Cedar Rapids Pedestrian Master Plan

Adopted December 2019
Updated March 2024

CEDAR RAPIDS
City of Five Seasons®

2023 Updates

The City adopted EnvisionCR in 2015 as the City's comprehensive plan. The annual review of EnvisionCR is the time to examine and report on the progress the City is achieving in implementing our comprehensive plan. This review process ensures that this plan is up to date and provides flexibility to account for changing conditions. The timing of this review is crucial as it serves as a reminder to City Departments to consider them in the development of their annual budgets and work plans.

The annual review process involves updating two elements and all the Initiatives in EnvisionCR. The status of each Initiative is reviewed and updated accordingly along with comments that provide additional information on the status. Completed Initiatives are removed and new ones may be added. Additionally, the outcome of planning efforts involving public infrastructure and quality of life are also reviewed annually since these plans are incorporated into the comprehensive plan upon adoption.

This year, the narrative of StrengthenCR and InvestCR was updated in addition to the status of 53 Initiatives. Of these 53 Initiatives, 30 were completed, 5 new ones were added, and 4 were recategorized as ongoing. The following infrastructure and quality of life plans were also updated in this review cycle: NW Neighborhood Area Action Plan, Mt Vernon Road Corridor Action Plan, College District Area Action Plan, Czech Village/NewBohemia Area Action Plan, Historic Preservation Plan, Wellington Heights Neighborhood Action Plan, Pedestrian Master Plan, 6th Street Corridor Action Plan, Westdale Area Action Plan, Community Climate Action Plan, Public Art Plan, and the Age Friendly Action Plan. In these plans, 429 Action Steps were updated with 174 completed.

In this plan 45 initiatives were updated and 20 completed. Action items start with Strategy 2 and updates can be viewed on the following pages.

Strategy 2 Summary: Expand the Sidewalk Network

Number	Action	Responsible Department(s)	2023 Updates	2023 Status
2.1	Amend subdivision regulations to speed up sidewalk installation	Development Services Community Development	Five years are alloted for building sidewalks with new development. Completed 2023.	Complete
2.2	Transition to 100% public funding for new sidewalks in high pedestrian infrastructure demand areas	Public Works	Completed 2023.	Complete
2.3	Amend the minimum sidewalk width from four feet to five feet in the city code	Public Works: Engineering Division	Completed 2023.	Complete
2.4	Develop context-sensitive pedestrian design guidelines as a supplement to updated regulations	Public Works: Engineering Division	Completed with adoption of SUDAS (Statewide Urban Design and Specifications). Completed 2023.	Complete

Strategy 3 Summary: Improve condition of existing sidewalks

Number	Action	Responsible Department(s)	2023 Updates	2023 Status
3.1	Consider piloting the City hired sidewalk contractor as the default for sidewalk repairs	Public Works: Engineering Division	While citizens are allowed to hire their own contractors, there's a list of sidewalk contractors on the City's website. Completed 2023.	Complete
3.2	Develop an annual assessment fee model for certain sidewalk districts	Public Works: Engineering Division	Sidewalk assessment happens on a case by case basis and is ongoing. Paving for Progress covers costs of development. Completed 2023.	Complete
3.3	Make it easier to locate sidewalk assessment information	Public Works: Engineering Division	Assessment agreements are available on infrastructure viewer. Completed 2023.	Complete
3.4	Amend ordinances to include edging and protrusions standards for ADA compliance	Public Works: Engineering Division	The City adopted SUDAS (Statewide Urban Design and Specifications) in January of 2019. SUDAS includes standards for ADA. Complete 2023.	Complete

Strategy 4 Summary: Improve crossing condition

Number	Action	Responsible Department(s)	2023 Updates	2023 Status
4.1	Require high-visibility, protected crossings in high priority areas	Public Works: Traffic Engineering Division	No updates at this time.	Started
4.2	Require Leading Pedestrian Intervals at high-conflict crossings	Public Works: Traffic Engineering Division	No updates at this time.	On-Schedule
4.3	Use automatic pedestrian signal phases in high pedestrian traffic areas	Public Works: Traffic Engineering Division	All signalized locations have a pedestrian signal. ADA upgrades are constantly being improved.	Ongoing

Strategy 5 Summary: Improve winter walkway maintenance

Number	Action	Responsible Department(s)	2023 Updates	2023 Status
5.1	Educate the public about sidewalk snow clearance	Public Works:Street Maintenance Division City Manager: Communications	Completed with the Snow Buddies program developed in 2022. Volunteers connect with low income or disabled residents to clear their sidewalks. Completed 2023.	Complete
5.2	Shorten the required timeframe for snow removal	Public Works:Street Maintenance Division	City now requires snow removal within 24 hours. Completed 2023.	Complete
5.3	Require sidewalk snow clearance to a width of five feet on all sidewalks	Public Works:Street Maintenance Division	No updates at this time.	On-Schedule
5.4	Shorten the timeline for sidewalk snow clearance abatement	Public Works:Street Maintenance Division	Amended in July 2021 to have sidewalks cleared within 24 hours, previously it was 48 hours. Complete 2023.	Complete
5.5	Establish a fine schedule for violating the sidewalk snow clearance ordinance	Public Works:Street Maintenance Division	Completed 2023.	Complete
5.6	Dedicate more staff time to enforcement	Public Works:Street Maintenance Division	No updates at this time.	On-Schedule
5.7	Develop a snow removal priority network	Public Works:Street Maintenance Division	The City has formed an innovation team to work on sidewalk snow removal. The City is developing a priority network along Mt. Vernon Road from 10th Street SE to 42nd Street SE.	Started
5.8	Clear snow piles at corners with sidewalks	Public Works:Street Maintenance Division	No updates at this time.	On-Schedule
5.9	Improve snow removal at bus stops	Transit	All bus stops are cleared within 48 hours according to the city's sidewalk policy. This is interdepartmental collaboration with Transit and Public Works. Completed 2023.	Complete
5.10	Continue to clear shared use paths	Public Works:Street Maintenance Division	This is joint project between Public Works and Parks & Recreation to clear and maintain trails in the winter.	Ongoing
5.11	Implement snow and ice clearing assistance programs for select populations.	Community Development Public Works: Street Maintenance Division	Complete with the Snow Buddies program developed in 2022. Snow buddies is an income-based residential sidewalk snow removal program for those 65+ and/ or mobility challenged. Complete 2023.	Complete

Strategy 6 Summary: Add more destinations within easy walking distance

Number	Action	Responsible Department(s)	2023 Updates	2023 Status
6.1	Continue to promote walkable developments through planning and zoning	Community Development	Updated zoning code in 2019 to promote walkability. Pedestrian routes are being created between buildings. Sidewalks are being added to the City right of way where there previously were not any. Completed 2023.	Complete
6.2	Promote walkable developments through economic incentives	Community Development	No updates at this time.	On-Schedule

Strategy 7 Summary: Share the benefits of a walk-friendly community

Number	Action	Responsible Department(s)	2023 Updates	2023 Status
7.1	Develop a positive informational campaign aimed at residents, government officials, and business owners.	City Manager's Office	This is ongoing, one example is Move More Week a campaign to encourage walking and other activities and is distributed through the City's website, Facebook page and OurCR Magazines. Completed 2023.	Complete
7.2	Distribute information to Cedar Rapids residents, community organizations, business owners, and elected officials.	City Manager's Office	Information is distributed through the City's website, Facebook page and OurCR Magazines. Completed 2023.	Complete
7.3	Become a Silver-level Walk Friendly Community	Community Development	Cedar Rapids received the Bronze level Walk Friendly Community through the Walk Friendly Communities organization. The City is exploring the possibility of obtaining the next level of certification. Update Action from 'Platinum-level' to 'Silver-level'.	On-Schedule

Strategy 8 Summary: Provide opportunitites to have a positive experience walking

Number	Action	Responsible Department(s)	2023 Updates	2023 Status
8.1	Implement an Open Streets event.	Community Development	No updates at this time.	On-Schedule

Strategy 9 Summary: Support Safe Routes to School planning and programs at all schools

Number	Action	Responsible Department(s)	2023 Updates	2023 Status
9.1	Develop a school walking map for youth.	Public Works School Board	Traffic Engineering updates the maps every 1-2 years. These "designated school routes" require sidewalks and they try to select upgraded ramp crossings and locations where all-way stops exist.	Ongoing
9.2	Develop Safe Routes to School Action Plans for all schools.	Public Works School Board	No updates at this time.	On-Schedule
9.3	Promote the development of walking school buses at additional schools.	Public Works School Board	Signs, crosswalks and sidewalks are implemented throughout the community to support walking school buses and Safe Routes to School. The City approves locations for adult cross guards and pays for half of their position, the schools pay for the other half. .	Ongoing
9.4	Increase the number of school crossing guards.	Public Works School Board	On track.	On-Schedule
9.5	Launch a School Safety Patrol Program to supplement school crossing guards.	Public Works School Board AAA	On track.	On-Schedule

Strategy 10 Summary: Promote a destination-based program to encourage walking

Number	Action	Responsible Department(s)	2023 Updates	2023 Status
10.1	Create a pedestrian wayfinding system to highlight community destinations and walking travel times.	Public Works	A self guided Art Tour was created for the downtown area. Historic District and the MedQ have sign toppers. Czech Village and New Bohemia have gateway signs at the 16th Avenue Bridge. Complete 2023.	Complete
10.2	Publish maps of walking routes in walkable, destination rich areas of the city.	Public Works	The Wellbeing Advisory Committee hosts a downtown weekly walking group. The Cedar Rapids Public Art Commission has a newly added self-guided mobile Art Tour. Cedar Rapids Tourism also has destination maps. Completed 2023.	Complete

Strategy 11 Summary: Analyze pedestrian crash data to target improvements

Number	Action	Responsible Department(s)	2023 Updates	2023 Status
11.1	Regularly review and analyze pedestrian crash data.	Public Works	This is accomplished by reviewing yearly reports on crashes for all modes of transportation.	Ongoing
11.2	Identify systemic safety issues and plan interventions.	Public Works	This is ongoing.	Ongoing

Strategy 12 Summary: Gather data on pedestrian use

Number	Action	Responsible Department(s)	2023 Updates	2023 Status
12.1	Establish a pedestrian count methodology and locations.	Public Works: Traffic	City works with a firm to analyze signalized pedestrian crossings and video counts. Crash reviews and safety analysis as well as the video counts are done on an as needed basis.	Ongoing
12.2	Analyze initial count data and determine next steps for the program.	Corridor MPO Public Works	This is ongoing.	Ongoing

Strategy 13 Summary: Carry out campaigns to increase drivers yielding to pedestrians

Number	Action	Responsible Department(s)	2023 Updates	2023 Status
13.1	Create a campaign to reduce driver speeding.	Public Works: Police Department	APWA (American Public Works Association) have a speed management policy that is used by Cedar Rapids. The city has traffic cameras and some regulation is done through police enforcement.	Ongoing
13.2	Create a campaign to encourage yielding at crosswalks.	Public Works Police Department	No updates at this time.	On-Schedule

Strategy 14 Summary: Improve visual interest for people walking

Number	Action	Responsible Department(s)	2023 Updates	2023 Status
14.1	Implement streetscape improvements	Community Development Public Works	The ROW Planning & Specifications Manual was completed to aid in improvements.	Started
14.2	Promote Public Art	Community Development Public Art Commission Public Works	The Public Arts Commission created a Public Art Walking Tour in the downtown area and is consistently promoting public art. Completed 2023.	Complete

Strategy 15 Summary: Keep plans up-to-date and integrated

Number	Action	Responsible Department(s)	2023 Updates	2023 Status
15.1	Update the Pedestrian Plan every five years.	Community Development Public Works	No updates at this time.	On-Schedule
15.2	Integrate Pedestrian Plan strategies into other plans.	Community Development Public Works	This is ongoing.	Ongoing

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Acknowledgments

This plan was completed with the valuable input of hundreds of Cedar Rapids stakeholders. Community members and government employees gave the planning team insight into the walking environment of the city. In addition to the public's input received through surveys, as well as at community workshops and listening sessions, the time and energy of the **Pedestrian Master Plan Advisory Committee** was particularly appreciated (see left column below).

Brad DeBrower, *Cedar Rapids Transit*

Dave Dennis, *Mt. Mercy University*

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Todd Fagan, *Cedar Rapids Parks*

Brenna Fall, *Cedar Rapids Public Works*

Chris Gates, *Cedar Rapids Community School District*

Ron Griffith, *Cedar Rapids Public Works*

Cathy Hafs, *ADA Committee*

Nate Kampman, *Cedar Rapids Public Works*

Adam Lindenlaub, *Cedar Rapids Community Development*

Troy McQuillen, *Kirkwood Community College*

Chad Pelley, *Developers Council*

Kevin Platz, *Realtors Association*

Mark Powers, *Corridor Running*

Jennifer Pruden, *formerly with Self-Supporting Municipal Improvement District (Czech Village)*

Rachel Schramm, *formerly with Linn County Public Health*

Jesse Thoeming, *Economic Alliance*

Sgt. Michael Wallerstedt, *Cedar Rapids Police*

Kevin Vrchoticky, *formerly with Cedar Rapids Public Works*

Phil Wasta, *Self-Supporting Municipal Improvement District (MedQuarter)*

Brandon Whyte, *Corridor Metropolitan Planning Organization*

Cedar Rapids Mayor and City Council:

Mayor Bradley G. Hart

Tyler Olson – *At Large*

Ann Poe – *At Large*

Susie Weinacht – A*t Large*

Marty Hoeger – *District 1*

Scott Overland – *District 2*

Dale Todd – *District 3*

Scott Olson – *District 4*

Ashley Vanorny – *District 5*

Toole Design provided consulting services

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Contents

Appendices

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Chapter 1

Introduction & Executive Summary

Chapter 1: Introduction & Executive Summary

Cedar Rapids has the potential to become one of America's great walking cities. The Pedestrian Master Plan (hereafter referred to as "the Plan") provides a vision, goals, and strategies for how to achieve that potential. The findings and recommendations included in this Plan are intended to be used as tools and resources to guide future policy decisions moving forward. The strategies listed in the Plan illustrate potential solutions used by other communities across the country, and do not necessarily reflect specific policy changes in Cedar Rapids.

Why walking?

Cedar Rapids has a burgeoning trail network, rapidly expanding accessibility for people with disabilities, and several neighborhood parks and schools. Walking is valued for its health, recreational, and functional qualities. Dog owners, seniors, runners, strollers, children, families, bus riders, and busy adults all benefit from a walk friendly community.

Why a pedestrian master plan?

For nearly a decade, the City of Cedar Rapids as a community and an organization has placed a greater emphasis on walking. In 2010 the City adopted its first Sidewalk Master Plan. In 2014 the Sidewalk Master Plan was updated, and the City Council adopted Iowa's first Complete Streets Policy. The goal of this policy was to create a "multi-modal transportation network for all users and uses of the public travel spaces with the goal of developing connectivity between each transportation mode."

Implementation of the Sidewalk Master Plan and Complete Streets Policy has resulted in discussions around new sidewalk construction. Debates about removing trees in front lawns, cost, and maintenance responsibilities resulted in the need for the community to step back and take a big picture look at the walking environment.

Who was involved?

City staff, in partnership with Toole Design and a project Advisory Committee, led the planning process. The primary focus of Plan development was to gain widespread community input. Discussions led to consensus around what was working well and what needed to be improved in terms of walking in Cedar Rapids.

Infrastructure and non-infrastructure strategies are derived from community engagement and analysis from the project team. The Plan is the distillation of ideas from over 1,000 residents about their desires for the future. Residents were engaged through online surveys, pop-up events, community workshops, and listening sessions.

What did the community tell us?

Residents told the planning team they support walking as a mode of transportation, especially for destinations like parks, restaurants, and schools. Progress with the Americans with Disabilities Act (ADA) accessibility is highly recognized, but the current walkway network is seen as inadequate. Several existing policies regarding funding and maintenance are not viewed favorably. A minority of residents are opposed to sidewalks. These results are summarized in Chapter 2 – Community Engagement and detailed in Appendix A.

Where do we go from here?

In response to community engagement results, the project team developed specific network, policy, and programmatic recommendations. These are summarized in Chapter 3 – Infrastructure, Chapter 4 – Ordinances and Policies, and Chapter 5 – The 5 E's: Education, Encouragement, Evaluation, Enforcement, & Engineering/Planning.

Most cities achieve walk friendly goals over the course of several decades, with measurable progress taking place on an annual basis. Chapters 3, 4, and 5 list potential strategies and responsible entities. Recommendations for performance measures, short term actions, and funding sources are found in Chapter 6 – Implementation. As the City works to accomplish Plan goals over the next several years, further study and vetting of specific strategies will be required to evaluate feasibility and impacts.

Vision

By 2040, walking in Cedar Rapids will be a safe, convenient, accessible and enjoyable activity for people of all ages and abilities.

Goals

Goal 1: Develop a connected pedestrian network that links popular destinations year-round.

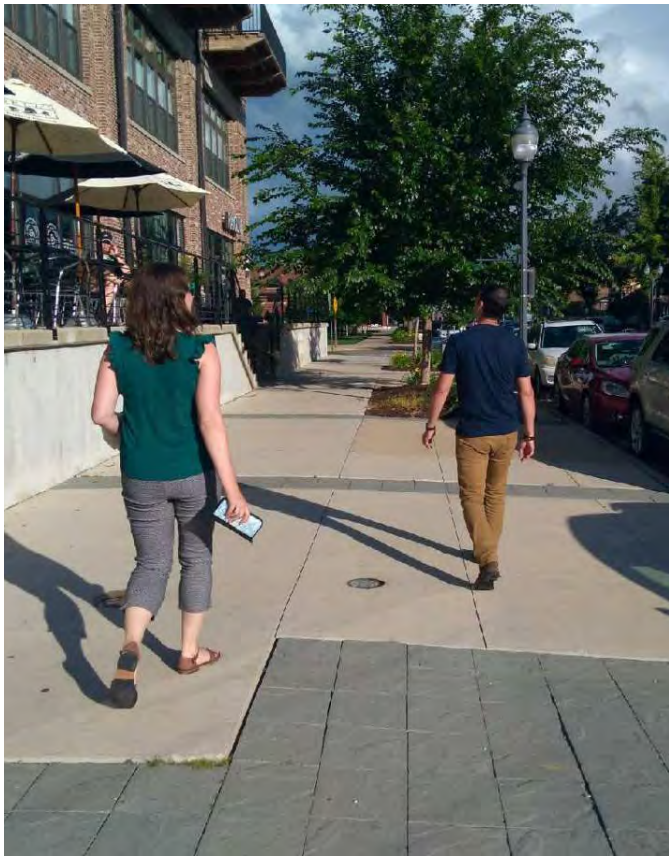
A connected pedestrian network is critical to increasing walking in Cedar Rapids. Linking popular destinations year-round is also a high priority. This goal will be achieved through an expanded infrastructure network of sidewalks, crossings, and walkable destinations, along with well-maintained sidewalk surfaces year round. This goal is addressed in Chapter 3 –Infrastructure and Chapter 4 – Ordinances and Policies. The following strategies will help achieve Goal 1:

- Design and build prioritized subareas of pedestrian infrastructure projects (Chapter 3)
- Expand the sidewalk network (Chapter 4)
- Improve condition of existing sidewalks (Chapter 4)
- Improve crossing conditions (Chapter 4)
- Improve winter walkway maintenance (Chapter 4)
- Add more destinations within easy walking distance (Chapter 4)

Goal 2: Create a comprehensive approach that fosters a culture of walking.

Walk friendly communities are the result of a comprehensive approach that creates a culture of walking. A set of non-infrastructure strategies rounds out a robust infrastructure program. The following strategies in Chapter 5 – The 5 E's: Education, Encouragement, Evaluation, Enforcement, and Engineering will help achieve Goal 2:

- Share the benefits of a walk-friendly community (Education)
- Provide opportunities to have a positive experience walking (Encouragement)
- Support Safe Routes to School planning and programs at all schools (Encouragement)



- Promote a destination-based program to encourage walking (Encouragement)
- Analyze pedestrian crash data to target improvements (Evaluation)
- Gather data on pedestrian use (Evaluation)
- Carry out campaigns to increase drivers yielding to pedestrians (Enforcement)
- Improve visual interest for people walking (Engineering/ Planning)
- Keep plans up-to-date and integrated (Engineering/ Planning)

Goal 3: Measure progress toward achieving the Plan's vision.

Cedar Rapids has a strong track record for measuring progress toward achieving its vision. The Plan includes practical strategies in Chapter 6 – Implementation, which include:

- Use performance measures to track progress
- Take short-term actions to kickoff Plan implementation
- Pursue multiple funding sources

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Chapter 2 Community Engagement

Chapter 2: Community Engagement

Broad engagement with the Cedar Rapids community remained a priority throughout the planning process. The Cedar Rapids Pedestrian Master Plan is intended to reflect the vision and goals of the community as a whole, not just those who explicitly identify as a "pedestrian." Strong community engagement from residents with diverse interests has enabled the development of a Plan that reflects the values and preferences of Cedar Rapids residents.

Community members were engaged during June and July of 2018, to gather input and ideas before drafting the Plan.

How we engaged

In order to reach as many residents as possible, it was important that the project team use a range of strategies to solicit community feedback. The following approaches resulted in 1,200 participant interactions during the planning process (for more detail, see Appendix A – Community Engagement Report):

Community Workshop and Pop-up Events: In June 2018 a formal workshop, three pop-up events, and field outreach engaged 184 residents who shared feedback on walking preferences, habits, and needs.

Online Surveys and Mapping: The online survey was visited 575 times, and the online interactive map had 396 users. Emails and Facebook posts directed to City staff were also recorded.

Advisory Committee: An advisory committee with 20 members met three times throughout the process to give input and review the plan recommendations.

Listening Sessions: Specific interests and concerns were shared by 36 stakeholders from the realty and development community as well as City staff from various departments.

Promotion and Communications: 19 outreach strategies were used to publicize the community engagement opportunities, including online and social media, print media, television, and personalized outreach.

Who we heard from

In-person and online participants were asked to self-identify race, age, and gender, as well as how often they walk. This data helped the project team to get a sense of who was reached, and what their daily walking habits are like. The following graphics illustrate Plan participant characteristics:

Approximately 75 community members were engaged outside the 1st Avenue NE Hy-Vee during a pop-up event on June 26, 2018

A community member draws on a map at the Downtown Library on June 27, 2018

Figure 1. Would you describe yourself as?
Gender of participants in the Cedar Rapids Pedestrian Plan public engagement activities, June-July 2018 (answered by 486 participants).

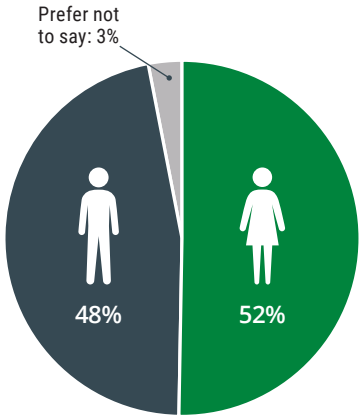


Figure 2. What is your age?
Age of participants in the Cedar Rapids Pedestrian Plan public engagement activities, June-July 2018 (answered by 490 participants).

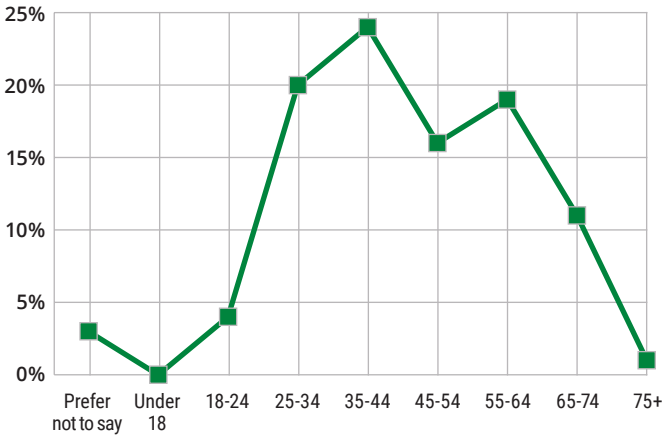


Figure 3. Do you have any of the following disabilities?
The percentage of participants from the Cedar Rapids Pedestrian Plan public engagement activities, June-July 2018, who reported having a disability. 65 out of 598 people reported having a disability of some kind.

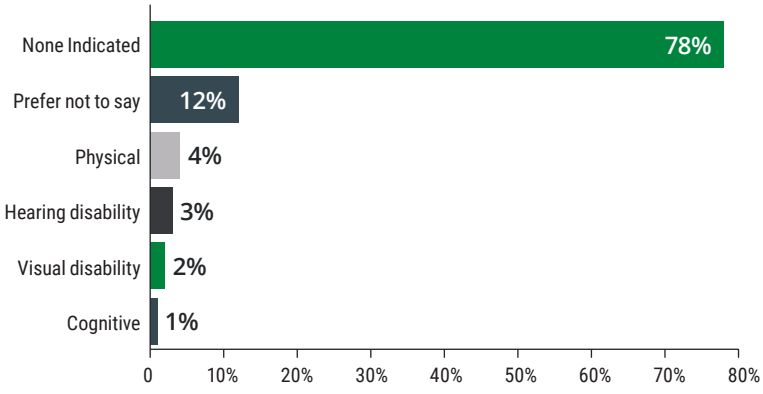
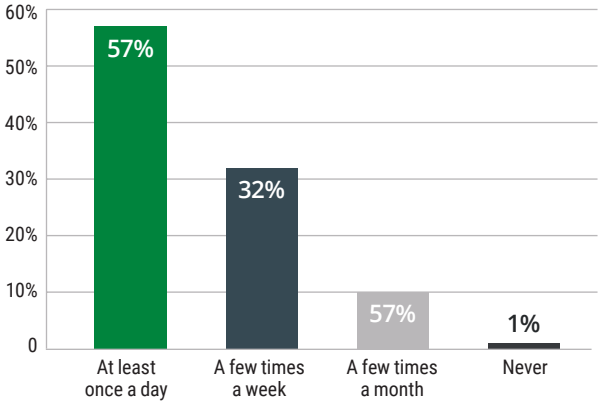


Figure 4. How often do you walk outdoors?
Frequency with which participants in the Cedar Rapids Pedestrian Plan public engagement activities, June-July 2018, reported walking outside (answered by 495 participants).



What we heard

As a result of the first phase of engagement, key findings were identified. These key findings are addressed in subsequent chapters, which include recommendations for responding to community priorities. The main themes were:

- Residents support walking as a mode of transportation in Cedar Rapids. The overwhelming message was one of support for making walking more convenient, enjoyable, fun, and simple for people of all ages and abilities.
- Several things are already working well with today's walkway network. These include ADA accessibility, crosswalk maintenance, the trail network, and traditional walkable neighborhoods.
- The current walkway network is seen as inadequate and disconnected. Gaps in the walkway network and busy commercial corridors without sidewalks create a barrier to a complete and connected network.
- Connecting the community's most popular destinations with walkways is a high priority. Multiple stakeholders highlighted the need to easily access important community destinations such as parks, restaurants, grocery stores, libraries, and schools.
- Several existing policies regarding funding and maintenance are not viewed favorably. Confusion was voiced over some existing policies, along with a desire to improve and simplify the processes for sidewalk installation and maintenance.
- Some residents oppose sidewalks. While opponents of sidewalks were a minority of the participants, opposition by some residents could prove to be a barrier to implementing this Plan.

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Chapter 3 Infrastructure

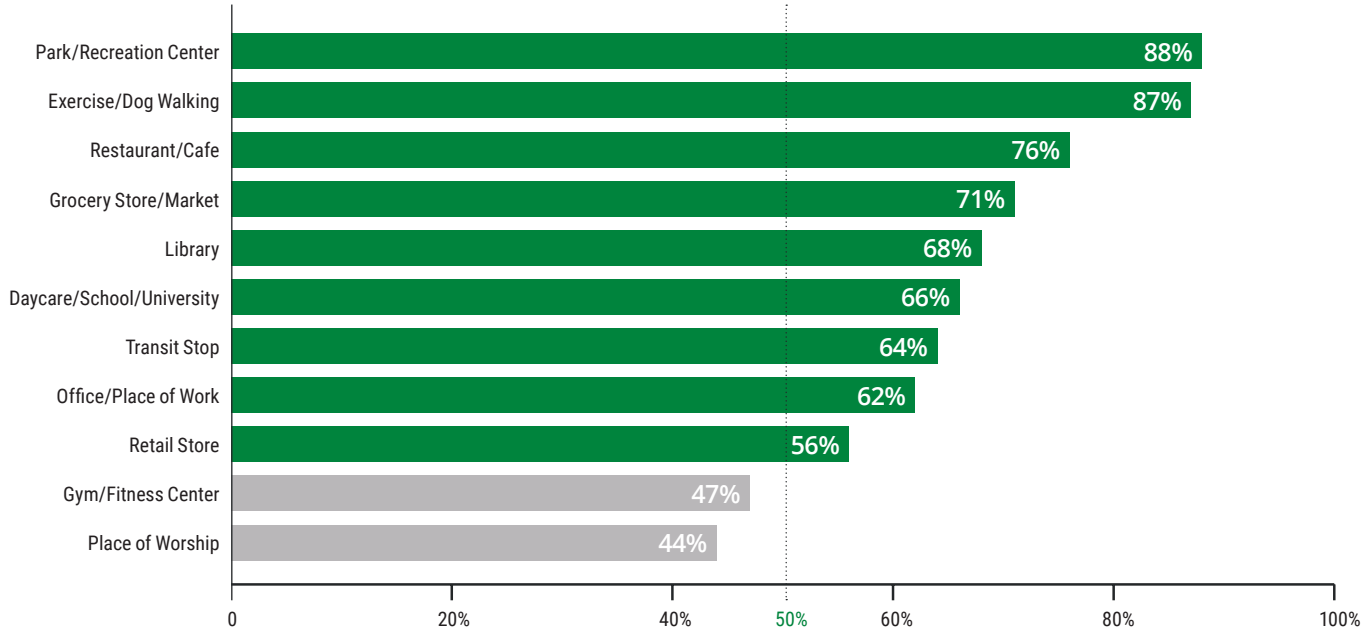
Chapter 3: Infrastructure

The Plan's first strategy involves designing and building pedestrian infrastructure projects across the community. This strategy was informed by community input, a pedestrian demand analysis, a field inventory of potential projects, and a prioritization process.

Community Input

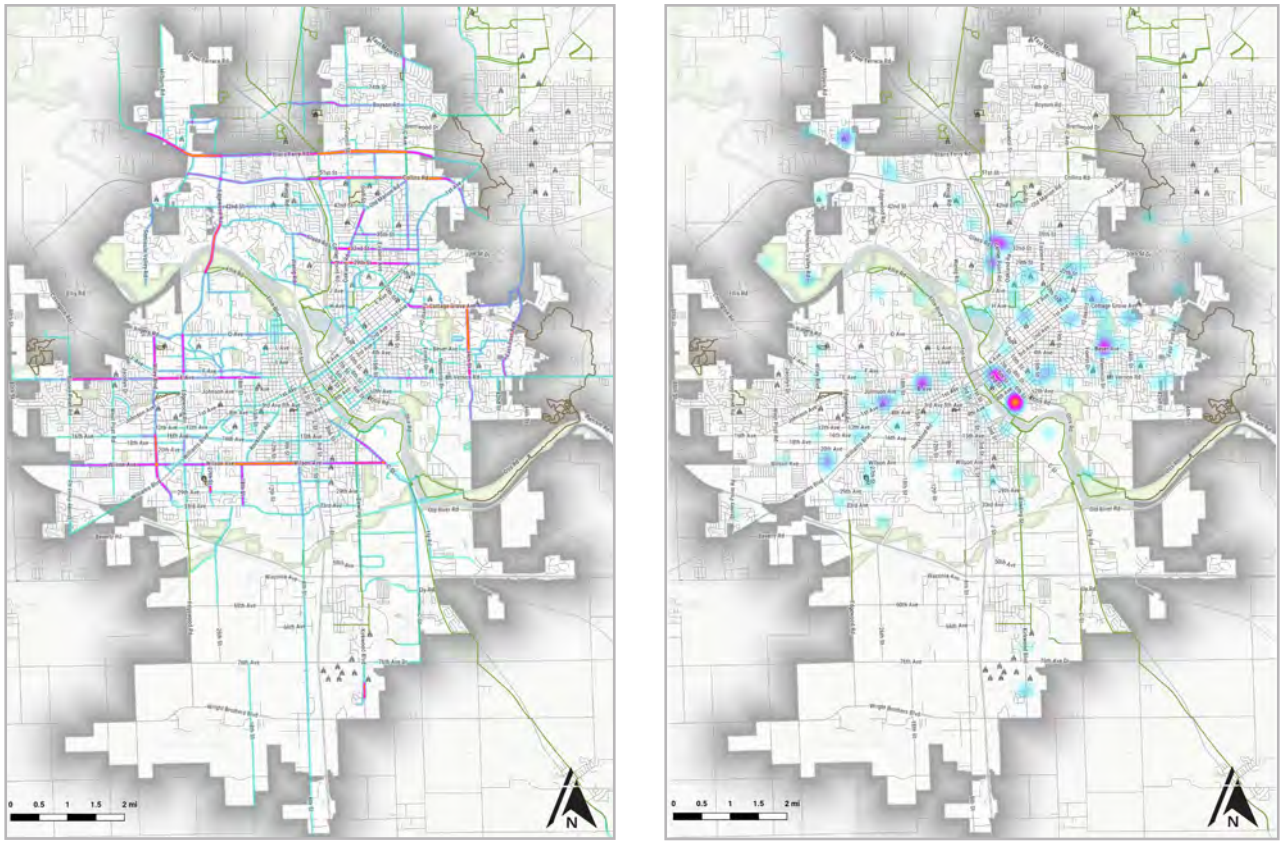
Cedar Rapids has 600 miles of streets which corresponds to a potential for 1,200 miles of sidewalks and crossings at over 4,300 intersections. To help narrow the focus for proposed pedestrian infrastructure projects to locations with high demand for walking, the project team asked the community to rank the importance of various walking destinations. Nine of the 11 most popular destinations were selected for analysis, as shown in Figure 1.

Figure 1. Destinations which were chosen as "very important" or "important" by more than 50% of respondents were included in a pedestrian infrastructure demand analysis.



Residents were also asked to draw on maps, illustrating "routes I'd like to walk" and "places I walk to." These layers of information, as shown in Figure 2, were also included in the analysis.

Figure 2. "Routes I'd like to walk" (on the left) and "Places I walk to" (on the right) were included in the pedestrian infrastructure demand analysis.

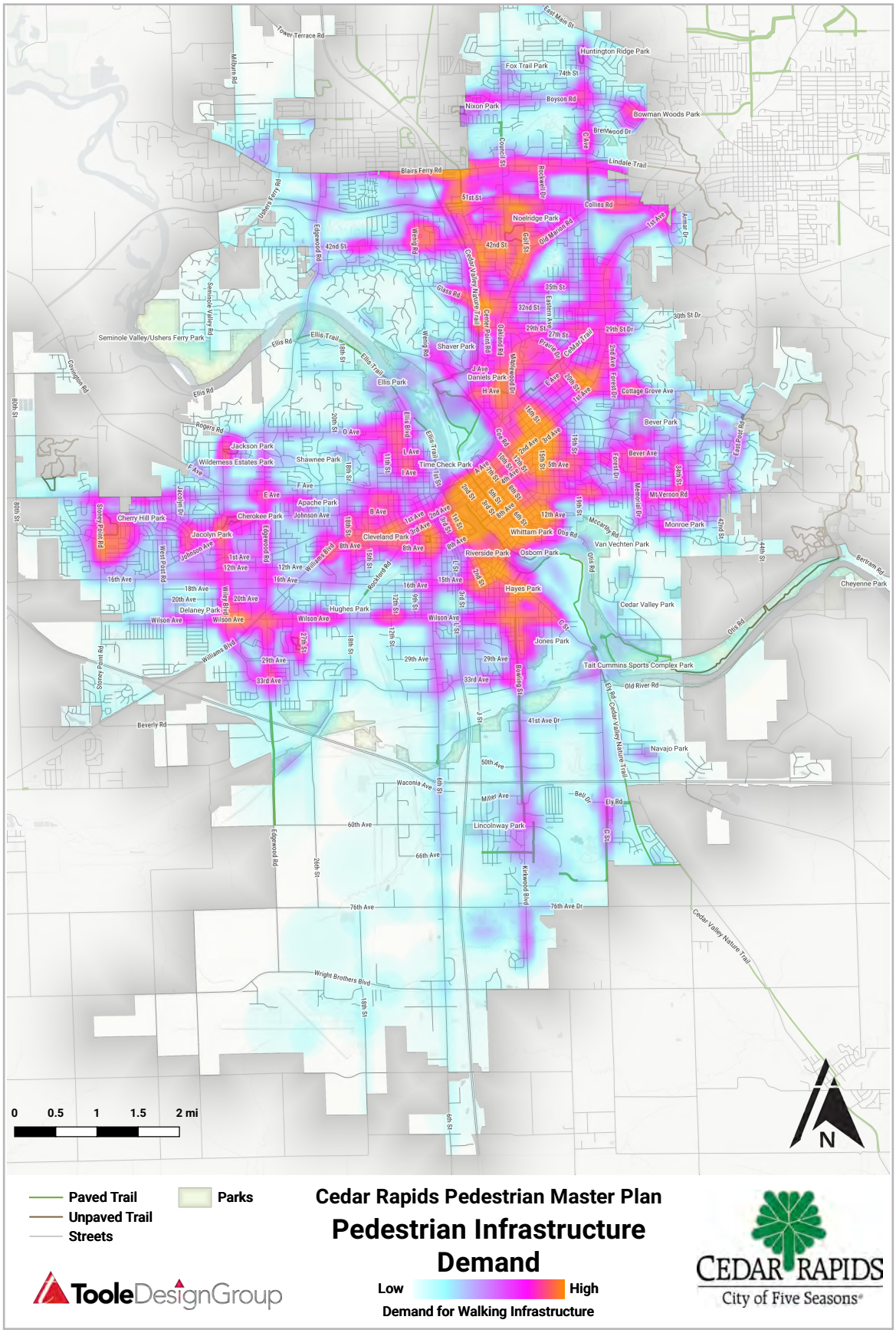


The project team included three categories of research-based information about walking demand: intersection density, population density, and zero car households. The latter category addresses racial equity. In sum, 14 categories of information were analyzed. Each was given a weight based on input from the community and experience of the project team, as shown in Table 1. The resulting Pedestrian Infrastructure Demand Map is shown in Figure 3.

Table 1. Information included in the pedestrian infrastructure demand analysis

Category	Input	Weight
Important Destinations	Parks	High
	Recreation centers	High
	Shared use paths	High
	Community colleges	High to low (based on enrollment)
	High schools	High to low (based on enrollment)
	K-8 schools	High to low (based on enrollment)
	Transit stops	High to low (based on ridership)
	Grocery stores	Medium
	Libraries	Medium
	Restaurants/cafés	Medium
	Employment density	Medium
	Retail centers	Low
Mapping Activity	Routes I'd like to walk	High
	Places I walk to	Medium
Research Based Data	Zero car households	High
	Intersection density	Medium
	Population density	Medium

Figure 3. 14 layers of information were weighted and combined into one map which shows the areas of the city that have the highest demand for pedestrian infrastructure.



City staff then outlined the highest demand areas on a map, which resulted in 10 field inventory areas, as shown in Figure 4. These were spaced across each of the four quadrants of the community. The areas also overlapped with neighborhoods where residents frequently request new sidewalks.

Figure 4. The 10 areas outlined in black were recommended for field inventory by City staff familiar with neighborhood sidewalk requests.

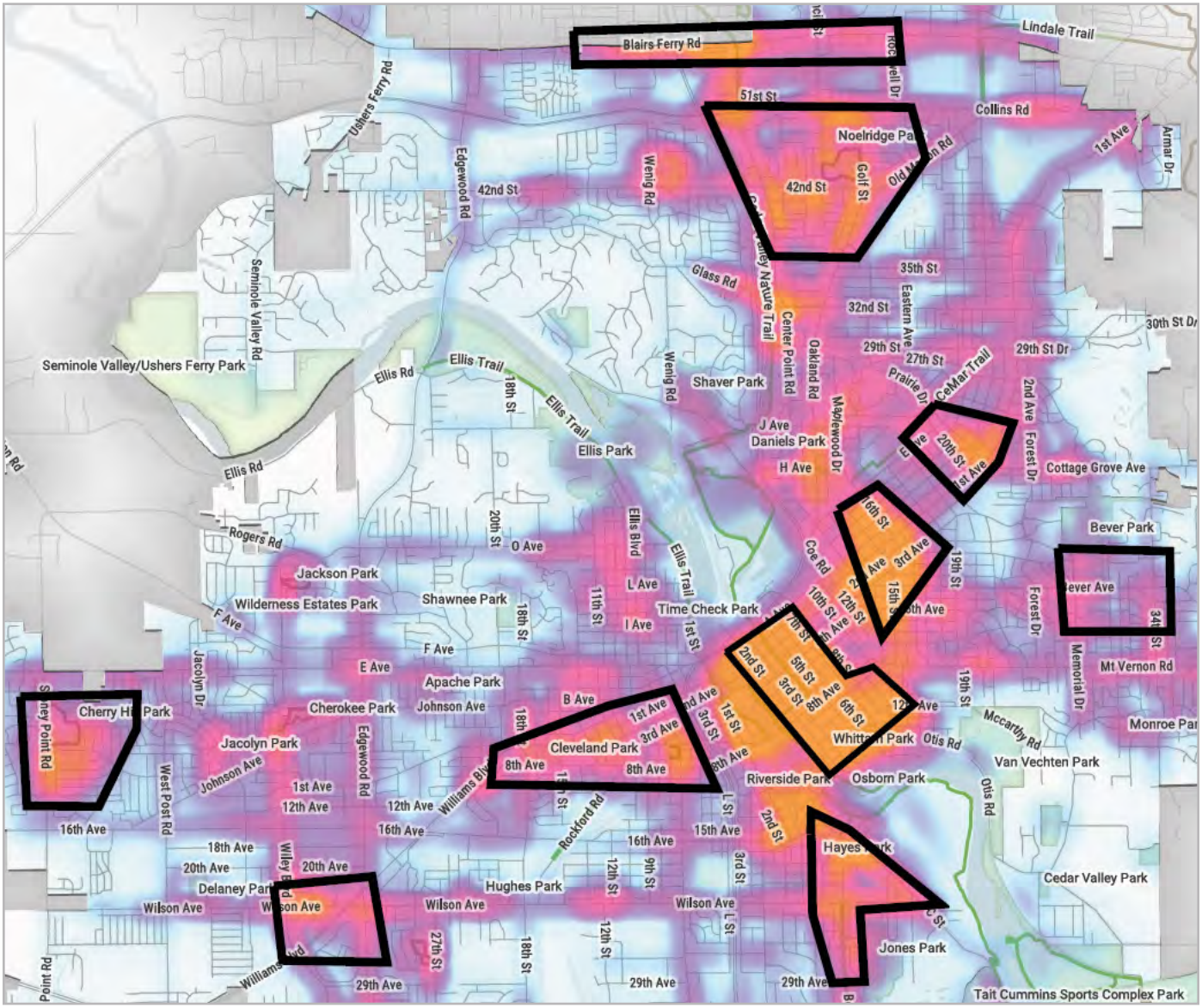
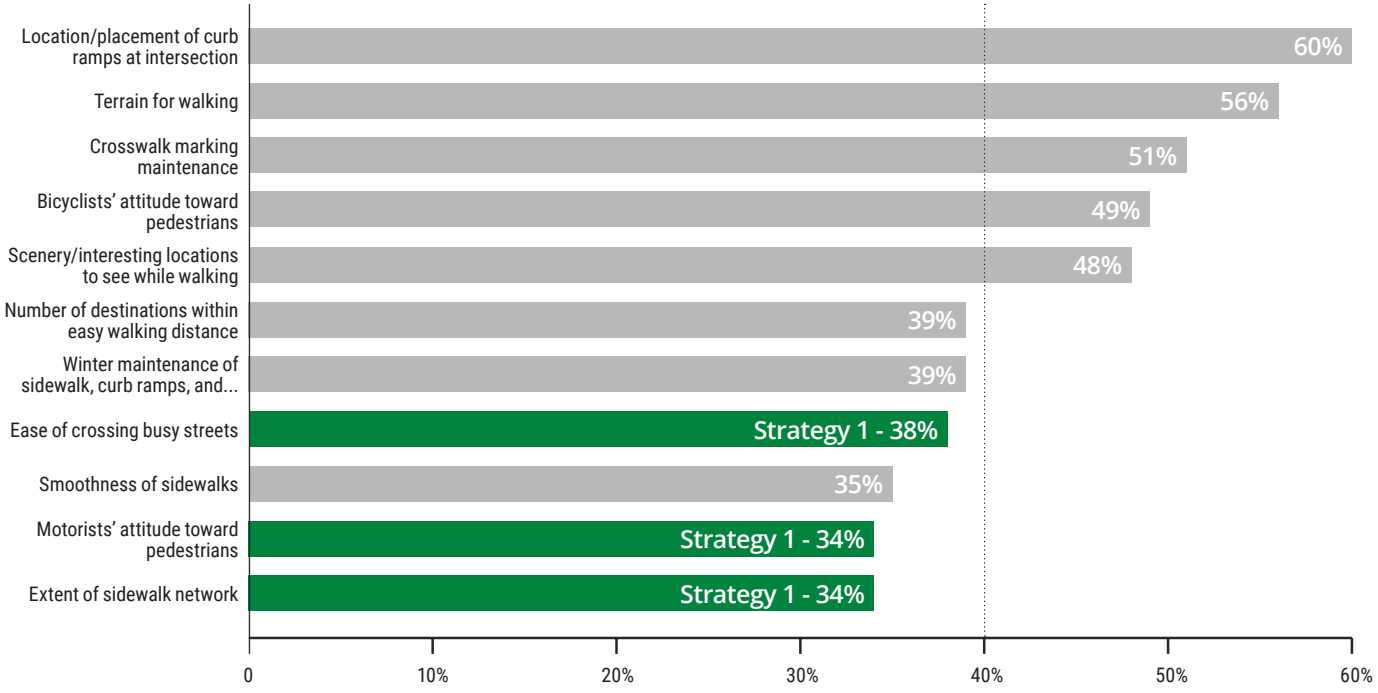


Figure 5. Community members were asked to rank various walking conditions in Cedar Rapids on a five-point scale of excellent, good, neutral, not good, and bad. This chart illustrates the percentage of people who ranked each condition as excellent or good. Conditions shown in green are addressed in Chapter 3. The remaining conditions under 40% are addressed in Chapter 4.



Projects and Cost Estimates

The field inventory was structured to collect three types of projects: sidewalk gaps, unsafe crossings, and sidewalk buffers. These project types were determined by analyzing input from residents, as well as existing programming at the City.

During the initial community engagement process, residents had the opportunity to rate various elements related to the safety and comfort of walking in Cedar Rapids, as shown in Figure 5. The elements with the lowest level of respondent satisfaction were "extent of the sidewalk network" and "motorists' attitude towards pedestrians", both with only 34% of respondents rating these as excellent or good. "Ease of crossing busy streets" received 38% excellent or good ratings. Sidewalk gap and unsafe crossing projects encompassed these three categories.

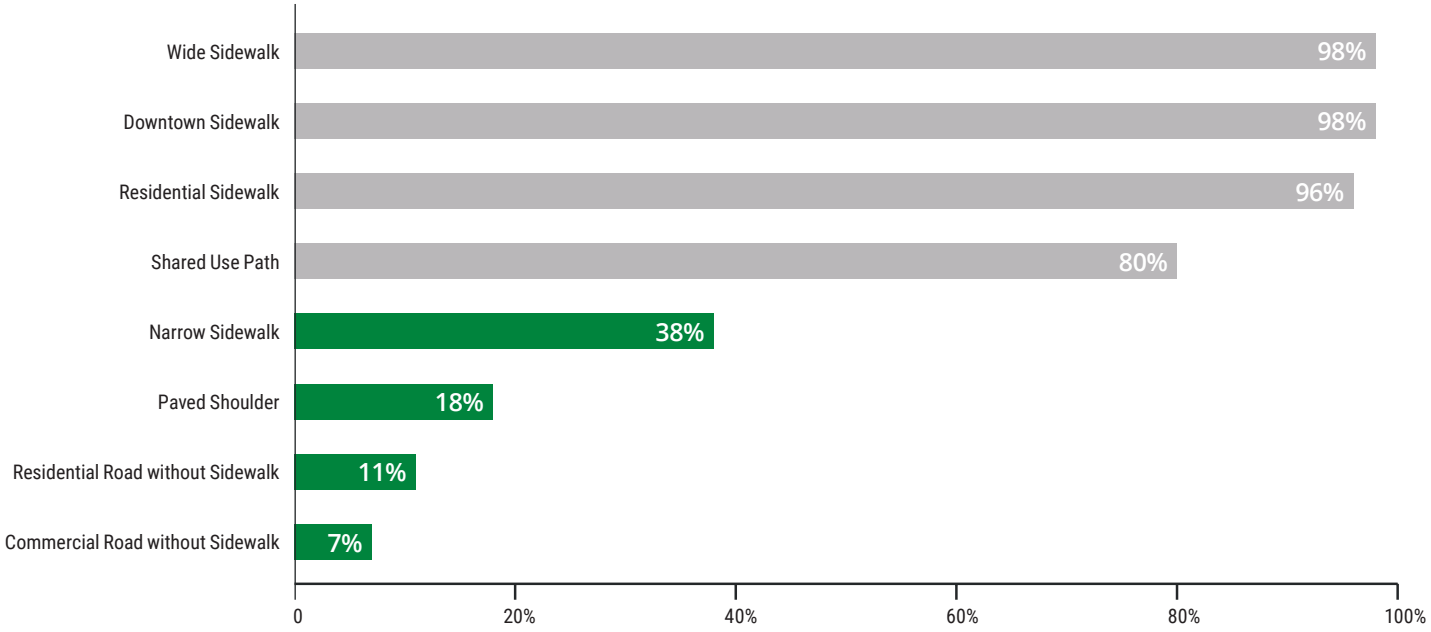
"Smoothness of sidewalks" received an excellent or good rating from just 35% of the respondents. Chapter 4 discusses the City's program to repair sidewalks which addresses sidewalk smoothness and condition.

Residents also completed a visual preference survey of eight walking environments, as shown in Figure 6. The least comfortable facility where pedestrian facilities do exist was a narrow sidewalk without a buffer between the sidewalk and the street. These areas would not show up on a map that identifies sidewalk gaps like the three lower ranked images. As a result, the project team included sidewalks without buffers as a project type to collect during the field inventory.

The field inventory was completed using the Fulcrum app on iPads and smartphones, as shown in Figure 7. A detailed map of the proposed infrastructure projects for each area is included in Appendix B. Each project has a unique project ID, and is color coded according to project type. Planning level cost estimate tables are shown at the end of Appendix B. These were determined using information collected in the field, such as length of a sidewalk gap and the number of ADA ramps needed on a project.

Costs opinions are order-of-magnitude, planning-level estimates calculated using unit costs (local bid tabulations for similar project types). They include contingency and engineering. Planning-level cost opinions do not take into consideration localized specifics of each project such as right-of-way acquisition, utility relocation, topography, and inflation. They are useful for aggregate-level budget planning, but individual project costs estimates will change as projects advance through further study and design.

Figure 6. A visual preference survey revealed that narrow sidewalks, paved shoulders, and roads without sidewalks were the least comfortable places to walk (shown in green). Numbers indicate the percentage of community members who ranked each facility as "very comfortable" or "comfortable," on a four-point scale that also included "uncomfortable" and "very uncomfortable".



Wide Sidewalk

Downtown Sidewalk

Residential Sidewalk

Shared Use Path

Narrow Sidewalk

Paved Shoulder

Residential Road without Sidewalk

Commercial Road without Sidewalk

Figure 7. The field inventory was completed using the Fulcrum app.

Are you recording a sidewalk gap, a crossing, or an existing sidewalk with no buffer/inadequate buffer?	*	Sidewalk Gap
Name of street	*	Wilson
Street suffix	*	AVE
Street quadrant		SW
Which side of the street?	*	South
Start point (intersection, address, landmark, or block number if improvement is needed for the whole block)	*	Sidewalk terminus at Corridor Health
End point (intersection, address, landmark, or block number if improvement is needed for the whole block)	*	Westdale Dr
Taken from the perspective of walking along the street, beginning at one end of the gap		
What is the total length of this gap (lineal feet)?	*	125
How many driveway entrances and alleys would a new sidewalk cross to close this gap?	*	0
What is the recommended location for the sidewalk?	*	Behind curb
How many ADA curb ramps are needed?	*	2
What is needed for sidewalk improvements? (select all that apply)	*	Add sidewalk only, Relocate Utilities, Grading and/utility relocati

Strategy 1: Design and build prioritized subareas of pedestrian infrastructure projects

Projects were grouped into subareas and then prioritized. The team assumed that projects would be constructed in geographically related groups within the same calendar year to more completely connect residents with neighborhood destinations and to be efficient with construction efforts. Using the ActiveTrans Priority Tool[1], the project team worked with the Advisory Committee to rank five factors shown in Table 2.

The resulting subarea rankings are shown in Table 3 and Figure 8. Total values for each of the factors have first been divided by subarea acres and then scaled on a zero to one range to the nearest hundredth decimal. Total subarea scores are then assigned weighted averages, based on the weights in Table 2. The final result is the first recommended strategy of the Plan: design and build these prioritized subareas of pedestrian infrastructure projects.

Concept designs for three project segments are shown in Appendix C. These preliminary concepts propose cross sections for challenging locations. Also included are cross sections for higher volume shared use paths, where separation may be necessary to reduce conflicts between people walking and bicycling.

Table 2. Factors used to rank subareas

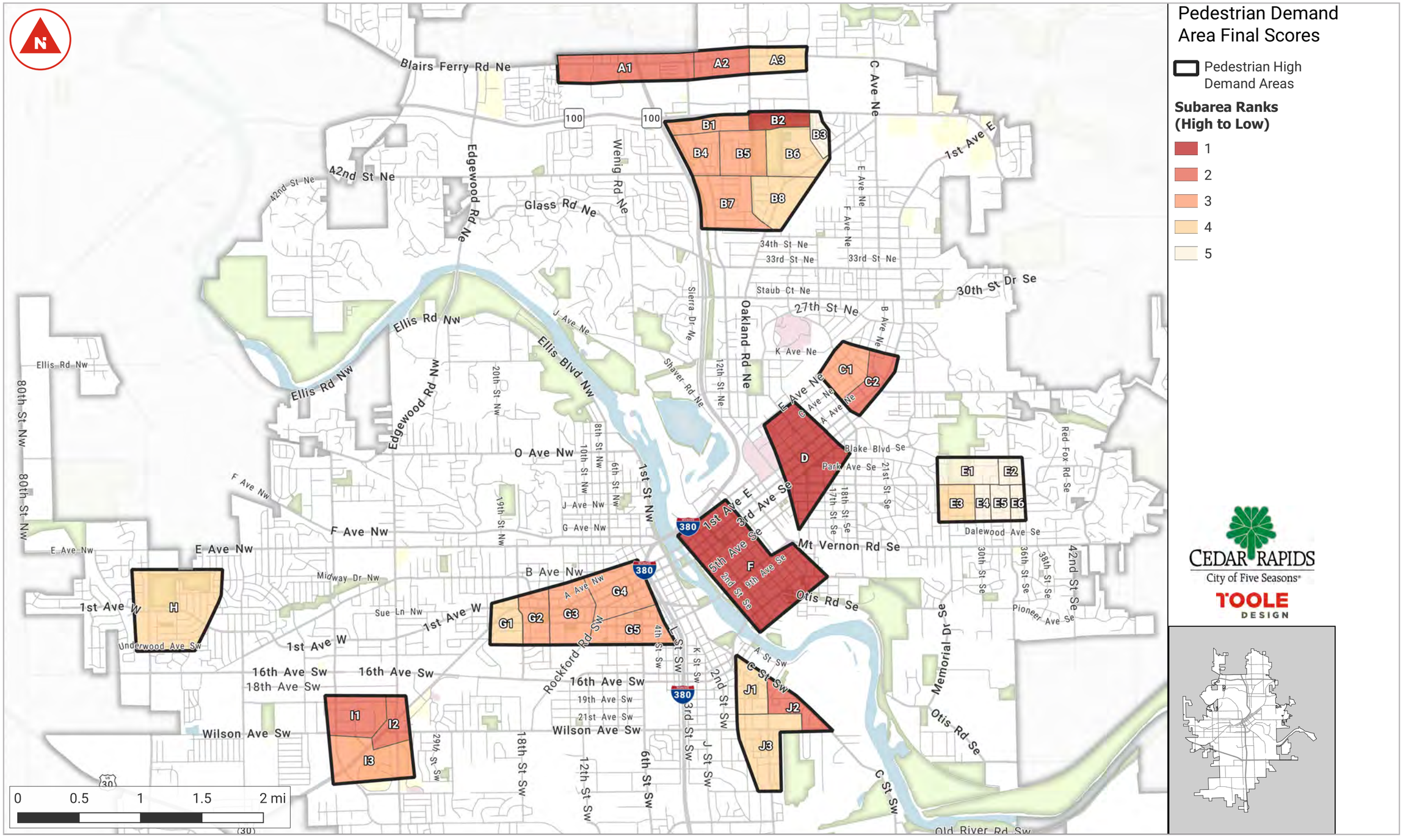
Factor	Higher Rank with...	Weight
Pedestrian infrastructure demand map	More demand	10
Pedestrian-motorist crashes	More crashes	9
Scheduled road projects	More projects	8
Cost estimates	Less cost	7
Busy streets	More busy streets	7

1 The ActiveTrans Priority Tool is a national model for prioritizing pedestrian improvements. The step-by-step, flexible methodology was developed by gathering successful strategies from agencies across the country. http://www.pedbikeinfo.org/planning/tools_apt.cfm

Table 3. Subarea rankings

Subarea	Rank	Score	Acres	Composite Pedestrian Demand Score	Composite Pedestrian Demand Score Scaled	Pedestrian-Motorist Crashes	Pedestrian-Motorist Crashes per Acre	Pedestrian-Motorist Crashes Scaled	Construction Projects (ft)	Construction Projects per Acre	Construction Projects Scaled	Cost Estimate	Cost Estimate per Acre	Cost Estimate Scaled	AADT	AADT per Acre	AADT Scaled
D	1	0.65	221.81	1100	0.87	23	0.1	1	3599	16	0.28	$879,000	$3,963	0.94	134056	604	0.04
B2	1	0.61	44.05	964	0.76	1	0.02	0.22	743	17	0.29	$421,000	$9,558	0.86	599241	13605	1
F	1	0.58	371.78	1270	1	20	0.05	0.52	4674	13	0.21	$464,000	$1,248	0.98	415607	1118	0.08
J2	2	0.52	58.79	964	0.76	0	0	0	3461	59	1	$953,000	$16,211	0.77	21153	360	0.03
I2	2	0.5	55.37	817	0.64	0	0	0	2116	38	0.65	$1,005,000	$18,150	0.74	411065	7424	0.55
A1	2	0.46	166.39	887	0.7	7	0.04	0.41	0	0	0	$1,113,000	$6,689	0.91	634407	3813	0.28
C2	2	0.45	66.09	900	0.71	0	0	0	2530	38	0.65	$712,000	$11,606	0.84	45466	688	0.05
I1	2	0.44	98.81	845	0.67	3	0.03	0.29	1730	18	0.3	$828,000	$8,380	0.88	32073	325	0.02
A2	2	0.43	65.21	846	0.67	3	0.05	0.44	0	0	0	$374,000	$5,736	0.92	63482	974	0.07
G4	3	0.42	117.12	851	0.67	4	0.03	0.33	0	0	0	$493,000	$4,209	0.94	239376	2044	0.15
B7	3	0.41	127.87	903	0.71	3	0.02	0.23	1853	14	0.25	$1,726,000	$13,498	0.81	43149	337	0.02
C1	3	0.41	78.79	851	0.67	1	0.01	0.12	2135	27	0.46	$1,384,000	$17,566	0.75	16419	208	0.02
I3	3	0.41	140.21	703	0.55	1	0.01	0.07	3776	27	0.46	$1,861,000	$13,273	0.81	364900	2603	0.19
B4	3	0.39	68.25	844	0.66	2	0.03	0.28	0	0	0	$800,000	$11,722	0.83	118033	1729	0.13
B5	3	0.39	90.05	917	0.72	0	0	0	1896	21	0.36	$1,090,000	$12,104	0.83	23762	264	0.02
G3	3	0.39	112.37	848	0.67	0	0	0	2544	23	0.38	$1,341,000	$11,934	0.83	78974	703	0.05
G5	3	0.39	101.09	815	0.64	3	0.03	0.29	203	2	0.03	$575,000	$5,688	0.92	35650	353	0.03
B1	3	0.38	53.67	837	0.66	0	0	0	0	0	0	$428,000	$7,975	0.89	280039	5218	0.38
G2	3	0.38	63.78	861	0.68	0	0	0	1162	18	0.31	$703,000	$11,023	0.84	44264	694	0.05
H	4	0.38	272.04	802	0.63	0	0	0	4299	16	0.27	$437,000	$1,606	0.98	42623	157	0.01
B8	4	0.37	101.1	889	0.7	0	0	0	2535	25	0.43	$2,316,000	$22,908	0.68	29896	296	0.02
G1	4	0.37	59.04	801	0.63	0	0	0	1735	29	0.5	$1,381,000	$23,392	0.67	42478	720	0.05
A3	4	0.36	61.89	843	0.66	0	0	0	1045	17	0.29	$732,000	$11,828	0.83	16217	262	0.02
B6	4	0.35	107.34	874	0.69	0	0	0	1490	14	0.24	$1,565,000	$14,580	0.79	12050	112	0.01
J3	4	0.34	132.77	875	0.69	2	0.02	0.15	0	0	0	$2,045,000	$15,402	0.78	42978	324	0.02
J1	4	0.33	64.98	952	0.75	0	0	0	0	0	0	$812,000	$12,495	0.82	56741	873	0.06
E3	4	0.27	57.97	787	0.62	0	0	0	0	0	0	$1,250,000	$21,564	0.69	7462	129	0.01
E1	5	0.27	70.35	699	0.55	0	0	0	0	0	0	$1,142,000	$16,234	0.77	3806	54	0
E2	5	0.25	28.43	601	0.47	0	0	0	0	0	0	$471,000	$16,568	0.77	7361	259	0.02
B3	5	0.22	28.01	690	0.54	0	0	0	256	9	0.16	$1,521,000	$54,306	0.23	38902	1389	0.1
E4	5	0.21	24.6	643	0.51	1	0.04	0.39	0	0	0	$1,736,000	$70,575	0	3338	136	0.01
E6	5	0.2	22.27	711	0.56	0	0	0	0	0	0	$999,000	$44,851	0.36	1778	80	0.01
E5	5	0.17	30.49	746	0.59	0	0	0	0	0	0	$1,801,000	$59,070	0.16	5760	189	0.01

Figure 8. Subareas are ranked according to the factors and weights shown in Tables 2 and 3.



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Chapter 4 Ordinances and Policies

Chapter 4: Ordinances and Policies

Community engagement findings are the foundation for ordinance and policy recommendations.

Over 600 people answered the question, "How do you rate the following walking conditions in Cedar Rapids?" Possible answers were given on a five-point scale including excellent, good, neutral, not good, and bad. The conditions with the most positive ratings were:

1. Location/placement of curb ramps at intersections (60%)
2. Terrain for walking (56%)
3. Crosswalk marking maintenance (51%)

As the chart in Figure 1 shows, the community recognizes positive aspects of Cedar Rapids' walkway network. However other aspects need to be improved. The public holds unfavorable views about the extent of the current sidewalk network, the condition of walkway surfaces, crossing busy streets, winter walkway maintenance, and the number of destinations that are within easy walking distance. Ordinances and policies can be altered to address these community concerns. Many of the recommendations in this section apply specifically to high pedestrian infrastructure demand areas (also referred to as high priority areas) (Figure 2), which were determined through the analysis explained in Chapter 3. Recommendations are divided into five overall strategies, each of which is supported by a set of specific actions.

Figure 1. Percentage of respondents who rated walking conditions as "Excellent" or "Good". Conditions shown in green are addressed in Chapter 4.

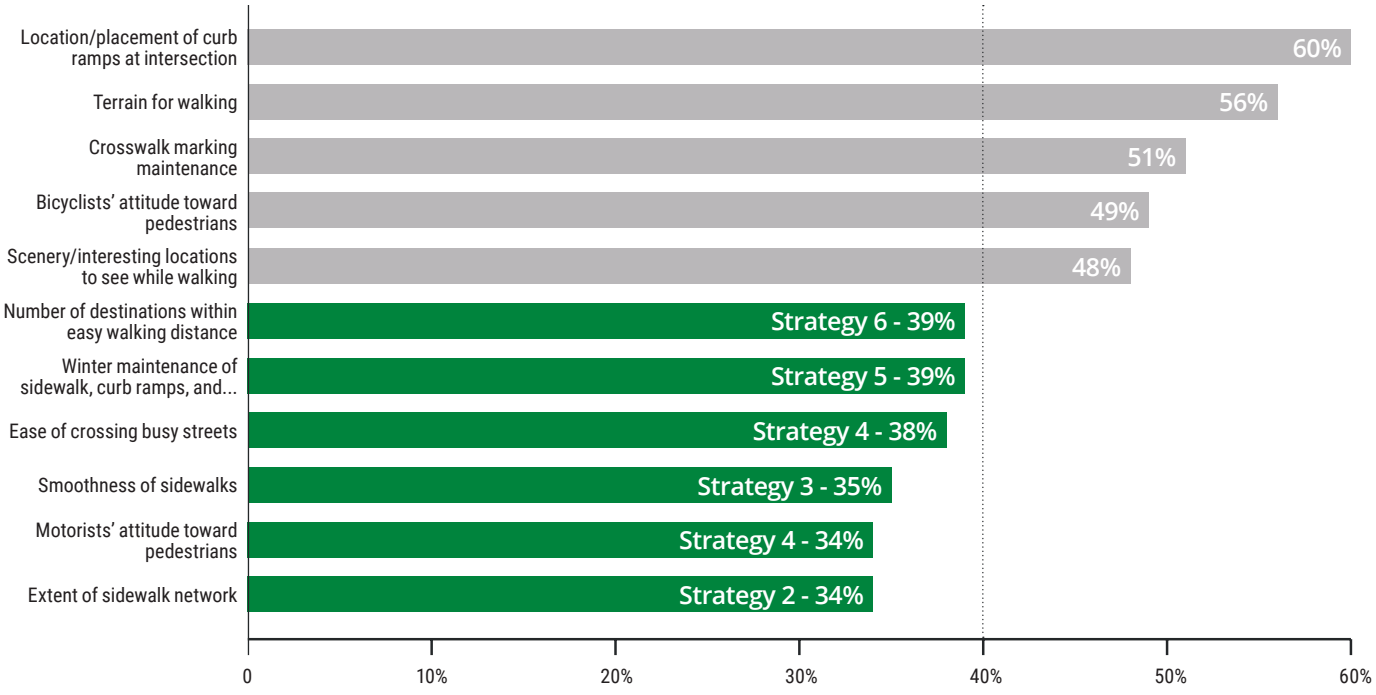
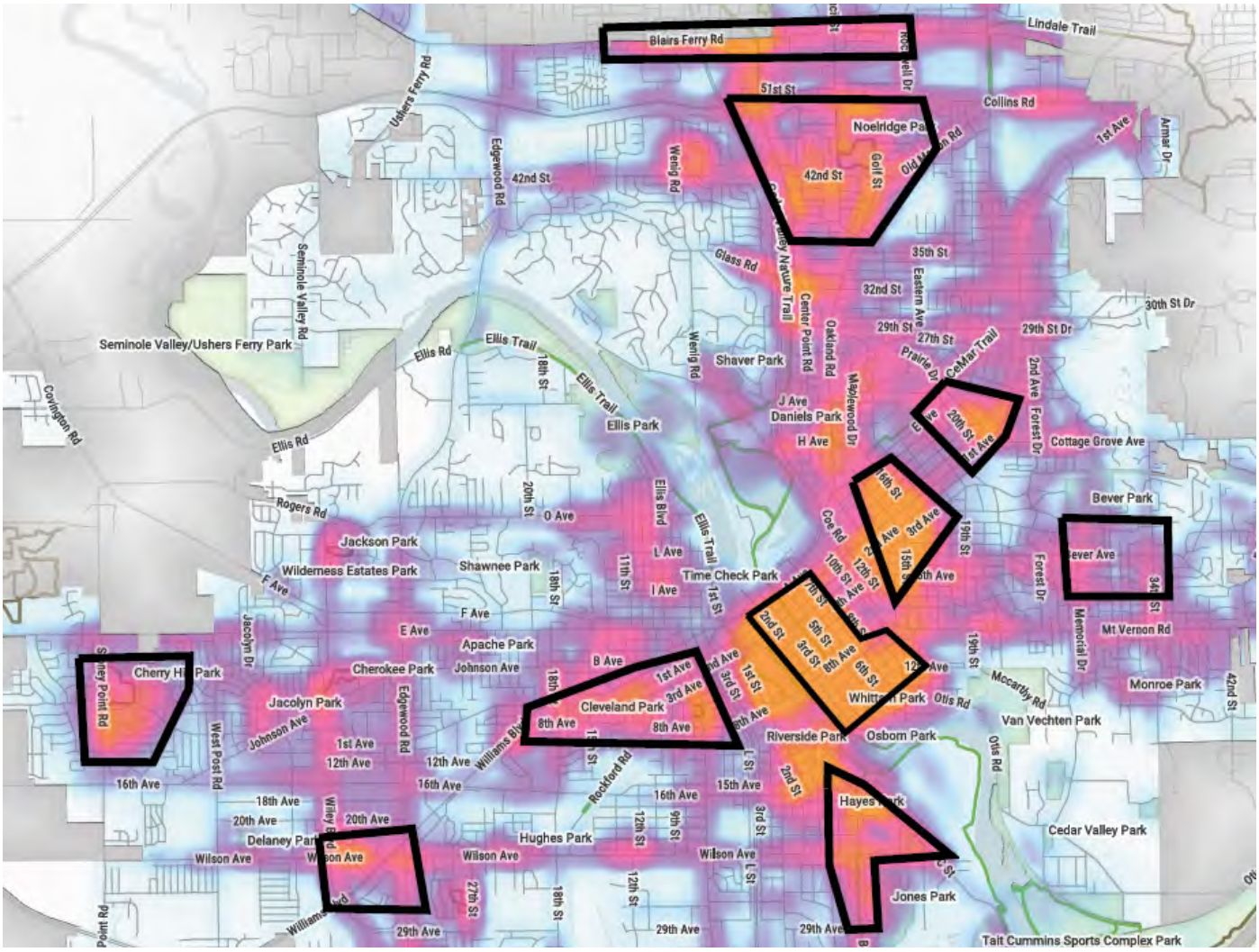


Figure 2. Areas outlined in black have high pedestrian infrastructure demand, as determined in the analysis explained in Chapter 3.



Strategy 2: Expand the Sidewalk Network

The largest category of comments collected from survey respondents were those in favor of more sidewalks, with only 34% of respondents giving a favorable rating to the current extent of the sidewalk network. In open-ended comments, respondents asked for more sidewalks or trails, for sidewalk gaps to be completed, and for the overall network to be more connected and walkable. These pro-sidewalk comments were in addition to the over 1,000 problem spots and desired routes that would benefit from sidewalk construction indicated through mapping activities during community engagement. The sidewalk network can be expanded in both developing and developed neighborhoods through amended codes and guidelines.

Action 2.1: Amend subdivision regulations to speed up sidewalk installation

Cedar Rapids' subdivision regulations stipulate that sidewalks should be built along the public street frontage of any lot in accordance with the Design Standards Manual before a certificate of occupancy is issued (City of Cedar Rapids Code of Ordinances, Chapter 31 Subdivisions, 31.06 (h)). This means that streets, curbs and gutters, and utilities are installed by the developer, but sidewalks may be the responsibility of homebuilders or individual property owners. The 2012 Sidewalk Installation Policy requires sidewalks in front of newly developed properties except in industrial areas.[1] Subdivision regulations permit the deferral of sidewalk construction, per the 2012 Sidewalk Installation Policy. Because not all lots are necessarily developed in a

1 http://cms.revize.com/revize/cedarrapids/document_center/PublicWorks/Sidewalk%20Installation%20Policy.pdf

Figure 3. A gap in the sidewalk network at a vacant lot on the northwest side of Cedar Rapids (source: Google)

timely manner within residential subdivisions, undeveloped lots can create gaps of missing sidewalks (Figure 3), which reduces the walkability of a neighborhood.

Many municipalities in neighboring Wisconsin require sidewalks to be built at the same time as streets. In Middleton, a suburb of Madison, this policy has been in place for several decades in the community's land division ordinance. The result is a connected pedestrian network for residents of new neighborhoods (Figure 4). Early sidewalk installation reduces administrative paperwork for City staff, who do not need to track sidewalk assessment agreements. Obstacles such as trees, fences, retaining walls, and steep grades are overcome before building construction, rather than during or after. The upfront cost of sidewalk installation is also included in the price of a lot, reducing homebuilding costs to new homeowners. Homebuilders drive equipment over one consolidated location across the sidewalk, limiting damaged areas that will need to be replaced. Some homebuilders lay gravel over the sidewalk to limit this damage, avoiding replacement costs.

Subdivision regulations should be amended to require sidewalk installation within five years from the date a development is final platted, or when 75% of the lots are developed, whichever occurs sooner. No matter who is the owner of a lot—the developer, builder, or private property owner—the current owner at that time will be the party responsible for sidewalk construction.

Figure 4. Middleton WI, a suburb of Madison, require developers to construct sidewalks at the same time streets are constructed. (source: Google)

Action 2.2: Transition to 100% public funding for new sidewalks in high pedestrian infrastructure demand areas

In 2017 Cedar Rapids adopted a New Sidewalk Construction Special Assessment Policy.[2] The policy includes the following rules for new sidewalks in already developed neighborhoods:

- Property owners can submit a petition to the City for sidewalk construction, but the owner is generally responsible for the total cost of the construction. For residentially zoned properties that have not submitted a petition, the City pays for the total cost of construction; for all other properties, the City and the property owner each cover half the total cost of construction.
- Grants applied to sidewalk construction are first credited for the City's cost, and then the property owner's cost.
- Financial assistance is available for owner-occupied single family residential households with low or moderate income. City cost share ranges from 50% to 90%.
- If the City orders a property owner to build a sidewalk, the City may build the sidewalk if the property owner does not comply, and then assess the cost to the property.

The current policy of combined public and private funding should transition to 100% public funding in areas with high pedestrian infrastructure demand, as determined through the analysis in this Plan. This policy will more accurately reflect that sidewalks are a benefit for the entire community and

2 http://cms.revize.com/revize/cedarrapids/49-17-033%20Amend%20Sidewalk%20Construction%20Special%20Assessment%20Policy%20Policy.pdf

not individual property owners. Petitions and assessments will no longer be needed, reducing administrative tasks on City staff. Outside these areas, projects would continue to be funded by property owners. Grants and financial assistance should still be used when possible to assist property owners in non-priority areas. Topeka, Kansas transitioned to this model of public funding in high priority areas in 2016, to expand the sidewalk network in a more equitable manner for neighborhoods with the greatest demand. City staff should use the Pedestrian Infrastructure Demand map (Figure 3 in Chapter 3) to determine the priority level of requests. Orange areas should be a high priority, pink areas medium priority, and blue areas low priority.

Action 2.3: Amend the minimum sidewalk width from four feet to five feet in the City code

Current ADA guidelines, published in the US Access Board's Public Rights-of-Way Accessibility Guidelines (PROWAG), require a minimum of four feet sidewalks. Five feet passing zones are also required every 200 feet. The National Association of City and Transportation Officials recommends sidewalk widths of five to seven feet in residential settings and eight to 12 feet in downtown or commercial areas.[3] The Cedar Rapids Supplement to the SUDAS Design Manual requires a 5' minimum for sidewalk width.

However, City code requires that all new sidewalks be built only to a width of at least four feet (City of Cedar Rapids Code of Ordinances, Chapter 9 Streets, Alleys and Sidewalks, 9.17 (a)). City code should be amended to increase the minimum sidewalk width from four feet to five feet, reflecting current guidelines.

Action 2.4: Develop context-sensitive pedestrian design guidelines as a supplement to updated regulations

98% of respondents to a visual preference survey during the community engagement process preferred wide sidewalks. Determining ideal sidewalk and buffer widths based on the surrounding context will accommodate pedestrian comfort more than a universal minimum width. In addition to updating the minimum width in city codes, the City should develop pedestrian design guidelines to provide more detailed guidance for developers, planners, and designers. Traffic volumes, speeds, road width, pedestrian volumes, land use, proximity to vulnerable users (i.e. children, seniors, individuals with disabilities), and other factors should be used to determine appropriate sidewalk and buffer width. Generally, as motorized traffic speeds and volumes rise and land use density increases, sidewalks or buffers should grow in width. High pedestrian volumes should also trigger requirements for wider sidewalks and buffers (Figure 5). Elements within the buffer will also enhance pedestrian comfort and safety: street trees, sidewalk-oriented lighting, public art, benches, and other amenities. The City is currently working on a manual that will be used to determine the appropriate streetscaping along roadways (including lighting, signage, benches, etc.)

Figure 5. Design guidelines require wider sidewalks in high traffic areas

Strategy 2 Summary: Expand the Sidewalk Network

Number	Action	Responsible Department(s)
2.1	Amend subdivision regulations to speed up sidewalk installation	Development Services Community Development
2.2	Transition to 100% public funding for new sidewalks in high pedestrian infrastructure demand areas	Public Works
2.3	Amend the minimum sidewalk width from four feet to five feet in the city code	Public Works: Engineering Division
2.4	Develop context-sensitive pedestrian design guidelines as a supplement to updated regulations	Public Works: Engineering Division

3 https://nacto.org/publication/urban-street-design-guide/street-design-elements/sidewalks/

Strategy 3: Improve condition of existing sidewalks

During community engagement, 65% of respondents to the survey gave an unfavorable rating to the condition of existing sidewalks. This finding suggests that the City should allocate more resources to pavement repair to provide a better level of service to Cedar Rapids residents.

Sidewalk repair funding policies fall into three categories:

1. **Individual Property Owner Funded:** Property owners are responsible for funding the repair or reconstruction of sidewalks adjacent to the properties they own. This is the most common sidewalk repair funding model.
2. **Community-Funded Repairs:** The municipality takes responsibility for repairing all sidewalks, typically using general funds, transportation funds, or annual assessments based on lot frontage length.
3. **Hybrid Approaches:** A combination of the first two models. Hybrid approaches may include special districts where community funding is used, and/or cost-sharing programs.

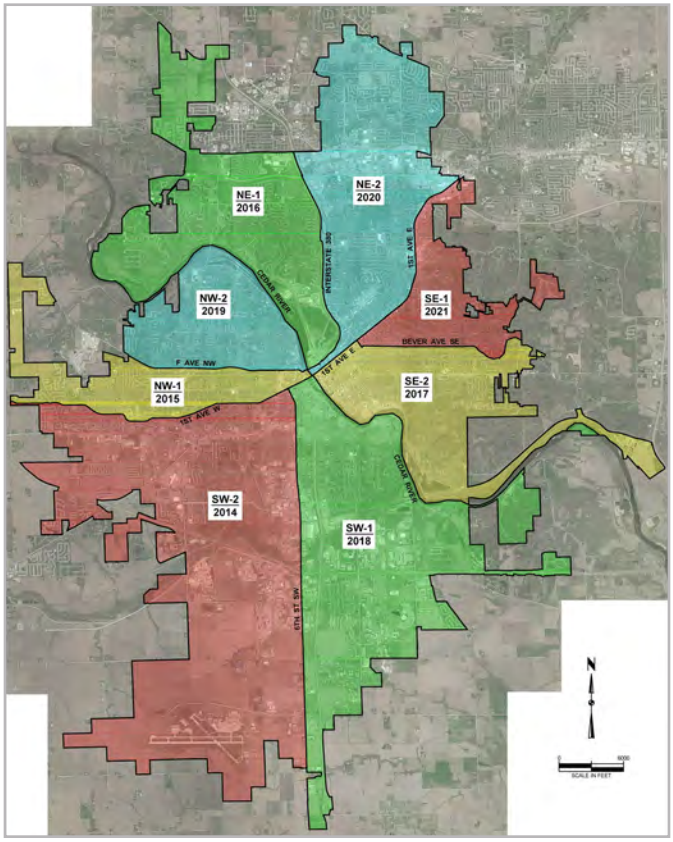
Cedar Rapids currently has a hybrid approach for sidewalk repair. In 2015, the City issued a new Sidewalk Repair and Reimbursement Policy. Per the policy,[4] the City reimburses 35% of a unit cost (determined on an annual basis), calculated by square feet, up to $1,000 within a four-year period.

The City also adopted a Sidewalk Repair Financial Assistance Policy in 2015. The policy is meant to "assist those property owners of low and moderate income, on whom the sidewalk repair costs place an undue financial burden."[5] The City covers 50 to 75% of the total repair cost, based on property owner income levels.

The city is divided into eight sidewalk repair districts (Figure 6), each of which is inspected on a rotating schedule, so that one district is inspected by the City every eight years. If the City determines through its inspections that a repair is needed, the property owner is given notice. If a property owner does not complete a requested repair within a specified time frame, the sidewalk will be repaired by the City. The total cost of sidewalk repairs completed by the City (or the City-hired sidewalk contractor) are assessed to the property owner and are not eligible for reimbursement. If the cost of repair exceeds $500, the property owner may defer full payment. The City will provide an assessment schedule to the Linn County Treasurer to add to the property tax bill in ten annual installments plus nine percent interest.[6]

A number of City documents are available to help property owners understand the Sidewalk Repair and Reimbursement Policy. There are three policies and two application forms related to sidewalk repair.[7] Navigating the sidewalk repair process can be cumbersome for property owners, especially for those with limited abilities, financial means, or time to understand the process.

Figure 6. The City's eight sidewalk repair districts and the year in which each one is inspected



4 http://cms.revize.com/revize/cedarrapids/document_center/PublicWorks/Sidewalk%20Repair%20and%20Reimbursement%20Policy.pdf

5 http://cms.revize.com/revize/cedarrapids/Public%20Works/Sidewalk%20Repair/Financial%20Assistance%20Policy%20on%20Sidewalk%20Repair%20March%202015.pdf

6 http://cms.revize.com/revize/cedarrapids/Public%20Works/Sidewalk%20Repair/Sidewalk%20Policy%20and%20ROW%20PERMITTING%20FAQ.pdf

7 http://www.cedar-rapids.org/local_government/departments_g_-_v/public_works/property_owner_responsibility.php

Action 3.1: Consider piloting the City-hired sidewalk contractor as the default for sidewalk repairs

The City should consider piloting City-hired contractors as the default for performing sidewalk repair. Only if the property owner wishes to find their own contractor or do the work themselves, would the City-hired contractor not be used. Currently it can take up to two years for a sidewalk to be repaired, from the time that the City provides a notice to the property owner, until the City-hired contractor completes the work. This is because a property owner is given approximately six months to complete the repairs or hire their own contractor, before the City-hired contractor can receive a work order to begin repairs. With the majority of notices being provided each May through August, the City currently reinspects only twice a year to see if the property owner has repaired sidewalks.

Cities that currently use the City-hired contractor as the default option, such as Minneapolis, MN, have reported large cost savings for individual property owners, compared to defaulting to property owner-hired contractors.[8] This is because a City-hired contractor is able to give volume discounts through reduced mobilization and concrete delivery costs. City inspectors can also focus their work on one contractor working on adjacent properties, rather than multiple contractors on properties scattered throughout an inspection zone. The sidewalk repair process is also completed in one construction season, rather than two (with property owners still being given one construction season to complete repairs on their own). A drawback is the need for a higher level of contract management and inspection of contractor work. As contractors compete to reduce bids and increase efficiencies, development of and adherence to specifications will become more important.

Existing sidewalk reimbursement forms, permits, and applications should be consolidated as much as possible to streamline the process for residents and lessen administrative burden for city staff. The City should also advocate for a change of Iowa state statute to eliminate the requirement for certified letters notifying property owners of pending sidewalk repairs. Many certified letters are not retrieved by property owners because a signature is required at the time of delivery. Property owners who are not home during mail delivery are required to visit their local Post Office to sign for the letter. City staff have recently begun sending a postcard in addition to the certified letter to ensure better communication.

Action 3.2: Develop an annual assessment fee model for certain sidewalk districts

Some cities have utilized an annual assessment fee program for sidewalk maintenance to spread costs more equitably and reduce administrative tasks. In 2014, Ithaca, NY divided the city into five districts and began collecting assessments based on building type and lot frontage length. This dispersed the cost of sidewalk maintenance and construction in a predictable manner so that no property owner receives a large, one-time assessment fee. Property owners who paid for sidewalk repairs or construction in the past 20 years receive a discounted assessment amounting to 1/20th of the cost of past work. This community of 31,000 residents collects $840,000 per year in fees.[9] Similarly, the City of Rochester, NY charges an embellishment fee on property tax bills for hazardous sidewalk repairs. The fee is based on each property's front footage, with the average amount collected per property at $7.18 per year.[10]

It is recommended to consider a district-based assessment program for areas where it is not practical for individual property owners to complete their own repairs. It could also be a model in places like the MedQuarter or Downtown District. City crews or City-hired contractors would be responsible for all sidewalk maintenance within district boundaries. There are several advantages to this approach:

- Oversight and quality control is more manageable when all repair work is completed by City or City-contracted crews; it is easier to maintain predictability of the sidewalk network.
- City-led repair programs reduce the financial burden on low and moderate-income households by eliminating large one-time fees or interest costs.
- It allows administrative processes to be simplified by removing paperwork related to property owner responsibility, reimbursement, and noncompliance.
- Maintenance funding and responsibilities would be identified for alley walks in the Rolling Green and Northbrook subdivisions. Currently these pedestrian facilities not maintained.

8 http://www.minneapolismn.gov/publicworks/sidewalks/sidewalks_repair

9 http://www.betterenergy.org/wp-content/uploads/2018/05/MN-Walks_Sidewalk-Repair-Funding-Guide.pdf

10 http://www.cityofrochester.gov/article.aspx?id=8589936477

The City should adopt an ordinance that reinforces Iowa Code 364.12 (2b), which states sidewalk maintenance is the responsibility of the adjacent property owner.

Action 3.3: Make it easier to locate sidewalk assessment information

A listening session with realtors and title companies revealed they are having trouble finding assessments during property sales. Sidewalk repair assessments are often not communicated during the home sale process. Sometimes a property with an assessment will be sold to a buyer, but the buyer will not learn about the assessment until after the sale. City staff have recently sent the Cedar Rapids Realtors Association a list of properties that will receive assessments.

In addition to implementing Action 3.1, which will shorten the sidewalk repair window from a maximum of two years to less than a year, the City should publish contact information for the Sidewalk Repair Inspection program. This will provide realtors with a point of contact so that prospective homebuyers know if a sidewalk repair is pending.

Action 3.4: Amend ordinances to include edging and protrusions standards for ADA compliance

City of Cedar Rapids Code §9.20 (a) requires that tree branches overhanging sidewalks be at least ten feet above the pavement surface to provide adequate clearance. Requirements regarding edging of vegetation and protrusions into the pedestrian pathway are not included in the ordinance.

When grass and soil build up on the outer edges of the sidewalk, it encroaches on the pedestrian pathway and narrows the effective clear width. Overgrown sidewalks are more difficult for people with disabilities to navigate.

In most communities, property owners are responsible for vegetation management (like winter maintenance responsibilities), which is sometimes specified in local ordinance. The Federal Highway Administration (FHWA) recommends that communities enforce existing ordinances to control overgrown vegetation on the sidewalk network. For communities with no ordinance in place, it is recommended to pass an ordinance that includes standards and enforcement measures.[11]

Cedar Rapids should codify standards for sidewalk edging and protrusions in the city code. An edging ordinance should require property owners to trim and maintain vegetation along abutting sidewalks as needed to maintain a minimum four- or five-foot clear width. A protrusion ordinance should specify that objects protruding more than four inches into the pedestrian pathway must be shorter than 27 inches or taller than 80 inches, or a curb must be built around the object (per ADA).

Strategy 3 Summary: Improve condition of existing sidewalks

Number	Action	Responsible Department(s)
3.1	Consider piloting the City-hired sidewalk contractor as the default for sidewalk repairs	Public Works: Engineering Division
3.2	Develop an annual assessment fee model for certain sidewalk districts	Public Works: Engineering Division
3.3	Make it easier to locate sidewalk assessment information	Public Works: Engineering Division
3.4	Amend ordinances to include edging and protrusions standards for ADA compliance	Public Works: Engineering Division

11 https://safety.fhwa.dot.gov/ped_bike/tools_solve/fhwasa13037/chap5.cfm

Strategy 4: Improve crossing conditions

Only 38% of respondents to the online survey rated "ease of crossing busy streets" as good or excellent. On a related note, "motorists' attitudes towards pedestrians" was rated as good or excellent by only 34% of respondents. Survey comments and listening sessions with community members indicated that motorists' attitudes were most problematic at crossing locations. Improving visibility and traffic control will increase safety and predictability.

The FHWA's Guide for Improving Pedestrian Safety at Uncontrolled Crossing Locations provides guidance on appropriate pedestrian crash countermeasures based on traffic speeds and volumes. In combination with the following actions, these best practices can be used to develop pedestrian crossing safety policies and guidelines for Cedar Rapids.

Action 4.1: Require high-visibility, enhanced crossings in high-priority areas

Respondents to the online survey preferred well-marked crosswalks, raised crosswalks, and median islands as "comfortable" or "very comfortable" crossing types. These treatments should be used at marked crossings in high priority areas identified in the pedestrian infrastructure demand analysis. Once these locations are addressed, the City should install similar treatments across Cedar Rapids where traffic speeds, volumes, crash history, land use, and other factors merit it. At minimum, continental crosswalk markings should be used to define crossing paths, which are more visible to motorists than standard crosswalks (Figure 7).[12]

Figure 8 from FHWA Guide for Improving Pedestrian Safety at Uncontrolled Crossing Locations[13] provides additional countermeasures that could be used at certain crossing locations, based on the number of travel lanes and traffic speeds and volumes. For example, high-visibility crosswalk markings, parking restrictions on crosswalk approaches, and adequate nighttime lighting levels should always be considered. Pedestrian hybrid beacons and advance yield/stop signs are appropriate countermeasures on high-speed roads. Figure 8 also includes criteria for raised crosswalks, in-street pedestrian crossing signs, curb extensions, pedestrian refuge islands, and road diets. FHWA Safety Effects of Marked Versus Unmarked Crosswalks at Uncontrolled Locations[14] recommends other crossing improvements to supplement a marked crosswalk if:

- the speed limit exceeds 40mph,
- daily traffic volumes are 12,000 or greater on four lane roads without medians or crossing islands, or,
- daily traffic volumes are 15,000 or greater on roads with medians or crossing islands.

While not included in Figure 8, Rectangular Rapid Flashing Beacons (RRFBs) should be considered by designers as an alternative to pedestrian hybrid beacons. FHWA Effects

Figure 7. The crosswalk on the left, at 1st Ave NE and 16th St NE, is less visible than the example on the right, which uses high-visibility markings to increase pedestrian safety.

12 http://americawalks.org/high-visibility-crosswalks/

13 https://www.fhwa.dot.gov/innovation/everydaycounts/edc_4/guide_to_improve_uncontrolled_crossings.pdf

14 https://www.fhwa.dot.gov/publications/research/safety/04100/

Figure 8. Application of pedestrian crash countermeasures by roadway feature (source: FHWA Guide for Improving Pedestrian Safety at Uncontrolled Crossing Locations).

Roadway Configuration	Speed Limit								
	≤30 mph	35 mph	≥40 mph	≤30 mph	35 mph	≥40 mph	≤30 mph	35 mph	≥40 mph
	Vehicle AADT <9,000			Vehicle AADT 9,000–15,000			Vehicle AADT >15,000		
2 lanes*	❶ 2 3 4 5 6	❶ ❸ 5 6 7	❶ ❸ 5 6 ❼	❶ 3 4 5 6	❶ ❸ 5 6 7	❶ ❸ 5 6 ❼	❶ 3 4 5 6 7	❶ ❸ 5 6 7	❶ ❸ 5 6 ❼
3 lanes with raised median*	❶ 2 3 4 5	❶ ❸ 5 7	❶ ❸ 5 ❼	❶ 3 4 5 7	❶ ❸ 5 ❼	❶ ❸ 5 ❼	❶ ❸ 4 5 7	❶ ❸ 5 ❼	❶ ❸ 5 ❼
3 lanes w/o raised median†	❶ 2 3 4 5 6 7	❶ ❸ 5 6 7	❶ ❸ 5 6 ❼	❶ 3 4 5 6 7	❶ ❸ 5 6 ❼	❶ ❸ 5 6 ❼	❶ ❸ 4 5 6 7	❶ ❸ 5 6 ❼	❶ ❸ 5 6 ❼
4+ lanes with raised median‡	❶ ❸ 5	❶ ❸ 5 7	❶ ❸ 5 ❼	❶ ❸ 5 7	❶ ❸ 5 ❼	❶ ❸ 5 ❼	❶ ❸ 5 ❼	❶ ❸ 5 ❼	❶ ❸ 5 ❼
4+ lanes w/o raised median‡	❶ ❸ 5 6 7 8	❶ ❸ 5 ❻ 7 8	❶ ❸ 5 ❻ ❼ 8	❶ ❸ 5 ❻ 7 8	❶ ❸ 5 ❻ ❼ 8	❶ ❸ 5 ❻ ❼ 8	❶ ❸ 5 ❻ ❼ 8	❶ ❸ 5 ❻ ❼ 8	❶ ❸ 5 ❻ ❼ 8

*One lane in each direction †One lane in each direction with two-way left-turn lane ‡Two or more lanes in each direction

Given the set of conditions in a cell,

❶ Signifies that the countermeasure should always be considered, but not mandated or required, based upon engineering judgment at a marked uncontrolled crossing location.

\# Signifies that the countermeasure is a candidate treatment at a marked uncontrolled crossing location.

The absence of a number signifies that the countermeasure is generally not an appropriate treatment, but exceptions may be considered following engineering judgment.

1 High-visibility crosswalk markings, parking restriction on crosswalk approach, adequate nighttime lighting levels
2 Raised crosswalk
3 Advance Yield Here To (Stop Here For) Pedestrians sign and yield (stop) line
4 In-Street Pedestrian Crossing sign
5 Curb extension
6 Pedestrian refuge island
7 Pedestrian Hybrid Beacon
8 Road Diet

This table was developed using information from: Zegeer, C. V., Stewart, J. R., Huang, H. H., Lagerwey, P. A., Feaganes, J., & Campbell, B. J. (2005), Safety effects of marked versus unmarked crosswalks at uncontrolled locations: Final report and recommended guidelines (No. FHWA-HRT-04-100); Manual on Uniform Traffic Control Devices, 2009 Edition, Chapter 4F. Pedestrian Hybrid Beacons; the Crash Modification Factors (CMF) Clearinghouse website (http://www.cmfclearinghouse.org/); and the Pedestrian Safety Guide and Countermeasure Selection System (PEDSAFE) website (http://www.pedbikesafe.org/PEDSAFE/).

of Yellow RRFBs on Yielding at Multilane Uncontrolled Crosswalks[15] found an 88% average compliance rate for motorists yielding to pedestrians at locations with RRFBs.

Action 4.2: Require Leading Pedestrian Intervals at high-conflict crossings

Leading Pedestrian Intervals (LPI) typically give pedestrians a three to seven second head start before parallel traffic receives a green light. At most intersections, LPIs allow pedestrians to cross most of the street before motorized traffic begins moving, establishing their right of way, improving visibility and reducing the amount of time they are exposed to turning traffic. LPIs have been shown to reduce pedestrian-vehicle collisions as much as 60% at treated intersections.[16] They are low-cost compared to other countermeasures, as they usually only require adjustments to existing signal timing.

Cedar Rapids should adopt a policy requiring LPIs to be used at signalized intersections with high pedestrian injury/fatality rates and frequent reports of near misses. They should also be considered at all intersections with heavy volumes of turning traffic conflicts.

15 https://www.fhwa.dot.gov/publications/research/safety/pedbike/10046/index.cfm
16 https://nacto.org/publication/urban-street-design-guide/intersection-design-elements/traffic-signals/leading-pedestrian-interval/

Action 4.3: Use automatic pedestrian signal phases in high pedestrian traffic areas

In high pedestrian traffic areas, pedestrian signal phases should automatically appear. When pedestrians face long delays, they are more likely ignore signals and cross when they perceive a gap in traffic, which can negatively impact their safety. Automatic pedestrian signals consistently reflect the time pedestrians have to cross streets, instead of requiring them to wait through a cycle where sufficient time may have existed. Data collected by traffic engineering staff can be used to tailor automatic phases to the locations, days, and times when pedestrian traffic is highest. Reductions in cycle lengths are also beneficial to reducing delays for pedestrians. The NACTO Urban Street Design Guide recommends cycle lengths of 60-90 seconds in urban areas.[17]

Strategy 4 Summary: Improve crossing conditions

Number	Action	Responsible Department(s)
4.1	Require high-visibility, protected crossings in high priority areas	Public Works: Traffic Engineering Division
4.2	Require Leading Pedestrian Intervals at high-conflict crossings	Public Works: Traffic Engineering Division
4.3	Use automatic pedestrian signal phases in high pedestrian traffic areas	Public Works: Traffic Engineering Division

Strategy 5: Improve winter walkway maintenance

Only 39% of survey respondents were satisfied with the City's sidewalk winter maintenance performance. Open-ended comments included those asking for increased enforcement of snow clearance. Federal regulations require sidewalk snow removal. The FHWA Guide for Maintaining Pedestrian Facilities for Enhanced Safety says that communities should have procedures in place to ensure walkways are only temporarily closed due to snow and ice. ADA requires local governments and property owners to remove snow within a reasonable period of time to maintain accessibility.

Winter maintenance recommendations encourage the City to expand the scope of their snow clearing responsibilities to provide a safer and more convenient walkway network year-round.

Action 5.1 Educate the public about sidewalk snow clearance

A website dedicated to sidewalk snow clearance will be a tool to communicate information to residents about responsible parties, rules, resources, fines, and inspections. A reporting mechanism for uncleared sidewalks should also be included, such as a link to the City's custom mobile app for reporting neighborhood problems.

Action 5.2: Shorten the required timeframe for snow removal

Cedar Rapids currently requires property owners to clear abutting sidewalks within 48 hours after snowfall (City of Cedar Rapids Code of Ordinances, Chapter 9 Streets, Alleys and Sidewalks, 9.11 (a)). This policy is more lenient than policies of most other Iowa communities.

Table 4. Snow removal timeframe policies in Iowa cities

City	Policy (hours)
Ames	10*
Sioux City	12
Burlington	24
Davenport	24
Iowa City	24
West Des Moines	24
Ankeny	24
Waterloo	48**
Des Moines	48
Cedar Rapids	**48**

*Within 10 daylight hours

**24 hours for Downtown, business districts, or anyone within a three-block radius of schools and hospitals

To quickly re-establish a safe travel environment for pedestrians after winter weather, it is recommended to amend the City's policy to 24 hours, matching the majority of communities in the state. This policy should also apply to sidewalks along City-owned properties, which may require additional resources.

17 https://nacto.org/publication/urban-street-design-guide/

Action 5.3: Require sidewalk snow clearance to a width of five feet on all sidewalks

The City Code currently requires sidewalks to be cleared of snow for a width of four feet. It is recommended that all sidewalks be cleared to a width of five feet, where sidewalks are five feet or greater, to comply with current ADA guidelines.

Action 5.4: Shorten the timeline for sidewalk snow clearance abatement

Currently the City of Cedar Rapids gives verbal or written notice to noncompliant property owners. An inspector then revisits the property after 48 hours. If the property fails the inspection, the City may proceed with abatement to bring the sidewalk into compliance. This includes removing the snow and assessing the cost against the offending property owner. Fees are based on the labor and equipment needed to clear the sidewalk (Table 5). City crews generally clear noncompliant property owners' sidewalks within one week of a snowfall.

Table 5. Equipment and labor costs for snow removal

Equipment	Hourly Rate
Employee Rate	$49.05
Bombardier	$23.50
½ ton pickup	$19.45
Snow thrower	$7.15

To shorten this timeframe, some cities use a no-warning policy. Madison, WI has used a no-warning policy for over 30 years, issuing progressive fines as soon as the snow removal timeframe has passed (repeat offenders are fined more than first time offenders). No verbal or written warning is given. After the citation is delivered, the property owner has until 7am of the next day to clear the sidewalk. If the sidewalk remains uncleared, the City's crews clear the sidewalk and the cost is added to the fine.[18]

After a season of education has occurred, Cedar Rapids should adopt a similar no-warning policy, which will decrease administrative burden on city staff responsible for inspecting noncompliant properties.

Action 5.5: Establish a fine schedule for violating the sidewalk snow clearance ordinance

Currently the City does not charge a fine for sidewalk snow clearance violations. The only fee charged is for City crews to clear the sidewalk, based on an hourly rate depending on the equipment used. This is unlike weed and vegetation violations, which include an administrative fee of $119.41 plus the cost of cutting and removal.

Some cities charge different fees based on property type: Boston, MA charges $200 for commercial properties that fail to remove snow, $100 for residential properties with more than 16 units, and $50 for residential properties with fewer than 16 units.[19] Madison, WI charges $124 for first time offenders and $187 for repeat offenders.

The City should establish a fine schedule that matches similar violations with which residents are already accustomed. Adopting a fine schedule will increase compliance and provide funds to cover the cost of administration.

Action 5.6: Dedicate more staff time to enforcement

Communities with effective sidewalk clearance use staff time – such as police, public works, parking enforcement, or dedicated snow and ice inspectors – for snow removal enforcement.[20] Dedicating more staff time to snow removal enforcement is recommended, since only one employee is responsible for the bulk of enforcement.

Action 5.7: Develop a snow removal priority network

In northern, winter climate states, communities have traditionally relied on property owners to clear sidewalks after snowfalls. Public agencies typically clear sidewalks bordering municipal properties, such as civic buildings and parks. Because private property owners are responsible for clearing the remaining sidewalk network, many segments are left untouched, due to lack of awareness or desire on the property owners' part, physical inability to clear sidewalks of snow, vacationing property owners, and vacant properties.

18 http://www.betterenergy.org/wp-content/uploads/2018/05/MN-Walks_Sidewalk-Snow-Clearing-Guide.pdf

19 https://safety.fhwa.dot.gov/ped_bike/tools_solve/fhwasa13037/research_report/chap2d.cfm

20 One strategy that the FHWA found unsuccessful is the issue of warnings before citations, which prolongs the time that the sidewalk remains impassable and creates extra administrative work for the jurisdiction.

Figure 9. This map shows the sidewalk snow removal priority routes in Bangor, ME (source: City of Bangor)

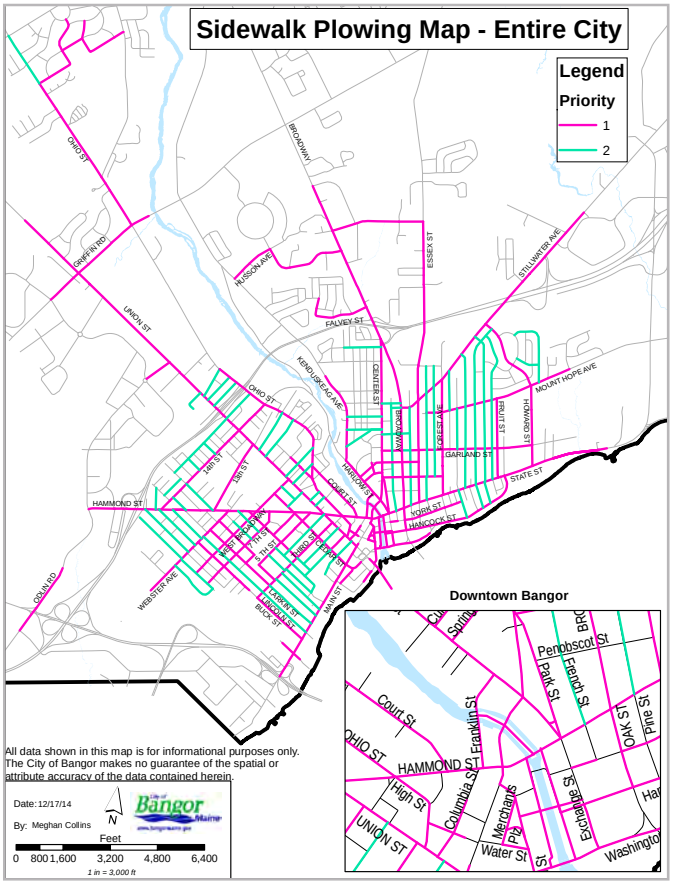


Figure 10: Snow blowing machines and can detect and avoid obstacles on the sidewalk to prevent equipment damage

Most communities do not have the resources to clear their entire sidewalk networks. Instead many of them are turning to snow removal priority networks as a more feasible solution. Snow removal priority networks connect facilities that are critical to the community's walkability. Cedar Rapids does not have established snow removal priority routes for its pedestrian network, although it does clear sidewalks Downtown and along streets with no buffer/boulevard between the sidewalk and street. While Iowa Code 364.12 (2b) assigns responsibility for sidewalk snow and ice removal to adjacent property owners, this is not always reflected in current practice.

Examples of communities where the City clears sidewalks are in Minnesota, New York, and Maine. Duluth, MN identifies five different types of priority routes comprising 100 miles of walkways that are cleared by the City and County following a snow event: Safe Routes to School, high pedestrian traffic areas, medium pedestrian traffic areas, transit routes, and park properties.[21] Rochester, NY uses private contractors to clear 878 miles of sidewalks, including all sidewalks that are at least five feet wide. Bangor, ME uses general funds to clear almost 60 miles of sidewalks across the city using a two-tier priority system (Figure 9).[22] Embellishment fees on property taxes can also be used and are typically minuscule ($35 annually in Rochester, NY[23]).

At face value, this strategy may seem more expensive than relying on property owners. While it does require more public funding, it reduces financial burdens on individual property owners. More importantly, city-led snow and ice clearance programs guarantee a reliable sidewalk network during winter.

An updated sidewalk maintenance plan should include a list of priority routes for snow removal throughout the city.

21 http://www.duluthmn.gov/winterwatch/sidewalk-priority-maps/

22 http://www.bangormaine.gov/wintermaintenance

23 http://www.cityofrochester.gov/sidewalkplowing/

Figure 11 and 12: Curb ramps and pedestrian push buttons should be cleared after snowfall. Some agencies use snow gates to keep curb ramps and driveways clear of snow during plowing. (source: Walk Boston, left; Argus Leader, right)

Pedestrian infrastructure demand areas shown in Figure 3 of Chapter 3 may be used as a starting point. A communications strategy should make it clear that the City is responsible for clearing priority routes, but all other sidewalks are still the responsibility of property owners.

Action 5.8: Clear snow piles at corners with sidewalks

Curb ramps are common trouble spots during winter weather because responsibility for keeping them clear of snow and ice is often undefined (Figure 11). Piles of snow are typically pushed onto curb ramps by snow plows, creating even more obstacles for pedestrians. Approaches to clearing curb ramps vary by jurisdiction. Some local governments assume this responsibility in addition to clearing streets. Others rely on property owners to keep curb ramps clear, which is the case in Cedar Rapids.

Implementing Action 5.7 would address this problem in high priority areas (shown in Figure 2) since sidewalk equipment would clear snow along entire blocks. If Action 5.7 is not implemented, the City should be responsible for clearing curb ramps in high priority areas. In non-priority areas, property owners may still be responsible for clearing curb ramps. Equipping snow plows with snow gates is an alternative that would give operators more control over where snow is deposited and would help keep curb ramps clear (Figure 12).

Pedestrian push buttons are located near curb ramps and must be made accessible after snowfall. Depending on the location, either the City or the property owner should clear a path from the pedestrian zone to the push button if it is not immediately accessible.

Action 5.9: Improve snow removal at bus stops

Cedar Rapids Transit is a city-owned department that provides fixed route bus service. Among other responsibilities, a maintenance crew of five clears snow at bus stops with shelters or benches within two to three days after a snowfall. The crew uses pick-up trucks with plows, snow blowers, and shovels. Bus stops without amenities are typically located at corner curb ramps. If not cleared by an adjacent property owner, the maintenance crew clears them on a case-by-case basis, usually at the request of bus drivers. Passengers are encouraged to wait at the closest cleared driveway if curb ramps have uncleared snow piles.

Figure 13. Metro Transit in the Minneapolis/St. Paul area removes snow at all Metro-owned shelters (source: Metro Transit)

Actions 5.7 and 5.8 will assist with addressing snow removal at curb ramp bus stops, but only in high priority areas shown in Figure 2. Additional resources should be allocated to proactively clear all bus stops (Figure 13). Snow gates attached to plows (Figure 12) may also be used to reduce the amount of snow pushed onto bus stops.

Action 5.10: Clear shared use paths within 24 hours of snowfall

The Cedar Rapids Parks Department clears all sidepaths after adjacent streets are plowed. Some cities also prioritize snow clearance on shared use paths that do not serve as sidewalks. Well-maintained shared use paths provide year-round active transportation and recreational opportunities for pedestrians, bicyclists, and other users. Minneapolis, MN has city crews dedicated to clearing shared use paths and off-street trails within 24 hours after a snowfall has ended.[24] Madison, WI has a goal of clearing its busiest shared use paths by 7:00 AM on weekdays.[25] The City should set a goal of clearing all shared use paths within 24 hours of snowfall, aligning with the proposed requirements for property owners.

Action 5.11: Implement snow and ice clearing assistance programs for select populations.

Clearing snow and ice from sidewalks can be challenging for certain populations, including older adults and people with disabilities. The City could create and manage a citywide program to assist with clearing snow and ice from sidewalks for select populations. While older adults or those with physical disabilities are often identified for assistance programs, the City could collect and evaluate additional data to determine if these are the populations most in need of assistance based on compliance rates or if there are other criteria that should be considered. This program would contribute to a consistent and equitable offering of services across Cedar Rapids.

Creating and managing a citywide program would require City staff for administrative and program management work, further evaluation is needed to determine if existing staff capacity is adequate to take on this effort or if additional staff resources would be required. As a low-cost alternative, the City could partner with organizations that match people in need of assistance with volunteers who clear sidewalks.

Establishing a free sand program would also be an inexpensive way to help low-income populations clear their sidewalks. Minneapolis, MN and Madison, WI both offer free sand to residents after snowfall.[26] Cedar Rapids could distribute sand at community centers, parks, or other accessible facilities in target areas.

Strategy 5 Summary: Improve winter walkway maintenance

Number	Action	Responsible Department(s)
5.1	Educate the public about sidewalk snow clearance	Public Works: Street Maintenance Division City Manager: Communications
5.2	Shorten the required timeframe for snow removal	Public Works: Street Maintenance Division
5.3	Require sidewalk snow clearance to a width of five feet on all sidewalks	Public Works: Street Maintenance Division
5.4	Shorten the timeline for sidewalk snow clearance abatement	Public Works: Street Maintenance Division
5.5	Establish a fine schedule for violating the sidewalk snow clearance ordinance	Public Works: Street Maintenance Division
5.6	Dedicate more staff time to enforcement	Public Works: Street Maintenance Division
5.7	Develop a snow removal priority network	Public Works: Street Maintenance Division
5.8	Clear snow piles at corners with sidewalks	Public Works: Street Maintenance Division
5.9	Improve snow removal at bus stops	Transit
5.10	Continue to clear shared use paths	Public Works: Street Maintenance Division
5.11	Implement snow and ice clearing assistance programs for select populations.	Public Works: Street Maintenance Division

24 http://www.minneapolismn.gov/www/groups/public/@publicworks/documents/webcontent/wcmsp-210946.pdf

25 https://www.cityofmadison.com/residents/winter/documents/PWBicycleFacilitiesMaintenance.pdf

26 http://www.minneapolismn.gov/snow/shovel/snow_freesidewalksand; http://www.cityofmadison.com/residents/winter/SnowIce/sand.cfm

Strategy 6: Add more destinations within easy walking distance

Only 39% of community engagement participants reported there was an excellent or good amount of destinations within easy walking distance in Cedar Rapids. Among the top-rated walking destinations were parks and recreation centers, restaurants and cafes, and grocery stores. In Cedar Rapids, the planning process for the Mount Vernon Road Corridor Action Plan revealed an interest from the public in promoting the development of walkable destinations for the community. The Action Plan for the corridor included recommendations to establish design standards and restrict land uses to promote local, eclectic uses and walkable designs.

Cedar Rapids already promotes walkable developments through several initiatives. It is recommended to continue and expand these programs.

Action 6.1: Continue to promote walkable developments through planning and zoning

Cedar Rapids recently undertook a rezoning effort to align its zoning code with the City's comprehensive plan. The update to Chapter 32 Zoning, which took effect on January 1, 2019, modernized and simplified the zoning code and provided more flexibility. The Zoning Code puts a strong emphasis on accommodating pedestrians and encouraging walkable, mixed-use development. Several new suburban zoning districts[27] are "intended for dense, diverse, walkable areas that facilitate residential, commercial, employment, and recreation uses in a single location" (Chapter 32.02 (D)). Other new zoning districts[28] encourage compact, pedestrian-friendly development in traditional mixed-use neighborhoods. The Urban Residential (U-NR, U-VR) district and proposed Urban Form Districts support walkable and transit-oriented environments. The Zoning Code also encourages infill and redevelopment of commercial, residential and mixed-use areas to maintain dense, walkable environments.

Past planning efforts have also examined how to make the city more walkable using regulatory tools. The City's comprehensive plan, updated in 2017, promotes the concept of compatibility between land uses: "If carefully done, the integration of uses can be achieved so that commute times become shorter, and neighborhoods become more walkable and interesting, all while preserving privacy, security and aesthetics."[29] The plan discusses certain land use typology areas, where walkability should be encouraged through built environment form and use.

Action 6.2: Promote walkable developments through economic incentives

The City provides financial incentives for infill redevelopment of vacant sites. Redevelopment tax credits, tax increment financing, and other incentives are used to concentrate development in existing compact, walkable areas. The Cedar Rapids Comprehensive Plan encourages the development of incentive programs for infill developers to incorporate walkable characteristics into their projects.

The City offers many incentives through its Economic Development Division, including Core District Reinvestment, Historic Preservation, Commercial Reinvestment, and Community Benefit. The City needs to continue to enforce its existing codes, which are designed to promote walkable urban environments.

Strategy 6 Summary: Add more destinations within easy walking distance

Number	Action	Responsible Department(s)
6.1	Continue to promote walkable developments through planning and zoning	Community Development
6.2	Promote walkable developments through economic incentives	Community Development

27 Suburban Mixed-Use Community Center (S-MC) and Suburban Mixed-Use Regional Center (S-MR)

28 Traditional Mixed-Use Center (T-MC) and Traditional Mixed Use Limited (T-ML)

29 http://cms.revize.com/revize/cedarrapids/Community%20Development/EnvisionCR/document/EnvisionCR%20Document,%203-28-17.pdf

Chapter 5 The Five Es

Chapter 5: The Five Es

Building a supportive environment for walking in Cedar Rapids can be accomplished, in part, through policy and programmatic interventions. These fall into five main categories: Education, Encouragement, Evaluation, Enforcement and Engineering (commonly referred to as the "five Es"). An effective approach integrates elements of all five components.

The following strategies and actions, organized according to these categories, are designed to address key objectives and opportunities for walking which were identified through community feedback. The strategies and actions are summarized in Table 1 and explained in greater detail below.

Table 1. Five Es Proposed Strategies and Actions Summary

Education		
Strategy	**Action**	**Responsible Party/ies**
7. Share the benefits of a walk-friendly community.	Develop a positive informational campaign aimed at residents, government officials, and business owners.	City Manager's Office
	Distribute information to Cedar Rapids residents, community organizations, business owners, and elected officials.	City Manager's Office
	Become a Platinum-level Walk Friendly Community.	City Manager's Office
Encouragement		
Strategy	**Action**	**Responsible Party/ies**
8. Provide opportunities to have a positive experience walking.	Implement an Open Streets event.	
9. Support Safe Routes to School planning and programs at all schools.	Develop a school walking map for youth.	Public Works School Board
	Develop Safe Routes to School Action Plans for all schools in Cedar Rapids.	Public Works School Board
	Promote the development of walking school buses at additional schools.	Public Works School Board
	Increase the number of school crossing guards.	Public Works School Board
	Launch a School Safety Patrol Program to supplement school crossing guards.	Public Works School Board AAA
10. Promote a destination-based program to encourage walking	Create a pedestrian wayfinding system to highlight community destinations and walking travel times.	Public Works
	Publish maps of walking routes in walkable, destination-rich areas of the city.	Public Works
Evaluation		
Strategy	**Action**	**Responsible Party/ies**
11. Analyze pedestrian crash data to target improvements	Regularly review and analyze pedestrian crash data.	Public Works
	Identify systemic safety issues and plan interventions.	Public Works
12. Gather data on pedestrian use	Establish a pedestrian count methodology and locations.	Corridor MPO Public Works
	Analyze initial count data and determine next steps for the program.	Corridor MPO Public Works

Enforcement		
Strategy	**Action**	**Responsible Party/ies**
13. Carry out campaigns to increase drivers yielding to pedestrians.	Create a campaign to reduce driver speeding.	Public Works Police Department
	Create a campaign to encourage yielding at crosswalks.	Public Works Police Department

Engineering and Planning		
Strategy	**Action**	**Responsible Party/ies**
14. Improve visual interest for people walking.	Implement streetscape improvements.	Community Development Public Works
	Promote public art.	Community Development Visual Arts Commission Public Works
15. Keep plans up-to-date and integrated.	Update the Pedestrian Plan every five years.	Community Development Public Works
	Integrate Pedestrian Plan strategies into other plans.	Community Development Public Works

Education

Educational strategies will teach Cedar Rapids residents about the benefits of walking, the opportunities for walking already available in the city, and how to interact safely between different types of road users.

Strategy 7: Share the benefits of a walk-friendly community

Although people who use motor vehicles as their primary mode of transportation might not readily self-identify as pedestrians, almost every trip taken starts or ends with walking. A walk-friendly community can benefit everyone, and especially those who rely on walking as a means of transportation. When evaluating current walking conditions in Cedar Rapids, participants rated "motorists attitudes towards pedestrians" among the lowest of all conditions, with only 34 percent rating this condition as "excellent" or "good". Public comments also revealed that some community members do not support the expansion of sidewalk networks even in their own neighborhoods. A shift in public opinion about the benefits of walking and greater self-identification as pedestrians will improve attitudes towards walking and build public support for the successful implementation of this Plan.

Action 7.1: Develop a positive informational campaign aimed at residents, government officials, and business owners.

A positive campaign can share information about walkability

Walk-friendly Community Benefits

Some of the benefits of a walk-friendly community include:

- **Mobility and Connectivity:** Walkability increases mobility options for community members, especially those with limited mobility, transit users, and people without access to cars.
- **Safety:** Facilitating walking can increase safety for users of all transportation modes, by slowing vehicle speeds, reducing crash severity, and the effects of "safety in numbers"
- **Health and Wellness:** Even small amounts of daily walking can increase health outcomes, and walkability correlates with reductions in chronic disease, which can also reduce healthcare costs.
- **Economic Development:** Walkability can lead to increased economic activity, new businesses attracted, and higher real estate values.
- **Environmental Protection:** Shifting trips from driving to walking reduces carbon dioxide emissions and improves air quality for the entire community.
- **Equity:** Providing walking as a transportation option can help families save money on transportation costs and provide an option that can be accessed regardless of wealth or physical mobility.

Source: Massachusetts Department of Transportation, "Municipal Resource Guide for Walkability".

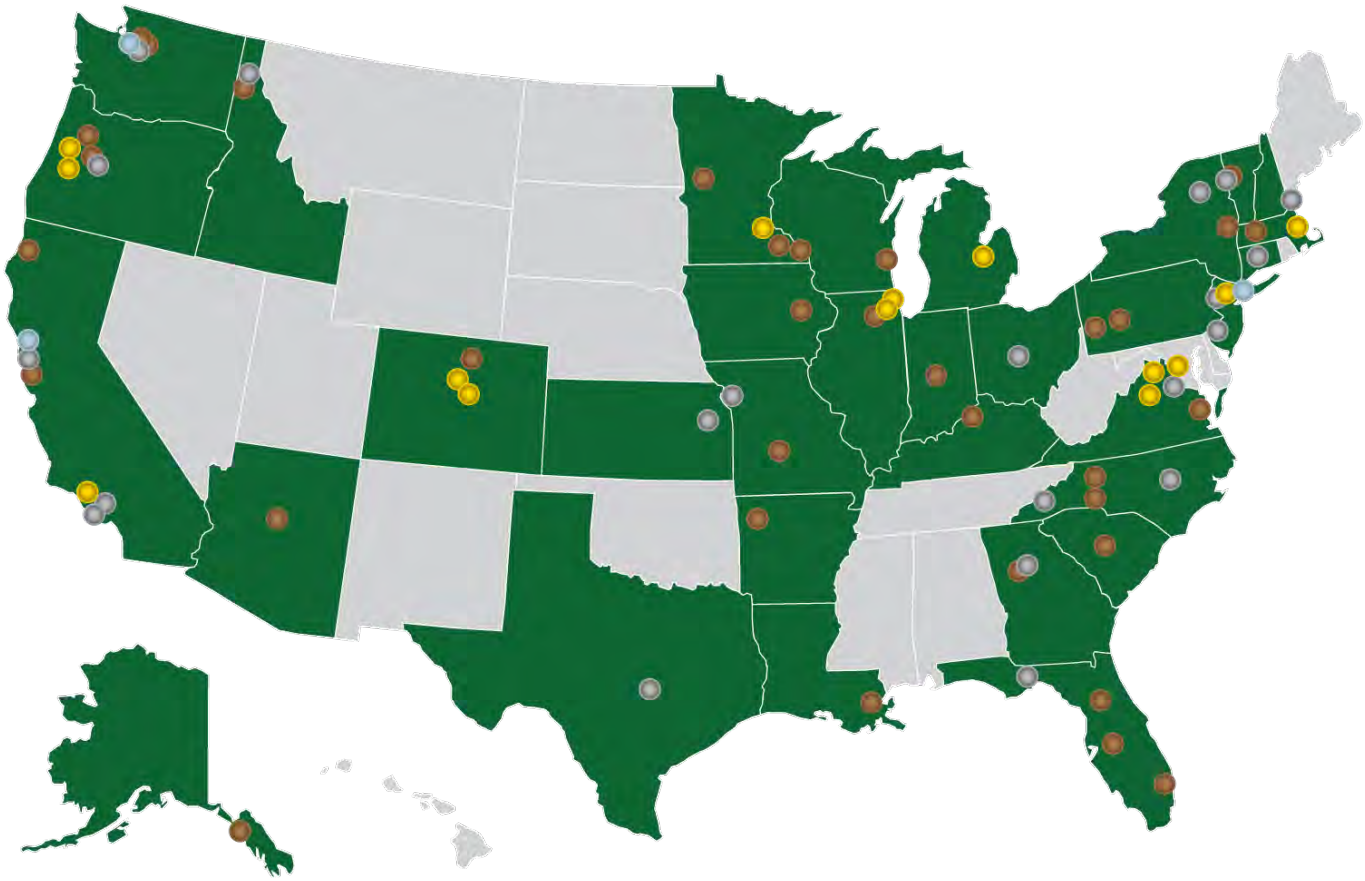
benefits (see sidebar), while using positive imagery to make walking a regular activity throughout the city.

Existing resources provide information about walkability benefits, (e.g., the Pedestrian and Bicycle Information Center[1] and America Walks[2]). These materials can provide a starting point to develop locally relevant materials. The campaign should include images of Cedar Rapids' diverse community members walking in typical situations - running errands, getting to the bus, going to school, walking dogs, going to a restaurant, etc. By featuring families, older adults, business people, blue-collar workers, and people of diverse backgrounds, perceptions about who walks in the city can begin to shift. The images should be set in places throughout the city, indicating the different types of walking conditions available.

This campaign should be led through the Communications Department and the Wellness Liaison in the City Manager's Office, with support from other partners. Ongoing monitoring of changing attitudes should also be incorporated into the campaign to measure how people's perceptions have shifted.

Communication Methods

- City of Cedar Rapids Website
- City Parks and Recreation Guide
- Social Media (Facebook, Twitter)
- Sidewalk repair letters to property owners
- Utility bill inserts
- Billboards and outdoor ads
- Television commercials
- Bus or bus stop ads



Ninety-two communities across the country have received recognition from the Walk Friendly Communities program (Source: Walk Friendly Communities).

1 Walkability resources from the Pedestrian and Bicycle Information Center can be found at http://www.pedbikeinfo.org/data/factsheet.cfm.

2 Resources on the benefits of walking from America Walks can be found at http://americawalks.org/learning-center/benefits-of-walking-2/.

Action 7.2: Distribute information to Cedar Rapids residents, community organizations, business owners, and elected officials.

Once developed, the campaign materials should be widely distributed throughout the community. Potential avenues for communication are included in the sidebar.

Action 7.3: Become a Platinum-level Walk Friendly Community.

Managed by the Pedestrian and Bicycle Information Center, the Walk Friendly Community designation[3] recognizes cities for their efforts towards improving walkability. In addition to providing ongoing feedback for the community, such national recognition raises the profile of walkability in the community and helps build local pride around recognizing and maintaining its walkable infrastructure. 94 communities are currently recognized by the organization. Cedar Rapids was the first community in Iowa to hold this designation (the first award was received in April 2019 at the Bronze level). There are five levels of recognition: Platinum, Gold, Silver, Bronze, and Honorable Mention. The City of Cedar Rapids should use feedback from the Walk Friendly Community program to achieve Platinum-level recognition.

Encouragement

Encouragement strategies will build enthusiasm through events and programs that help community members embrace walking.

Strategy 8: Provide opportunities to have a positive experience walking

For some residents, it can be hard to start thinking of themselves as pedestrians or to consider replacing some of their trips with walking if they have had few positive experiences of walking. By providing fun events and activities centered around walking that attract many different members of the community, people can begin to make more positive associations with walking and will be more likely to try walking on their own.

Action 8.1: Implement an Open Streets event[4].

During an Open Streets event, a whole street is partially or completely shut down to motorized vehicles and opened up for people to enjoy by walking, biking, or other forms of activities. Community members and organizations are

During an Open Streets event in Minneapolis, MN, a state highway was opened up for use by the community.

3 Further information on the Walk Friendly Community designation can be found at http://walkfriendly.org/.

4 Information and tools about Open Streets events and how to implement are available from the Open Streets Project at https://openstreetsproject.org/.

invited to provide a variety of activities or to sell food and other goods. Open Streets events help bring visibility to walking and demonstrate the potential for a community where streets are prioritized for people walking and bicycling instead of driving motor vehicles. Open Streets events have been implemented in cities throughout the country, including in Des Moines and Ames. Many communities host events on an annual basis or more frequently. Numerous resources exist to help communities plan and execute these events, including from the Open Streets Project. Cedar Rapids should identify a central location to launch an Open Streets event, with the aim of making it a recurring event. An area with good conditions for walkability, such as NewBo, could host the event, to celebrate and showcase what a walkable area looks like. Alternatively, it could be held in an area with greater need for walkability improvements, such as around Noelridge Park, to demonstrate the demand for walkable environments and potential future improvements. An Open Streets event could also be held in conjunction with events like the Downtown Farmers' Market.

Strategy 9: Support Safe Routes to School planning and programs at all schools.

Through the public engagement phase, 66 percent of participants stated that they found it "important" or "very important" to be able to walk to daycares, schools, and universities. Walking or bicycling to school helps families stay active and healthy, and helps kids arrive to school more focused and ready to learn. Safe Routes to School (SRTS) is a nationally established program that helps kids walk and bicycle to school more often through education, promotion, and infrastructure improvements. Fostered by groups or organizations at the school or community level, SRTS is a comprehensive strategy to instill life-long habits that support physical activity and health. SRTS is part of other community initiatives, programs and projects such as transportation, health, safety, and well-being. SRTS projects are eligible for funding by the Transportation Alternatives Program (TAP); in Iowa, federal TAP funds are distributed to metropolitan planning organizations (MPOs) for disbursement. The Corridor MPO distributes TAP funds for Cedar Rapids and shows preference for projects that are shown to benefit local schools (see sidebar).

Safe Routes to Schools Funding in Iowa

"Per DOT STBG - TAP guidance, provided October 1st, 2017, all MPO funded projects that utilize STBG - TAP funds and have more than 50% MPO funding are eligible to receive up to 30% Statewide TAP funds (usually $1,000,000 per year) on a competitive basis. This 30% funding cannot be used to offset the local 20% matching funds. STBG - TAP projects must be located along a statewide byway or show a positive benefit for a local school. This is an effort from the Iowa Transportation Commission to encourage Safe Routes to School and Iowa Byways projects."

(Source: Corridor MPO, FFY19-FFY22 Transportation Improvement Program, p. 76)

Cedar Rapids' Public Works Department currently operates a program to promote walking to school. The program includes three main elements: mapped School Routes, a Walking School Bus program, and Adult Crossing Guards. These programs are a great starting point for developing a comprehensive SRTS program for the city and can be augmented through the following actions.

Action 9.1: Develop a school walking map for youth.

Currently, the City publishes maps of safe walking routes to each school[5]. These maps are updated on a regular basis as new sidewalks are added or other changes are made to the walking network. The maps are available on the City's website, but their format is not conducive to widespread distribution and usage. The City should develop a new city-wide map highlighting safe walking routes for youth to school and other destinations, with additional youth-oriented safety information. This resource can be distributed online and in hard copy. An example of a similar resource from Minneapolis is pictured below.

Action 9.2: Develop Safe Routes to School Action Plans for all schools in Cedar Rapids.

Building off of the existing walking maps, SRTS Action Plans for schools in the district should identify improvements in the areas of engineering, education, encouragement and

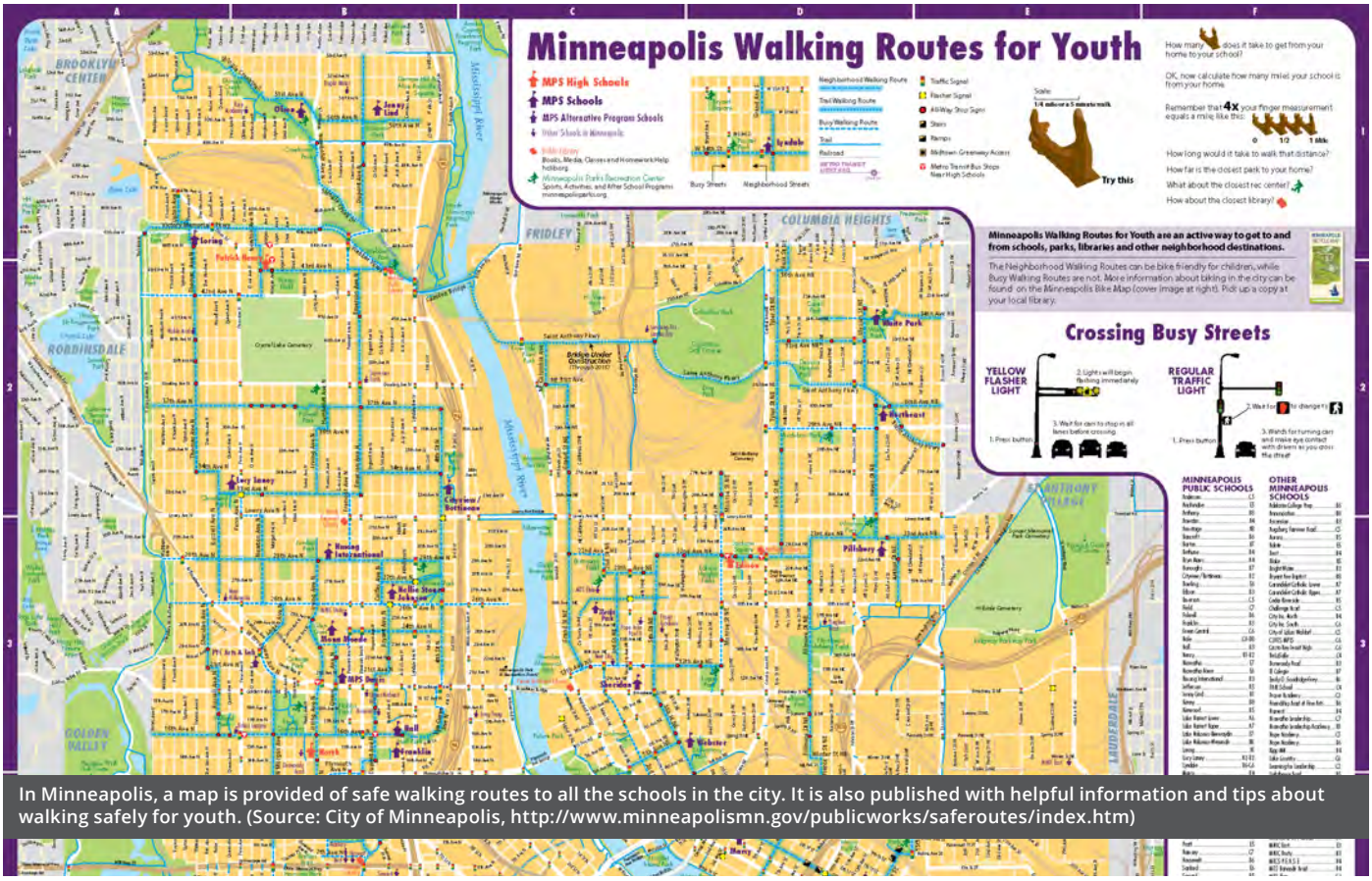
5 The current school walking maps can be found at http://www.cedar-rapids.org/local_government/departments_g_-_v/public_works/school_routes.php

enforcement to increase the number of students walking to school and improve their safety while walking. In addition, a SRTS Action Plan could support an application to the Corridor MPO for an allocation of TAP funding to implement the infrastructure changes recommended in the plan. The additional SRTS actions below may also be incorporated into individual schools' action plans.

Action 9.3: Promote the development of walking school buses at additional schools.

A walking school bus is a group of students walking to and/or from school with adult supervision. These may be organized on an annual, monthly, weekly, or daily basis. Organizing a walking school bus provides a way for parents to allow their children to walk to school under supervision and makes walking to school a fun activity. Walking school buses are organized and overseen by individual schools; the City provides information and resources[6] to schools wishing to start a program. In Cedar Rapids, the program initially began as part of the Blue Zones project. During that project, nine schools launched walking school buses, with participation ranging from five to twenty-eight students per school. The programs typically organized a walk to school one day per week, usually before Thanksgiving and after spring break during the school year. Currently, at least two schools continue to operate a walking school bus on a regular basis. One of the challenges is finding parents who are willing to volunteer their time to organize and operate a walking school bus. Walking school buses in Cedar Rapids have been most effective for walking to school rather than home from school; and to be held at least weekly to encourage regular participation and a predictable schedule.

While schools will be responsible for launching and maintaining such programs, the City can support schools in starting them through resources and advice. The City should continue to maintain its website with resources for schools. In addition, outreach should be conducted to all schools in the district to make them aware of the resources already available for walking school buses. Schools can be encouraged to launch a walking school bus in conjunction with National Walk to School day.



In Minneapolis, a map is provided of safe walking routes to all the schools in the city. It is also published with helpful information and tips about walking safely for youth. (Source: City of Minneapolis, http://www.minneapolismn.gov/publicworks/saferoutes/index.htm)

6 Walking school bus information from the City can be found at http://www.cedar-rapids.org/local_government/departments_g_-_v/public_works/walking_school_bus.php

Two walking school bus groups arrive at school in Cedar Rapids.

Action 9.4: Increase the number of school crossing guards.

Adult crossing guards increase safety for children walking to school by supervising students when crossing busy streets, increasing their visibility to drivers, and lengthening the amount of time children have to safely cross the street before cars start moving again. Crossing locations in need of additional support in the form of adult crossing guards are identified by the Public Works Department based on criteria such as road speed and pedestrian volumes. There are currently thirty-five locations identified that qualify for crossing guards. The City provides fifty percent of the necessary funding for crossing guards at Cedar Rapids Community School District (CRCSD) schools and at All Saints School. The available funding is distributed to schools based on locations in need of crossing guards. The biggest program challenge is finding volunteers to staff the program; the available budget is not used and the qualified locations are not currently staffed. The short length and timing of the shifts are not necessarily compatible with other part-time job opportunities. Although teachers' schedules could be compatible with crossing guard duties, their union contracts do not allow for them to fill this role.

Cedar Rapids should support the school district to find ways to fill crossing guard positions. This could be done by:

- Increasing the available funding for the program to offer more competitive wages and/or longer shifts to attract staff,
- Working with schools to evaluate feasibility of hiring school employees other than teachers, such as cafeteria or janitorial staff, and/ or
- Hiring a third-party contractor that would be responsible for staffing.

Action 9.5: Launch a School Safety Patrol Program to supplement school crossing guards.

School Safety Patrols[7] are a program of AAA, which provides resources and materials to train students to help direct their peers to safely load and unload from buses and cross streets. Patrol members direct students, not traffic, and must be supervised by an adult; they are not a replacement for adult crossing guards, but rather a complement. Local AAA Clubs provide information, publicity, and material support to schools, who are responsible for recruiting and training students to the program. The City should consult with the Cedar Rapids branch of AAA to launch a program locally, and support schools to apply to the program.

Strategy 10: Promote a destination-based program to encourage walking

One barrier to promoting more walking in Cedar Rapids is that people often overestimate the time it takes to walk to a destination that they would normally drive to[8]. A destination-based campaign could help shift those perceptions and encourage people to switch a trip from driving to walking. In addition, feedback from stakeholders in the Cedar Rapids community highlighted an interest in focusing walkability efforts around community destinations.

Action 10.1: Create a pedestrian wayfinding system to highlight community destinations and walking travel times.

A pedestrian wayfinding system should highlight notable community destinations. The initial effort can be implemented in the more destination-rich parts of the city, which are identified in the Pedestrian Infrastructure Demand Analysis. In the public engagement phase, community members identified which locations were the most important to them to

7 More information on the AAA School Safety patrol program can be found at https://schoolsafetypatrol.aaa.com/

8 See, for example, D. Sims et. al. (2018). "Predicting discordance between perceived and estimated walk and bike times among university faculty, staff, and students". Transportmetrica A: Transport Science. Volume 14: Issue 8. https://www.tandfonline.com/doi/full/10.1080/23249935.2018.1427814.

Pedestrian wayfinding in Adelaide, Australia (Source: Samantha Curcio)

Pedestrian Wayfinding: Lorain, Ohio

The city of Lorain, Ohio created a temporary wayfinding project to promote walking to community destinations. They posted signs at visible intersections at walkable distances from key community destinations, such as parks and libraries. The signs pointed towards the destinations, and stated, "It is a [#] minute walk from here to [destination]". Such a campaign (temporary or permanent), centered around key destinations within Cedar Rapids, could encourage walking as a viable option.

Example of a sign from a pedestrian and bicycle wayfinding system in Lorain, Ohio. (Source: Kat Bray)

be able to walk to. The top destination types identified were parks and recreation centers, restaurants and cafes, grocery stores and markets, libraries, and schools (the full list is shown in Figure 1 of Chapter 3). These community priorities should be used to guide the selection of what destinations to highlight through the wayfinding system. For example, signage in the Oak Hill Jackson neighborhood could point walkers towards Van Vechten Park, Oak Hill Park, Sinclair Park, the NewBo Business District, Bender Pool, Metro High School, the Cedar River Trail, and similar destinations.

Wayfinding signage should have a consistent visual appearance that is compatible with City, neighborhood, and other district branding. Signs should guide people to the identified destinations and include destination names and the time needed to walk (at an average three miles per hour pace) to that destination. Destinations to be highlighted in a given area should be selected in consultation with the local community, and funding could be provided by local businesses or business associations who would benefit economically from increased foot traffic. A pedestrian wayfinding system should follow guidelines established in the City's Wayfinding Signage Program.

Action 10.2: Publish maps of walking routes in walkable, destination-rich areas of the city.

The City should create and publish maps of suggested walking routes that highlight the more walkable areas of the city (those identified in the Pedestrian Infrastructure Demand Analysis). The Cedar Rapids Tourism Office website already publishes information about community destinations and could be the ideal host for these maps. Maps should be published on the Cedar Rapids Tourism Office website, distributed in physical format through the Cedar Rapids Tourism magazine, and posted in large format along the routes. An app could also be developed for residents to have easy access to the maps and information about the destinations. A key partner for this project could be a hospital or health-oriented organization, which could promote the health benefits of walking.

Evaluation

An ongoing assessment of the state of walking in Cedar Rapids and the effectiveness of the strategies in this Plan will help the City to implement the Plan and continuously improve conditions for walking.

Strategy 11: Analyze pedestrian crash data to target improvements

Since 2008, there have been 269 crashes involving pedestrians in the Cedar Rapids Corridor MPO area. Of those crashes, fifty-two resulted in the death or serious injury of the pedestrian. A crash evaluation program will help the City better understand when, where, and why crashes with pedestrians have occurred and prevent future crashes from occurring.

Action 11.1: Regularly review and analyze pedestrian crash data.

Cedar Rapids currently reviews crash data collected by the Iowa Department of Transportation (DOT)[9]. Data collected includes information on crashes with pedestrians, skaters, and wheelchair users. The data collected includes the location of the crash, time and date, severity of the injuries, pre-crash maneuvers, contributing factors, and weather conditions. Iowa DOT's crash mapping analysis tool summarizes these reported crashes. From this data, it is possible to gain an understanding of crashes affecting pedestrians in Cedar Rapids. The following map shows how crashes with pedestrians that have occurred in the past ten years are distributed in the city, with a clear concentration along certain corridors (such as 1st Ave) and in the Downtown area. Analysis of this data in conjunction with pedestrian count information (see the next strategy) can determine pedestrian exposure to risk and can reveal those factors that are associated with higher rates of pedestrian crashes, in order to target improvements.

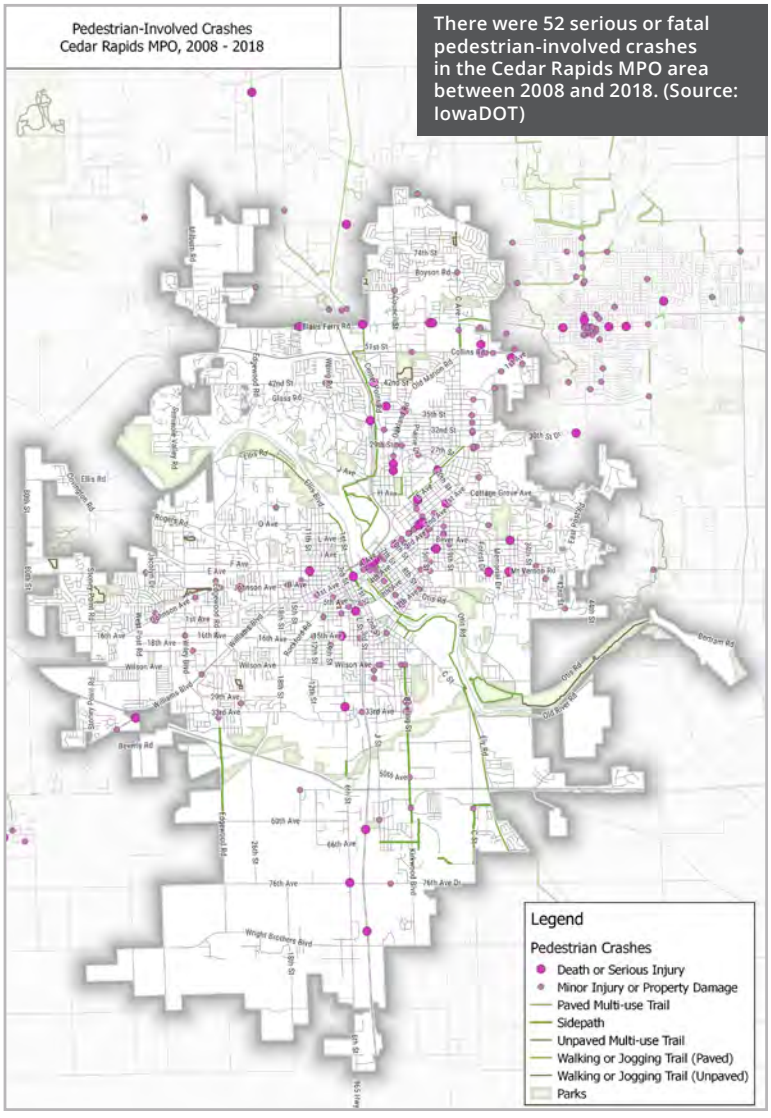
Action 11.2: Identify systemic safety issues and plan interventions.

Analysis of crash data can help identify crucial corridors for further analysis and prioritize locations for improvements to the built environment to increase pedestrian safety. Crash data can also be used to more effectively target informational campaigns along those corridors with the most frequent conflicts. Finally, crash data should be analyzed before and after the interventions are implemented to help determine their effectiveness at increasing pedestrian safety.

9 The Iowa DOT crash data portal can be found at https://icat.iowadot.gov/.

Strategy 12: Gather data on pedestrian uses

By collecting data on the volume of pedestrians, Cedar Rapids will be better able to understand where pedestrian facilities are needed and understand how its current facilities are being utilized. Using an organized system for collecting pedestrian counts, the City will be better prepared to track the usage of new pedestrian facilities, understand seasonal changes in pedestrian behavior, inform decisions on sidewalk and shared-use path designs, analyze pedestrian crash data in the context of the level of usage of a given road or intersection, and rationalize decisions on new pedestrian infrastructure to policy makers, community members, and stakeholders.



There were 52 serious or fatal pedestrian-involved crashes in the Cedar Rapids MPO area between 2008 and 2018. (Source: IowaDOT)

Action 12.1: Establish a pedestrian count methodology and locations.

Corridor MPO currently conducts pedestrian counts for Cedar Rapids and the surrounding communities. The MPO has one Eco-Counter PYRO-Box that is used to conduct automatic counts around the city. There are approximately four locations in the city where information is collected annually. Counts are also performed on an ad-hoc basis at additional locations, and the counter can be installed to gather before and after counts for new pedestrian infrastructure.

Linn County Trails Association also has a pedestrian and bicycle count program in place to monitor trail usage throughout the Metro Trails system. However their counts do not differentiate between pedestrians and bicyclists on the trails.

In addition, a research team for the University of Iowa has been conducting bicycle and pedestrian counts in Cedar Rapids as part of an Iowa DOT-funded project. This data has been made available to the City and will continue to be collected for at least one more year. This data will help establish baselines for future counts and analyses.

Overall, the count program is more oriented towards bicycle infrastructure, with data on pedestrians being gathered incidentally. A new methodology should be established to establish set locations and intervals for pedestrian count data to be gathered. Corridor MPO should continue to be the entity organizing the counts, sharing the data with the City to conduct their own analyses.

Pedestrian counts may be done manually and/or automatically. Most count programs start small and rely on volunteer support to perform manual counting. Automatic counters can also be set up in key locations to provide count data over a longer period of time. With either method (or a combination of the two), counts should be conducted in geographically diverse locations throughout Cedar Rapids. They should also be conducted at the locations of new pedestrian facilities both before and after installation. The National Cooperative Highway Research Program (NCHRP) Report 797 provides a comprehensive guide to bicycle and pedestrian volume data collection. The 2014 Report includes information on how to plan and set up a count program, count data applications, data collection planning and implementation, counter technology types, and case studies.

Over time as count programs grow, traffic engineers often manage the process, integrating the program into existing traffic count efforts. Because actual counts can be time- and resource-intensive, they may also be supplemented by a pedestrian exposure model analysis. This type of model is used to provide "ballpark" estimates of pedestrian volumes that take into account a number of correlated parameters[10].

Action 12.2: Analyze initial count data and determine next steps for the program.

Once the counts have been completed, the data should be analyzed and published. Analyzed together, pedestrian count data and crash data can help create a better understanding of what areas have the highest demand for better infrastructure and/or safety improvements. Data can be shared on a map and published online for public use. The image below is an example of how the Delaware Valley Regional Planning Commission in Pennsylvania shares the results of its pedestrian count program in an easily-accessible web format. In addition, the count program should be repeated on at least an annual basis; taking counts in the same location in subsequent years will bring an understanding of long-term trends and the effectiveness of new pedestrian infrastructure and programming.

Enforcement

Enforcement of the laws and norms related to walking will deter unsafe behaviors and encourage safe habits by all road users.

Strategy 13: Carry out campaigns to increase drivers yielding to pedestrians.

When evaluating current conditions for walking in Cedar Rapids, participants rated "motorists attitudes towards pedestrians" among the lowest of all conditions, with only 34 percent rating this condition as "excellent" or "good". For example, participants noted that drivers often fail to yield to people crossing the street, even at marked crosswalk locations. Improving the attitudes of motorists when interacting with pedestrians and their compliance with pedestrian right of way through targeted campaigns will be a crucial step in making people feel more comfortable with walking in the city.

10 For additional information on this methodology, see: R. Sanders et. al. (2017). "Ballpark Method for Estimating Pedestrian and Bicyclist Exposure in Seattle, Washington". Transportation Research Record. Vol 2605: Issue 1. http://journals.sagepub.com/doi/10.3141/2605-03.

Campaigns may include a combination of visible publicity materials, increased enforcement, and/or direct community outreach. Campaign messaging should focus primarily on driver compliance, but should also include messages that educate pedestrians on their rights and responsibilities and on actions they can take to reduce conflicts.

Action 13.1: Create a campaign to reduce driver speeding.

One campaign should be targeted at reducing driver speeding. Speeding drivers are less likely to be able to stop in time for a pedestrian crossing the road. They create an unpleasant walking environment when sidewalks are close to the roadway or absent. In residential areas where children are likely to be walking along or playing in the street, speeding drivers are more likely to cause a crash. Many cities have implemented visual campaigns with signage displayed in residents' yards reminding drivers of the speed limit (see sidebar). This type of campaign should be partnered with speeding enforcement. The city can place speed feedback trailers at key locations with high rates of speeding and carry out enforcement in crucial areas on an irregular basis.

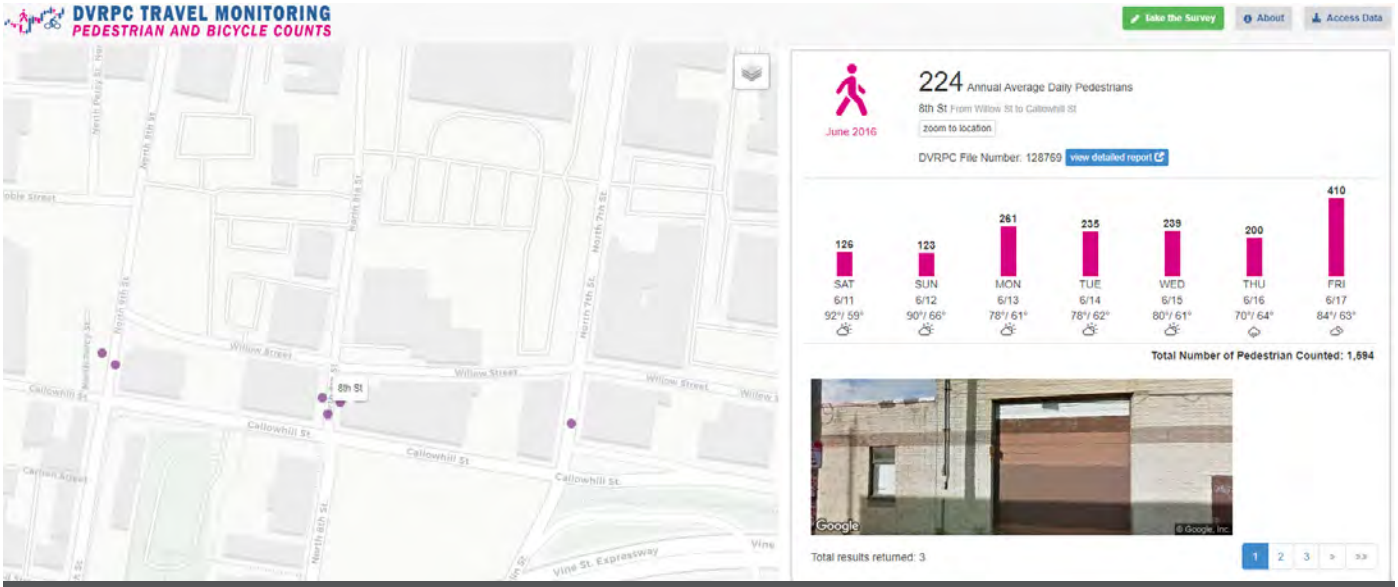
Action 13.2: Create a campaign to encourage yielding at crosswalks.

In Iowa, drivers are required to yield to pedestrians crossing the roadway in marked crosswalks and in unmarked crosswalks at intersections. Community members in Cedar Rapids cited examples of drivers failing to comply with their right-of-way at crosswalks. While adult crossing guards provide assistance to ensure driver yielding at certain school crosswalks at certain times of day, a broader, more creative campaign can impart a more long-term change in driver behavior.

Keep Kids Alive, Drive 25

The "Keep Kids Alive, Drive 25" campaign originated in Omaha, Nebraska, and has since been adapted to over 240 communities around the country, with many variations on the original campaign slogan. The campaign uses visible materials such as yard signs, stickers, public service announcements and more to remind drivers in residential areas to pay closer attention to their speed. In a study in Oceanside, CA, a sixteen percent reduction in driver speeds was measured in targeted areas following the campaign.

Speeding campaigns use yard signs such as this one to remind drivers to slow down when driving through residential neighborhoods. (Source: PBIC)



The Delaware Valley Regional Planning Commission shares the results of its pedestrian counts on an easy-to-use website. (Source: https://www.dvrpc.org/webmaps/pedbikecounts/)

Crosswalk Yielding

Other cities have taken innovative approaches to educate drivers about pedestrian right of way at crosswalks. In Mexico City, a troupe of mimes were dispatched to some of the busiest intersections, where they observed driver and pedestrian behavior and gave "green cards" and "red cards" to drivers according to their behavior and compliance with traffic laws. In Bolivia, people dressed in zebra costumes (reminiscent of the zebra-like stripes of a crosswalk) carried out a similar campaign, bringing greater visibility to pedestrians crossing the street while leaving a lasting message with drivers. Cedar Rapids could supplement police enforcement with a similar campaign to promote better driver behavior in a light-hearted way.

A campaign in Bolivia educated drivers about yielding to pedestrians in crosswalks using people dressed as zebras (Source: Fran Sánchez Becerril, El Mundo)

A yielding enforcement campaign should include a combination of targeted enforcement, inexpensive engineering and road signs, and visible educational elements[11].

Enforcement elements: After selecting areas where enforcement should be targeted, police should advise the community they will be enforcing pedestrian right-of-way laws. In the first weeks they can issue warnings to noncompliant drivers, accompanied by educational flyers. They can then escalate to citations after several weeks of targeted enforcement.

Education elements: Outreach should be conducted to the affected community before an enforcement campaign starts to inform drivers about pedestrian right-of-way. Distributing flyers to students to give to their parents is an especially effective way to get the message across. This can be accompanied by radio ads and other media. In addition, feedback signs can be posted advertising the rates of driver yielding each week to make the message especially visible.

Engineering elements: Advance yield markings and in-street "State Law Yield to Pedestrian" Signs can be installed at crosswalks with low yielding compliance to increase pedestrian visibility and remind drivers of their responsibilities.

Engineering and Planning

The physical improvements designed through engineering and planning strategies will create a built environment that is safe and welcoming for pedestrians.

Strategy 14: Improve visual interest for people walking

In the community engagement process, only 48 percent of respondents thought that Cedar Rapids offered good visual interest for walking, such as appealing landscapes, public art, or engaging storefronts. Creating an inviting environment for walking can help raise the level of interest in walking and improve the experience for those who walk.

Action 14.1: Implement streetscape improvements.

Visual interest can be created along streets and sidewalks through landscaping and other streetscape improvements. Such programs have the additional benefits of spurring more economic activity, providing shade, and managing stormwater runoff. Streetscape improvements could also incorporate street art, branding, and other placemaking elements to create a sense of place throughout the community. The City contracted with a firm in late 2017 to develop a Right-of-Way Planning and Specifications Manual, which will define a range of streetscape treatments and design options to be implemented in the right-of-way throughout the city. Upon completion of the Manual, the city should dedicate funding to making streetscape improvements and incorporate such improvements when other construction projects are planned. The City's current policy does not allow visual art such as murals to be on street surfaces.

11 The approach described here was adapted from: R. Van Houten et. al. (2013). "High-Visibility Enforcement on Driver Compliance with Pedestrian Right-of-Way Laws". Washington DC: National Highway Traffic Safety Administration. https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/811786.pdf.

Action 14.2: Promote public art.

Public art is another way to create a more pleasant environment for walking, especially art that is best seen from the point of view of a pedestrian. Public art may take the form of murals, sculptures from small to large, light installations, or even temporary installations like chalk drawings. It may be placed on private buildings or in the public right-of way. For example, in Downtown Cedar Rapids, murals painted on sidewalks add visual interest that is best enjoyed by walking. An attractive, interesting environment created through public art improves the walking experience and makes people more inclined to want to walk.

Cedar Rapids currently has several projects and programs that promote public art in the community.

- The Visual Art Commission is a seven to nine-member committee, appointed by the Mayor. The Commission's purpose is to "select and preserve visual art in public places for the public good". It also operates a program that allows residents to "adopt" public art in the community.
- Currently, the City budgets $60,000 per year for public art.
- Murals & More is a nonprofit organization "dedicated to utilizing local architecture as the backdrop for public art in Cedar Rapids"[12]. They aim to create a "trail of murals" in the city, and to date have sponsored the creation of seven murals, mostly in the Downtown district.
- Adopted action plans for College District, Kingston Village, Northwest Neighbors, and Wellington Heights, as well as the 2009 Neighborhood Planning Process elaborate on local placemaking efforts and identify ideal locations for public art. Public art is most prevalent in the urban core neighborhoods of Downtown, NewBo, Czech Village, and Kingston Village, including murals and sculptures.

Public art that enhances the visual experience for pedestrians could be further promoted through additional funding. Potential funding mechanisms include the budgeted public art funds as well as private donations. The City could also work with developers to incorporate public art in new developments. Opportunities to incorporate public art in neighborhoods outside the urban core should be prioritized to increase visual interest throughout the city. A mix of different types of art of different scales should be encouraged. Temporary art as well as more permanent installations should both be promoted.

The sculpture SkyBlade, next to a Downtown sidewalk

Strategy 15: Keep plans up-to-date and integrated.

Continued planning and the integration of pedestrian goals with city-wide planning efforts are crucial to the ongoing implementation of this plan.

Action 15.1: Update the Pedestrian Plan every five years.

This Plan includes actions for implementation in both five-year and ten-year time frames. As the first five-year time frame is completed, the status of those actions should be evaluated, and actions for the following five- and ten-year time frames confirmed or adapted as necessary through an update to this Plan.

Action 15.2: Integrate Pedestrian Plan strategies into other plans.

In addition to this Plan, the pedestrian experience in Cedar Rapids can be addressed through EnvisionCR, neighborhood plans, corridor plans, the Comprehensive Trails Plan, and the Corridor MPO Transit Study. As other planning processes are undertaken, the goals and strategies of this Plan should be reflected and/or supported.

12 Information on Murals & More programming can be found at http://crmurals.org/

Chapter 6 Implementation

Chapter 6: Implementation

Strategy 16: Use Performance Measures to Track Progress

The success of the strategies recommended in Chapters 3, 4, and 5 of the Pedestrian Master Plan will be evaluated by tracking quantifiable measures of changes in the usage of pedestrian infrastructure, safety of the walking environment, construction of new infrastructure, and public perceptions and opinions. Performance measures for the Plan are described in Table 1. Each measure lists a specific Plan strategy whose progress it will track, and progress towards all the measures in combination will indicate the success of the Plan as a whole.

Baseline data for some of the measures will be established in the first year of the Plan as the plan's strategies are implemented. Progress should be evaluated on an annual basis. The City's Comprehensive Plan, EnvisionCR, also undergoes an action-oriented initiative annual evaluation and review. Review of the Pedestrian Master Plan should be coordinated with Envision CR reviews to ensure consistency. For example, according to the 2016 year-end review of Envision CR, approximately 650 ADA compliant curb ramps were constructed during 2016. Nearly 3,000 additional curb ramp upgrades are in design and scheduled for completion by 2019.

Table 1. Performance Measures

Performance Measure	Related Strategies	Baseline	5-year Goal	Data Collection Frequency	Data Source
Usage					
Pedestrian mode share *Track how the share of commuters who walk to work changes as Census data are available each year.*	4f (Gather data on pedestrian use)	2012-2016 average: 2.58%	3% increase in five-year rolling average	Annual	US Census – American Community Survey
Pedestrian counts *After developing a baseline count of pedestrian activity, aim for year-over-year increases.*	4f (Gather data on pedestrian use)	Establish baseline in 2019	1% annual increases	Annual, plus automatic counters	Corridor MPO pedestrian counts
Students walking to school *Initiate teacher tallies of students walking to school and conduct semi-annually to monitor changes.*	4c (Support SRTS planning and programs)	Establish baseline in 2019	1% annual increases	Semi-annual	Student travel tallies reported to Public Works[1]
Safety					
Pedestrian-related fatalities and serious injuries *Track the number of pedestrian-related crashes, including the level of severity and if injuries occurred.*	4e (Analyze pedestrian crash data)	2015-2017: 75 crashes, 12 fatal or serious injuries	5% reduction	3-year increments	Iowa DOT ICAT Platform (https://icat.iowadot.gov/)
Infrastructure in High Pedestrian Demand Areas					
Feet of sidewalks completed *Track the completion of sidewalks in linear feet each year.*	5c (Projects)	8184 feet budgeted in 2018	TBD	Annual	Public Works internal tracking
Number of crossings added/ improved *Track the number and type of pedestrian crossings installed or improved each year.*	5c (Projects)	Unknown	TBD	Annual	Public Works internal tracking

1 The Virginia DOT's Safe Routes to School Program is a model program for student travel tallies: http://www.virginiadot.org/programs/srsm_student_travel_tally_week.asp

Performance Measure	Related Strategies	Baseline	5-year Goal	Data Collection Frequency	Data Source
Feet of sidewalk buffer installed *Track the installation of sidewalk buffers in linear feet each year.*	5c (Projects)	Unknown	TBD	Annual	Public Works internal tracking
Public Opinion					
Citizen satisfaction with the walking network *Monitor citizen satisfaction with walking paths and ease of walking in biennial National Citizen Survey.*	4b (Provide opportunities to have a positive experience walking)	Positive ratings in 2016: Paths and walking trails: 61% Ease of walking: 53%	10% increase in positive ratings	Every 2 years	National Citizen Survey Community Livability Report (Conducted every 2 years)
Citizen perception of walking *Conduct surveys before and after communications campaign to measure changing perceptions of walking.*	4b (Provide opportunities to have a positive experience walking)	Establish baseline with survey before campaign	10% increase in positive perceptions of walking	One-time campaign	Surveys by City Manager's Office before and after implementation of campaign

Strategy 17: Take Short Term Actions to Kickoff Plan Implementation

The work of City staff and dedicated residents can positively influence the pedestrian environment, whether in enforcement, engineering, education, evaluation, or encouragement. Increasing attention toward pedestrian issues will translate into more people walking in Cedar Rapids. The following are short term actions that the City should take internally to kick off the work of the Plan.

Action 17.1 Designate an official City Pedestrian Program Manager/Coordinator

Having a staff person dedicated to the implementation of the Plan will help build momentum for the City. Pedestrian program staff also bring cost savings to a municipal government since they are responsible for additional dollars through grants and improved economic activity.

The City of Cedar Rapids should allocate a 0.25 FTE within a new or existing City staff position to serve as the City's Pedestrian Program Manager/Coordinator. The City already employs a Bicycle Coordinator. This role could potentially be wrapped into that person's responsibilities.

Responsibilities should include:

- Developing and implementing educational programs
- Pursuing and securing funding opportunities
- Working with various departments to ensure coordination of pedestrian-related policies and facilities
- Serving as a resource to other staff
- Communicating with the public in person and online
- Collaborating with partner community organizations and agencies
- Implementing the adopted Cedar Rapids Pedestrian Master Plan
- Developing ideas into projects
- Conducting research and evaluation of the performance measures of this Plan
- Engaging in planning processes to advocate for the needs of pedestrians

Action 17.2 Further integrate walking into existing City staff roles.

With the designation of a Pedestrian Program Manager/Coordinator, City of Cedar Rapids staff will be able to further integrate support for walking into their existing roles. A pedestrian-focused staff person should partner with engineers, police officers, planners, and communications staff to lead trainings and make the promotion of walking a stronger component of their daily roles.

Action 17.3 Form a Pedestrian Advisory Committee of local residents and City employees.

Cedar Rapids already has a designated Bicycle Advisory Committee, which "provides an opportunity for residents and organizations to discuss upcoming bike facility projects, plan events that bring cyclists together, and bring attention to issues"[2]. They also support the goal of making the City a Bicycle Friendly Community certified by the League of American Bicyclists. A similar advisory committee should be formed for pedestrian issues, made up of a diverse group of residents and City employees. In addition to discussing future projects, educating the public, and advocating for the needs of pedestrians, the group could support the application to become a Walk Friendly Community (see strategy 7a).

Strategy 18: Pursue Multiple Funding Sources

This section describes how pedestrian-related projects are currently funded by the City of Cedar Rapids. It also lists a number of state and federal resources that may also be available to fund the recommendations of the Plan. A critical overarching funding strategy of the City should be to find ways to incorporate pedestrian projects into other road projects and to more equitably distribute the cost of sidewalk maintenance and construction among all Cedar Rapids residents and visitors.

Current Local Funding

City Budget

To further the goals stated in both the EnvisionCR Comprehensive Plan and the previously adopted Sidewalk Master Plan, Cedar Rapids prioritizes funding decisions within an annual budget. Some pedestrian-related categories of initiatives in the 2018 budget include:

- High Priority Sidewalk Segments per the City's Sidewalk Master Plan, including infill sidewalk projects, sidewalk repair, and ramp program (as shown in the table on the following page)
- Comprehensive Trails Plan update
- Sleeping Giant bridge project and trail connection

In the past, the City aimed to install at least 0.51 miles of sidewalk each year. In fiscal year 2016, the City exceeded this goal by installing 0.96 miles and is on track to install 1.44 miles of sidewalk in 2017. In fiscal year 2018, the city had budget for approximately 1.55 miles of sidewalk. The Public Works Department also oversees the community's school crossing guards, budgeted at an annual amount of $63,000.

For fiscal year 2018 (July 1, 2017 to June 30, 2018), Cedar Rapids issued $13.4 million in general obligation bonds. Bonds focused largely on walking improvements included $1.11 million for trail improvements and $0.5 million for sidewalk improvements. Additional bonds related to pedestrian improvements included $4.75 million for ADA improvements (i.e. curb ramps, facilities, parks and recreation improvements), $2.41 million for streets, and $0.58 million for traffic signals.

Local Option Sales Tax

In 2013, voters in Cedar Rapids and the surrounding jurisdictions approved a one cent, ten-year local option sales tax (LOST) to fund repairs and improvements to the city's streets. The tax is estimated to collect around $18 million annually, all of which is dedicated to the maintenance, repair, construction and reconstruction of public streets. A ten-year capital improvement plan (The Paving for Progress Plan – PFP) was written in 2014 to identify projects for construction and establish guidance for selecting new projects. The plan was updated in 2017[3]. Among the key goals of the plan is to "make improvements to residential neighborhoods that have long been neglected"[4].

According to the 2017 PFP Plan Update, the majority of funding goes to roadway and bridge deck pavement, surface and landscape restoration, utility structure adjustments, drainage systems, roadway markings, and ramps. However, sidewalk replacements and repairs to non-ADA compliant sidewalks and curb ramps may also be eligible for funding on a case-by-case basis. Furthermore, 20% of annual LOST revenues (an estimated $3.6 million) are set aside for "design costs, construction observation, program management, and sidewalk upgrades" (p. A-9).

PFP projects are selected every two years as new data

2 The Bicycle Advisory Committee, http://www.cedar-rapids.org/local_government/departments_g_-_v/public_works/bicycle_advisory_committee.php

3 http://cms.revize.com/revize/cedarrapids/document_center/PublicWorks/Cedar%20Rapids%2010-Year%20Plan%20(v.%205.19.17).pdf

4 http://www.cedar-rapids.org/local_government/departments_g_-_v/public_works/paving_progress.php

Selected Pedestrian-Related Initiatives from the 2018 City Budget					
	2018	2019	2020	2021	2022
Infill Sidewalk Projects	$200,000	$200,000	$200,000	$200,000	$200,000
Sidewalk Repair and Ramp Program	$300,000	$300,000	$300,000	$300,000	$300,000
Trail Repair Program	$150,000	$100,000	$100,000	$100,000	$100,000
ADA Compliance*	$4,750,000	$5,000,000	$5,000,000	$5,000,000	$5,000,000

*Includes curb ramps, facilities, and park and recreation improvements.

is collected on pavement conditions, including texture, pavement distress, and roughness. Data is collected automatically with an automatic road analyzer van, with sidewalk condition data being collected manually in the field.

For future selection of projects, language should be added to the PFP Plan that sidewalk gap projects, sidewalk buffer projects, and crossing projects should be included as part of all street repair and reconstruction. When streets are selected for repair under this plan, sidewalk conditions should be assessed simultaneously and, automatically be repaired or reconstructed as part of the project. If any street is selected for PFP funding that has a sidewalk or crossing improvement that is recommended in this Plan, the sidewalk and crossing improvements should be completed simultaneously with other repairs or reconstruction to that street.

In addition, a portion of LOST funding should be set aside exclusively for the construction of sidewalk gap projects, sidewalk buffer projects, and crossing projects as identified in this Plan. This percentage should be separate from the 20% described above that is set aside for engineering and design costs, program management and sidewalks. The recommended portion of funding is 5% annually (or approximately $900,000).

$35 million (2017 dollars) worth of projects have been identified in this Plan (see Chapter 3 and Appendix B). Without inflation it would take 39 years to complete the projects using only LOST funding. To accelerate progress, capital borrowing should be paired with sales tax revenues. To complete the projects identified in this Plan between 2020 and 2029, the inflation adjusted cost over 10 years is $44 million, or $4.4 million per year. Assuming $900,000 in dedicated LOST funding, the annual bonding amount would be $3.5 million. In early years, the number of projects completed would occur at a faster rate with increased buying power. As construction costs increase in later years, projects would be constructed at a slower rate.

Property Owner Sidewalk Assessments

Funding for sidewalk construction and repairs is currently supplemented by property owner assessments and contributions. In 2017 Cedar Rapids adopted a New Sidewalk Construction Special Assessment Policy.[5] Under this policy, the full cost of new sidewalk construction in residential zones is paid for by the city, unless a previous sidewalk assessment agreement was in place between the property owner and City. Owners of all non-residentially zoned properties split the cost equally with the City.

For maintenance and repairs of existing sidewalks, the City created a policy in March 2015. Property owners are required to complete the work themselves or through a contractor of their choosing. The City reimburses property owners for 35% of the cost of general sidewalk repairs. If the property owner does not resolve the needed sidewalk repairs, the City completes the work and assesses 100% of the cost. Under this scenario, no reimbursement is issued to the property owner for general sidewalk repairs. The City also provides financial assistance for owner-occupied single family residential households with low or moderate income, sharing 50 to 90 percent of the cost of construction. City cost share ranges from 50 percent to 90 percent. This financial assistance should continue. The current City policy does not provide City cost share for sidewalks repairs needed due to City trees in the right-of-way. This should be implemented at a 50% rate.

5 http://cms.revize.com/revize/cedarrapids/49-17-033%20Amend%20Sidewalk%20Construction%20Special%20Assessment%20Policy%20Policy.pdf

State Funding Sources

The State of Iowa has some funding available for pedestrian projects, though guidelines are not always detailed[6]. The main funding source is the Road Use Tax Fund of $1.5 billion, which is funded by vehicle registration fees and fuel taxes. These funds are distributed to the Iowa DOT and its counties.

State Recreational Trails Program (SRTP)[7]

$1 million to $2.5 million of the Road User Tax Fund is distributed annually to the State Recreational Trails Program to fund public recreational trails. Local jurisdictions may apply for competitive grants from SRTP. A 25 percent local match is required and projects must be part of a trail plan.

Traffic Safety Improvement Program (TSIP)[8]

This program provides funding for traffic safety improvements or studies on any public roads in the state. Projects may include site-specific safety improvements, traffic control devices, or research studies. Projects may be funded for up to $500,000, with applications accepted annually by August 15. The fund is allocated around $7 million per year. This could be a potential source of funding for projects in high-crash areas that will improve safety, such as improved signals and signage at pedestrian crossings.

Pedestrian Curb Ramp Construction

Cities may apply to the Iowa DOT for up to $250,000 per year to fund the construction of ADA-compliant curb ramps. IowaDOT may pay for up to 100% of the eligible costs.

Federal Funding Sources

Pedestrian projects are eligible for federal funding under a number of federal programs. These are mainly authorized by the 2015 Fixing America's Surface Transportation (FAST) Act and 2012 Moving Ahead for Progress in the 21st Century Act (MAP-21). This section contains an overview of the principal programs that might be used to fund the recommendations in this plan. Table 1 further indicates how funding from a number of federal programs may be allocated for pedestrian projects. The City is encouraged to seek and apply for federal funds through the Corridor MPO and Iowa Department of Transportation as appropriate. But they should be considered only as a partial funding source because grants are generally competitive and limited. Federal funding also often requires a supply of "matching funds" from local agencies, typically 20% of the project's total cost.

Surface Transportation Block Grant-Transportation Alternatives Set-Aside (STBG-TA)[9]

The Surface Transportation Block Grant – Transportation Alternatives Set-Aside (STBG-TA) is the most relevant funding source for the Plan. This program consolidated several previous funding programs – the Transportation Alternatives Program, Transportation Enhancements, Safe Routes to School, and the Recreational Trails Program. The program is highly competitive and up to half of the funding from the program can be diverted to general street and road projects. Nevertheless, it remains a key funding source for projects to enhance pedestrian mobility. The state of Iowa received an allocation of $10.8 million under this program for FY 2018. The majority of this money is redistributed to MPOs and RPAs to allocate to local projects. The Corridor MPO manages this program for Cedar Rapids and accepts applications for funding under this program through a request for inclusion in the Long Range Transportation Plan.

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6 An overview of the majority of IowaDOT funding programs can be found at https://iowadot.gov/pol_leg_services/Funding-Guide.pdf

7 https://iowadot.gov/systems_planning/grant-programs/federal-and-state-recreational-trails

8 https://iowadot.gov/traffic/traffic-and-safety-programs/tsip/tsip-program

9 https://iowadot.gov/systems_planning/grant-programs/transportation-alternatives

Table 1. Allowable pedestrian expenses under federal funding programs

Project Type	Funding Sources									
	TIGER	TIFIA	FTA	ATI	CMAQ	HSIP	NHPP	STBG	TRP	SRTS
Bicycle and pedestrian overpasses	A	A	A	A	B	A	A	A	A	A
Bicycle and pedestrian scale lighting	A	A	A	A	D	A	A	A	A	A
Crosswalks (new or retrofit)	A	A	A	A	B	A	A	A	A	A
Curb ramps	A	A	A	A	B	A	A	A	A	A
Shared use paths	A	A	A	A	B	A	A	A	A	A
Sidewalks (new or retrofit)	A	A	A	A	A	A	A	A	A	A
Signs and signals	A	A	A	A	A	A	A	A	D	A
Streetscaping	C	C	A	A	D	D	A	A	D	D
Traffic calming	A	A	A	D	D	A	A	A	D	A
Trail bridges	A	A	D	D	B	A	A	A	A	A
Trail crossings	A	A	D	D	B	A	A	A	A	A
Trail facilities (e.g. restrooms)	C	C	D	D	D	D	D	B	B	D
Tunnels/underpasses	A	A	A	A	B	A	A	A	A	A

A - Funds may be used for this activity	B - Program-specific restrictions	C - Eligible, but not Competitive unless part of a larger project	D - Not eligible

Enhanced Mobility of Seniors and Individuals with Disabilities Program (Section 5310)[10]

This federal program supports transit activities for transit dependent populations. Transit agencies may apply for funding, and funds are distributed using a performance-based formula. 55% of funds may be used on capital projects to meet the needs of seniors and individuals with disabilities when public transportation is insufficient. Pedestrian projects that could be eligible include accessible pathways to bus stops and improved signage and wayfinding. A local match of 20% is required for capital projects. Applications are due every year by May 1 and are allocated by the Iowa DOT Office of Public Transit.

Iowa Clean Air Attainment Program (ICAAP)[11]

ICAAP aims to maintain Iowa's air quality by reducing transportation emissions. Pedestrian projects may be eligible under this program. The City may apply for projects that reduce vehicle miles of travel, single-occupant vehicle trips, and other transportation improvement projects to reduce congestion. Projects have a minimum cost of $20,000, and a local match of 20% is required. The competitive application process closes on October 1. Approximately $4 million are available from this program each year.

10 https://www.transit.dot.gov/funding/grants/enhanced-mobility-seniors-individuals-disabilities-section-5310

11 https://iowadot.gov/systems_planning/grant-programs/iowa-clean-air-attainment-program-icaap

Section 402 State and Community Highway Safety Grant[12]

This Federal program was authorized by the 2012 Moving Ahead for Progress in the 21st Century Act (MAP-21) and helps communities address traffic safety problems. Pedestrian safety programs are eligible for funding under the program. Iowa designated 22 top "Problem Counties" through an in-depth crash and safety analysis. Linn County is a qualifying county. Commonly funded items include educational programs, enforcement activities, and speed trailers. Funding is administered by the Governor's Traffic Safety Program under the Iowa Department of Safety and must be spent in accordance with an approved Highway Safety Plan.

Community Development Block Grants – Downtown Revitalization Fund (CDBG-DRF)[13]

Community Development Block Grants are funded by the Department of Housing and Urban Development (HUD) and provide support for a variety of community development needs. In Iowa, the Downtown Revitalization Fund is used to revitalize main street city centers.

Program Abbreviations

- TIGER: Transportation Investment Generating Economic Recovery Discretionary Grant program
- TIFIA: Transportation Infrastructure Finance and Innovation Act (loans)
- FTA: Federal Transit Administration Capital Funds
- ATI: Associated Transit Improvement (1% set-aside of FTA)
- CMAQ: Congestion Mitigation and Air Quality Improvement Program
- NHPP: National Highway Performance Program
- STBG: Surface Transportation Block Grant Program
- HSIP: Highway Safety Improvement Program
- TA: Transportation Alternatives Set-Aside (formerly Transportation Alternatives Program)
- RTP: Recreational Trails Program
- SRTS: Safe Routes to School Program / Activities

12 https://www.iowagrants.gov/insideLinkOpps.jsp?documentPk=1485449790280

13 https://www.iowaeconomicdevelopment.com/CDBG/DowntownFund

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Cedar Rapids
Pedestrian Master Plan

December 2019

CEDAR RAPIDS
City of Five Seasons®

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Pedestrian Master Plan

Appendix A: Community Engagement Report

Key Findings, Engagement Strategies, and Detailed Results

The Czech Village New Bohemia District is a popular place for walking in Cedar Rapids.

Contents

INTRODUCTION

The purpose of the community engagement report is to summarize the approach to and results of engaging community members around the Cedar Rapids Pedestrian Master Plan (Plan). The voices of the community members revealed findings for the project team to further analyze and drive recommendations in the Plan.

A successful process must have stakeholder input and buy-in for the Plan's recommendations and priorities. This begins by relying on community member input to help determine what problems need to be solved and to generate solutions. This also involves assessing the priorities of community members to ensure Plan recommendations are in response to the issues identified by community members as well as those responsible for working toward implementation.

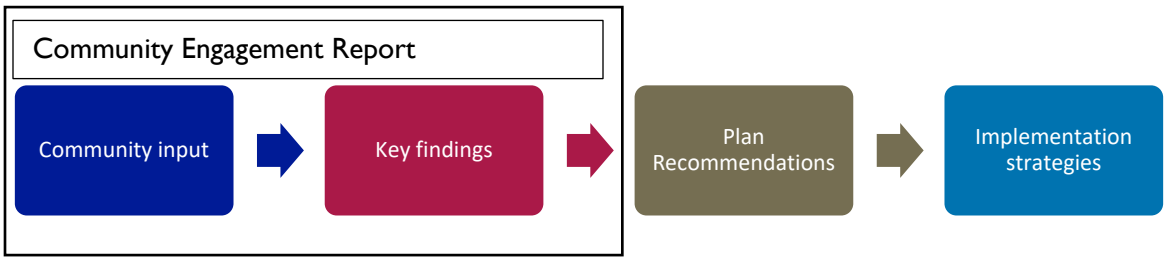


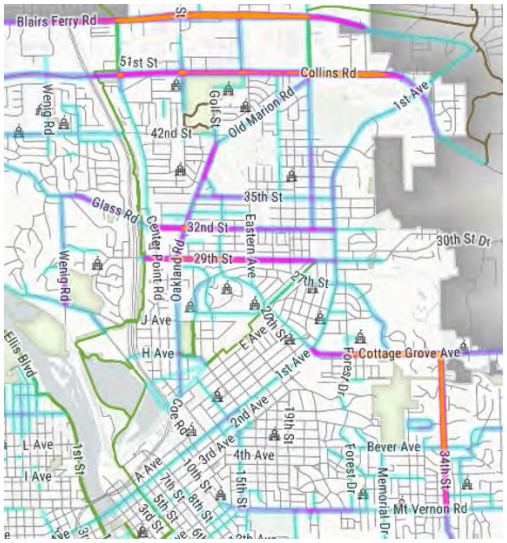
Illustration of Plan development process: community input informs key findings which lead to recommendations and implementation strategies.

In June and July 2018, there were approximately 1,200 participant interactions that resulted in recorded input. This does not include passive participation such as website clicks, reading an article about the Plan, or listening to a presentation. The participants have a range of walking habits which helps account for potential bias about the various topics.

KEY FINDINGS

This section summarizes the key findings from the community engagement process in June and July. Successful plans are based on listening to and addressing community priorities – that includes strengths, weaknesses, opportunities, and challenges that cannot be uncovered with multiple choice questions. Open-ended responses, public discourse, and focused listening sessions are where the project team uncovered honest, candid, and sincere priorities from the community. When a sense of priority is revealed through community engagement, it is easier for City staff to prioritize and strategically invest the City's limited resources.

1) **Residents support walking as a mode of transportation in Cedar Rapids**. In addition to nearly 1,300 lines and points drawn on the online mapping survey from almost 400 residents, the majority of additional open-ended comments from online surveys, social media pages, and emails to City staff were about wanting more sidewalks. There are aspirations from the developer and real estate community to make walking more convenient, enjoyable, fun, and simple for people of all ages and abilities. City staff relayed that a more walkable community is a common request during community planning projects, and even residents who are initially opposed to new sidewalk construction often come to see its benefits.
2) **Several things are already working well with today's walkway network**. Online survey respondents and those who attended community workshops and pop-up events gave the highest "walking condition" rating of 60% to the location and placement of ADA-accessible curb ramps at intersections. This is likely due to the City's focus on ADA compliance as a result of the US Department of Justice's Project Civic Program beginning in 2011, and the settlement agreement passed by the City Council in 2015. Fifty-one percent of the community also rated crosswalk marking maintenance as excellent or good, which was the third highest ranking. The Plan's advisory committee (made up of 14 community stakeholders) gave its highest ranks to the community's expanding shared-use path network, which was seen as the greatest strength for walking. This was followed by the community's traditional, walkable neighborhoods with tree-lined streets.
3) **The current walkway network is seen as inadequate and disconnected**. The category that received the most input on the community WikiMap (out of four categories) was "routes I'd like to walk," with 578 routes drawn. These routes were concentrated on busy commercial streets with incomplete sidewalks (see image below and Figure 2 on page A-12). This type of street was also seen as the least comfortable place for walking in the visual preference survey. The category with the least positive rating of 34% was the extent of the sidewalk network, ranked the lowest out of 11 possible conditions. The Plan's advisory committee also saw gaps in the walkway network as the walkway network's biggest weakness.



4) **Connecting the community's most popular destinations with walkways is a high priority**. At each of the three listening sessions held with realtors, developers, and City staff, the topic of focusing on important destinations was prominent. The Plan's advisory community also saw connections to destinations as the greatest opportunity. While schools were a popular destination type in large group discussions with stakeholders, they ranked only sixth out of 11 destination types with the larger public. They were preceded by parks, dog walking, restaurants grocery stores, and libraries.

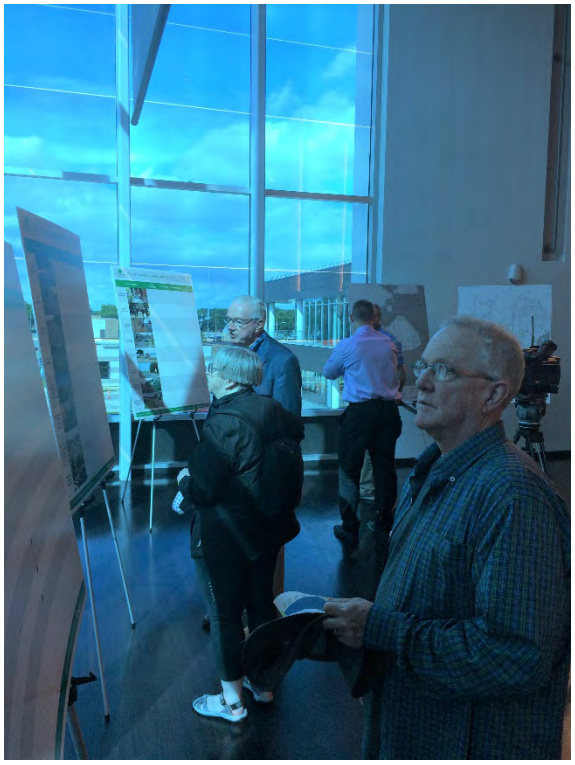
5) **Several existing policies regarding funding and maintenance are not viewed favorably.** In the listening session with realtors, it was clear that assessments for sidewalk repair are a large concern, because they are often unknown to a buyer until after the home selling process is complete. Prospective buyers of corner lots with sidewalks also often express concern about being responsible for walkway maintenance. The practice of placing sidewalks on only one side of a street was seen as an assessment and maintenance challenge for those homeowners with a sidewalk (versus those without). In the listening session with developers, the current combination of public and private funding for sidewalk construction and maintenance was seen as confusing and frustrating to many residents. Maintenance also ranked low in the walking condition survey, with 35% of residents viewing the smoothness of sidewalks as excellent or good, and 39% satisfied with winter maintenance. In the listening session with City staff, confusion over who is responsible for winter maintenance was a concern.
6) **Some residents oppose sidewalks.** While they are in the minority of participants, their reasons for opposing sidewalks include current policies in the preceding paragraph, with the cost of sidewalk construction and maintenance rated as the top reason for opposition in open-ended comments. The loss of right-of-way that is currently used for yards and trees is another reason, as well as a desire to concentrate more funding on street repairs. The Plan's advisory committee viewed opposition as the biggest barrier to address, to improve the walkway network.

Approximately 75 community members were engaged outside the 1st Avenue NE Hy-Vee during a pop-up event on June 26, 2018

STRATEGIES FOR ENGAGING CEDAR RAPIDS COMMUNITY MEMBERS

The Cedar Rapids Pedestrian Master Plan is intended to reflect the vision and goals of the community as a whole, not just those who explicitly identify as a "pedestrian." By uncovering the issues and ideas from community members with indirect interest in walking, the Plan recommendations will better reflect the community's values and priorities. For example, while a director of a wellness program at a large employer may not identify as a pedestrian, there are many reasons her employer may have a financial interest in increasing walking trips for insurance costs, a healthy and alert workforce, and employee retention.

Oftentimes communities have widespread interest in walking, but limited time to devote to meetings and volunteer opportunities, making it difficult to gauge public opinion through conventional public meetings. Making engagement easy, tailored, inviting, and fun helps reach people who may care, but who are generally less vocal on a single issue like walking. It was important for the project team to use a range of strategies to solicit feedback from community members.

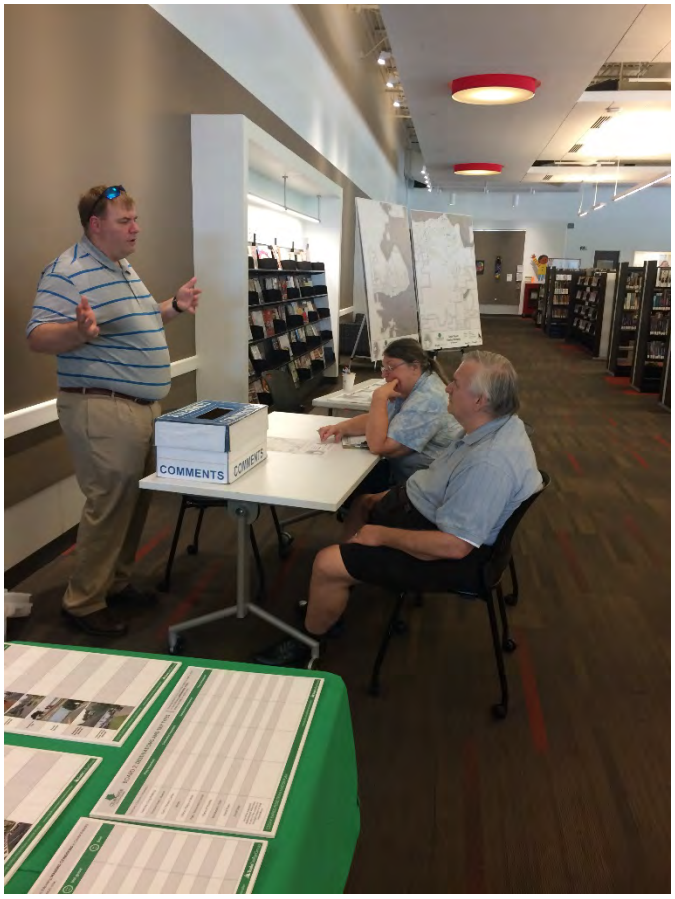


Participants complete surveys at the Cedar Rapids Public Library on June 27, 2018

This section summarizes the strategies used to engage a range of community voices, why the strategies were selected, and the input that was received.

Strategy A: Community Workshops, Pop-up Events, and Online Surveys

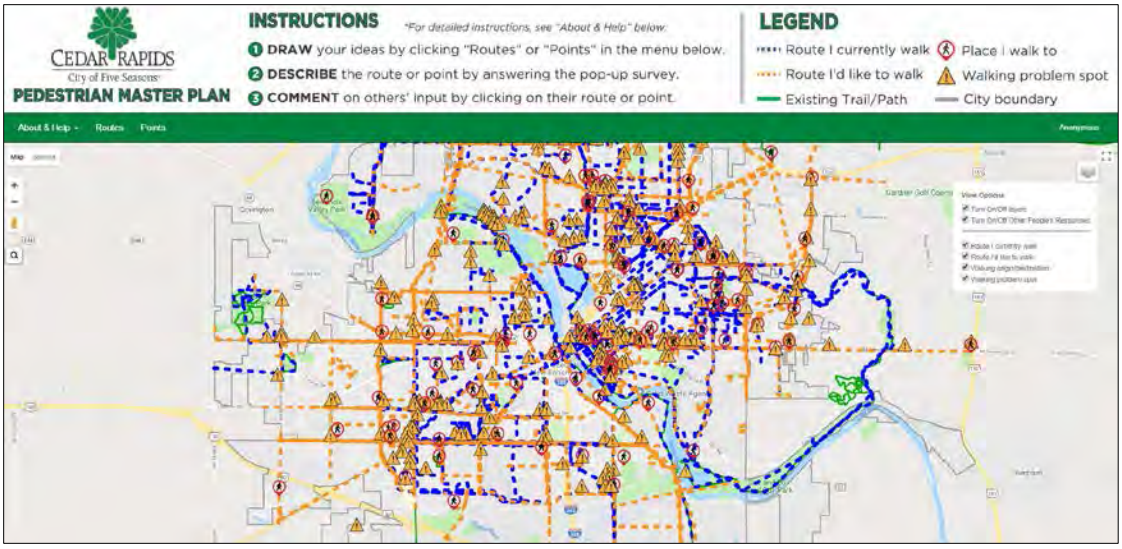
On June 26th, 27th and 28th the project team hosted one traditional community workshop and three pop-up events. The first pop-up event took place at Hy-Vee (1556 1st Avenue NE) with 75 participants, and the traditional community workshop took place at the Downtown Library (450 5th Avenue SE) with 18 participants. The second pop-up event took place at Ladd Library (3750 Williams Boulevard SW) with 30 participants, and the third pop-up event took place at the Ground Transportation Center (450 1st Street SE) with 54 participants. In addition, engineering interns visited parks throughout the community to facilitate the completion of 24 online and paper surveys. The parks included Bever Park, Cherry Hill Park, Cleveland Park, Green Square Park, Noelridge Park, and Twin Pines Golf Club.



A City staff member discusses sidewalks with residents at a pop-up event at Ladd Library on June 28, 2018

In addition to public events, an online survey and interactive map were promoted to Cedar Rapids community members between June 2nd and July 22nd. The online survey and interactive map mimicked the format that was used at the community workshops and pop-up events. The online survey was visited 575 times. The online interactive map had 396 users. The results of the community workshop, pop-up event, and online surveys are combined in the following section to provide a composite snapshot.

A screen capture of the online survey showing a multiple-choice question about comfort level at a raised crosswalk



A screen capture of the online interactive map that displays the options to mark routes people currently walk, would like to walk, places people walk to, and walking problem spots.

PARTICIPATORY MAPPING EXERCISES

Cedar Rapids residents, reached at both in-person events and online through an interactive mapping website, were invited to identify examples of routes they currently walk, routes they would like to walk, places they walk to, and walking problem spots.

Residents traced a total of 232 routes where they currently walk and 578 routes where they would like to be able to walk. The routes residents identified as wanting to be able to safely walk converged along a several commercial corridors throughout the city. Residents placed a total of 128 markers at places they walk to and 353 markers at walking problem spots. Both the places and the problem spot responses converged around several distinct locations.

A community member draws on a map at the Downtown Library on June 27, 2018

Routes Residents Currently Walk

The map shown in Figure 1 summarizes the 232 routes that residents identified as places where they currently walk. This was accomplished by converting the route segments into a "hot spot" map, showing the concentration of reported routes. Existing routes show concentrations in several locations. Many people report walking in and near the central business district, near the river, and in the Oak Hill Jackson neighborhood. Another popular location is on streets near Mount Mercy University and Regis Middle School. Other concentrations emerged near Seminole Valley Park and Bever Park, with a few concentrations in commercial areas.

Routes Residents Would Like to Walk

Residents traced a total of 578 routes where they would like to be able to walk. Most of these (532 routes) overlapped with the existing road and trail network; these are summarized in Figure 2. In contrast with residents' existing routes concentrated near downtown areas, schools, and parks, the desired routes converged along several key commercial corridors. Residents highlighted multiple segments of Wilson Avenue SW, Wiley Boulevard, Edgewood Road, Blairs Ferry Road, Collins Road, Cottage Grove Avenue, and 34th Street. A common theme among the comments attached to residents' desired routes was the preference for sidewalks.

Places Residents Walk To

A heat map showing the concentration of locations residents identified as places they walk to is depicted in Figure 3. The two largest concentrations of places are both in the Oak Hill Jackson neighborhood. Residents also reported walking to places in and around Bever Park, the commercial area around Glass Road NE/32nd Street NE and Center Point Road NE, and two schools near Johnson Avenue on the west side of the city (Cleveland Elementary and Roosevelt Magnet School).

Walking Problem Spots

A heat map showing the concentration of locations residents identified as difficult for walking are mapped in Figure 4. The largest single concentration is along Ellis Road near the golf course and harbor. Additional high response locations are in the Oak Hill Jackson neighborhood, along a commercial area near Edgewood Road SW and Williams Boulevard SW, and near the Hy-Vee at 32nd Street NE and Oakland Road NE. Overall, locations residents identified as difficult for walking tended to be in commercial areas with multi-lane streets.

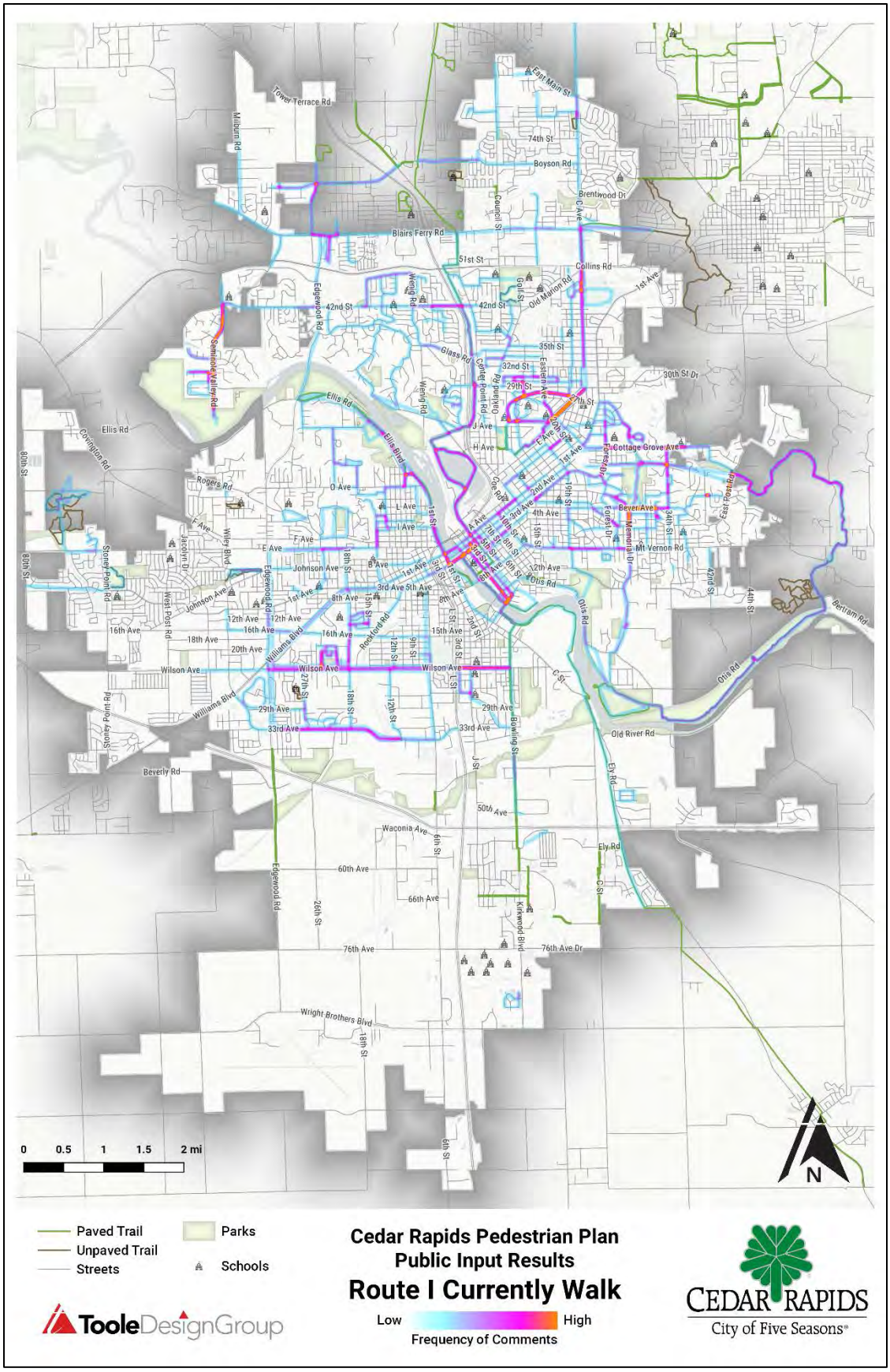


Figure 1. Participants were asked to trace routes they currently walk.

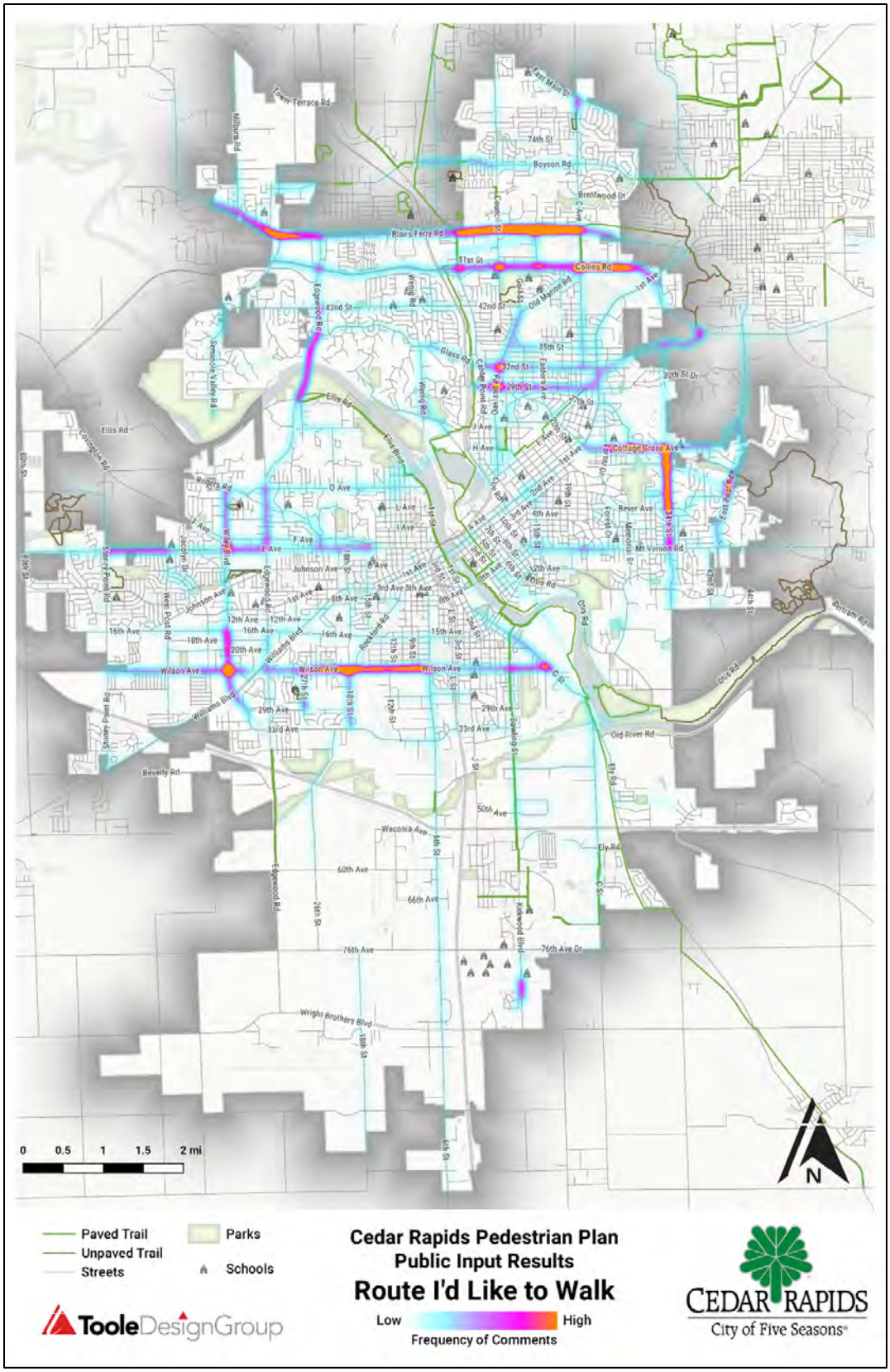


Figure 2. Participants were asked to trace routes they would like to be able to walk.

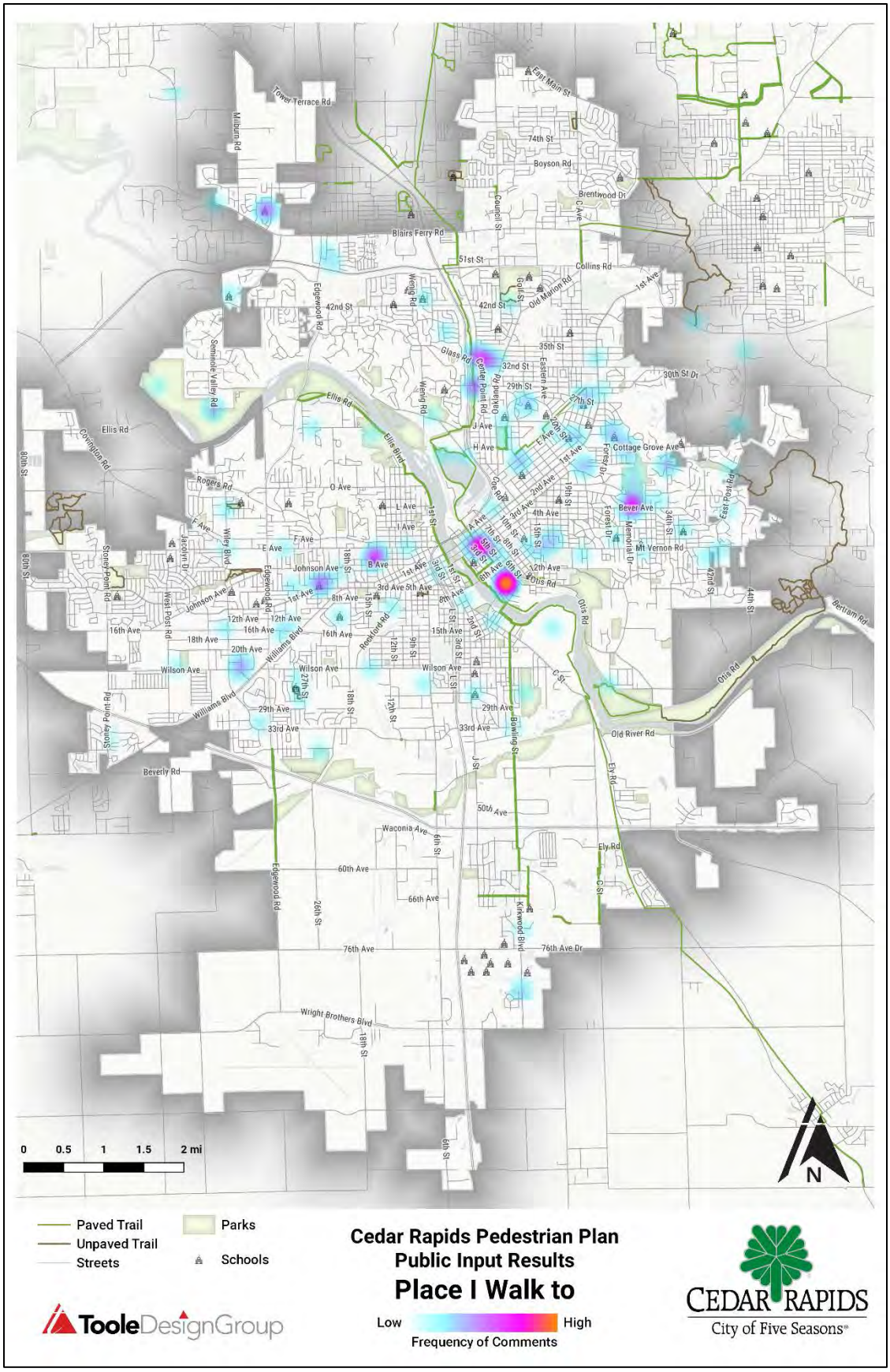


Figure 3. Participants were asked to place points at locations they walk to.

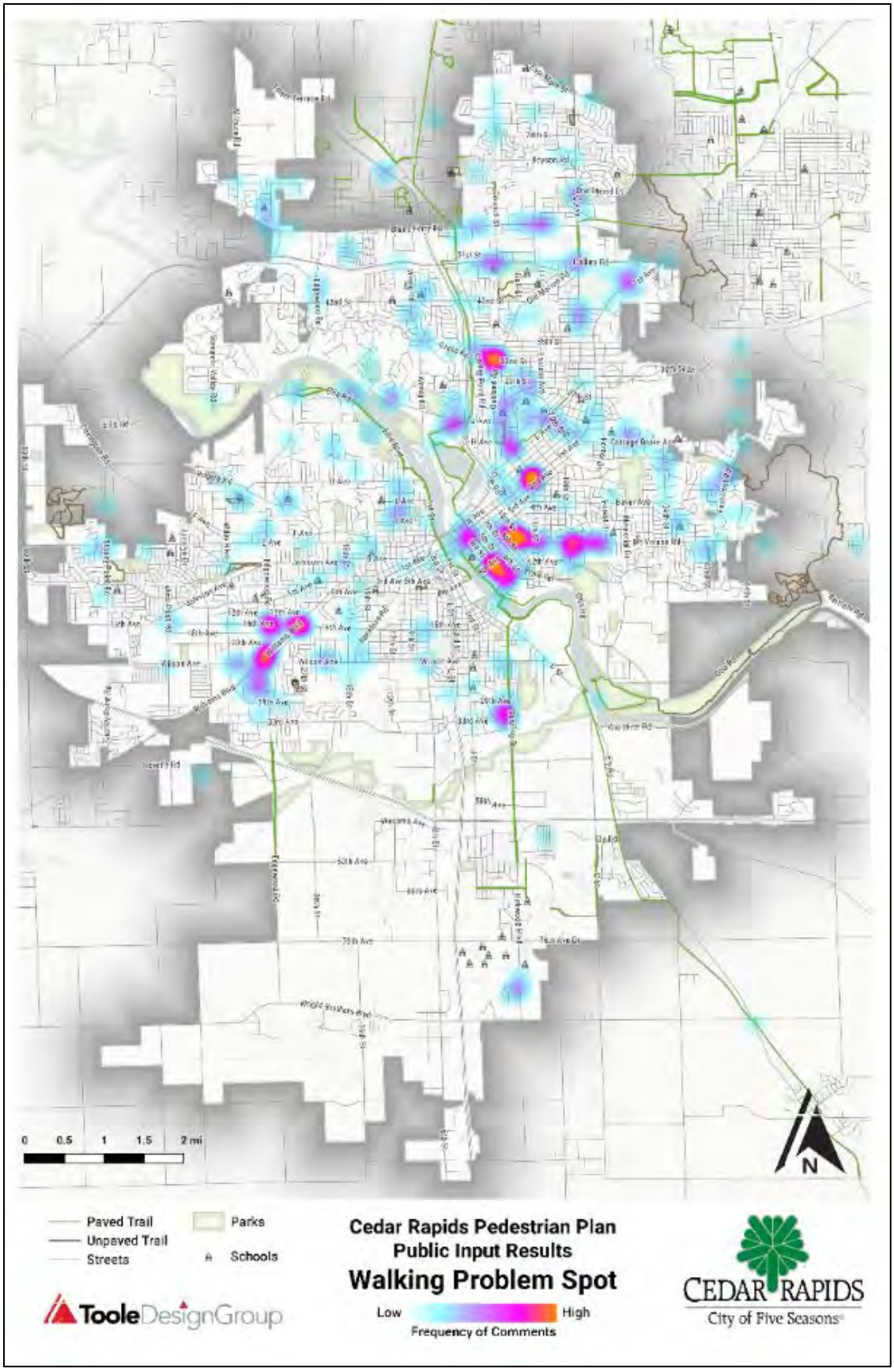


Figure 4. Participants were asked to place points at locations they consider to be walking problem spots.

WALKING DESTINATIONS AND TRIP TYPES

Participants rated how important it was to them to be able to walk to eleven different types of destinations or trips. Rating was on a four-point scale, from "Very unimportant" to "Very important". They were also asked to add any additional types of destinations that were not listed. Approximately 600 people responded to this question. Figure 5 displays the results of participants who rated each condition as either "Very important" or "Important". The destinations with the highest number of ratings as "Very Important" or "Important" were parks and recreation centers, walking for exercise or dog walking, and restaurants and cafes.

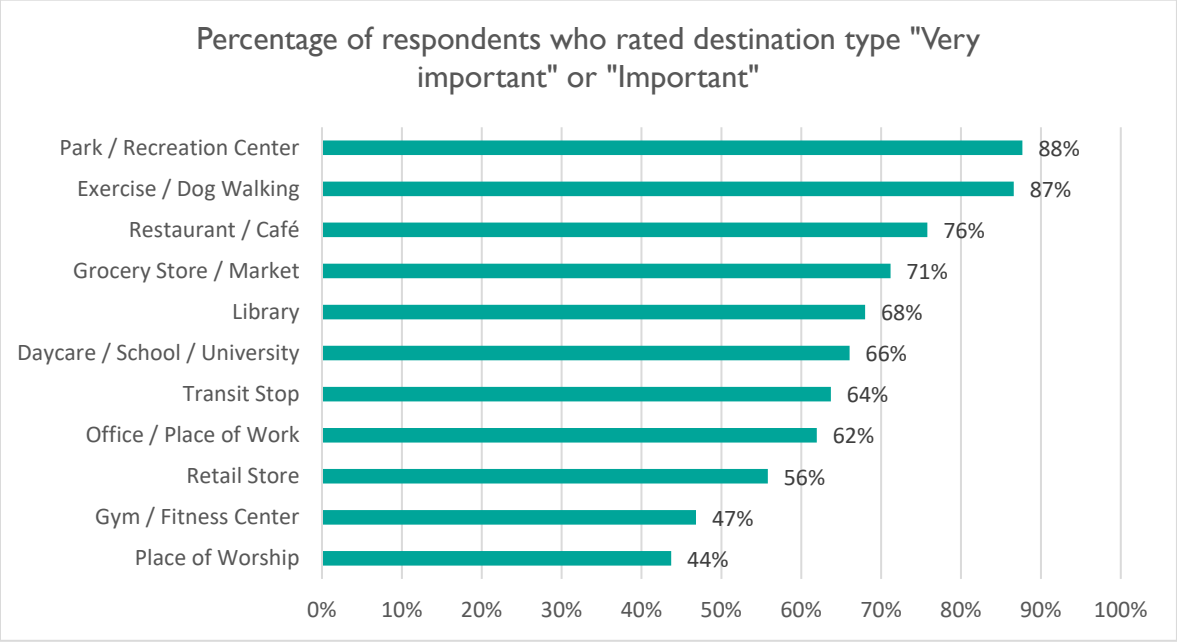


Figure 5. Summary graph of percentage of respondents who rated each walking destination type as "Very important" or "Important".

Approximately sixty-five people listed additional types of destinations that were not named above but were important for them to be able to walk to. Among the additional destination types listed (shown in Figure 6), the top destinations were accessing trails (21 comments), various services including banks, hospitals, and post offices (14), walking around or between neighborhoods (14), other people's houses (7), entertainment and sports venues (5), and events (3).

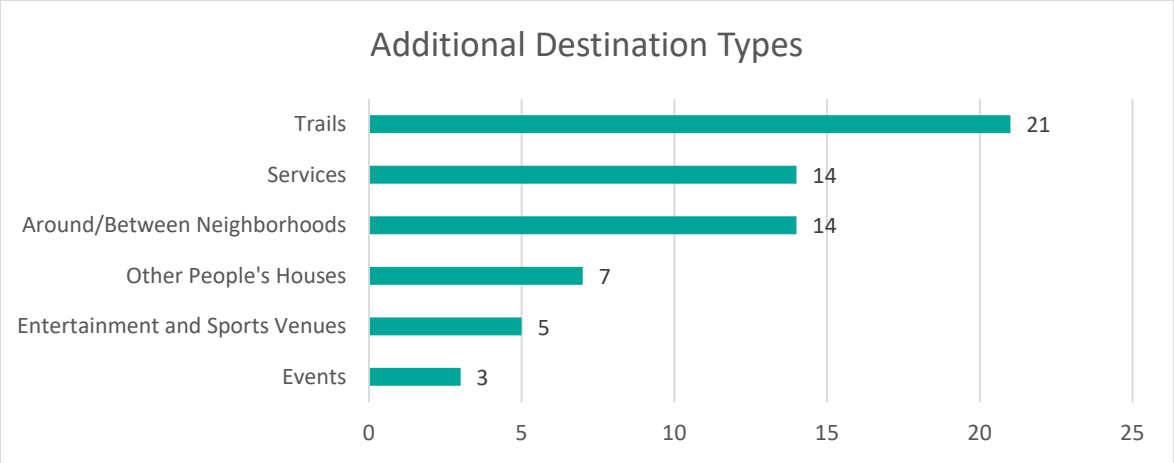


Figure 5: Summary graphs of number of respondents who listed additional destination types as important

Three community member rates the top issues for walking in Cedar Rapids at Hy-Vee during a community workshop on June 26, 2018

RATING CURRENT CONDITIONS

Participants in the online survey and community workshops were asked to rank a variety of current walking conditions in Cedar Rapids on a five-point scale from 'Excellent' to 'Bad.' Figure 7 displays the results of participants who voted for each condition as either 'Excellent' or 'Good'. Approximately 635 people answered this question. The conditions with the most positive ratings were:

1. Location/placement of curb ramps at intersections (60%)
2. Terrain for walking (56%)
3. Crosswalk marking maintenance (51%)

The conditions with the least positive ratings were:

9. Smoothness of sidewalks (35%)
10. Motorists' attitudes towards pedestrians (34%)
11. Extent of sidewalk network (34%)

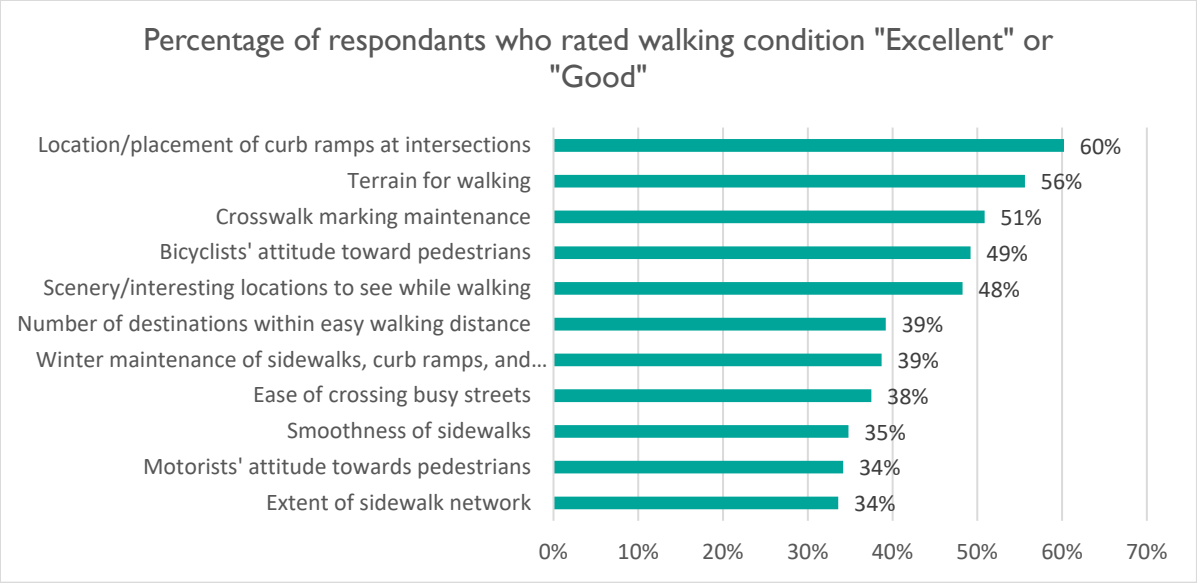
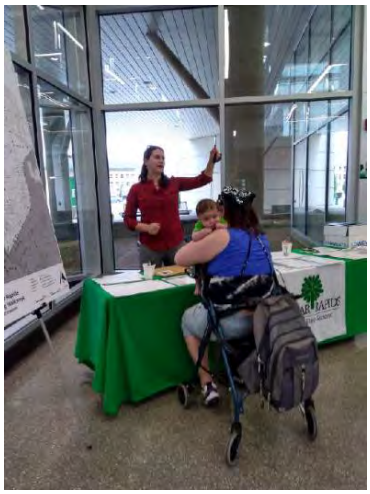


Figure 7. Summary graph of percentage of respondents who rated each walking condition as 'Excellent' or 'Good'.



A community member completes a survey at the Ground Transportation Center on June 28, 2018

DESIGN PREFERENCES FOR CROSSING STREETS

Community members were asked to rate their comfort level for crossing the street using different types of crosswalks. Participants viewed photos and short descriptions of eight crosswalk types, and then rated each one on a four-point scale from 'Very Comfortable' to 'Very Uncomfortable'. Figure 8 shows the percentage of respondents who ranked each category as either 'Very Comfortable' or 'Comfortable'. Approximately 550 people answered this question. The three crossing types that received the most responses for 'Very Comfortable' or 'Comfortable' were long, well-marked crosswalks (85%), raised crosswalks (84%), and median islands (83%). However, no crossing type was ranked as comfortable or very comfortable by fewer than 65% of respondents.

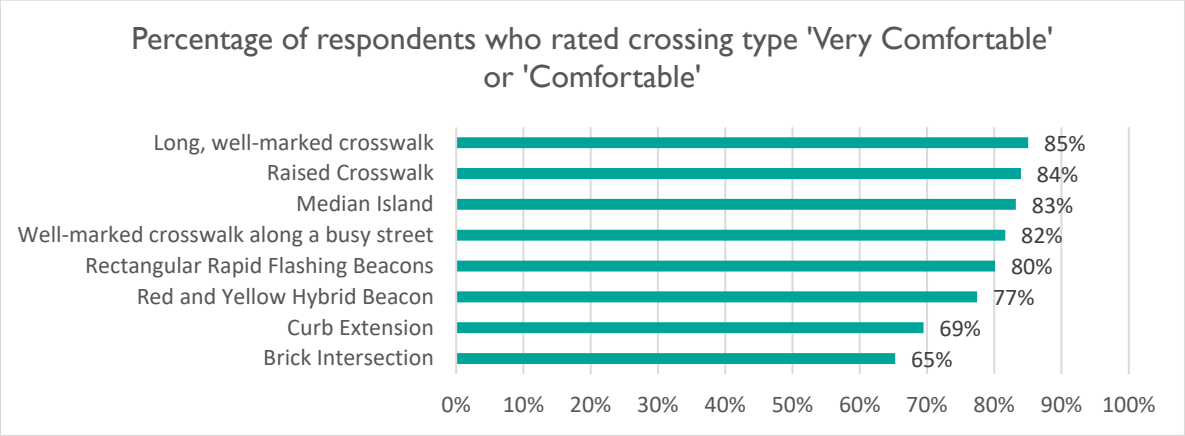
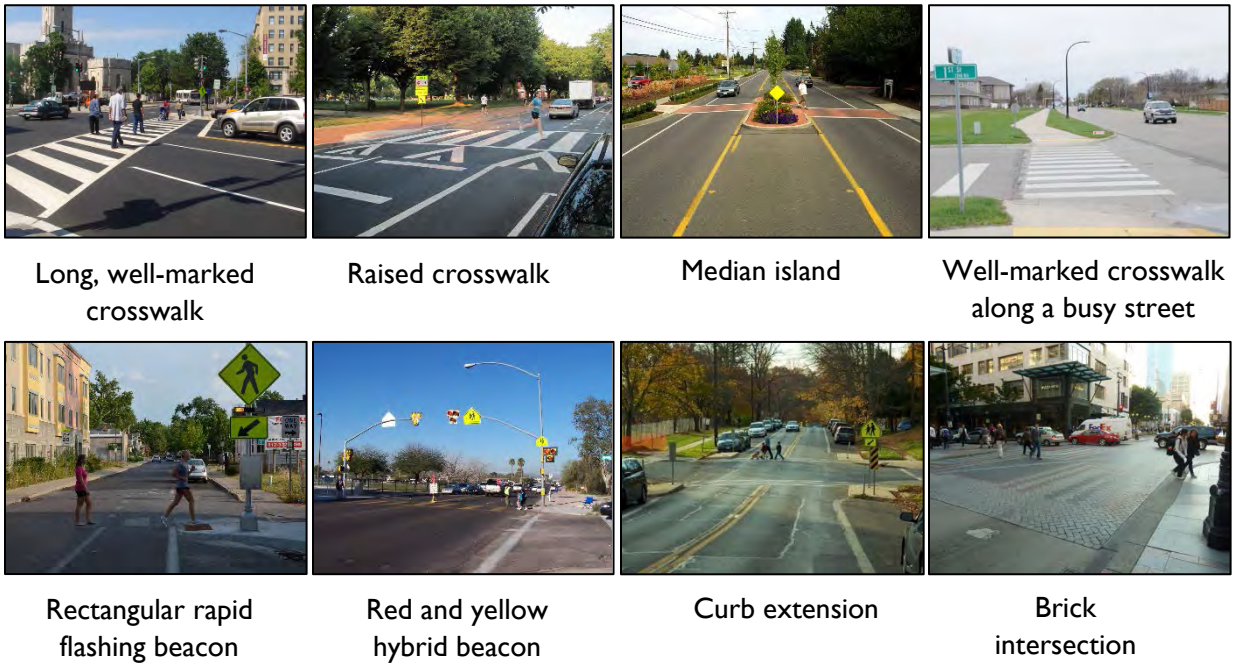


Figure 8. Summary graph of percentage of respondents who rated each crossing type as 'Very Comfortable' or 'Comfortable'.



Each of the eight crossing types that were rated by survey respondents and community workshop participants.

DESIGN PREFERENCES FOR WALKING ALONG STREETS

Community members were asked to rate their comfort level with walking along streets in various types of pedestrian environments. Participants viewed a photo of each pedestrian environment, and then rated each on a four-point scale from 'Very Comfortable' to 'Very Uncomfortable'. Figure 9 shows the percentage of respondents who ranked each category as either 'Very Comfortable' or 'Comfortable'. Approximately 540 people answered this question. The three pedestrian environments that received the most responses for 'Very Comfortable' or 'Comfortable' were wide sidewalks (98%), downtown sidewalks (98%), and residential sidewalks (96%). The complete results of the pedestrian environment rankings and images of each pedestrian facility are shown below.

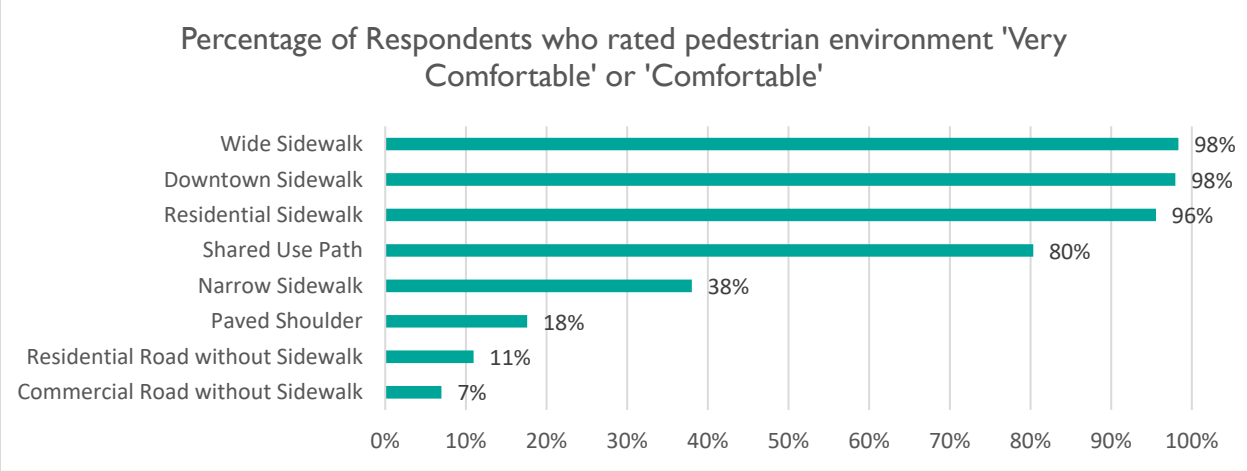


Figure 9. Summary graph of percentage of respondents who rated each pedestrian environment as 'Very Comfortable' or 'Comfortable'.

Each of the eight pedestrian environments that were rated by survey respondents and community workshop participants.

ADDITIONAL COMMENTS

In addition to the guided activities described above, Cedar Rapids residents submitted over 200 comments and opinions to be considered for the plan. These comments were collected from the online survey, public workshops, social media posts (Facebook and Nextdoor), and emails to City staff. These comments were read and assigned general topics corresponding to their content. Some comments fell under multiple topics. The full list of topics assigned and the number of comments categorized in each topic are found in Figure 10.

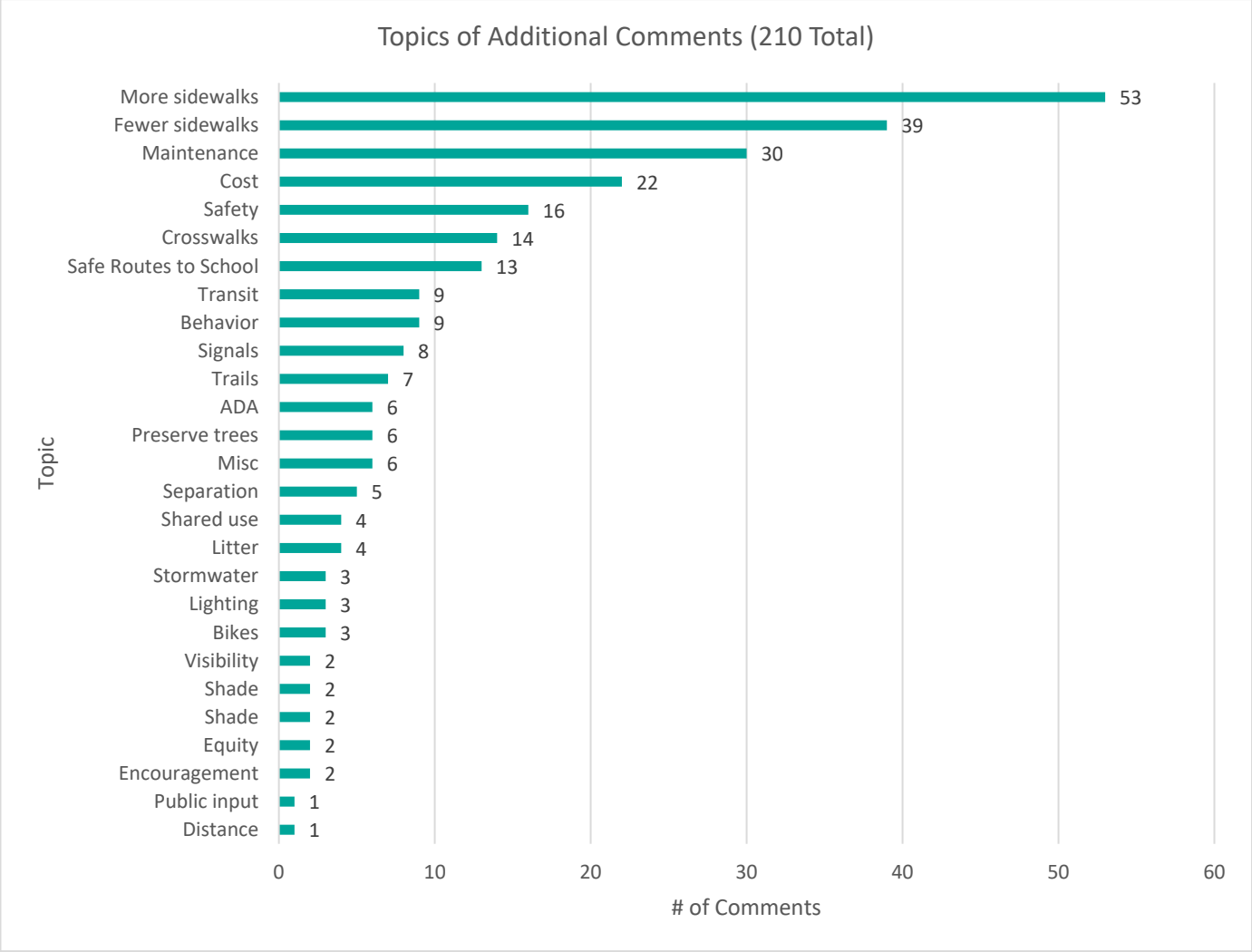


Figure 10. Summary graph of additional comments by topic.

The category with the most additional comments was those in favor of **more sidewalks** (53 comments). These comments asked for more sidewalks or trails, for sidewalk gaps to be completed, and for the overall network to be more connected and walkable. One comment requested "[m]ore sidewalks so that we can walk, run or bike to all areas of the city and surrounding towns". Another commented, "We would love a pedestrian friendly downtown. It makes us excited to think about retirement in downtown Cedar Rapids!" These pro-sidewalk comments were in

addition to the over 1,000 problem spots and desired routes indicated through mapping activities described earlier in this report.

However, not all comments were in favor of expanding the sidewalk network. Thirty-nine comments asked for **fewer sidewalks.** These included residents stating a preference for sidewalks not to be added in their neighborhoods. Comments in this vein included, "[I] don't feel sidewalks in quiet residential neighborhoods are a necessity, especially the extremely wide ones! Well maintained yards are more appealing." Others stated that they preferred for money to be spent on fixing and resurfacing roads rather than sidewalks, or on maintaining existing sidewalks. For example, one person commented: "I have nothing against allowing people having an enjoyable and safe walk, but having sidewalks in unused areas of the city is spending our tax dollars unwisely… For the most part, our streets are in deplorable condition and several can even cause damage to vehicles driving over the cracked and potholed surfaces." Although these comments represent a small fraction of the overall number of people who participated in this process to express their desires to improve pedestrian infrastructure in Cedar Rapids, it will nevertheless be important to be clear and transparent regarding how investments are prioritized as a result of this Plan.

The third largest category of additional comments referred to sidewalk **maintenance**, with a total of thirty comments. These comments related to repairing cracks and other problems with the sidewalk surface; keeping sidewalks free of obstructions; and clearing sidewalks of snow and ice in the winter. Keeping the sidewalks clear in winter was a critical point of concern, with comments such as: "PLEASE improve conditions in winter. City of Five Seasons falls short in winter in many areas". Others expressed a desire for additional enforcement of snow clearance and other sidewalk maintenance requirements for property owners; for example, "Everyone needs to comply to the same rules when it comes to fixing them. Seems like some are not getting them done". Keeping the sidewalks clear in winter and the surfaces clear and free of obstructions is crucial for ensuring that the sidewalk network is serving pedestrians year-round.

PARTICIPANT INTERACTIONS

Including the public in planning and development is an important component of any transportation plan. Public involvement builds trust in the planning process and improves the overall quality of the findings. Three primary means of public involvement were used during Plan development: community workshops, pop-up events, and online surveys.

- 184 people participated in community workshops and pop-up events during the last week of June 2018 at the following locations:
    - Hy-Vee (1st Ave NE and 16th St NE)
    - Downtown Library
    - Ladd Library
    - Ground Transportation Center
- 575 people responded to an online survey made available on the Cedar Rapids website.
- 396 people contributed 1,294 comments to an online Wikimap.

Online public engagement expands the project's interaction with the public beyond meetings. For those who are unable to attend, surveys allow all community members the opportunity to provide insight and ideas. Online survey participants were asked to self-identify their race, age, and gender, as well as some simple questions about their walking. This data helped the project team to get a sense of who was being reached in the community, and what their daily walking habits are like.

The following section describes demographic characteristics of both in-person and online public engagement participants. Fifty-two percent of participants were female, and 48 percent were male. Eighty-seven percent of

participants were white, compared to 84 percent of Cedar Rapids' population. (It should be noted that completion of demographic data at pop-up events was very low, and these events were observed to have a higher number of people of color than online responses.)

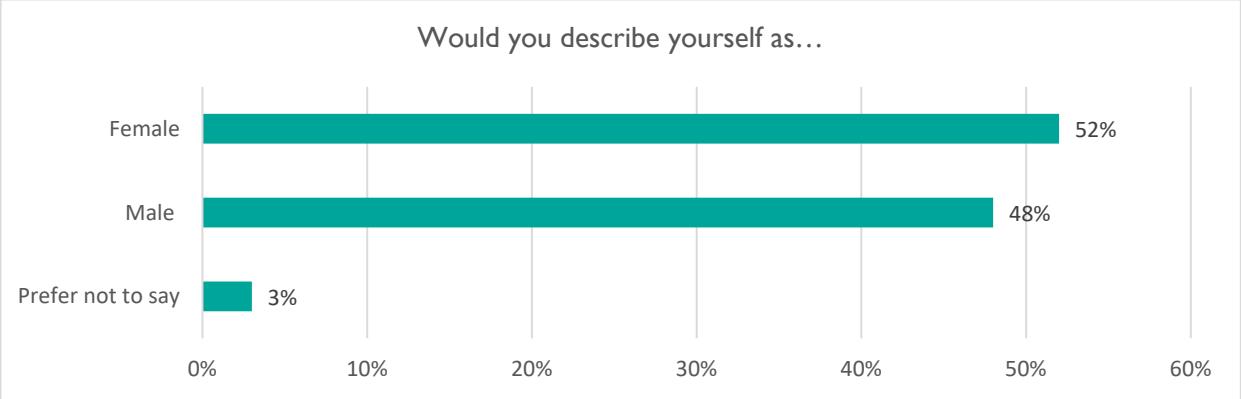


Figure11. Gender of participants in the Cedar Rapids Pedestrian Plan public engagement activities, June-July 2018 (answered by 486 participants).

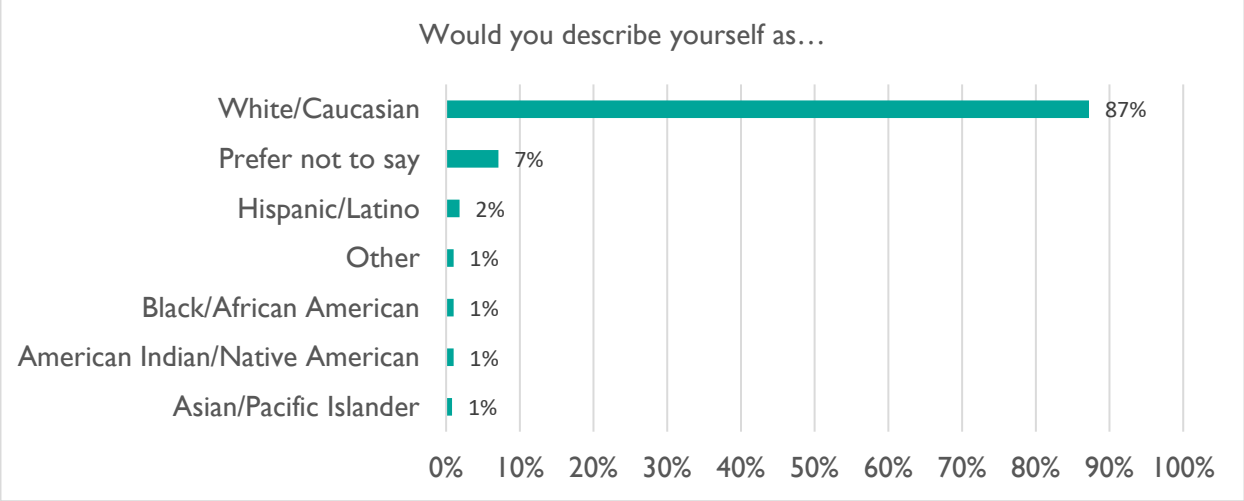


Figure 12. Race of participants in the Cedar Rapids Pedestrian Plan public engagement activities, June-July 2018 (answered by 493 participants).

The median age in Cedar Rapids is 36. Many participants (45 percent) were between the ages of 25 and 44. Five percent of participants reported household income below the federal poverty line, compared to Cedar Rapids'

poverty rate of 11 percent. Eleven percent of participants reported some type of disability, including 4% with a physical disability, 3% with a hearing disability, 2% with a visual disability, and 1% with a cognitive disability.

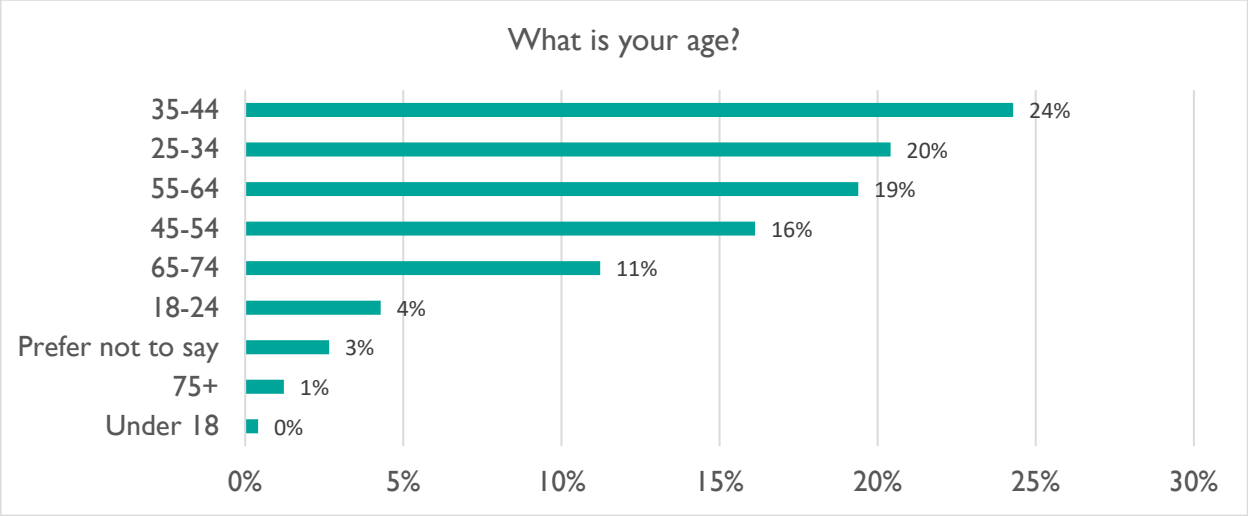


Figure 13. Age of participants in the Cedar Rapids Pedestrian Plan public engagement activities, June-July 2018 (answered by 490 participants)..

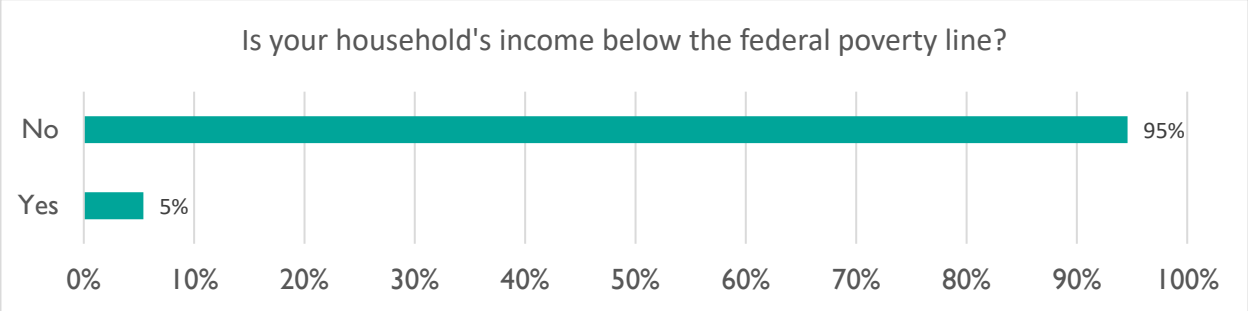


Figure 64. The percentage of participants from the Cedar Rapids Pedestrian Plan public engagement activities, June-July 2018, that are below the federal poverty line (answered by 444 participants).. The federal poverty line thresholds are $12,060 for individuals, $16,240 for a family of 2, $20,420 for a family of 3, $24,600 for a family of 4, $28,780 for a family of 5, $32,960 for a family of 6, $37,140 for a family of 7, $41,320 for a family of 8.

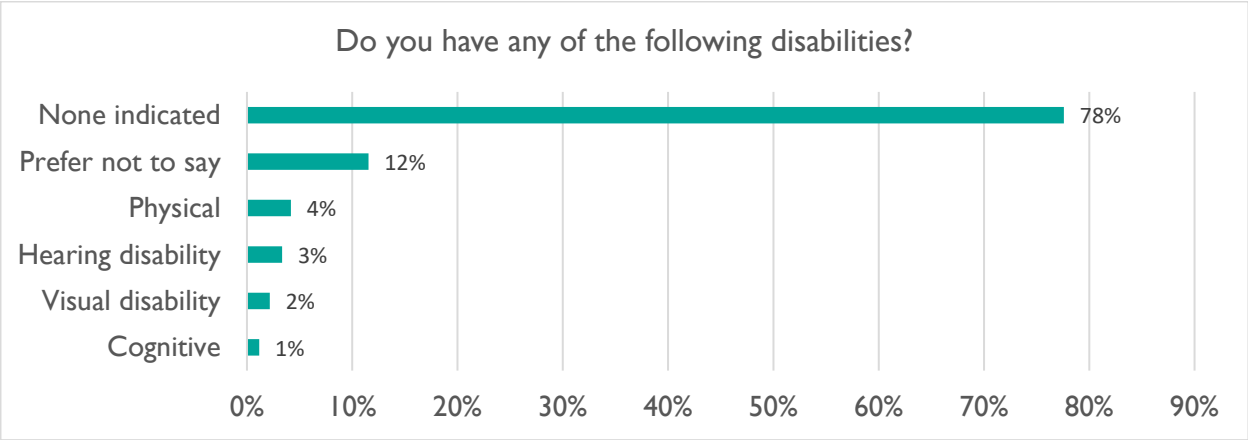


Figure 75. The percentage of participants from the Cedar Rapids Pedestrian Plan public engagement activities, June-July 2018, that reported having a disability. 65 out of 598 people reported having a disability of some kind.

Most participants (57 percent) reported walking outdoors at least once a day, 32 percent reported walking outdoors a few times a week, 10 percent reported walking outdoors a few times a month or less, and one percent reported never walking outdoors.

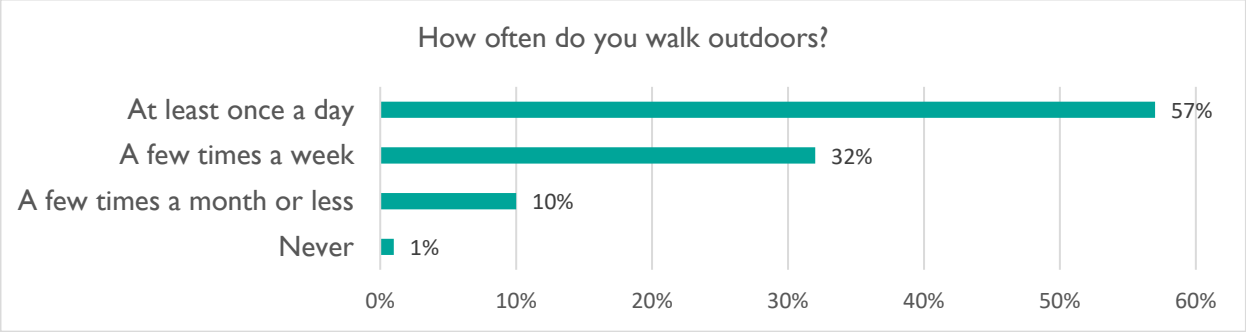


Figure16: Frequency with which participants in the Cedar Rapids Pedestrian Plan public engagement activities, June-July 2018, reported walking outside (answered by 495 participants).

ONLINE MAPPING PARTICIPANTS

309 people completed an online introduction survey before participating in the online interactive mapping exercise between June 14 and July 22, 2018.

Online survey participants were asked to self-identify their race and gender, as well as how often they walk for enjoyment or to travel to destinations. This helped the project team to get a sense of who was being reached in the community, and what their typical pedestrian habits are like.

When survey participants were asked how often they walk for enjoyment or to travel to destinations, nearly 75% of respondents replied at least weekly (40% "several times a week to every day" plus 32% "once or twice a week").

Nearly 80% of respondents self-identified as white/Caucasian, and 52% of respondents were women.

Figure 17. Pedestrian habits of participants from the online mapping survey in June-August 2018.

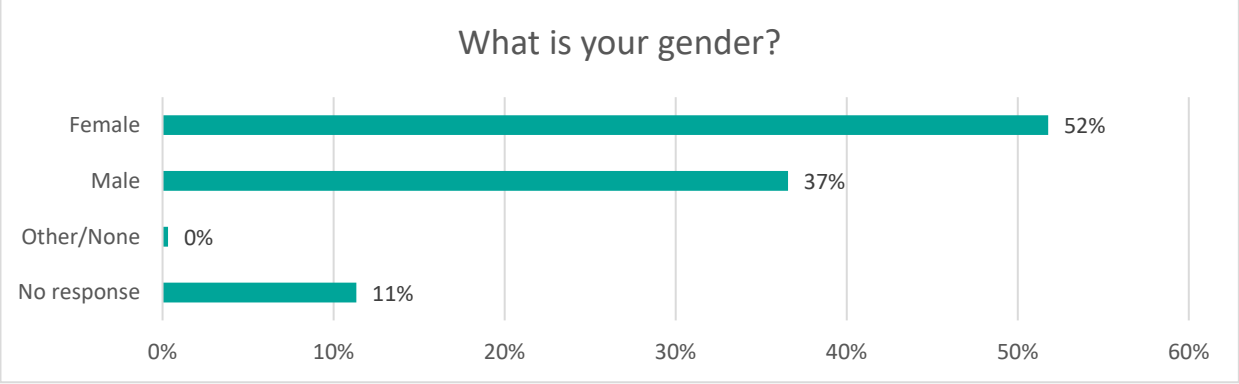


Figure 18. Gender of participants from the online mapping survey in June-August 2018.

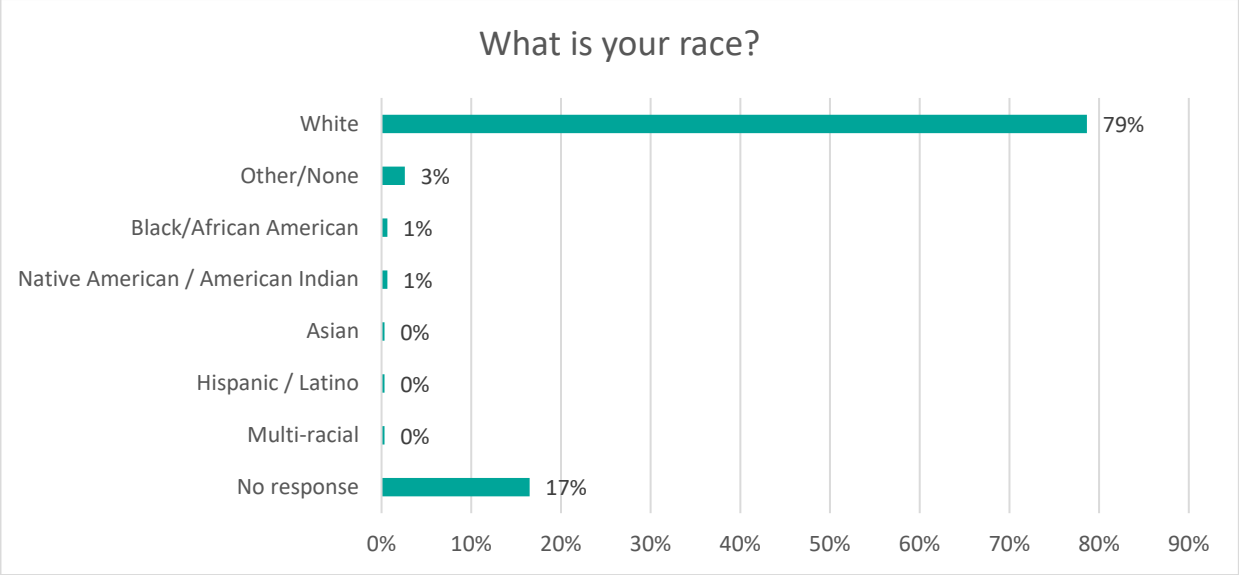


Figure 19. Race of participants from the online survey in June-August 2018.

PROMOTION AND COMMUNICATIONS

While receiving and recording input from community members is critical to authoring a community-led plan, raising awareness is a valuable strategy for engaging the public. While some people may not choose to weigh in, it is important to raise awareness of the planning process, its purpose, and its effect on the future of the community. Raising awareness early in the planning process helps to garner enthusiasm and uncover concerns.

The project team implemented a robust communications plan with messages about the Plan. The following table summarizes the communications used.

Listening Sessions	
	Personalized, targeted emails
Community Workshops	
	Social media outreach
	Community group targeted emails
	Text alert
	Press release
	E-blast to community stakeholders
	Radio and TV interviews
	City website
	Official city notice
	City e-newsletter and Parks and Rec e-newsletter
	City Council invitations
	Newspaper interviews
	TV interviews
Online Survey and Interactive Maps	
	Community group targeted emails
	City website
	Text alert
	E-blast to community stakeholders
	Social media outreach
	City e-newsletter and Parks and Rec e-newsletter

A summary of communications strategies for the June/July 2018 engagement with specific actions for the listening sessions, community workshops, and online activities

Strategy B: Advisory Committee

On May 1, 2018, an advisory committee met to learn about and give input on the Pedestrian Master Plan. The committee's membership was made up of representatives from the following groups:

- Americans with Disabilities Act (ADA) Advisory Committee (Cathy Hafs)
- Cedar Rapids Area Association of Realtors (Kevin Platz)
- Cedar Rapids Community School District (Chris Gates)
- Cedar Rapids Metro Economic Alliance (Jesse Thoeming)
- City of Cedar Rapids Communications Coordinator (Emily Breen)
- City of Cedar Rapids Community Development Department (Adam Lindenlaub)
- City of Cedar Rapids Parks & Recreation Department (Todd Fagan)
- City of Cedar Rapids Police Department (Sgt. Mike Wallerstedt)
- City of Cedar Rapids Public Works Department (Mike Duffy, Brenna Fall, Ron Griffith, Nate Kampman)
- Cedar Rapids Transit (Brad DeBrower)
- Corridor Metropolitan Planning Organization (Brandon Whyte)
- Corridor Running (Mark Powers)
- Czech Village New Bohemia Main Street District (Jennifer Pruden)
- Greater Cedar Rapids Housing & Building Association (HBA) Developer's Council (Chad Pelley)
- Kirkwood Community College (Chris Croy)
- Linn County Public Health (Rachel Schramm)
- Mount Mercy University (Terri Crumley)

The goal of the first advisory committee meeting was to learn about the varying perspectives of stakeholders, generate initial buy-in, and identify partnership opportunities for the Cedar Rapids Pedestrian Master Plan. City staff targeted invitations to people associated with specific groups either based on personal interests or professional expertise.

Toole Design Group staff facilitated the meeting with a general focus on four key pieces of information: strengths (what people like they don't want changed), weaknesses (what things drive people nuts), opportunities (what wants and needs people have), and threats (what the biggest barriers are).

Advisory committee members individually brainstormed ideas under each category, and then worked in groups to categorize them. Each person then voted on the top area in each category. Results included:

Category	**Sub-category (votes)**
Strengths	Trails (12), policy/maintenance (5), aesthetics (2)
Weaknesses	Gaps (12), connections (5), education (0), maintenance (0), policy (0)
Opportunities	Connections to destinations (14), improving funding (4), neighborhood desirability increase (1)
Threats	Excuses (10), funding (6), environment/terrain (2), barriers (1)

The group was then asked to generate three words that describe what each person hopes walking will look and feel like in Cedar Rapids in the year 2040. Responses included accessible, casual, community, connected, convenient, done, easy, enjoyable, everyday occurrence, everywhere, expanded, fun, omnipresent, rechargeable hoverboard, safe, simple, and walkability (for powered mobility devices).

The advisory committee will continue to meet over the course of the planning process, with more results forthcoming.

Strategy C: Listening Sessions

In June and July, Toole Design Group conducted three listening sessions with realtors, developers, and City of Cedar Rapids staff. The listening sessions focused on how people view walking in Cedar Rapids and what ideas people have for improving the walking environment. The following sections summarize the participant groups and key topics from the conversations.

REALTORS

Based on guidance from City staff, the project team engaged realtors in a listening session to gain a better understanding of the experiences of realtors and property owners, and where the City can make improvements. Representatives from CBH Realty, Coldwell Banker Hedges, Iowa Realty, Pinnacle Realty, Ruhl & Ruhl Realtors, and Skogman Realty participated in the listening session.

Key topics from the conversation included:

- Sidewalks increase the health and well-being of residents.
- Destinations such as residential neighborhoods, parks, and retail areas should drive connectivity improvements to the walkway network.
- Families want sidewalks more than seniors.
- Sidewalk repair assessments are often not communicated during the home sale process. Sometimes a property with an assessment will be sold to a buyer, but the buyer will not learn about the assessment until after the sale. Realtors and title companies have a difficult time finding sidewalk repair assessments for prospective buyers.
- Sidewalks on one side of a street may be adequate in some instances, but how does this alternative affect the assessments, maintenance, and home value of property owners with sidewalks versus those without?
- Sidewalks may or may not affect the value of an existing home, but they do add to the cost of new homes. Prospective buyers of corner lots with sidewalks express concern over maintenance.
- There is a desire to have clear communication of the City's goals and reasons for sidewalk-related policy.
- There is also interest in understanding the justification for the City's priority order of new sidewalks.
- There is confusion about the combination of 4' and 5' sidewalks that exist, and when each is required.
- Conflicts between people walking and bicycling take place on shared-use paths, with separate areas sometimes needed.

DEVELOPERS

The project team facilitated a listening session with approximately 12 property developers. Key topics from the conversation included:

- Walkability is a big issue with new homebuyers, particularly with dog owners who need to exercise their dogs and reach dog parks. Dog owners make up a large portion of new homebuyers in suburban locations.
- Connections to trails and K-12 schools are also important.
- Assessments for new sidewalk construction affect commercial properties and residential areas with an existing sidewalk construction agreement in place, but not residential areas without agreements.
- There is too much focus on who is going to pay for sidewalks. Residents see the walkway network as a benefit for the entire community, not for individual property owners.
- The local option sales tax to repair streets is a potential funding source for walkway repair and construction.
- Sidewalks on one side of a street is adequate in many situations.

CITY STAFF

In addition to community outreach, the project team invested in conducting "in-reach" with potential/future implementers of the Plan early in the plan development process. The listening session for City of Cedar Rapids staff had representation from the Building Services, Community Development, Development Services, Public Works, and Solid Waste and Recycling Departments.

Key topics from the conversation included:

- Residents consistently express a desire for improved walkability during community planning and zoning projects.
- Opposition to new sidewalk installation is related to losing trees and yard space in the public right-of-way, winter maintenance responsibility, and impractical/expensive sidewalk construction projects. Yet sometimes opposed residents come to see the benefits of new sidewalks after installation.
- The destination-based reasons for closing gaps in the walkway network should be clear, seamless, and orderly, with widespread public buy-in. This will reduce the likelihood for opposition from residents and elected officials.
- Flexible, alternative design methods are needed to avoid expensive retrofit sidewalk construction.
- Schools are an important destination for walking, and there are many examples of gaps in the walkway network near schools.
- Connections between neighborhoods is a challenge because of busy roads. At times, designated pedestrian crossings are ½ to one mile apart. Cul-de-sacs also reduce connectivity between residences and destinations.
- Developers need clear guidance for when sidewalks, curb ramps, and shared-use paths are required. They may not be aware of the demand for walking, and sometimes argue against sidewalks because of the added cost which is passed onto buyers.
- There is a misperception that sidewalk construction funding takes away from street construction funding.
- The quality and timeliness of winter maintenance on sidewalks and curb ramps is a challenging issue. There is also some confusion over who is responsible for winter maintenance on walkways, particularly where snow windrows are pushed into curb ramps.
- There is also confusion about who is responsible for maintenance of sidewalks located in the typical right-of-way for alleys.
- Formal design guidelines are needed for pedestrian accessibility at traffic signals.
- A policy on replacing 4' sidewalks with 5' sidewalks should be considered.
- The Complete Streets Policy may need to be updated to reflect the new Pedestrian Master Plan.
- Conflicts between people walking and bicycling exist on both sidewalks and shared-use paths.
- The Parks & Recreation Department and utility companies need to participate in the planning process, to ensure consistency in the walkway network.

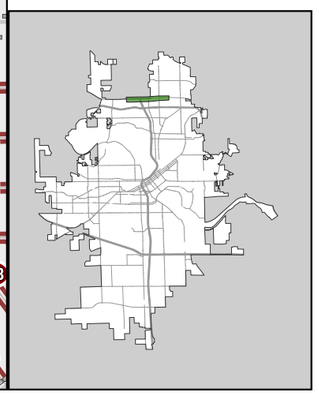
Pedestrian Demand Area A

- Crossing Project
- Sidewalk Gap Project
- Sidewalk Buffer Project
- Has Sidewalk
- Missing Sidewalk
- Pedestrian High Demand Areas
- Subarea

A1 A2 A3

0 500 1000 1500 2000 ft

CEDAR RAPIDS
City of Five Seasons®
TOOLE DESIGN



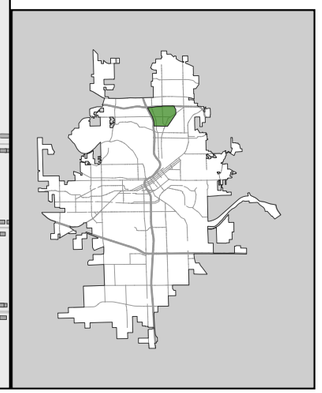
Pedestrian Demand Area B

- Crossing Project
- Sidewalk Gap Project
- Sidewalk Buffer Project
- Has Sidewalk
- Missing Sidewalk
- Pedestrian High Demand Areas
- Subarea

B1 B2 B3 B4 B5 B6 B7 B8

0 500 1000 1500 2000 ft

CEDAR RAPIDS
City of Five Seasons®
TOOLE DESIGN



Pedestrian Demand Area C

- Crossing Project
- Sidewalk Gap Project
- Sidewalk Buffer Project
- Has Sidewalk
- Missing Sidewalk
- Pedestrian High Demand Areas
- Subarea

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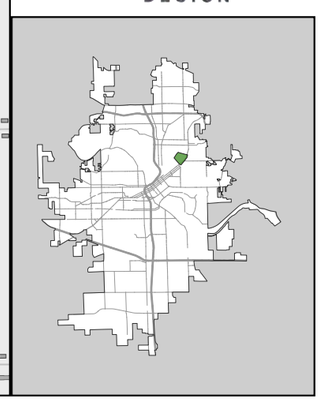

0 500 1000 1500 2000 ft

Pedestrian Demand Area D

- Crossing Project
- Sidewalk Gap Project
- Sidewalk Buffer Project
- Has Sidewalk
- Missing Sidewalk
- Pedestrian High Demand Areas
- Subarea

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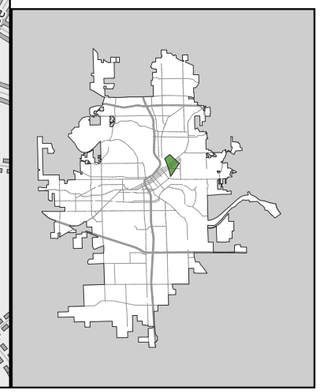
TOOLE DESIGN



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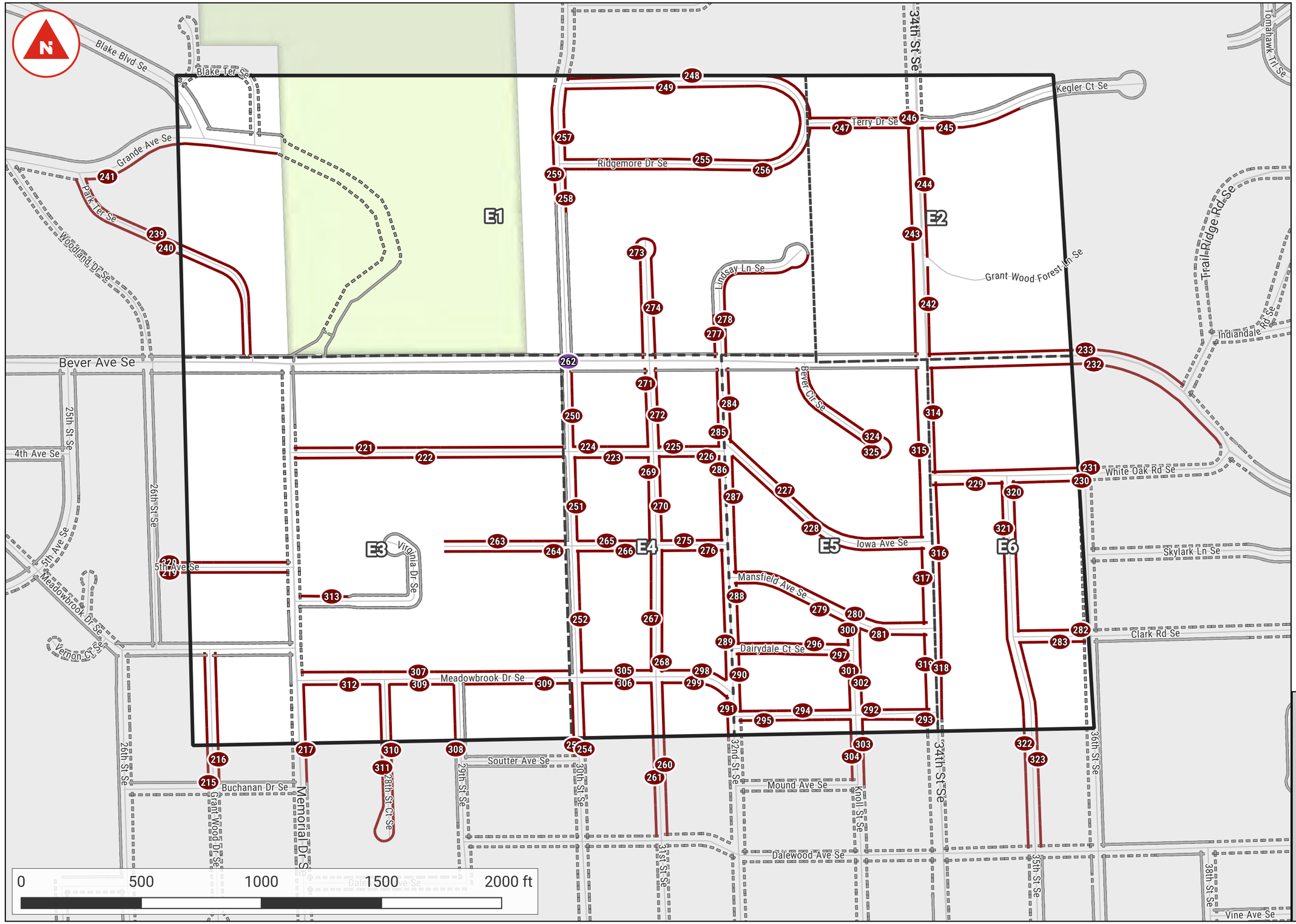

Pedestrian Demand Area E

- Crossing Project
- Sidewalk Gap Project
- Sidewalk Buffer Project
- Has Sidewalk
- Missing Sidewalk
- Pedestrian High Demand Areas
- Subarea

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Pedestrian Demand Area F

- Crossing Project
- Sidewalk Gap Project
- Sidewalk Buffer Project
- Has Sidewalk
- Missing Sidewalk
- Pedestrian High Demand Areas
- Subarea

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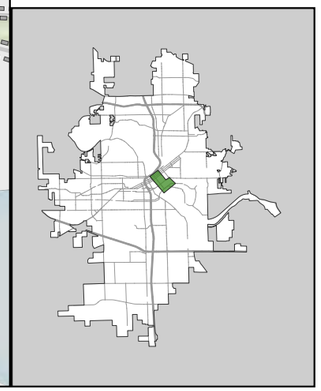
TOOLE DESIGN



0 500 1000 1500 2000 ft

Pedestrian Demand Area G

- Crossing Project
- Sidewalk Gap Project
- Sidewalk Buffer Project
- Has Sidewalk
- Missing Sidewalk
- Pedestrian High Demand Areas
- Subarea

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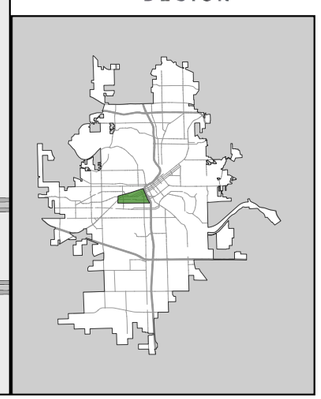
TOOLE DESIGN



0 500 1000 1500 2000 ft

Pedestrian Demand Area H

- Crossing Project
- Sidewalk Gap Project
- Sidewalk Buffer Project
- Has Sidewalk
- Missing Sidewalk
- Pedestrian High Demand Areas
- Subarea

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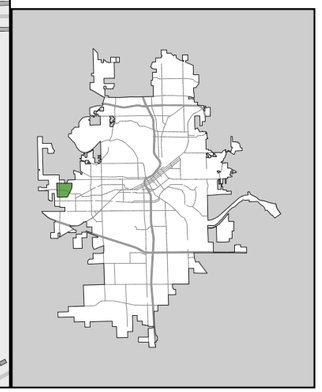
TOOLE DESIGN



Pedestrian Demand Area I

- Crossing Project
- Sidewalk Gap Project
- Sidewalk Buffer Project
- Has Sidewalk
- Missing Sidewalk
- Pedestrian High Demand Areas
- Subarea

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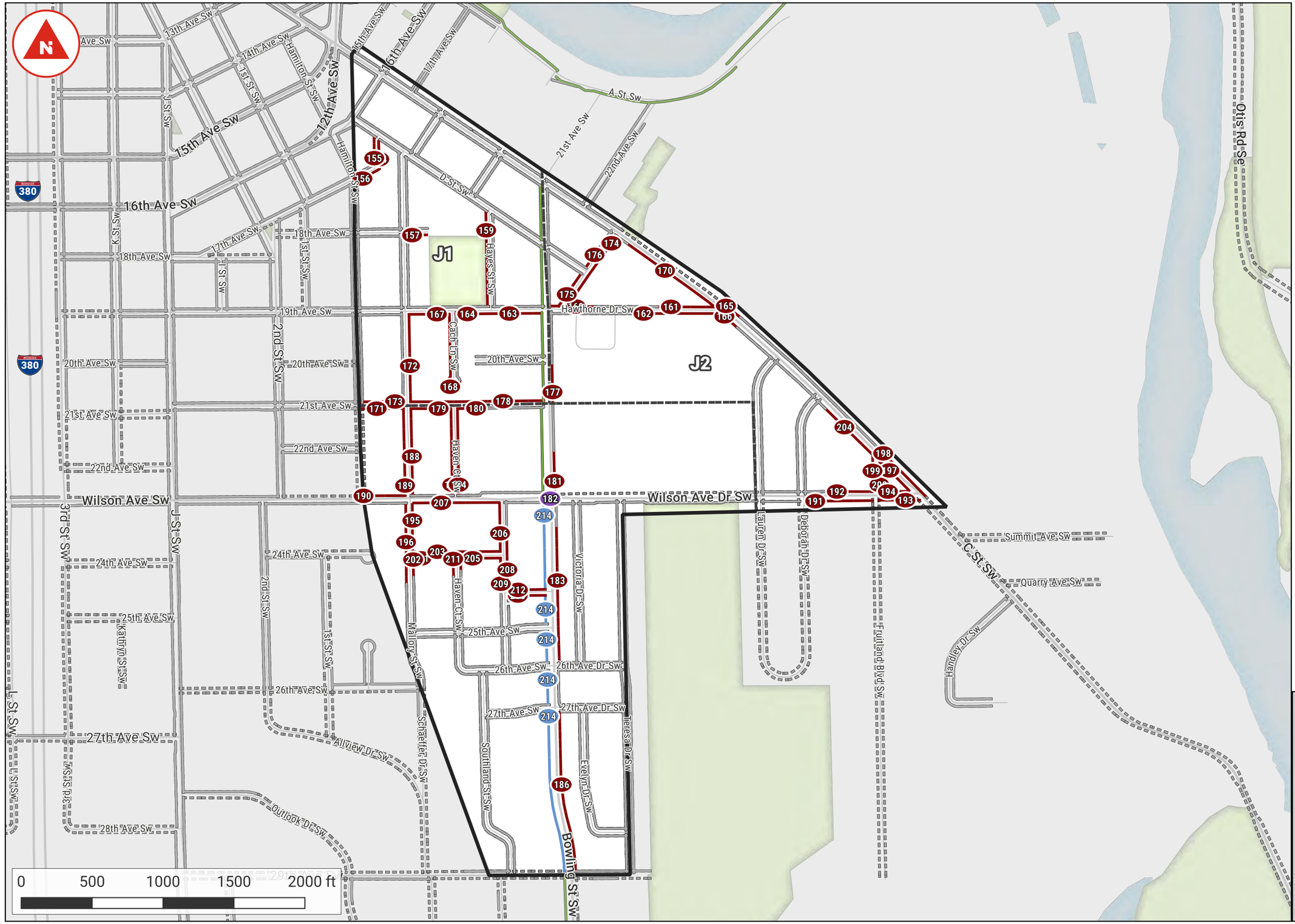
TOOLE DESIGN

0 500 1000 1500 2000 ft

Jacob Nigro 2019.11.05 \\msp-file01\A0000\A072_Cedar_Rapids_Pedestrian_Master_Plan_CityofCedarRapids\PRODUCTION\GIS\QGIS\Projects.qgz



Pedestrian Demand Area J

- Crossing Project
- Sidewalk Gap Project
- Sidewalk Buffer Project
- Has Sidewalk
- Missing Sidewalk
- Pedestrian High Demand Areas
- Subarea

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TOOLE DESIGN

Project Type	Number of Projects	Total Length (L.F.)	Total Length (Miles)	Base Cost	Base Cost + Contingency	Base Cost + Contingency + Engineering Design
Sidewalk Gaps	439	229,916	41.96	$ 19,924,000.00	$ 26,099,000.00	$ 31,247,000.00
Sidewalk Buffers	14	5,600	1.02	$ 378,000.00	$ 498,000.00	$ 598,000.00
Pedestrian Crossings	38	N/A	N/A	$ 2,360,000.00	$ 3,086,000.00	$ 3,691,000.00
Total	**491**			**$ 22,662,000.00**	**$ 29,683,000.00**	**$ 35,536,000.00**

Project Type by Area	Sidewalk Gap	Sidewalk Buffer	Pedestrian Crossing	Number of Projects by Area	Cost by Area
A1	15	0	2	**17**	$ 1,113,000.00
A2	6	0	1	**7**	$ 374,000.00
A3	7	0	2	**9**	$ 807,000.00
B1	9	0	0	**9**	$ 428,000.00
B2	2	0	2	**4**	$ 421,000.00
B3	14	0	0	**14**	$ 1,521,000.00
B4	11	0	1	**12**	$ 800,000.00
B5	10	0	0	**10**	$ 1,090,000.00
B6	15	0	0	**15**	$ 1,565,000.00
B7	19	0	0	**19**	$ 1,726,000.00
B8	31	0	1	**32**	$ 2,316,000.00
C1	13	0	0	**13**	$ 1,384,000.00
C2	10	0	0	**10**	$ 712,000.00
D	2	1	9	**12**	$ 879,000.00
E1	14	0	0	**14**	$ 1,142,000.00
E2	7	0	0	**7**	$ 471,000.00
E3	17	0	0	**17**	$ 1,250,000.00
E4	28	0	1	**29**	$ 1,736,000.00
E5	25	0	0	**25**	$ 1,801,000.00
E6	13	0	0	**13**	$ 999,000.00
F	9	1	1	**11**	$ 464,000.00
G1	19	0	1	**20**	$ 1,381,000.00
G2	13	0	0	**13**	$ 703,000.00
G3	22	3	0	**25**	$ 1,341,000.00
G4	2	4	3	**9**	$ 476,000.00
G5	3	4	2	**9**	$ 575,000.00
H	7	0	0	**7**	$ 437,000.00
I1	13	0	4	**17**	$ 828,000.00
I2	8	0	3	**11**	$ 1,005,000.00
I3	18	0	4	**22**	$ 1,861,000.00
J1	12	0	0	**12**	$ 812,000.00
J2	20	0	0	**20**	$ 953,000.00
J3	25	1	1	**27**	$ 2,165,000.00
Total by Type	**439**	**14**	**38**	**491**	**$ 35,536,000.00**

Sidewalk Gap Project ID	Construction Costs	Contingency	Engineering Design Cost	Total Project Cost
1	$ 16,000.00	$ 5,000.00	$ 4,000.00	$ 25,000.00
2	$ 12,000.00	$ 4,000.00	$ 3,000.00	$ 19,000.00
3	$ 70,000.00	$ 21,000.00	$ 18,000.00	$ 109,000.00
6	$ 22,000.00	$ 7,000.00	$ 6,000.00	$ 35,000.00
8	$ 13,000.00	$ 4,000.00	$ 4,000.00	$ 21,000.00
9	$ 20,000.00	$ 6,000.00	$ 5,000.00	$ 31,000.00
10	$ 24,000.00	$ 8,000.00	$ 6,000.00	$ 38,000.00
11	$ 54,000.00	$ 17,000.00	$ 14,000.00	$ 85,000.00
12	$ 28,000.00	$ 9,000.00	$ 7,000.00	$ 44,000.00
13	$ 19,000.00	$ 6,000.00	$ 5,000.00	$ 30,000.00
14	$ 15,000.00	$ 5,000.00	$ 4,000.00	$ 24,000.00
15	$ 17,000.00	$ 6,000.00	$ 5,000.00	$ 28,000.00
17	$ 19,000.00	$ 6,000.00	$ 5,000.00	$ 30,000.00
18	$ 33,000.00	$ 10,000.00	$ 9,000.00	$ 52,000.00
23	$ 57,000.00	$ 18,000.00	$ 15,000.00	$ 90,000.00
27	$ 21,000.00	$ 7,000.00	$ 6,000.00	$ 34,000.00
28	$ 27,000.00	$ 9,000.00	$ 7,000.00	$ 43,000.00
29	$ 28,000.00	$ 9,000.00	$ 7,000.00	$ 44,000.00
30	$ 44,000.00	$ 14,000.00	$ 11,000.00	$ 69,000.00
32	$ 18,000.00	$ 6,000.00	$ 5,000.00	$ 29,000.00
34	$ 31,000.00	$ 10,000.00	$ 8,000.00	$ 49,000.00
35	$ 31,000.00	$ 10,000.00	$ 8,000.00	$ 49,000.00
43	$ 77,000.00	$ 24,000.00	$ 20,000.00	$ 121,000.00
48	$ 40,000.00	$ 12,000.00	$ 10,000.00	$ 62,000.00
49	$ 45,000.00	$ 14,000.00	$ 12,000.00	$ 71,000.00
50	$ 53,000.00	$ 16,000.00	$ 14,000.00	$ 83,000.00
51	$ 137,000.00	$ 42,000.00	$ 35,000.00	$ 214,000.00
52	$ 37,000.00	$ 12,000.00	$ 10,000.00	$ 59,000.00
53	$ 9,000.00	$ 3,000.00	$ 3,000.00	$ 15,000.00
54	$ 29,000.00	$ 9,000.00	$ 8,000.00	$ 46,000.00
55	$ 65,000.00	$ 20,000.00	$ 17,000.00	$ 102,000.00
58	$ 46,000.00	$ 14,000.00	$ 12,000.00	$ 72,000.00
59	$ 67,000.00	$ 21,000.00	$ 17,000.00	$ 105,000.00
60	$ 76,000.00	$ 23,000.00	$ 19,000.00	$ 118,000.00
61	$ 75,000.00	$ 23,000.00	$ 19,000.00	$ 117,000.00
62	$ 65,000.00	$ 20,000.00	$ 17,000.00	$ 102,000.00
64	$ 69,000.00	$ 21,000.00	$ 18,000.00	$ 108,000.00
65	$ 47,000.00	$ 15,000.00	$ 12,000.00	$ 74,000.00
68	$ 55,000.00	$ 17,000.00	$ 14,000.00	$ 86,000.00
69	$ 17,000.00	$ 6,000.00	$ 5,000.00	$ 28,000.00
70	$ 109,000.00	$ 33,000.00	$ 28,000.00	$ 170,000.00
72	$ 38,000.00	$ 12,000.00	$ 10,000.00	$ 60,000.00
74	$ 4,000.00	$ 2,000.00	$ 1,000.00	$ 7,000.00
76	$ 39,000.00	$ 12,000.00	$ 10,000.00	$ 61,000.00
77	$ 47,000.00	$ 15,000.00	$ 12,000.00	$ 74,000.00
81	$ 9,000.00	$ 3,000.00	$ 3,000.00	$ 15,000.00
89	$ 72,000.00	$ 22,000.00	$ 18,000.00	$ 112,000.00

Sidewalk Gap Project ID	Construction Costs	Contingency	Engineering Design Cost	Total Project Cost
90	$ 36,000.00	$ 11,000.00	$ 9,000.00	$ 56,000.00
91	$ 21,000.00	$ 7,000.00	$ 6,000.00	$ 34,000.00
92	$ 38,000.00	$ 12,000.00	$ 10,000.00	$ 60,000.00
93	$ 24,000.00	$ 8,000.00	$ 6,000.00	$ 38,000.00
94	$ 19,000.00	$ 6,000.00	$ 5,000.00	$ 30,000.00
95	$ 83,000.00	$ 25,000.00	$ 21,000.00	$ 129,000.00
96	$ 45,000.00	$ 14,000.00	$ 12,000.00	$ 71,000.00
97	$ 34,000.00	$ 11,000.00	$ 9,000.00	$ 54,000.00
98	$ 35,000.00	$ 11,000.00	$ 9,000.00	$ 55,000.00
99	$ 53,000.00	$ 16,000.00	$ 14,000.00	$ 83,000.00
100	$ 44,000.00	$ 14,000.00	$ 11,000.00	$ 69,000.00
101	$ 23,000.00	$ 7,000.00	$ 6,000.00	$ 36,000.00
102	$ 53,000.00	$ 16,000.00	$ 14,000.00	$ 83,000.00
103	$ 23,000.00	$ 7,000.00	$ 6,000.00	$ 36,000.00
104	$ 18,000.00	$ 6,000.00	$ 5,000.00	$ 29,000.00
105	$ 66,000.00	$ 20,000.00	$ 17,000.00	$ 103,000.00
106	$ 23,000.00	$ 7,000.00	$ 6,000.00	$ 36,000.00
108	$ 25,000.00	$ 8,000.00	$ 7,000.00	$ 40,000.00
109	$ 31,000.00	$ 10,000.00	$ 8,000.00	$ 49,000.00
110	$ 27,000.00	$ 9,000.00	$ 7,000.00	$ 43,000.00
111	$ 62,000.00	$ 19,000.00	$ 16,000.00	$ 97,000.00
112	$ 25,000.00	$ 8,000.00	$ 7,000.00	$ 40,000.00
114	$ 69,000.00	$ 21,000.00	$ 18,000.00	$ 108,000.00
115	$ 26,000.00	$ 8,000.00	$ 7,000.00	$ 41,000.00
116	$ 48,000.00	$ 15,000.00	$ 12,000.00	$ 75,000.00
117	$ 53,000.00	$ 16,000.00	$ 14,000.00	$ 83,000.00
118	$ 25,000.00	$ 8,000.00	$ 7,000.00	$ 40,000.00
120	$ 93,000.00	$ 28,000.00	$ 24,000.00	$ 145,000.00
121	$ 67,000.00	$ 21,000.00	$ 17,000.00	$ 105,000.00
122	$ 15,000.00	$ 5,000.00	$ 4,000.00	$ 24,000.00
123	$ 43,000.00	$ 13,000.00	$ 11,000.00	$ 67,000.00
124	$ 73,000.00	$ 22,000.00	$ 19,000.00	$ 114,000.00
125	$ 30,000.00	$ 9,000.00	$ 8,000.00	$ 47,000.00
128	$ 37,000.00	$ 12,000.00	$ 10,000.00	$ 59,000.00
129	$ 30,000.00	$ 9,000.00	$ 8,000.00	$ 47,000.00
130	$ 30,000.00	$ 9,000.00	$ 8,000.00	$ 47,000.00
131	$ 37,000.00	$ 12,000.00	$ 10,000.00	$ 59,000.00
132	$ 44,000.00	$ 14,000.00	$ 11,000.00	$ 69,000.00
133	$ 6,000.00	$ 2,000.00	$ 2,000.00	$ 10,000.00
134	$ 63,000.00	$ 19,000.00	$ 16,000.00	$ 98,000.00
135	$ 95,000.00	$ 29,000.00	$ 24,000.00	$ 148,000.00
136	$ 57,000.00	$ 18,000.00	$ 15,000.00	$ 90,000.00
137	$ 70,000.00	$ 21,000.00	$ 18,000.00	$ 109,000.00
138	$ 87,000.00	$ 27,000.00	$ 22,000.00	$ 136,000.00
139	$ 20,000.00	$ 6,000.00	$ 5,000.00	$ 31,000.00
140	$ 21,000.00	$ 7,000.00	$ 6,000.00	$ 34,000.00
141	$ 12,000.00	$ 4,000.00	$ 3,000.00	$ 19,000.00

Sidewalk Gap Project ID	Construction Costs	Contingency	Engineering Design Cost	Total Project Cost
142	$ 15,000.00	$ 5,000.00	$ 4,000.00	$ 24,000.00
143	$ 30,000.00	$ 9,000.00	$ 8,000.00	$ 47,000.00
144	$ 11,000.00	$ 4,000.00	$ 3,000.00	$ 18,000.00
145	$ 38,000.00	$ 12,000.00	$ 10,000.00	$ 60,000.00
146	$ 37,000.00	$ 12,000.00	$ 10,000.00	$ 59,000.00
147	$ 27,000.00	$ 9,000.00	$ 7,000.00	$ 43,000.00
150	$ 36,000.00	$ 11,000.00	$ 9,000.00	$ 56,000.00
151	$ 23,000.00	$ 7,000.00	$ 6,000.00	$ 36,000.00
152	$ 22,000.00	$ 7,000.00	$ 6,000.00	$ 35,000.00
153	$ 24,000.00	$ 8,000.00	$ 6,000.00	$ 38,000.00
154	$ 42,000.00	$ 13,000.00	$ 11,000.00	$ 66,000.00
155	$ 15,000.00	$ 5,000.00	$ 4,000.00	$ 24,000.00
156	$ 8,000.00	$ 3,000.00	$ 2,000.00	$ 13,000.00
157	$ 18,000.00	$ 6,000.00	$ 5,000.00	$ 29,000.00
158	$ 11,000.00	$ 4,000.00	$ 3,000.00	$ 18,000.00
159	$ 58,000.00	$ 18,000.00	$ 15,000.00	$ 91,000.00
160	$ 15,000.00	$ 5,000.00	$ 4,000.00	$ 24,000.00
161	$ 33,000.00	$ 10,000.00	$ 9,000.00	$ 52,000.00
162	$ 31,000.00	$ 10,000.00	$ 8,000.00	$ 49,000.00
163	$ 42,000.00	$ 13,000.00	$ 11,000.00	$ 66,000.00
164	$ 39,000.00	$ 12,000.00	$ 10,000.00	$ 61,000.00
165	$ 7,000.00	$ 3,000.00	$ 2,000.00	$ 12,000.00
166	$ 15,000.00	$ 5,000.00	$ 4,000.00	$ 24,000.00
167	$ 46,000.00	$ 14,000.00	$ 12,000.00	$ 72,000.00
168	$ 43,000.00	$ 13,000.00	$ 11,000.00	$ 67,000.00
170	$ 60,000.00	$ 18,000.00	$ 15,000.00	$ 93,000.00
171	$ 67,000.00	$ 21,000.00	$ 17,000.00	$ 105,000.00
172	$ 70,000.00	$ 21,000.00	$ 18,000.00	$ 109,000.00
173	$ 40,000.00	$ 12,000.00	$ 10,000.00	$ 62,000.00
174	$ 50,000.00	$ 15,000.00	$ 13,000.00	$ 78,000.00
175	$ 32,000.00	$ 10,000.00	$ 8,000.00	$ 50,000.00
176	$ 27,000.00	$ 9,000.00	$ 7,000.00	$ 43,000.00
177	$ 30,000.00	$ 9,000.00	$ 8,000.00	$ 47,000.00
178	$ 97,000.00	$ 30,000.00	$ 25,000.00	$ 152,000.00
179	$ 44,000.00	$ 14,000.00	$ 11,000.00	$ 69,000.00
180	$ 36,000.00	$ 11,000.00	$ 9,000.00	$ 56,000.00
181	$ 29,000.00	$ 9,000.00	$ 8,000.00	$ 46,000.00
183	$ 35,000.00	$ 11,000.00	$ 9,000.00	$ 55,000.00
184	$ 69,000.00	$ 21,000.00	$ 18,000.00	$ 108,000.00
185	$ 69,000.00	$ 21,000.00	$ 18,000.00	$ 108,000.00
186	$ 49,000.00	$ 15,000.00	$ 13,000.00	$ 77,000.00
188	$ 68,000.00	$ 21,000.00	$ 17,000.00	$ 106,000.00
189	$ 68,000.00	$ 21,000.00	$ 17,000.00	$ 106,000.00
190	$ 46,000.00	$ 14,000.00	$ 12,000.00	$ 72,000.00
191	$ 43,000.00	$ 13,000.00	$ 11,000.00	$ 67,000.00
192	$ 27,000.00	$ 9,000.00	$ 7,000.00	$ 43,000.00
193	$ 33,000.00	$ 10,000.00	$ 9,000.00	$ 52,000.00

Sidewalk Gap Project ID	Construction Costs	Contingency	Engineering Design Cost	Total Project Cost
194	$ 40,000.00	$ 12,000.00	$ 10,000.00	$ 62,000.00
195	$ 48,000.00	$ 15,000.00	$ 12,000.00	$ 75,000.00
196	$ 95,000.00	$ 29,000.00	$ 24,000.00	$ 148,000.00
197	$ 31,000.00	$ 10,000.00	$ 8,000.00	$ 49,000.00
198	$ 23,000.00	$ 7,000.00	$ 6,000.00	$ 36,000.00
199	$ 31,000.00	$ 10,000.00	$ 8,000.00	$ 49,000.00
200	$ 39,000.00	$ 12,000.00	$ 10,000.00	$ 61,000.00
201	$ 46,000.00	$ 14,000.00	$ 12,000.00	$ 72,000.00
202	$ 23,000.00	$ 7,000.00	$ 6,000.00	$ 36,000.00
203	$ 70,000.00	$ 21,000.00	$ 18,000.00	$ 109,000.00
204	$ 28,000.00	$ 9,000.00	$ 7,000.00	$ 44,000.00
205	$ 46,000.00	$ 14,000.00	$ 12,000.00	$ 72,000.00
206	$ 50,000.00	$ 15,000.00	$ 13,000.00	$ 78,000.00
207	$ 83,000.00	$ 25,000.00	$ 21,000.00	$ 129,000.00
208	$ 37,000.00	$ 12,000.00	$ 10,000.00	$ 59,000.00
209	$ 36,000.00	$ 11,000.00	$ 9,000.00	$ 56,000.00
210	$ 19,000.00	$ 6,000.00	$ 5,000.00	$ 30,000.00
211	$ 23,000.00	$ 7,000.00	$ 6,000.00	$ 36,000.00
212	$ 45,000.00	$ 14,000.00	$ 12,000.00	$ 71,000.00
213	$ 43,000.00	$ 13,000.00	$ 11,000.00	$ 67,000.00
215	$ 47,000.00	$ 15,000.00	$ 12,000.00	$ 74,000.00
216	$ 45,000.00	$ 14,000.00	$ 12,000.00	$ 71,000.00
217	$ 38,000.00	$ 12,000.00	$ 10,000.00	$ 60,000.00
219	$ 39,000.00	$ 12,000.00	$ 10,000.00	$ 61,000.00
220	$ 39,000.00	$ 12,000.00	$ 10,000.00	$ 61,000.00
221	$ 78,000.00	$ 24,000.00	$ 20,000.00	$ 122,000.00
222	$ 76,000.00	$ 23,000.00	$ 19,000.00	$ 118,000.00
223	$ 31,000.00	$ 10,000.00	$ 8,000.00	$ 49,000.00
224	$ 31,000.00	$ 10,000.00	$ 8,000.00	$ 49,000.00
225	$ 27,000.00	$ 9,000.00	$ 7,000.00	$ 43,000.00
226	$ 25,000.00	$ 8,000.00	$ 7,000.00	$ 40,000.00
227	$ 62,000.00	$ 19,000.00	$ 16,000.00	$ 97,000.00
228	$ 70,000.00	$ 21,000.00	$ 18,000.00	$ 109,000.00
229	$ 29,000.00	$ 9,000.00	$ 8,000.00	$ 46,000.00
230	$ 30,000.00	$ 9,000.00	$ 8,000.00	$ 47,000.00
231	$ 46,000.00	$ 14,000.00	$ 12,000.00	$ 72,000.00
232	$ 39,000.00	$ 12,000.00	$ 10,000.00	$ 61,000.00
233	$ 73,000.00	$ 22,000.00	$ 19,000.00	$ 114,000.00
239	$ 87,000.00	$ 27,000.00	$ 22,000.00	$ 136,000.00
240	$ 93,000.00	$ 28,000.00	$ 24,000.00	$ 145,000.00
241	$ 60,000.00	$ 18,000.00	$ 15,000.00	$ 93,000.00
242	$ 29,000.00	$ 9,000.00	$ 8,000.00	$ 46,000.00
243	$ 56,000.00	$ 17,000.00	$ 14,000.00	$ 87,000.00
244	$ 43,000.00	$ 13,000.00	$ 11,000.00	$ 67,000.00
245	$ 30,000.00	$ 9,000.00	$ 8,000.00	$ 47,000.00
246	$ 35,000.00	$ 11,000.00	$ 9,000.00	$ 55,000.00
247	$ 35,000.00	$ 11,000.00	$ 9,000.00	$ 55,000.00

Sidewalk Gap Project ID	Construction Costs	Contingency	Engineering Design Cost	Total Project Cost
248	$ 79,000.00	$ 24,000.00	$ 20,000.00	$ 123,000.00
249	$ 75,000.00	$ 23,000.00	$ 19,000.00	$ 117,000.00
250	$ 33,000.00	$ 10,000.00	$ 9,000.00	$ 52,000.00
251	$ 50,000.00	$ 15,000.00	$ 13,000.00	$ 78,000.00
252	$ 64,000.00	$ 20,000.00	$ 16,000.00	$ 100,000.00
253	$ 46,000.00	$ 14,000.00	$ 12,000.00	$ 72,000.00
254	$ 43,000.00	$ 13,000.00	$ 11,000.00	$ 67,000.00
255	$ 69,000.00	$ 21,000.00	$ 18,000.00	$ 108,000.00
256	$ 75,000.00	$ 23,000.00	$ 19,000.00	$ 117,000.00
257	$ 31,000.00	$ 10,000.00	$ 8,000.00	$ 49,000.00
258	$ 17,000.00	$ 6,000.00	$ 5,000.00	$ 28,000.00
259	$ 42,000.00	$ 13,000.00	$ 11,000.00	$ 66,000.00
260	$ 19,000.00	$ 6,000.00	$ 5,000.00	$ 30,000.00
261	$ 70,000.00	$ 21,000.00	$ 18,000.00	$ 109,000.00
263	$ 38,000.00	$ 12,000.00	$ 10,000.00	$ 60,000.00
264	$ 40,000.00	$ 12,000.00	$ 10,000.00	$ 62,000.00
265	$ 31,000.00	$ 10,000.00	$ 8,000.00	$ 49,000.00
266	$ 31,000.00	$ 10,000.00	$ 8,000.00	$ 49,000.00
267	$ 65,000.00	$ 20,000.00	$ 17,000.00	$ 102,000.00
268	$ 63,000.00	$ 19,000.00	$ 16,000.00	$ 98,000.00
269	$ 52,000.00	$ 16,000.00	$ 13,000.00	$ 81,000.00
270	$ 50,000.00	$ 15,000.00	$ 13,000.00	$ 78,000.00
271	$ 31,000.00	$ 10,000.00	$ 8,000.00	$ 49,000.00
272	$ 33,000.00	$ 10,000.00	$ 9,000.00	$ 52,000.00
273	$ 28,000.00	$ 9,000.00	$ 7,000.00	$ 44,000.00
274	$ 28,000.00	$ 9,000.00	$ 7,000.00	$ 44,000.00
275	$ 29,000.00	$ 9,000.00	$ 8,000.00	$ 46,000.00
276	$ 29,000.00	$ 9,000.00	$ 8,000.00	$ 46,000.00
277	$ 8,000.00	$ 3,000.00	$ 2,000.00	$ 13,000.00
278	$ 37,000.00	$ 12,000.00	$ 10,000.00	$ 59,000.00
279	$ 43,000.00	$ 13,000.00	$ 11,000.00	$ 67,000.00
280	$ 67,000.00	$ 21,000.00	$ 17,000.00	$ 105,000.00
281	$ 34,000.00	$ 11,000.00	$ 9,000.00	$ 54,000.00
282	$ 30,000.00	$ 9,000.00	$ 8,000.00	$ 47,000.00
283	$ 14,000.00	$ 5,000.00	$ 4,000.00	$ 23,000.00
284	$ 42,000.00	$ 13,000.00	$ 11,000.00	$ 66,000.00
285	$ 32,000.00	$ 10,000.00	$ 8,000.00	$ 50,000.00
286	$ 52,000.00	$ 16,000.00	$ 13,000.00	$ 81,000.00
287	$ 55,000.00	$ 17,000.00	$ 14,000.00	$ 86,000.00
288	$ 45,000.00	$ 14,000.00	$ 12,000.00	$ 71,000.00
289	$ 62,000.00	$ 19,000.00	$ 16,000.00	$ 97,000.00
290	$ 44,000.00	$ 14,000.00	$ 11,000.00	$ 69,000.00
291	$ 33,000.00	$ 10,000.00	$ 9,000.00	$ 52,000.00
292	$ 31,000.00	$ 10,000.00	$ 8,000.00	$ 49,000.00
293	$ 29,000.00	$ 9,000.00	$ 8,000.00	$ 46,000.00
294	$ 49,000.00	$ 15,000.00	$ 13,000.00	$ 77,000.00
295	$ 47,000.00	$ 15,000.00	$ 12,000.00	$ 74,000.00

Sidewalk Gap Project ID	Construction Costs	Contingency	Engineering Design Cost	Total Project Cost
296	$ 41,000.00	$ 13,000.00	$ 11,000.00	$ 65,000.00
297	$ 43,000.00	$ 13,000.00	$ 11,000.00	$ 67,000.00
298	$ 28,000.00	$ 9,000.00	$ 7,000.00	$ 44,000.00
299	$ 28,000.00	$ 9,000.00	$ 7,000.00	$ 44,000.00
300	$ 37,000.00	$ 12,000.00	$ 10,000.00	$ 59,000.00
301	$ 44,000.00	$ 14,000.00	$ 11,000.00	$ 69,000.00
302	$ 66,000.00	$ 20,000.00	$ 17,000.00	$ 103,000.00
303	$ 39,000.00	$ 12,000.00	$ 10,000.00	$ 61,000.00
304	$ 45,000.00	$ 14,000.00	$ 12,000.00	$ 71,000.00
305	$ 29,000.00	$ 9,000.00	$ 8,000.00	$ 46,000.00
306	$ 29,000.00	$ 9,000.00	$ 8,000.00	$ 46,000.00
307	$ 85,000.00	$ 26,000.00	$ 22,000.00	$ 133,000.00
308	$ 25,000.00	$ 8,000.00	$ 7,000.00	$ 40,000.00
309	$ 75,000.00	$ 23,000.00	$ 19,000.00	$ 117,000.00
310	$ 45,000.00	$ 14,000.00	$ 12,000.00	$ 71,000.00
311	$ 41,000.00	$ 13,000.00	$ 11,000.00	$ 65,000.00
312	$ 32,000.00	$ 10,000.00	$ 8,000.00	$ 50,000.00
313	$ 8,000.00	$ 3,000.00	$ 2,000.00	$ 13,000.00
314	$ 53,000.00	$ 16,000.00	$ 14,000.00	$ 83,000.00
315	$ 64,000.00	$ 20,000.00	$ 16,000.00	$ 100,000.00
316	$ 79,000.00	$ 24,000.00	$ 20,000.00	$ 123,000.00
317	$ 45,000.00	$ 14,000.00	$ 12,000.00	$ 71,000.00
318	$ 34,000.00	$ 11,000.00	$ 9,000.00	$ 54,000.00
319	$ 47,000.00	$ 15,000.00	$ 12,000.00	$ 74,000.00
320	$ 72,000.00	$ 22,000.00	$ 18,000.00	$ 112,000.00
321	$ 62,000.00	$ 19,000.00	$ 16,000.00	$ 97,000.00
322	$ 71,000.00	$ 22,000.00	$ 18,000.00	$ 111,000.00
323	$ 79,000.00	$ 24,000.00	$ 20,000.00	$ 123,000.00
324	$ 26,000.00	$ 8,000.00	$ 7,000.00	$ 41,000.00
325	$ 32,000.00	$ 10,000.00	$ 8,000.00	$ 50,000.00
330	$ 76,000.00	$ 23,000.00	$ 19,000.00	$ 118,000.00
331	$ 37,000.00	$ 12,000.00	$ 10,000.00	$ 59,000.00
332	$ 39,000.00	$ 12,000.00	$ 10,000.00	$ 61,000.00
333	$ 28,000.00	$ 9,000.00	$ 7,000.00	$ 44,000.00
334	$ 23,000.00	$ 7,000.00	$ 6,000.00	$ 36,000.00
335	$ 106,000.00	$ 32,000.00	$ 27,000.00	$ 165,000.00
336	$ 46,000.00	$ 14,000.00	$ 12,000.00	$ 72,000.00
337	$ 30,000.00	$ 9,000.00	$ 8,000.00	$ 47,000.00
338	$ 53,000.00	$ 16,000.00	$ 14,000.00	$ 83,000.00
339	$ 30,000.00	$ 9,000.00	$ 8,000.00	$ 47,000.00
340	$ 27,000.00	$ 9,000.00	$ 7,000.00	$ 43,000.00
341	$ 27,000.00	$ 9,000.00	$ 7,000.00	$ 43,000.00
342	$ 31,000.00	$ 10,000.00	$ 8,000.00	$ 49,000.00
343	$ 126,000.00	$ 38,000.00	$ 32,000.00	$ 196,000.00
346	$ 158,000.00	$ 48,000.00	$ 40,000.00	$ 246,000.00
347	$ 97,000.00	$ 30,000.00	$ 25,000.00	$ 152,000.00
348	$ 54,000.00	$ 17,000.00	$ 14,000.00	$ 85,000.00

Sidewalk Gap Project ID	Construction Costs	Contingency	Engineering Design Cost	Total Project Cost
349	$ 64,000.00	$ 20,000.00	$ 16,000.00	$ 100,000.00
350	$ 62,000.00	$ 19,000.00	$ 16,000.00	$ 97,000.00
351	$ 62,000.00	$ 19,000.00	$ 16,000.00	$ 97,000.00
352	$ 64,000.00	$ 20,000.00	$ 16,000.00	$ 100,000.00
353	$ 64,000.00	$ 20,000.00	$ 16,000.00	$ 100,000.00
354	$ 58,000.00	$ 18,000.00	$ 15,000.00	$ 91,000.00
358	$ 41,000.00	$ 13,000.00	$ 11,000.00	$ 65,000.00
359	$ 33,000.00	$ 10,000.00	$ 9,000.00	$ 52,000.00
360	$ 66,000.00	$ 20,000.00	$ 17,000.00	$ 103,000.00
361	$ 34,000.00	$ 11,000.00	$ 9,000.00	$ 54,000.00
362	$ 63,000.00	$ 19,000.00	$ 16,000.00	$ 98,000.00
363	$ 67,000.00	$ 21,000.00	$ 17,000.00	$ 105,000.00
364	$ 42,000.00	$ 13,000.00	$ 11,000.00	$ 66,000.00
365	$ 85,000.00	$ 26,000.00	$ 22,000.00	$ 133,000.00
367	$ 31,000.00	$ 10,000.00	$ 8,000.00	$ 49,000.00
368	$ 31,000.00	$ 10,000.00	$ 8,000.00	$ 49,000.00
369	$ 40,000.00	$ 12,000.00	$ 10,000.00	$ 62,000.00
370	$ 48,000.00	$ 15,000.00	$ 12,000.00	$ 75,000.00
371	$ 42,000.00	$ 13,000.00	$ 11,000.00	$ 66,000.00
373	$ 48,000.00	$ 15,000.00	$ 12,000.00	$ 75,000.00
374	$ 47,000.00	$ 15,000.00	$ 12,000.00	$ 74,000.00
375	$ 71,000.00	$ 22,000.00	$ 18,000.00	$ 111,000.00
376	$ 66,000.00	$ 20,000.00	$ 17,000.00	$ 103,000.00
377	$ 18,000.00	$ 6,000.00	$ 5,000.00	$ 29,000.00
378	$ 13,000.00	$ 4,000.00	$ 4,000.00	$ 21,000.00
379	$ 17,000.00	$ 6,000.00	$ 5,000.00	$ 28,000.00
380	$ 97,000.00	$ 30,000.00	$ 25,000.00	$ 152,000.00
381	$ 99,000.00	$ 30,000.00	$ 25,000.00	$ 154,000.00
382	$ 37,000.00	$ 12,000.00	$ 10,000.00	$ 59,000.00
383	$ 100,000.00	$ 30,000.00	$ 25,000.00	$ 155,000.00
384	$ 100,000.00	$ 30,000.00	$ 25,000.00	$ 155,000.00
385	$ 26,000.00	$ 8,000.00	$ 7,000.00	$ 41,000.00
386	$ 14,000.00	$ 5,000.00	$ 4,000.00	$ 23,000.00
387	$ 26,000.00	$ 8,000.00	$ 7,000.00	$ 41,000.00
388	$ 100,000.00	$ 30,000.00	$ 25,000.00	$ 155,000.00
389	$ 100,000.00	$ 30,000.00	$ 25,000.00	$ 155,000.00
390	$ 19,000.00	$ 6,000.00	$ 5,000.00	$ 30,000.00
391	$ 81,000.00	$ 25,000.00	$ 21,000.00	$ 127,000.00
392	$ 14,000.00	$ 5,000.00	$ 4,000.00	$ 23,000.00
393	$ 24,000.00	$ 8,000.00	$ 6,000.00	$ 38,000.00
394	$ 44,000.00	$ 14,000.00	$ 11,000.00	$ 69,000.00
395	$ 46,000.00	$ 14,000.00	$ 12,000.00	$ 72,000.00
396	$ 8,000.00	$ 3,000.00	$ 2,000.00	$ 13,000.00
397	$ 30,000.00	$ 9,000.00	$ 8,000.00	$ 47,000.00
400	$ 78,000.00	$ 24,000.00	$ 20,000.00	$ 122,000.00
401	$ 72,000.00	$ 22,000.00	$ 18,000.00	$ 112,000.00
403	$ 27,000.00	$ 9,000.00	$ 7,000.00	$ 43,000.00

Sidewalk Gap Project ID	Construction Costs	Contingency	Engineering Design Cost	Total Project Cost
404	$ 20,000.00	$ 6,000.00	$ 5,000.00	$ 31,000.00
412	$ 67,000.00	$ 21,000.00	$ 17,000.00	$ 105,000.00
413	$ 37,000.00	$ 12,000.00	$ 10,000.00	$ 59,000.00
414	$ 31,000.00	$ 10,000.00	$ 8,000.00	$ 49,000.00
415	$ 95,000.00	$ 29,000.00	$ 24,000.00	$ 148,000.00
416	$ 85,000.00	$ 26,000.00	$ 22,000.00	$ 133,000.00
417	$ 63,000.00	$ 19,000.00	$ 16,000.00	$ 98,000.00
418	$ 54,000.00	$ 17,000.00	$ 14,000.00	$ 85,000.00
419	$ 32,000.00	$ 10,000.00	$ 8,000.00	$ 50,000.00
420	$ 72,000.00	$ 22,000.00	$ 18,000.00	$ 112,000.00
421	$ 50,000.00	$ 15,000.00	$ 13,000.00	$ 78,000.00
422	$ 43,000.00	$ 13,000.00	$ 11,000.00	$ 67,000.00
423	$ 27,000.00	$ 9,000.00	$ 7,000.00	$ 43,000.00
424	$ 29,000.00	$ 9,000.00	$ 8,000.00	$ 46,000.00
425	$ 21,000.00	$ 7,000.00	$ 6,000.00	$ 34,000.00
427	$ 20,000.00	$ 6,000.00	$ 5,000.00	$ 31,000.00
428	$ 27,000.00	$ 9,000.00	$ 7,000.00	$ 43,000.00
429	$ 44,000.00	$ 14,000.00	$ 11,000.00	$ 69,000.00
430	$ 55,000.00	$ 17,000.00	$ 14,000.00	$ 86,000.00
431	$ 55,000.00	$ 17,000.00	$ 14,000.00	$ 86,000.00
432	$ 62,000.00	$ 19,000.00	$ 16,000.00	$ 97,000.00
433	$ 64,000.00	$ 20,000.00	$ 16,000.00	$ 100,000.00
434	$ 62,000.00	$ 19,000.00	$ 16,000.00	$ 97,000.00
435	$ 70,000.00	$ 21,000.00	$ 18,000.00	$ 109,000.00
436	$ 53,000.00	$ 16,000.00	$ 14,000.00	$ 83,000.00
437	$ 53,000.00	$ 16,000.00	$ 14,000.00	$ 83,000.00
439	$ 19,000.00	$ 6,000.00	$ 5,000.00	$ 30,000.00
440	$ 32,000.00	$ 10,000.00	$ 8,000.00	$ 50,000.00
441	$ 29,000.00	$ 9,000.00	$ 8,000.00	$ 46,000.00
442	$ 29,000.00	$ 9,000.00	$ 8,000.00	$ 46,000.00
444	$ 40,000.00	$ 12,000.00	$ 10,000.00	$ 62,000.00
445	$ 3,000.00	$ 1,000.00	$ 1,000.00	$ 5,000.00
446	$ 20,000.00	$ 6,000.00	$ 5,000.00	$ 31,000.00
447	$ 37,000.00	$ 12,000.00	$ 10,000.00	$ 59,000.00
448	$ 30,000.00	$ 9,000.00	$ 8,000.00	$ 47,000.00
450	$ 13,000.00	$ 4,000.00	$ 4,000.00	$ 21,000.00
454	$ 35,000.00	$ 11,000.00	$ 9,000.00	$ 55,000.00
455	$ 6,000.00	$ 2,000.00	$ 2,000.00	$ 10,000.00
457	$ 36,000.00	$ 11,000.00	$ 9,000.00	$ 56,000.00
459	$ 29,000.00	$ 9,000.00	$ 8,000.00	$ 46,000.00
460	$ 17,000.00	$ 6,000.00	$ 5,000.00	$ 28,000.00
462	$ 63,000.00	$ 19,000.00	$ 16,000.00	$ 98,000.00
463	$ 33,000.00	$ 10,000.00	$ 9,000.00	$ 52,000.00
464	$ 13,000.00	$ 4,000.00	$ 4,000.00	$ 21,000.00
466	$ 17,000.00	$ 6,000.00	$ 5,000.00	$ 28,000.00
467	$ 21,000.00	$ 7,000.00	$ 6,000.00	$ 34,000.00
468	$ 29,000.00	$ 9,000.00	$ 8,000.00	$ 46,000.00

Sidewalk Gap Project ID	Construction Costs	Contingency	Engineering Design Cost	Total Project Cost
469	$ 35,000.00	$ 11,000.00	$ 9,000.00	$ 55,000.00
470	$ 25,000.00	$ 8,000.00	$ 7,000.00	$ 40,000.00
472	$ 44,000.00	$ 14,000.00	$ 11,000.00	$ 69,000.00
473	$ 6,000.00	$ 2,000.00	$ 2,000.00	$ 10,000.00
474	$ 16,000.00	$ 5,000.00	$ 4,000.00	$ 25,000.00
475	$ 33,000.00	$ 10,000.00	$ 9,000.00	$ 52,000.00
476	$ 47,000.00	$ 15,000.00	$ 12,000.00	$ 74,000.00
477	$ 57,000.00	$ 18,000.00	$ 15,000.00	$ 90,000.00
478	$ 51,000.00	$ 16,000.00	$ 13,000.00	$ 80,000.00
479	$ 17,000.00	$ 6,000.00	$ 5,000.00	$ 28,000.00
480	$ 88,000.00	$ 27,000.00	$ 22,000.00	$ 137,000.00
481	$ 51,000.00	$ 16,000.00	$ 13,000.00	$ 80,000.00
482	$ 29,000.00	$ 9,000.00	$ 8,000.00	$ 46,000.00
483	$ 30,000.00	$ 9,000.00	$ 8,000.00	$ 47,000.00
484	$ 15,000.00	$ 5,000.00	$ 4,000.00	$ 24,000.00
485	$ 73,000.00	$ 22,000.00	$ 19,000.00	$ 114,000.00
486	$ 72,000.00	$ 22,000.00	$ 18,000.00	$ 112,000.00
487	$ 20,000.00	$ 6,000.00	$ 5,000.00	$ 31,000.00
488	$ 140,000.00	$ 42,000.00	$ 35,000.00	$ 217,000.00
489	$ 75,000.00	$ 23,000.00	$ 19,000.00	$ 117,000.00
490	$ 51,000.00	$ 16,000.00	$ 13,000.00	$ 80,000.00
491	$ 102,000.00	$ 31,000.00	$ 26,000.00	$ 159,000.00
492	$ 94,000.00	$ 29,000.00	$ 24,000.00	$ 147,000.00
493	$ 91,000.00	$ 28,000.00	$ 23,000.00	$ 142,000.00
494	$ 55,000.00	$ 17,000.00	$ 14,000.00	$ 86,000.00
495	$ 88,000.00	$ 27,000.00	$ 22,000.00	$ 137,000.00
496	$ 51,000.00	$ 16,000.00	$ 13,000.00	$ 80,000.00
497	$ 51,000.00	$ 16,000.00	$ 13,000.00	$ 80,000.00
498	$ 8,000.00	$ 3,000.00	$ 2,000.00	$ 13,000.00
499	$ 16,000.00	$ 5,000.00	$ 4,000.00	$ 25,000.00
500	$ 30,000.00	$ 9,000.00	$ 8,000.00	$ 47,000.00
501	$ 36,000.00	$ 11,000.00	$ 9,000.00	$ 56,000.00
502	$ 45,000.00	$ 14,000.00	$ 12,000.00	$ 71,000.00
503	$ 44,000.00	$ 14,000.00	$ 11,000.00	$ 69,000.00
504	$ 127,000.00	$ 39,000.00	$ 32,000.00	$ 198,000.00
505	$ 44,000.00	$ 14,000.00	$ 11,000.00	$ 69,000.00
506	$ 34,000.00	$ 11,000.00	$ 9,000.00	$ 54,000.00
507	$ 111,000.00	$ 34,000.00	$ 28,000.00	$ 173,000.00
508	$ 109,000.00	$ 33,000.00	$ 28,000.00	$ 170,000.00
509	$ 47,000.00	$ 15,000.00	$ 12,000.00	$ 74,000.00
510	$ 45,000.00	$ 14,000.00	$ 12,000.00	$ 71,000.00
511	$ 47,000.00	$ 15,000.00	$ 12,000.00	$ 74,000.00
512	$ 54,000.00	$ 17,000.00	$ 14,000.00	$ 85,000.00
513	$ 37,000.00	$ 12,000.00	$ 10,000.00	$ 59,000.00
514	$ 37,000.00	$ 12,000.00	$ 10,000.00	$ 59,000.00
515	$ 58,000.00	$ 18,000.00	$ 15,000.00	$ 91,000.00
516	$ 94,000.00	$ 29,000.00	$ 24,000.00	$ 147,000.00

Sidewalk Gap Project ID	Construction Costs	Contingency	Engineering Design Cost	Total Project Cost
517	$ 76,000.00	$ 23,000.00	$ 19,000.00	$ 118,000.00
518	$ 110,000.00	$ 33,000.00	$ 28,000.00	$ 171,000.00
519	$ 97,000.00	$ 30,000.00	$ 25,000.00	$ 152,000.00
520	$ 91,000.00	$ 28,000.00	$ 23,000.00	$ 142,000.00
521	$ 79,000.00	$ 24,000.00	$ 20,000.00	$ 123,000.00
522	$ 74,000.00	$ 23,000.00	$ 19,000.00	$ 116,000.00
523	$ 50,000.00	$ 15,000.00	$ 13,000.00	$ 78,000.00
524	$ 28,000.00	$ 9,000.00	$ 7,000.00	$ 44,000.00
525	$ 82,000.00	$ 25,000.00	$ 21,000.00	$ 128,000.00
526	$ 34,000.00	$ 11,000.00	$ 9,000.00	$ 54,000.00
527	$ 59,000.00	$ 18,000.00	$ 15,000.00	$ 92,000.00
528	$ 8,000.00	$ 3,000.00	$ 2,000.00	$ 13,000.00
529	$ 48,000.00	$ 15,000.00	$ 12,000.00	$ 75,000.00
530	$ 13,000.00	$ 4,000.00	$ 4,000.00	$ 21,000.00
531	$ 48,000.00	$ 15,000.00	$ 12,000.00	$ 75,000.00

Sidewalk Buffer Project ID	Construction Costs	Contingency	Engineering Design Cost	Total Project Cost
75	$ 5,000.00	$ 2,000.00	$ 2,000.00	$ 9,000.00
79	$ 9,000.00	$ 3,000.00	$ 3,000.00	$ 15,000.00
82	$ 64,000.00	$ 20,000.00	$ 16,000.00	$ 100,000.00
83	$ 36,000.00	$ 11,000.00	$ 9,000.00	$ 56,000.00
85	$ 24,000.00	$ 8,000.00	$ 6,000.00	$ 38,000.00
87	$ 6,000.00	$ 2,000.00	$ 2,000.00	$ 10,000.00
88	$ 25,000.00	$ 8,000.00	$ 7,000.00	$ 40,000.00
107	$ 26,000.00	$ 8,000.00	$ 7,000.00	$ 41,000.00
113	$ 4,000.00	$ 2,000.00	$ 1,000.00	$ 7,000.00
126	$ 11,000.00	$ 4,000.00	$ 3,000.00	$ 18,000.00
149	$ 5,000.00	$ 2,000.00	$ 2,000.00	$ 9,000.00
214	$ 125,000.00	$ 38,000.00	$ 32,000.00	$ 195,000.00
407	$ 8,000.00	$ 3,000.00	$ 2,000.00	$ 13,000.00
438	$ 30,000.00	$ 9,000.00	$ 8,000.00	$ 47,000.00

Crossing Project ID	Construction Costs	Contingency	Engineering Design Cost	Total Project Cost
4	$ 41,000.00	$ 13,000.00	$ 11,000.00	$ 65,000.00
5	$ 46,000.00	$ 14,000.00	$ 12,000.00	$ 72,000.00
7	$ 46,000.00	$ 14,000.00	$ 12,000.00	$ 72,000.00
16	$ 64,000.00	$ 20,000.00	$ 16,000.00	$ 100,000.00
21	$ 48,000.00	$ 15,000.00	$ 12,000.00	$ 75,000.00
24	$ 83,000.00	$ 25,000.00	$ 21,000.00	$ 129,000.00
25	$ 70,000.00	$ 21,000.00	$ 18,000.00	$ 109,000.00
31	$ 135,000.00	$ 41,000.00	$ 34,000.00	$ 210,000.00
38	$ 36,000.00	$ 11,000.00	$ 9,000.00	$ 56,000.00
57	$ 87,000.00	$ 27,000.00	$ 22,000.00	$ 136,000.00
63	$ 135,000.00	$ 41,000.00	$ 34,000.00	$ 210,000.00
78	$ 143,000.00	$ 43,000.00	$ 36,000.00	$ 222,000.00
80	$ 74,000.00	$ 23,000.00	$ 19,000.00	$ 116,000.00
84	$ 45,000.00	$ 14,000.00	$ 12,000.00	$ 71,000.00
86	$ 5,000.00	$ 2,000.00	$ 2,000.00	$ 9,000.00
119	$ 5,000.00	$ 2,000.00	$ 2,000.00	$ 9,000.00
148	$ 24,000.00	$ 8,000.00	$ 6,000.00	$ 38,000.00
182	$ 15,000.00	$ 5,000.00	$ 4,000.00	$ 24,000.00
262	$ 5,000.00	$ 2,000.00	$ 2,000.00	$ 9,000.00
345	$ 89,000.00	$ 27,000.00	$ 23,000.00	$ 139,000.00
357	$ 121,000.00	$ 37,000.00	$ 31,000.00	$ 189,000.00
398	$ 38,000.00	$ 12,000.00	$ 10,000.00	$ 60,000.00
399	$ 51,000.00	$ 16,000.00	$ 13,000.00	$ 80,000.00
402	$ 16,000.00	$ 5,000.00	$ 4,000.00	$ 25,000.00
405	$ 51,000.00	$ 16,000.00	$ 13,000.00	$ 80,000.00
406	$ 54,000.00	$ 17,000.00	$ 14,000.00	$ 85,000.00
408	$ 108,000.00	$ 33,000.00	$ 27,000.00	$ 168,000.00
409	$ 50,000.00	$ 15,000.00	$ 13,000.00	$ 78,000.00
410	$ 43,000.00	$ 13,000.00	$ 11,000.00	$ 67,000.00
411	$ 87,000.00	$ 27,000.00	$ 22,000.00	$ 136,000.00
426	$ 51,000.00	$ 16,000.00	$ 13,000.00	$ 80,000.00
443	$ 43,000.00	$ 13,000.00	$ 11,000.00	$ 67,000.00
449	$ 13,000.00	$ 4,000.00	$ 4,000.00	$ 21,000.00
451	$ 82,000.00	$ 25,000.00	$ 21,000.00	$ 128,000.00
456	$ 217,000.00	$ 66,000.00	$ 55,000.00	$ 338,000.00
461	$ 39,000.00	$ 12,000.00	$ 10,000.00	$ 61,000.00
465	$ 14,000.00	$ 5,000.00	$ 4,000.00	$ 23,000.00
471	$ 86,000.00	$ 26,000.00	$ 22,000.00	$ 134,000.00

Appendix C: Concept Design

Four locations were identified in pedestrian infrastructure demand areas where preliminary concept design was needed. These concepts should be further refined based on field verification, site condition assessments, engineering analysis, community engagement, and design.

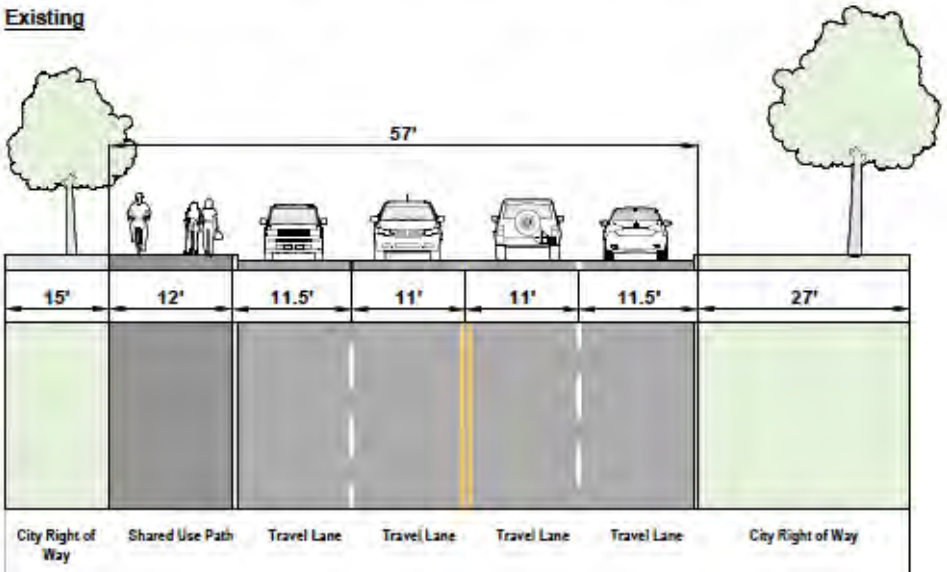
Bowling Street SW: Projects # 183 and 214, Subarea J3

Bowling Street is a four-lane street with a shared use path along the west side. Four lane streets often operate as two outside through lanes and two inside left turn lanes, posing higher safety risks for motorists. By reducing the street to three-lanes with one center turn lane, a wide buffer can improve safety and comfort for people walking and bicycling on the shared use path. Snow storage can also be provided. A sidewalk is proposed for the east side of the street to better serve people walking and using transit.

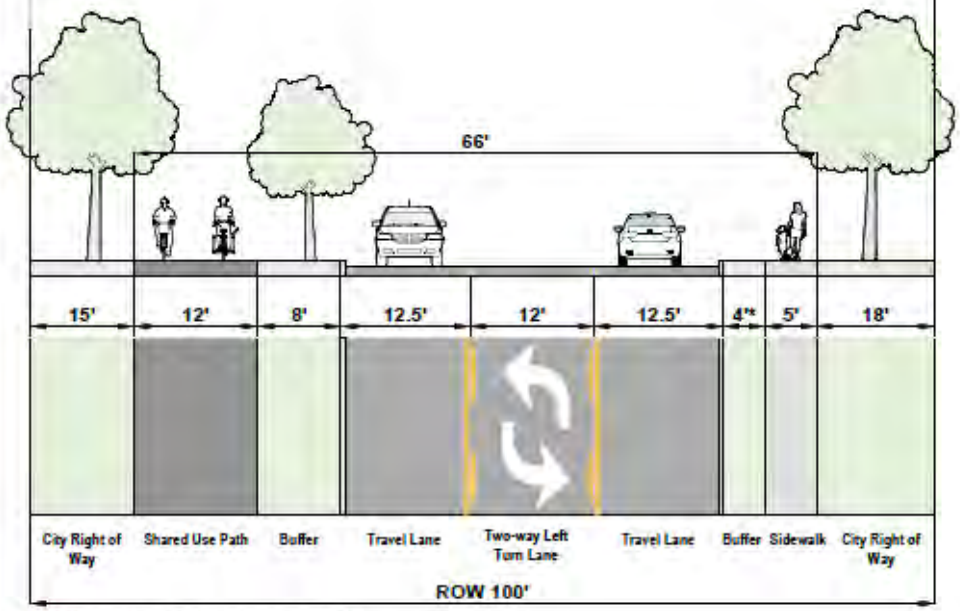
Figure 1 Looking north on Bowling Street SW, between Wilson Avenue SW and 29th Avenue SW

Bowling Street SW from Wilson Ave SW to 29th Ave SW

Existing



Proposed



* Buffer width may vary in some areas due to grading

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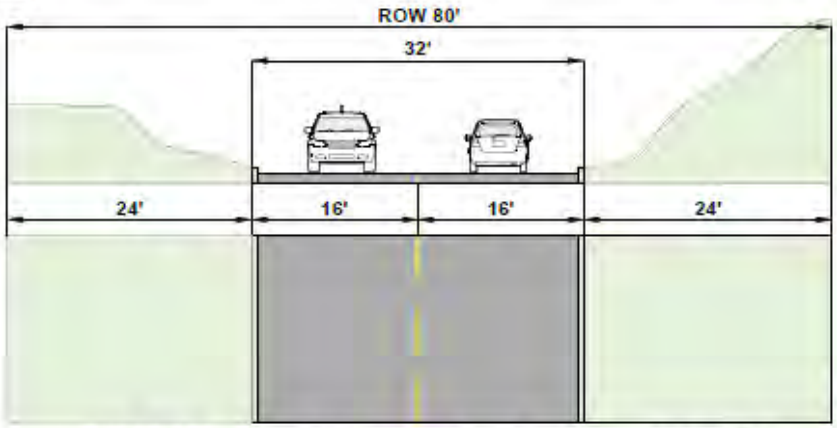
Bever Avenue: Projects # 232 and 233, Subareas E2 and E6

Bever Avenue is a wide two-lane street without sidewalks. Grading challenges make the implementation of sidewalks cost prohibitive and would require the removal of valued trees. However, the excess street width provides an opportunity for a short-term and long-term facility. By restriping the street and adding a street-level pedestrian lane on the north side, the existing curb-to-curb street can serve area residents in the interim. In the long term, the street can be reconstructed to repurpose the excess street width as an ADA compliant, curb-level sidewalk, eliminating the need for retaining walls and tree removal. It should be noted that this design will require additional winter maintenance efforts from the Streets Division to clear snow from the sidewalk after the street has been plowed.

Figure 2 Looking east on Bever Avenue SE, between 34th Street SE and White Oak Road SE

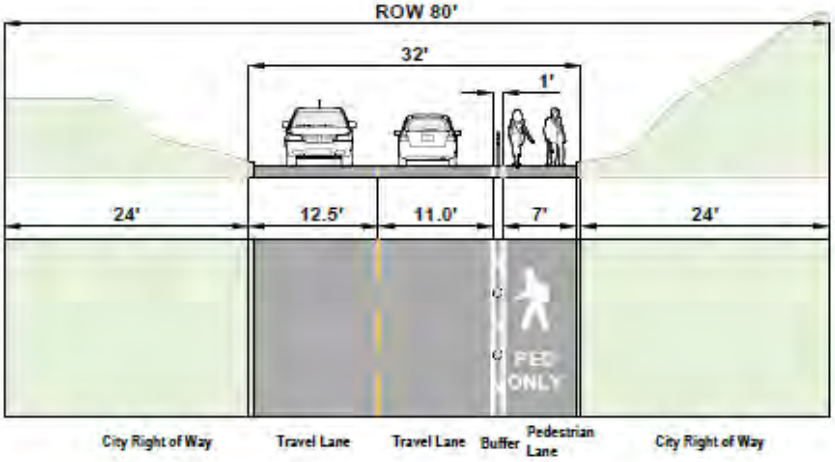
Bever Avenue SE from 34th Street SE to White Oak Road SE

Existing

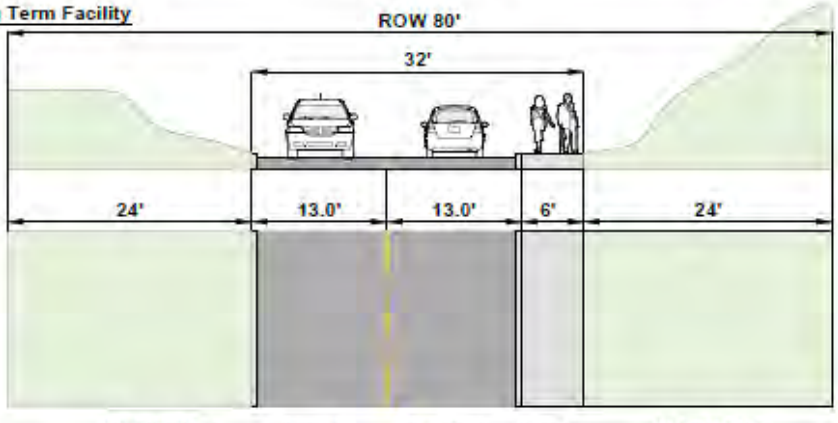


Interim

A pedestrian lane is an interim facility. ADA issues will not be addressed with a pedestrian lane, but should be a part of the City's ADA transition plan.



Long Term Facility



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TOOLE DESIGN

THIS IS A PRELIMINARY CONCEPT. FIELD VERIFICATION, SITE CONDITION ASSESSMENTS, ENGINEERING ANALYSIS, COMMUNITY ENGAGEMENT, AND DESIGN ARE NECESSARY PRIOR TO IMPLEMENTING ANY OF THE RECOMMENDATIONS CONTAINED HEREIN.

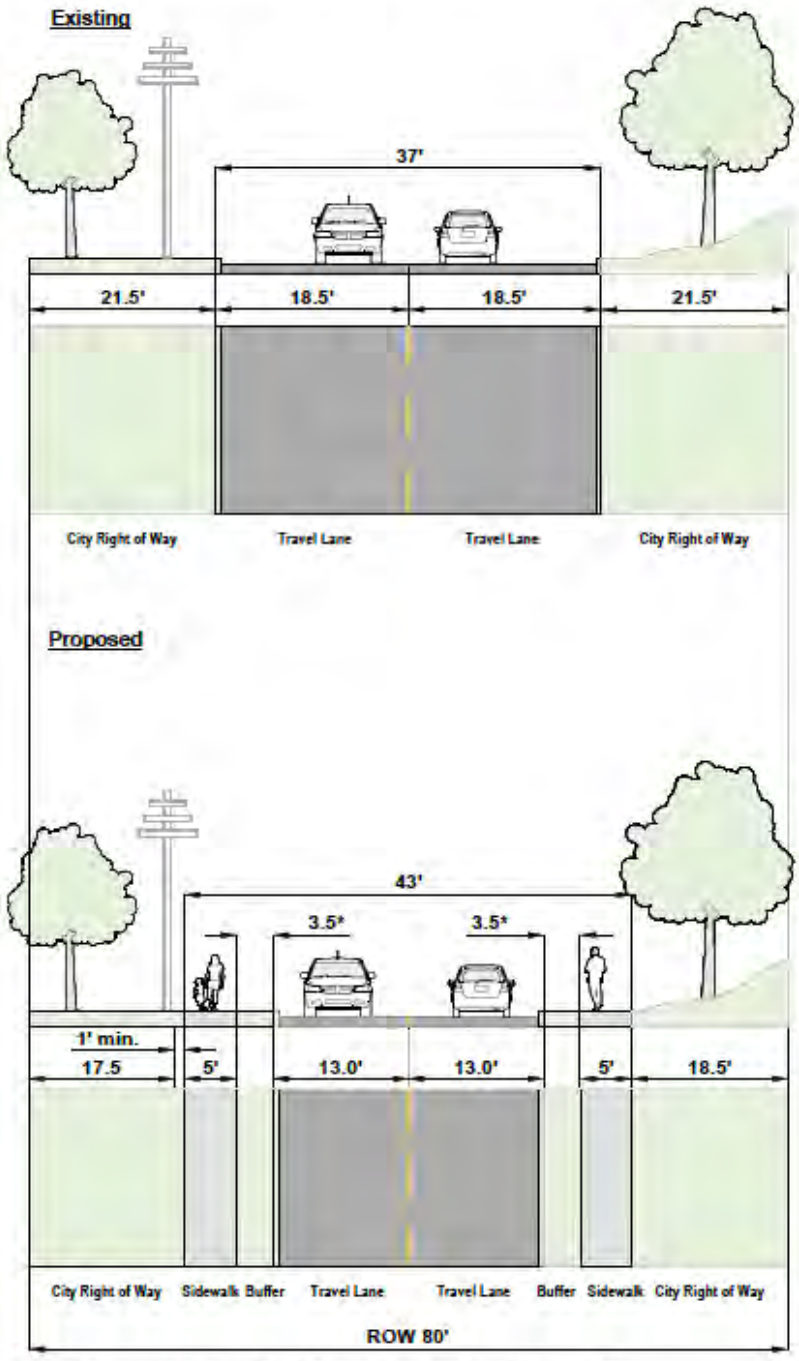
PRELIMINARY CONCEPT - NOT FOR CONSTRUCTION

34th Street SE: Projects # 314 – 319, Subareas E5 and E6

Many residential streets connect to 34th Street SE, which is a wide two-lane street with no sidewalks and parking lanes largely unused. The utility poles along the west side and some grading challenges along the east side limit the available space for sidewalks. The parking lanes present an opportunity to provide sidewalk without expanding the right of way, major utility relocation, or additional costs associated with grading or retaining walls. The proposed facility will provide for sidewalks with buffers.

Figure 3 Looking north on 34th Street SE, between Soutter Avenue SE and Iowa Avenue SE

34th Street SE from Soutter Ave SE to Iowa Ave SE



*A 4 ft buffer width is preferred. However, buffer width may vary in some areas depending on exact utility location.

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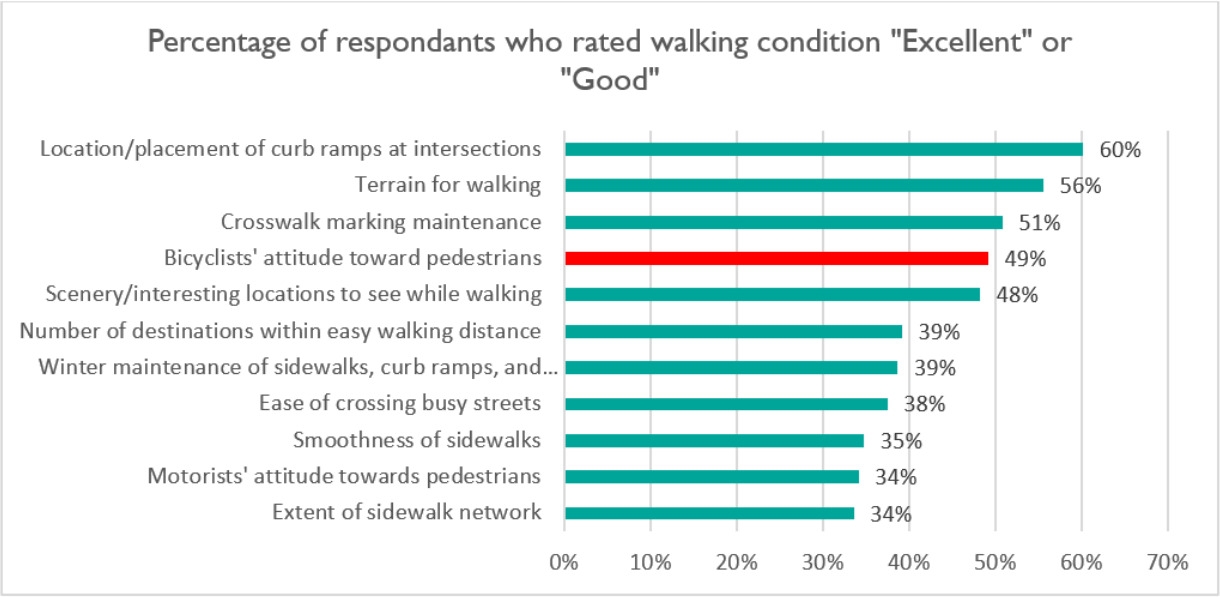
TOOLE DESIGN

THIS IS A PRELIMINARY CONCEPT. FIELD VERIFICATION, SITE CONDITION ASSESSMENTS, ENGINEERING ANALYSIS, COMMUNITY ENGAGEMENT, AND DESIGN ARE NECESSARY PRIOR TO IMPLEMENTING ANY OF THE RECOMMENDATIONS CONTAINED HEREIN.

PRELIMINARY CONCEPT - NOT FOR CONSTRUCTION

Shared Use Paths

During the community engagement process, approximately 50% of survey respondents gave “excellent” or “good” ratings to bicyclists’ attitude toward pedestrians. One infrastructure-related improvement that reduces conflict between people walking and bicycling is shared use path design. The appropriate shared use path width varies based on volume and user type. The current standard in Cedar Rapids is 10’ paths. Widths of 11’ to 14’ allow for one person to overtake another while avoiding someone traveling in the opposite direction. As volumes increase, separation of walking and biking should be considered to reduce conflicts. This can be accomplished by designing shared use paths with separate pedestrian lanes or sidewalks. Designers should refer to the Shared-Use Path Level of Service Calculator[1] for detailed guidance.

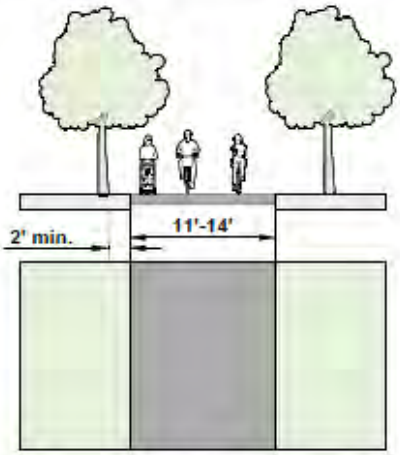


[1] https://www.fhwa.dot.gov/publications/research/safety/pedbike/05138/

Reducing Walking and Bicycling Conflicts on Shared Use Paths

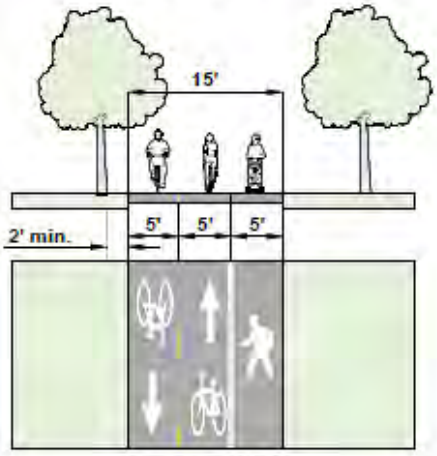
Wider Shared Use Path

A minimum path width of 11 feet allows one person to overtake another while avoiding someone traveling in the opposite direction.



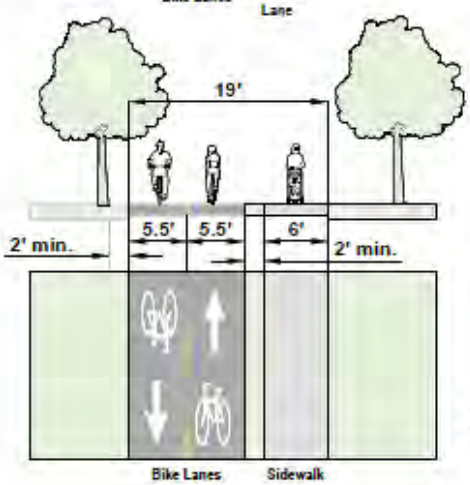
Shared Use Path

Shared Use Path with Separate Lanes



Bike Lanes Pedestrian Lane

Separated Sidewalk



Bike Lanes Sidewalk

Source: FHWA Achieving Multimodal Networks (2016)

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TOOLE DESIGN