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Visualize SLP

Online Visual Preference Survey of Complete Streets Features in St. Louis Park, MN

Sean Hayford Oleary
Luke Hanson
Maria Wardoku

PA 8081 May 2017
Faculty: Prof. Greg Lindsey

ACKNOWLEDGEMENTS

This project was created in spring semester 2017 as a capstone project for the Masters of Urban and Regional Planning Program at the Humphrey School of Public Affairs.

We are extremely thankful for the support and insights of Prof. Greg Lindsey. He helped shape this project for the better, and provided thoughtful feedback to deepen our research and better express what we learned from residents of St. Louis Park.

We are also thankful to City of St. Louis Park staff for their support of the project. City Engineer Debra Heiser and Engineering Project Manager Jack Sullivan helped provide feedback and guide the process. Former Transportation Engineer Chris Iverson helped the project immensely, helping us design and target the initial survey.

Finally, we are thankful to the over 200 residents of St. Louis Park for their time and interest to take our survey and let us know what kind of streets they want to see in their city.

TABLE OF CONTENTS

EXECUTIVE SUMMARY

This report describes the results of a visual preference survey administered in the City of St. Louis Park in spring 2017. It was developed as part of a Capstone project by students in the Master of Urban and Regional Planning program at the University of Minnesota.

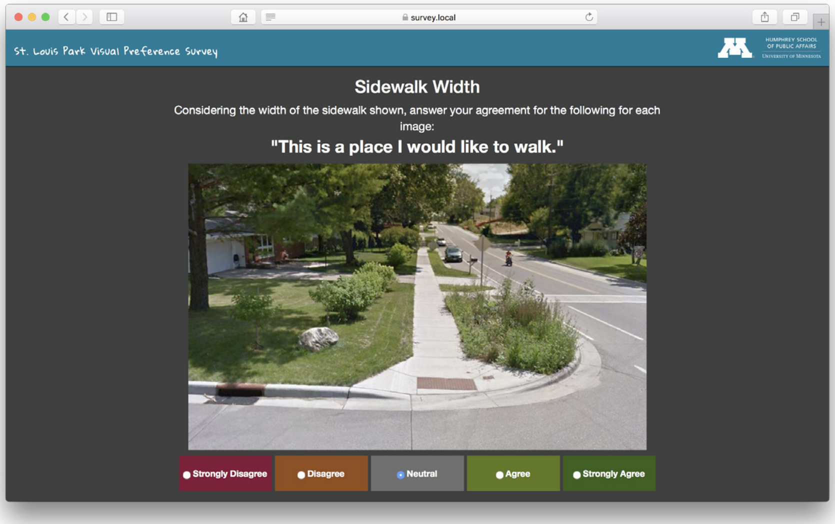
We were interested in St. Louis Park after learning about the City's Connect the Park plan, and reading press coverage of how implementation of that plan had proved controversial in some areas. The controversies seemed to echo similar barriers faced by other inner-suburban communities as they attempt to enhance their streets for walking and biking. Although we were excited to read about the level of engagement of residents near these projects, we wondered how representative these concerns were of the community at large. We wanted to reach out to a different segment of the community than a public meeting would, and allow residents to more easily weigh the impacts of sidewalks to their streets and walking experience. To examine this issue, we developed a visual preference survey.

The survey was divided into two major parts: one measured respondents' baseline preferences for streets where they would like to walk, and the second asked residents what they would like on their own street — and allowed them to visualize the combination of different street elements. A third, shorter section asked residents for their demographics and allowed us to examine trends relative to their responses.

The survey was administered by door-knocking in the proposed 2019 and 2020 Connect The Park sidewalk project areas, and via a city-wide distribution was done online via Facebook and Nextdoor.

Across 206 respondents, we found an overall preference in both sections for trees, sidewalks, and high-quality street lighting. When asked where they would like to walk:, residents had strongly negative reactions toward unlit streets at night, sidewalks immediately adjacent to the curb, and sidewalks that end abruptly. When asked to build their own street, 96% of respondents chose a sidewalk on at least one side of the street, and the majority chose sidewalks on both sides. 90% of residents chose to add additional street lights.

There are limitations to these results. The survey addressed only the impact on walking experience and relative use of space (e.g., adding a sidewalk versus additional green space). It did not address trade-offs related to cost, or maintenance. Although the City's current policies insulate affected property owners from the direct cost of the sidewalk, these concerns may loom larger on the minds of those



St. Louis Park Visual Preference Survey

Sidewalk Width

Considering the width of the sidewalk shown, answer your agreement for the following for each image:

"This is a place I would like to walk."

Figure 1: We developed an online survey tool customized for this project.

who live near a specific proposed sidewalk. In fact, our results showed weaker support for sidewalks in the Connect the Park project area than in the city-wide online response. Although in both cases, few selected an option with no sidewalks, the proportion was much larger in the CTP area — just over 12% versus under 5% from the online responses. The full report offers a much more granular breakdown of these results, including comparing responses by demographic groups (including gender and length of tenure).

These results offer a different perspective from the idea that there is strong community opposition to sidewalks. They indicate the presence of opinions that differ significantly from those expressed in public meetings regarding sidewalks and other pedestrian amenities. In our discussion section, we offer specific recommendations for implementation of similar surveys in the future.

Figure 2: One of our methods for collecting responses was in-person surveys at homes along the Connect the Park 2019 and 2020 routes.

INTRODUCTION

Many neighborhoods of the Twin Cities' first-ring suburbs were developed immediately post-World War II, and were designed to almost exclusively cater to automobile transportation. These communities now face the challenge of serving residents who desire and depend on walking, biking, and transit as primary modes of transportation. As students in the Humphrey School of Public Affairs' Masters of Urban and Regional Planning program, we have observed the controversy that ensues when suburban cities seek to install Complete Streets infrastructure. This infrastructure includes features like sidewalks, crosswalks, and bike lanes that serve people walking and biking. After reading about one such controversy in 2016 in St. Louis Park, we approached the City with the idea of creating a visual preference survey to better understand inner-suburban residents' preferences for Complete Streets infrastructure. Rather than a simple up-or-down vote on sidewalks, our goals were to provide more complete comparisons of various elements of streets, and to elicit responses from residents who might not normally attend public meetings.

St. Louis Park has a history of adding Complete Streets amenities to its road network. The City collaborated with community members to create The Active Living Sidewalks and Trail Plan in 2007. The plan identified gaps in the pedestrian and bicycle networks and prioritized recommended improvements. In 2013, the City Council approved the Connect the Park Plan, which guides implementation of improvements over a ten-year period and aims to create a network of bikeways every half-mile, and a network of sidewalks every quarter mile.

While the Connect the Park plan was approved by City Council over four years ago, implementation of the plan has been controversial. Filling gaps in the pedestrian and bicycle networks requires changes to the appearance and use of streets. As a result, proposals to implement Complete Streets amenities like new sidewalks frequently encounter resistance, especially by residents immediately adjacent to the new facility.

We worked with three staff members at the City of St. Louis Park: Deb Heiser, the engineering director; Chris Iverson, a transportation engineer; and Jack Sullivan, senior engineering project manager. In our conversations with city staff, they observed that sidewalks often seem more controversial when they are first proposed than after they are installed and established. We believed that part of the hesitancy of impacted residents may be the inability to visualize what the proposed changes in street design would look like following construction. It is challenging to weigh the visual impact of changes to the street design without a visual reference, and most project proposals lack detailed renderings of what the new infrastructure would look like.This report presents the results of a visual preference survey for Complete Streets options in the City of St. Louis Park and is organized into three major sections:

Section one describes the project approach and methods, identifying the goals of the project as identified by our team and St. Louis Park staff, the development of the project scope, and the phasing of administering the visual preference survey (VPS). This section also outlines the methodology and composition of VPS, including the Complete Streets infrastructure variables being measured, and the methods utilized to collect and identify respondent preferences.

Section two describes the results of both components of the survey, and examines the trends of demographics as compared to the survey results.

Section three reiterates the core findings of the

VPS, and presents simple recommendations that may facilitate the successful implementation of St. Louis Park's Connect the Park Plan.

APPROACH AND METHODS

Our approach was informed by similar projects in peer cities, and we received direction from St. Louis Park staff as to which specific features we wanted to examine residents' reactions.

Many scholars and practitioners have observed that images can be an effective way to engage the public in garnering feedback for infrastructure improvements:

In a discussion of technology and public participation, scholar Kheir Al-Kodmany advocated visualization as a method for demystifying design processes and drawing out the views of the public (Al-Kodmany 2000).

Another study examined community engagement processes for transportation planning and found that "visualization efforts helped articulate alternative design visions, convince project opponents, build knowledge among participants, and lend credibility to community preferences for transportation project design" (Slotterback 2010).

In a visual assessment of New Jersey State Highways, Reid Ewing et al. considered the influence of the composition and framing of the visuals presented in preference surveys (Ewing et al. 2005). The authors identified statistically significant differences and variables in surveys visuals that influence user preference, such as the weather conditions depicted and the proportion of the street covered by tree canopy.

Given the power of visualizations to realistically depict inaccurate or biased scenes, Sheppard (2000) further contended that accuracy and representativeness should be general principles for any landscape visualization. Similarly, a study of accuracy and bias in renderings by Daniel and Meinter (1997) suggested that generally, the more realistic a rendering is and the important response dimensions (influencing variables in the image), the higher the accuracy should be to prevent bias.

These studies confirm the effectiveness of a VPS as a tool to gauge public opinion, allowing respondents to more realistically engage with the question of different pieces of infrastructure than they would with a simple yes/no vote.

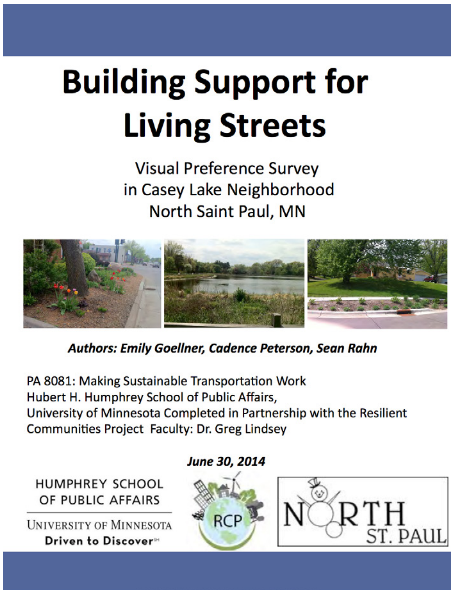
Peer Cities' Visual Preference Surveys

Many cities in the U.S. have conducted visual preference surveys to gather resident opinions on the built environment and street improvements. We reviewed the following studies in preparation for developing our own VPS for St. Louis Park.

Golden Valley, MN

Consultants for the City of Golden Valley conducted a visual preference survey as a component of the planning process for the city's Comprehensive Plan in 2008. 150 respondents participated, and provided feedback on a range of building types, parking configurations, and streetscape designs. Participants utilized a Likert scale — strongly disagree to strongly agree — to indicate their visual preferences.

The streetscape design section indicated a general preference for wide landscaped buffers between sidewalk facilities and surface parking. However, it is not clear from the study whether or not landscaped buffers are preferred when surface parking is absent, and whether a sidewalk's proximity to the roadway or adjacent land uses influences this preference.



Building Support for Living Streets

Visual Preference Survey
in Casey Lake Neighborhood
North Saint Paul, MN

Authors: Emily Goellner, Cadence Peterson, Sean Rahn

PA 8081: Making Sustainable Transportation Work
Hubert H. Humphrey School of Public Affairs,
University of Minnesota Completed in Partnership with the Resilient
Communities Project Faculty: Dr. Greg Lindsey

June 30, 2014

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NORTH ST. PAUL

Figure 3: Building Support for Living Streets in North St. Paul report cover.

North Saint Paul, MN

In 2014, Humphrey School students administered a study of visual preferences for "living street" infrastructure amenities in the Casey Lake neighborhood of North Saint Paul. The survey was administered face-to-face and had 76 respondents. Survey results indicated that rain gardens, enhanced intersections with bumpouts, and narrowed streets recorded the highest preference ratings. On the other hand, closed medians and off-street designated bike trails recorded the most resistance, with respondents indicating that these features as the least preferable infrastructure amenities included in the study.

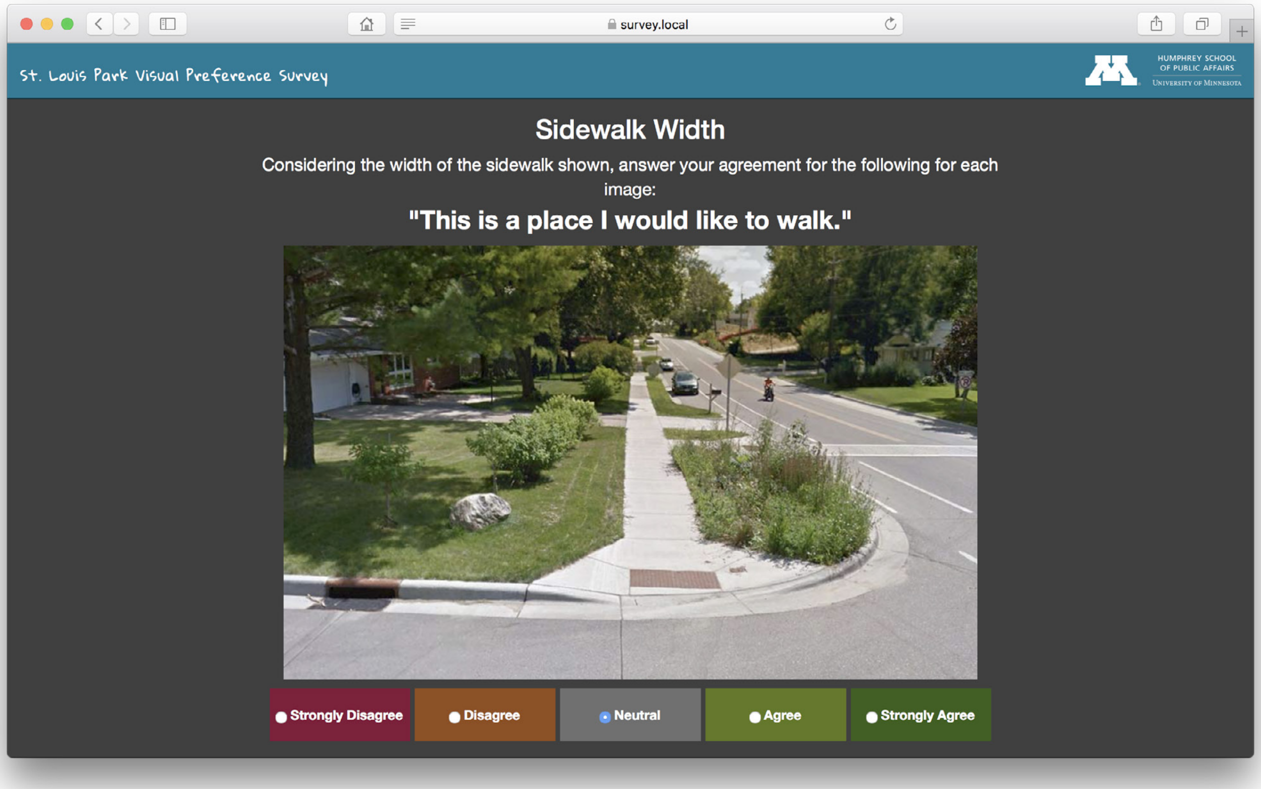
Attitudes toward sidewalks were not directly investigated; however, there are some results that indicate preference indirectly. Sidewalks were favored in conjunction with well-designed rain gardens, but an image of a one-sided sidewalk with rain gardens was viewed more favorably than a two-side sidewalk image without.

Burlington, MA

The Town of Burlington, MA conducted a visual preference survey as a component of its Comprehensive Master Plan in 2014. The City's survey included examples of varying types of sidewalk infrastructure and construction materials. Residents expressed preferences for brick streets and sidewalks, pedestrian-scale lighting, and architecturally traditional railings and wayfinding elements. Although the project did not focus specifically on multimodal amenities, an urban street with conventional on-street bike lanes was the worst-ranked in overall streetscape ranking. Comments from participants noted a preference for traditional appearance and streets that suggest less overall traffic.

Newburgh, NY

The City of Newburgh, NY employed a visual preference survey to measure user preference for development aesthetics and potential changes to the streetscape in a historic district. Each image in the survey was rated from between +10 to -10 based on the question, "How appropriate or inappropriate is the image you are seeing for the Liberty-Grand Street Corridor now and in the future?" 114 respondents took the survey, which was focused on a corridor that was a more traditionally urban environment than St. Louis Park, but found a strong preference for historical materials (brick and stone rather than concrete), and concern for poorly maintained streets and sidewalks. 64% of participants in this survey ranked "visually attractive streets" as the most important streetscape consideration, while only 28% chose "safe walking environment." This provides a strong example of just how important the appearance of a street can be to residents.



Sidewalk Width

Considering the width of the sidewalk shown, answer your agreement for the following for each image:

"This is a place I would like to walk."

Figure 4: Part 1 of the Visual Preference Survey. The 5' width from the Sidewalk Width section is shown.

Implementation of survey in St. Louis Park

Together with St. Louis Park city staff, we identified the following goals for the survey:

- Provide opportunities for St. Louis Park residents to visualize Complete Streets infrastructure amenities, including sidewalks and lighting, on their own street
- Collect detailed feedback on resident preferences for various types of infrastructure
- Obtain feedback from stakeholders who might not attend meetings
- Facilitate and encourage two-way communication between residents and the City

The process consisted of four phases: I. Survey Development and Review, II. Community Engagement, III. Data Analysis, and IV. Presentation of Findings.

Phase I: Survey Development and Review

In the first phase, we met with city staff to determine the scope of the survey and project deliverables. This included identifying what Complete Streets amenities would be included in the visual survey, identifying the context and framing for presenting these changes to the public, and discussing how the survey would be distributed and administered. Using this information, we developed a web application for loading questions and recording responses, and embedded images for the questions and formatted the application. The web application was custom-built and hosted by one of the team members, with a back-end operating on PHP/MySQL and interactive features operated by jQuery Javascript.

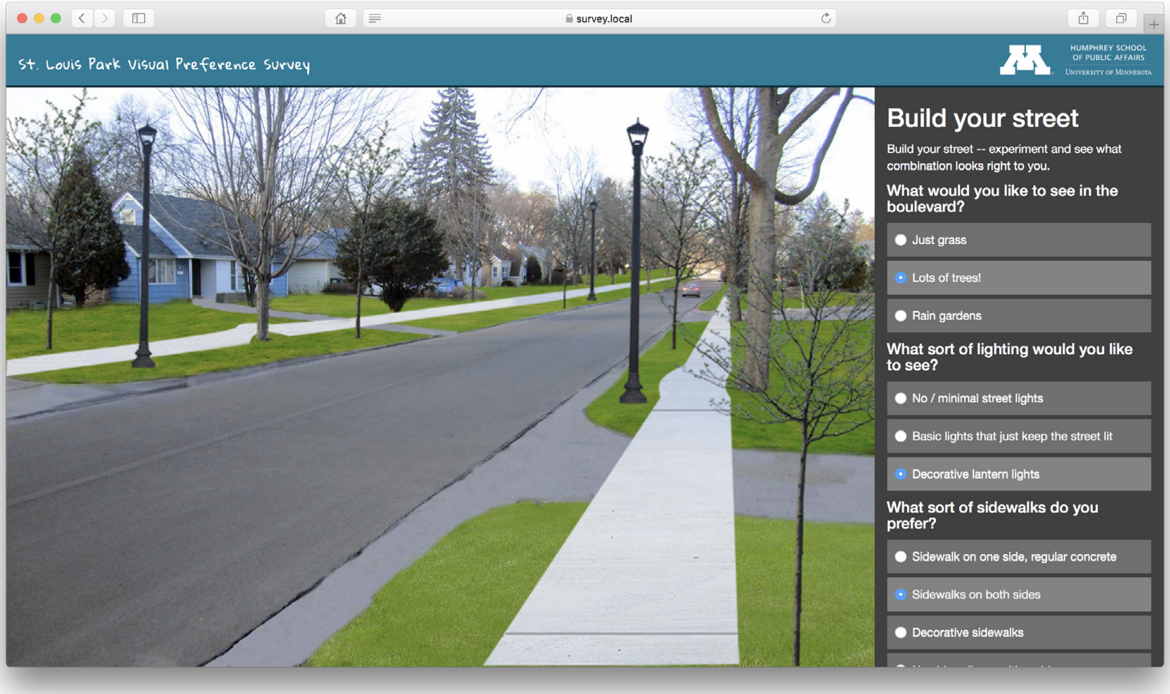
City staff reviewed and suggested edits. Following revisions to the survey application, an updated VPS tool was approved by St. Louis Park staff for administration.

The final VPS tool comprised three sections:

Section 1: The first section was designed to establish a baseline over where a respondent would prefer to walk (which may or may not be their own street). This included photographs of Complete Streets infrastructure amenities that participants scored according to their preferences. Following discussion with city staff, these infrastructure amenities were included in section 1:

- Sidewalk location: ~6′ boulevard, back of curb, and ~14′ boulevard
- Sidewalk width: 4′, 5′-6′, and 10′
- Sidewalk materials: asphalt, concrete, and brick

Figure 5: Part 2 of the Visual Preference Survey. The "minimal" options were pre-selected. In the image below, the most popular combination of options is shown: concrete sidewalks on both sides, decorative lights, and lots of trees.



Build your street

Build your street -- experiment and see what combination looks right to you.

What would you like to see in the boulevard?

○ Just grass

● Lots of trees!

○ Rain gardens

What sort of lighting would you like to see?

○ No / minimal street lights

○ Basic lights that just keep the street lit

● Decorative lantern lights

What sort of sidewalks do you prefer?

○ Sidewalk on one side, regular concrete

● Sidewalks on both sides

○ Decorative sidewalks

- Sidewalk connectivity: 1-leg to 1-leg, 1-leg dead end, 2-leg to 2-leg, and mid-block dead end
- Boulevard trees: mature trees, medium-aged trees, and newly planted trees
- Intersection design: no curb ramps, one-directional curb ramp, and bi-directional curb ramps
- Street lights: no lighting, cobrahead HPS, lantern HPS, and lantern LED
- Overall streetscape: overall high, medium, and low-quality pedestrian environments

One example screenshot is shown in figure 1, of the beginning of the sidewalk width section. Although these images were classified for our internal purposes, they were not labeled in the survey itself; only the section was labeled. For example, in the "overall streetscape" section, respondents saw three, unlabeled images — not images labeled "high" or "low" quality.

For each question in this section, respondents were asked to consider the variable of the section, and answer their agreement for the following statement: "This is a place I would like to walk." A five-point "agree-disagree" Likert scale was utilized to measure respondent preferences, with neutral representing the middle value.

Section 2: In this "Build Your Street" section, respondents were asked what they preferred for their own street. They layered a composite image, using options in three distinct categories. One combination of these factors — the most popular combination of respondents — is shown in figure 1. The options included:

- Boulevard: grass only, trees, or rain gardens
- Street Lighting: no street lights, simple "cobrahead" lights on utility poles, and decorative lantern lighting
- Sidewalks: no sidewalk on either side of the street, a standard concrete sidewalk on one side of the street, a standard sidewalk on both sides of the street, or decorative sidewalks on both sides of the street

We also asked respondents to share why they built their street the way they did. All questions were optional.

Section 3: Demographic questions regarding age, gender, geographic location, homeowner status, and race were asked. The variables and answer ranges included in this section are consistent with US Census methodology.

Image bias and limitations

We took care to eliminate biases inherent in scene selection in the visuals presented. In Section 1 of the survey, this was accomplished by using photos depicting similar weather conditions, on-street parking occupancy, and quality/maintenance of street infrastructure materials. While the photographs presented depict varying types of infrastructure, we carefully chose to minimize variation in aspects other than the Complete Streets amenity in question.

Figure 6: We delivered fliers to homes along the proposed routes of sidewalks to be built in 2019 and 2020.

In Section 2 of the survey, the rendered imagery provides the ability to control for most variables, as the background image, weather conditions, and lighting remain constant as participants add or remove infrastructure amenities from the image. The rendered imagery was designed to be representative of the real-world limitations of implementation, so when participants added a feature like enhanced street lighting to the image, the spacing, location, and dimensions were representative of real-world conditions. Similar care was taken to ensure that the quality of imagery was consistent across all renders, so that a poorly rendered street feature would not introduce bias when compared against higher-quality renderings.

For both sections of the VPS, the steps taken to reduce biases inherent in scene selection should not be interpreted as an elimination of bias. The images presented in the VPS still contained variables that were not controlled for — such as differing background buildings in the images in section 1 — and this study cannot confirm the elimination of bias in scene selection. Nonetheless, the effort to control for influencing variables where possible yielded a more effective tool in better understanding respondent preferences for Complete Streets amenities, and promotes a better understanding of the design choices available on Saint Louis Park local roads.

Phase II: Survey Administration

In the second phase, we administered the survey to community members. We coordinated with City staff to identify the most effective distribution method for administering the survey.

Surveys were administered via door-knocking along the proposed routes of sidewalks to be built in 2019 and 2020 to gather survey data specific to those project areas. Since the VPS tool is digital, we provided an iPad tablet for residents to complete the survey in-person. We left behind materials at homes in the project area when no one was available to take the survey, directing respondents to an online link where they could complete the survey online.

City staff also sent the survey to residents through Nextdoor and Facebook. Completing the survey online constituted the majority of survey responses collected — of 206 responses, 28 were from in-person responses, 5 from survey-area responses done online, and 173 other online responses.

Phase III: Analysis

In the third phase, we analyzed data from the survey to understand overall trends in preferences for Complete Streets amenities, and compared responses by geographic location, homeowner status, and other conditions. Summary statistics for recorded user preferences were derived for each visual example included in the survey. Geographic information was confirmed for in-person survey respondents. Online respondents were prompted in the VPS tool to identify their address or nearest intersection. The VPS tool utilized GPS location for the in-person survey administration. Although technically feasible for the online survey, this option was disabled due to the possibility of people taking the survey at locations other than their home.

Phase IV: Presentation of Findings

In the fourth phase, we prepared a report identifying and summarizing the VPS tool and the results of the survey. We presented the results of this report to staff from the St. Louis Park Engineering and Planning departments on May 2nd, 2017. Electronic copies of the report were delivered to Saint Louis Park city staff later in May 2017.

RESULTS

Number and Source of Respondents

In total, 206 people completed the survey. Of this, 33 were in the confirmed sidewalk project area targeted. The majority took the survey online on their own time, through Nextdoor and Facebook. Although the online responses were not coded to these specific sources, the postings on these two different services were more than two weeks apart, and thus, we assumed the likely source based on the timestamp of the response.

Figure 3 depicts the location of surveys where geographic location was known. In the following section, we address the time commitment that was required for the in-person responses, and the relative efficiency of responses via door-knocking, postcards, and online distribution.

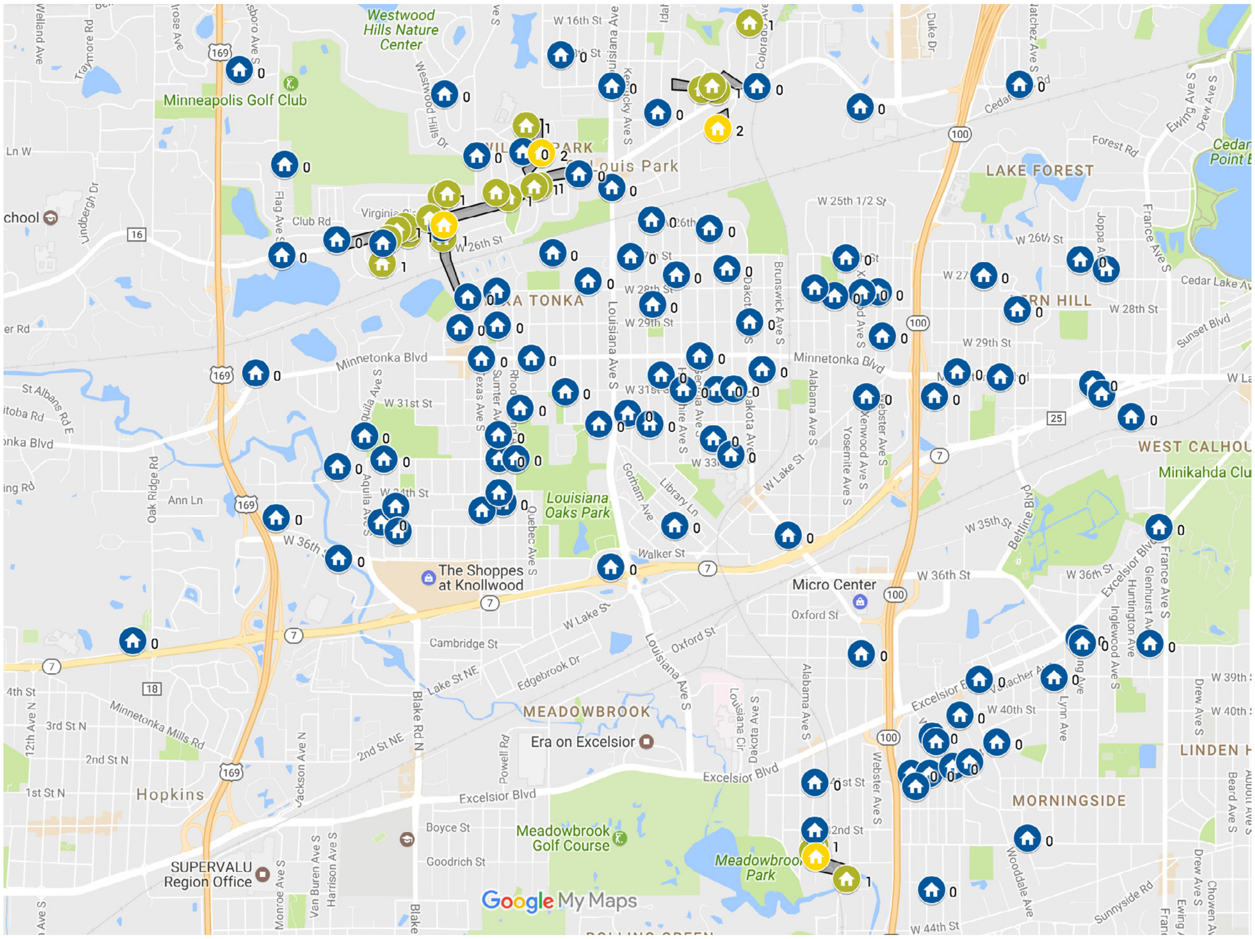


Figure 7: Map of the location of survey respondents. Green houses represent door-to-door surveys. Yellow houses are survey-area surveys prompted by the postcards. Blue are other online surveys.

Time efficiency of conducting the survey

Since the survey was developed for online use, there was no incremental cost for time to collect additional responses; other than the cost of time to recruit people to take the survey, it made no difference to administer it for 10 users or 1,000. However, the door-to-door work was considerably more laborious. We spent 12 person-hours to collect 28 responses at the door (2.33 responses per person-hour), and an additional 4 person-hours for dropping off postcards at doors of residents who did not respond to the initial door-knock (1.66 responses per hour). For safety reasons, the door-knocking was done in teams of two.

Managing bias in online responses

The survey was intentionally not posted to bike-walk specific social media sites or mailing lists, hoping to get as broad of a cross-section of the community as possible. However, it is possible that residents self-selected based on their interest in the subject matter; those who are indifferent about sidewalks may not have bothered to take the survey. Furthermore, although we avoided bike-walk specific sites, a member of the public posted the survey to the Facebook page "Bike & Walk St. Louis Park" approximately 4 hours after the City's Facebook posting. The posting (shown in Appendix C) did not advocate for particular responses, but the audience of the page may be more oriented toward pedestrian facilities than the public at large. We cannot know exactly how many respondents accessed the survey through this means; however, we do know from timestamps that 78 people completed the survey prior to this posting, and 95 completed it after. There were no major differences between the results in these two time periods; in fact, results were slightly less favorable to sidewalks after this posting. We concluded that this posting did not have a major impact on the results of the survey.

Survey results were also examined for repetitiveness and close-together timestamps, and there were no signs of intentional, repeated entries.

Source	Number of Responses
Confirmed CTP project area	**33**
In-person responses	28
Online, coded to project area	5
Not confirmed CTP project area	**173**
Presumed Nextdoor	25
Known location	14
Unknown location	9
Presumed Facebook	148
Known Location	86
Unknown Location	62
Total	**206**

Figure 8: Summary of number of respondents by source

PART 1 RESULTS: BASELINE PREFERENCES

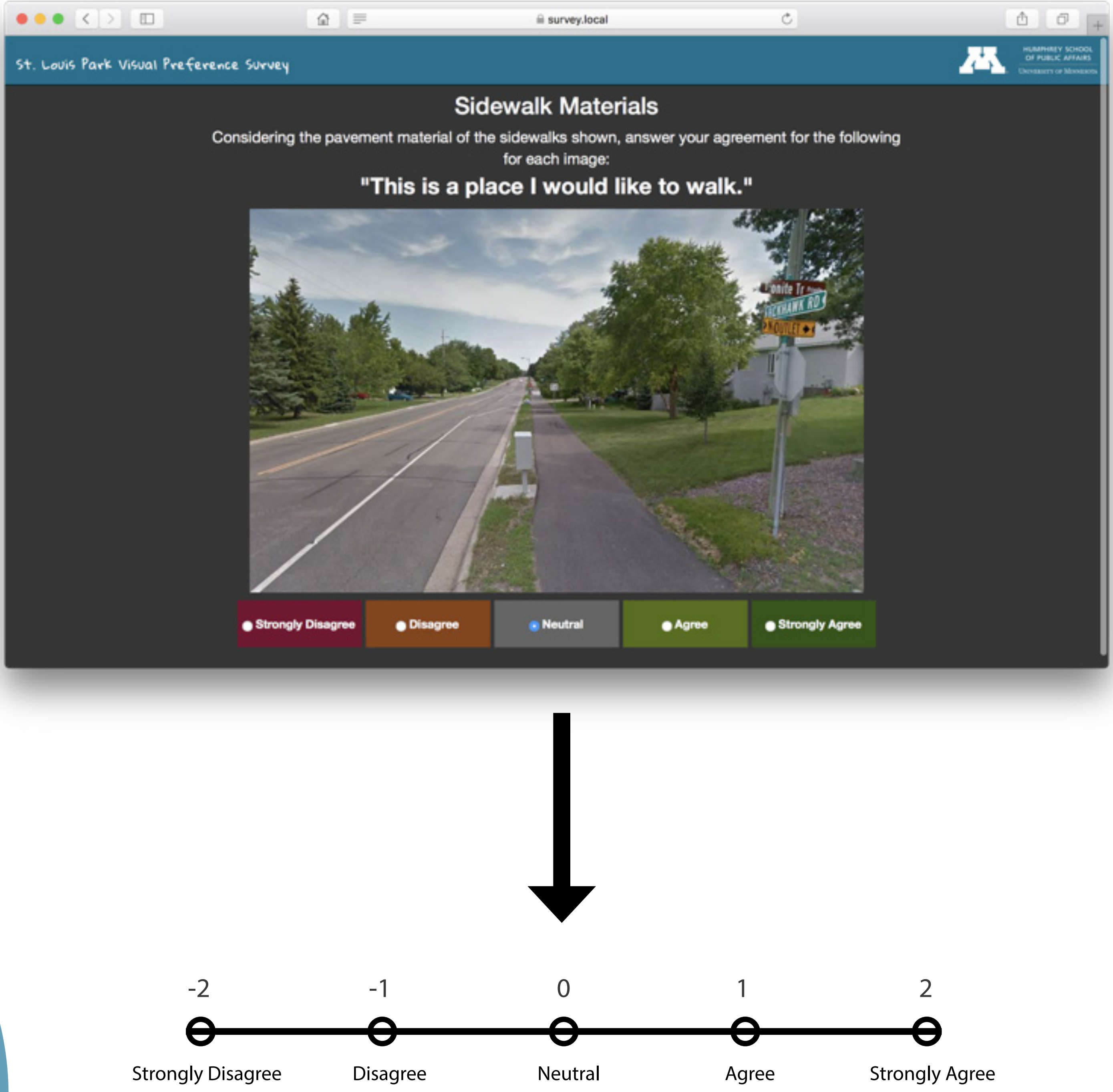
Eight questions were presented in part 1 of the survey. Each question included three or four photographs of Complete Streets infrastructure amenities that participants scored according to their preferences. Following consultation with St. Louis Park staff, the following infrastructure amenities were included in section 1:

1. Sidewalk location: ~14′ boulevard, ~6′ boulevard, and back of curb
2. Sidewalk width: 10′, 5′-6′, and 4′
3. Sidewalk materials: Brick, concrete, and asphalt
4. Sidewalk connectivity: 2-leg to 2-leg, 1-leg to 1-leg, 1-leg dead end, and mid-block dead end
5. Boulevard trees: Mature trees, medium-aged trees, and newly planted trees
6. Corner design: Bi-directional curb ramps with a bumpout, bidirectional curb ramps, and no curb ramps
7. Street lights at night: Decorative "lantern-style" LED lighting, decorative "lantern-style" HPS lighting, Xcel "cobrahead" lighting, and no lighting
8. Overall streetscape: Overall high, medium, and low-quality pedestrian environments

For each question, respondents were asked to consider the variable of the section, and answer their agreement for the following statement: "This is a place I would like to walk." A five-point "agree-disagree" Likert scale was utilized to measure respondent preferences, with neutral representing the middle value. To compare results more clearly, the five-point Likert scale was translated into a five-point numerical scale, where -2 = "strongly disagree," -1 = "disagree," 0= "neutral," 1= "agree," and 2= "strongly agree." The comparison between what users saw and how we analyzed the result is shown in figure 9.

All results in this section are presented in the following order:

- Summary of average scores, standard deviation, and the mode (the most common score) for all survey respondents
- Summary of average scores for "neighborhood" respondents along planned sidewalk routes compared with "online" survey respondents
- Summary of average scores by identified gender
- Summary average scores by length of tenure in current home



St. Louis Park Visual Preference Survey

Sidewalk Materials

Considering the pavement material of the sidewalks shown, answer your agreement for the following for each image:

"This is a place I would like to walk."

Figure 9: Likert Scale and Corresponding Numerical Scale

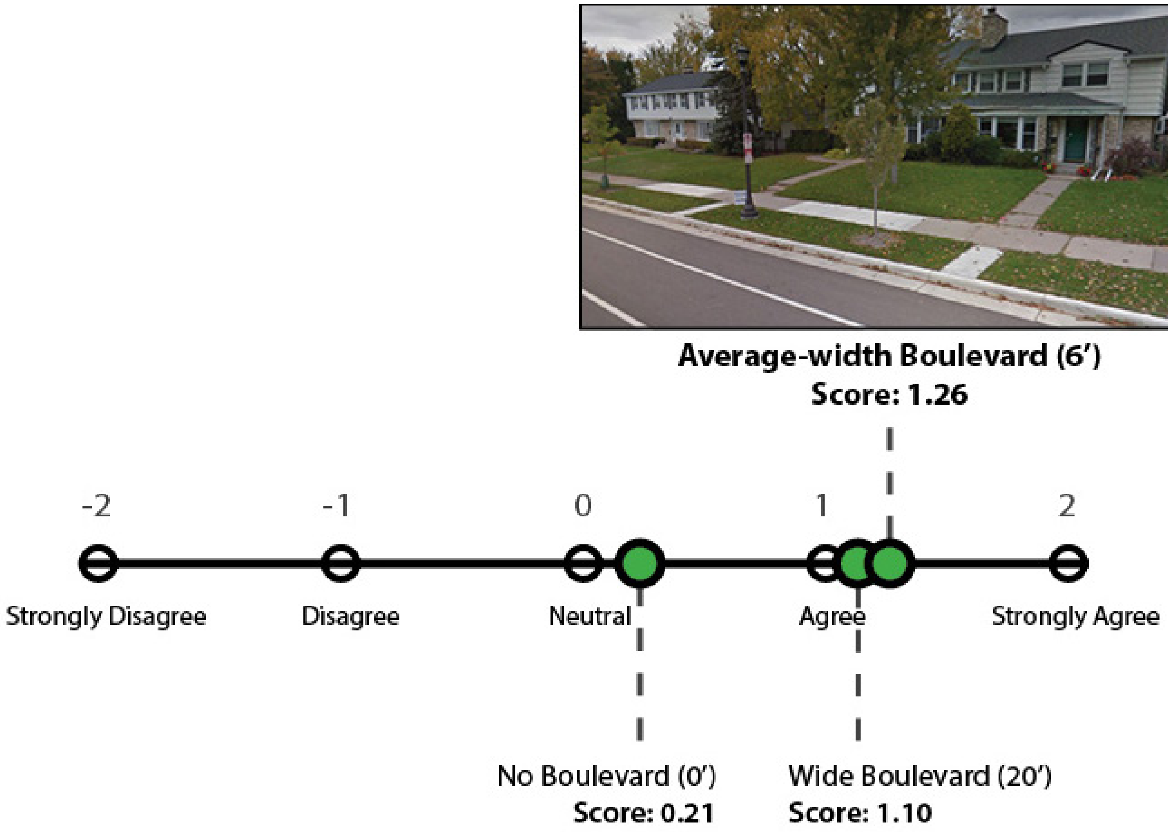


Figure 10: Mean Scores for all Survey Respondents (n=206) for the Images Depicting Sidewalk Location

1. SIDEWALK LOCATION

Key finding: Respondents prefer boulevard space between the street and sidewalk.

To measure whether the locations of sidewalks relative to the roadway influence where people want to walk, the following images were included in the VPS:

- An image of a sidewalk far from the curb with a wide (20′) boulevard
- An image of a sidewalk further from the curb with an average sized (6′) boulevard
- An image of a sidewalk directly adjacent to the roadway curb with no (0′) boulevard

Results for all Survey Respondents (n=206)

Respondents preferred the images of an average sized (5′) boulevard (mean score = 1.26) and wide boulevard (mean score = 1.10) to the image of a sidewalk directly adjacent to the curb with no boulevard (mean score = 0.21) (Figure 10).

Neighborhood Survey vs. Online Survey (n=206)

Both neighborhood respondents surveyed along the routes of planned 2019/20 sidewalk projects as well as online respondents recorded similar average scores for sidewalks. Interestingly, respondents along planned sidewalk routes recorded a higher average score for sidewalks adjacent to the curb, and a lower average score for sidewalks with average boulevards (Figure 11).

			Sidewalk with Wide Boulevard (20’)	Sidewalk with Average Boulevard (6’)	Sidewalk Back of Curb (0’)
All Survey Respondents	All Survey Respondents (n=206)	Mean	1.10	1.26	0.21
		SD	0.82	0.97	1.07
		Mode	1	1	1
Neighborhood Survey vs. Online Survey	Neighborhood Respondents (n=33)	Mean Score	1.00	1.03	0.85
	Online Respondents (n=173)		1.12	1.30	0.09
Gender	Female (n = 128)	Mean Score	1.13	1.28	0.22
	Male (n = 74)		1.08	1.26	0.22
Length of Tenure in Current Home (years)	<1 year (n = 14)	Mean Score	1.14	1	0.36
	1-5 years (n = 51)		1.25	1.29	0.16
	6-10 years (n = 39)		1.44	1.26	-0.23
	11-20 years (n=48)		0.75	1.35	0.19
	>20 years (n=44)		0.95	1.16	0.59

Figure 11: Mean scores for sidewalk location for all respondents and all demographic categories measured

Gender (n=203, No Response: n=3)

There was little notable difference in the average scores recorded between genders for sidewalk location. For both female and male-identifying respondents, the image depicting a sidewalk with an average-sized boulevard recorded the highest average scores, while the image depicting the sidewalk adjacent to the curb recorded the lowest average scores (Figure 11).

Length of Tenure in Current Home (n=196, No Response: n=10)

Average scores for the images showing sidewalks with average and wide boulevards were largely similar across the spectrum of short to long-term residents. The image of the sidewalk adjacent to the curb recorded the lowest average scores across all categories of respondents, though respondents who have lived in their homes for more than twenty years recorded a comparatively high score for this image with an average score of 0.59. Conversely, residents who have lived in their homes between 6 and ten years recorded the lowest average score of -0.23 for this category (Figure 11).

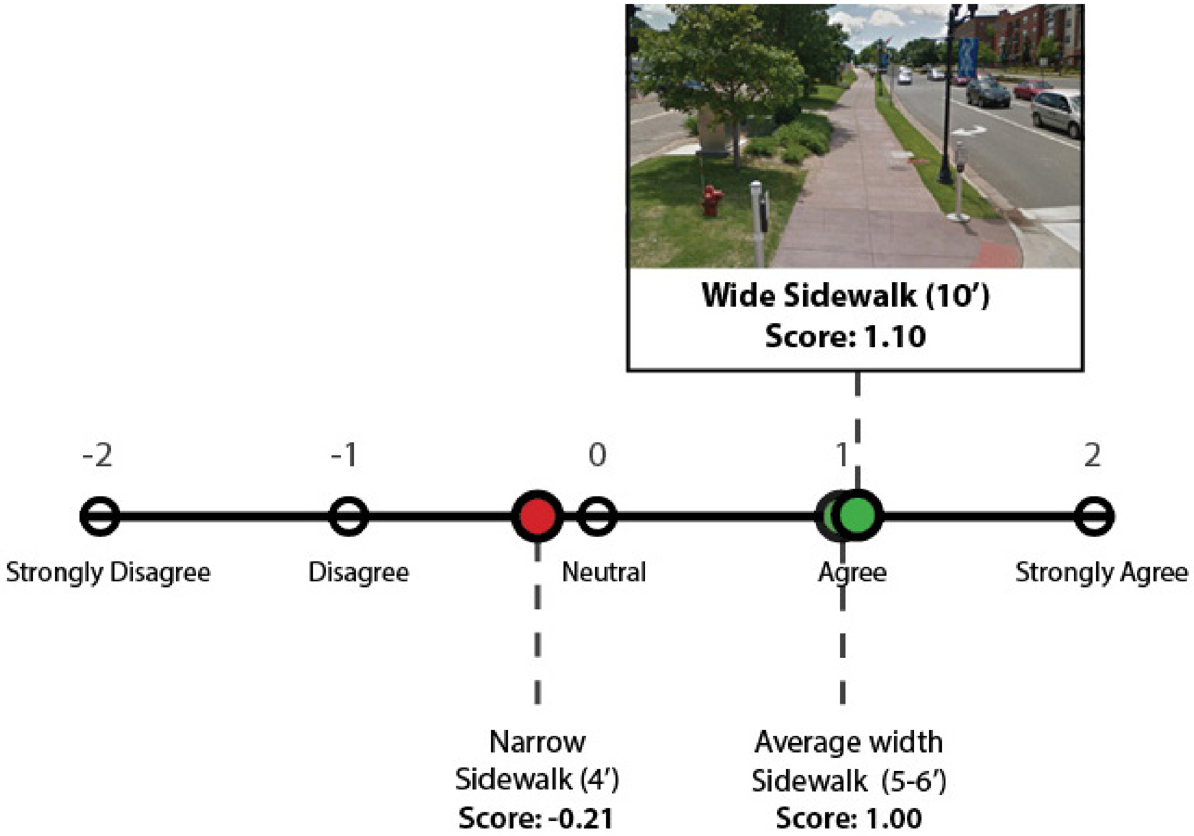


Figure 12: Mean Scores for all Survey Respondents (n=206) for the Images Depicting Sidewalk Width

2. SIDEWALK WIDTH

Key finding: Respondents prefer wide sidewalks

To measure if the width of sidewalks influence where respondents would want to walk, the following images were presented in the VPS:

- An image of a wide sidewalk (10")
- An image of a sidewalk of average width (5-6')
- An image of a narrow sidewalk (4')

Results for all Survey Respondents (n=206)

The image depicting a wide sidewalk (> 6') received the highest average rating of 1.1. The image depicting a narrow sidewalk (< 5') received the lowest average rating of -0.27. When applied to the Likert scale utilized in this survey, on average, respondents "agree" that they would like to walk in the areas depicted with wide and average sidewalks, and "somewhat disagree" that they would like to walk in the area depicted with a narrow sidewalk (Figure 12).

Neighborhood Survey vs. Online Survey (n=206)

Respondents from both the neighborhood and online survey recorded similar results for sidewalk width. Those surveyed along planned future sidewalk routes recording identical high scores for the images of wide and average-width sidewalks, with the image of the narrow sidewalk recording the lowest average score. Results were similar for online respondents, though wide sidewalks received the highest average score, and the image showing the narrow sidewalk received the lowest (Figure 13).

			Wide Sidewalk (10’)	Average-Sized Sidewalk (5-6’)	Narrow Sidewalk (4’)
All Survey Respondents	All Survey Respondents (n=206)	Mean	1.10	1.00	-0.27
		SD	1.02	0.73	0.98
		Mode	2	1	-1
Neighborhood Survey vs. Online Survey	Neighborhood Respondents (n=33)	Mean Score	0.97	0.97	-0.09
	Online Respondents (n=173)		1.12	1.00	-0.30
Gender	Female (n = 128)	Mean Score	1.21	1.11	-0.24
	Male (n = 74)		0.96	0.88	-0.30
Length of Tenure in Current Home (years)	<1 year (n = 14)	Mean Score	1.07	0.93	-0.29
	1-5 years (n = 51)		1.29	0.92	-0.39
	6-10 years (n = 39)		1.15	1.08	-0.18
	11-20 years (n=48)		0.92	1.02	-0.15
	>20 years (n=44)		1.09	0.98	-0.30

Figure 13: Mean scores for sidewalk width for all respondents and all demographic categories measured

Gender (n=203, No Response: n=3)

Average results for those identifying as male or female are quite similar, with females recording a slightly higher average score than their male counterparts for the images depicting wide and average sidewalks. For both male and female respondents, wide sidewalks recorded the highest average score, and narrow sidewalks the lowest (Figure 13).

Length of Tenure in Current Home (n=196, No Response: n=10)

The image showing a wide sidewalk received the highest average score for all categories of tenure except for those that have lived in their home from 11-20 years, where the average width sidewalk received the highest score. The image of the narrow sidewalk was the lowest average score across all categories (Figure 13).

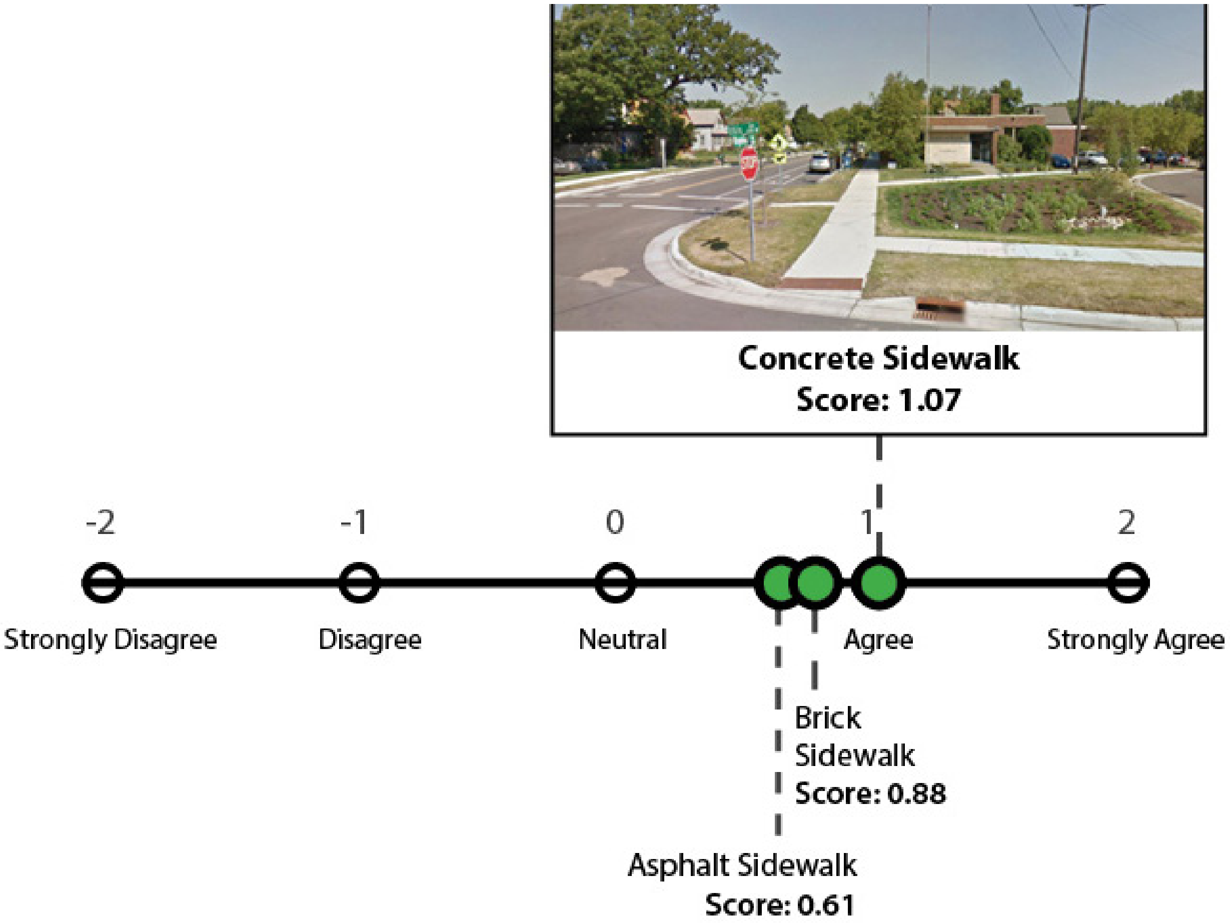


Figure 14: Mean scores for all survey respondents (n=206) for the images depicting sidewalk materials

3. SIDEWALK MATERIALS

Key finding: Respondents prefer concrete sidewalks

The aesthetic and tactile experience of a sidewalk can vary significantly based upon the material from which it is constructed. To measure if different construction materials influence where people would want to walk, the VPS included the following images:

- Image of a Brick Sidewalk
- Image of a “typical” concrete sidewalk
- Image of a bituminous or asphalt sidewalk

Results for all Survey Respondents (n=206)

With all results aggregated, the image showing a concrete sidewalks received the highest average score of 1.07, and the image showing a bituminous sidewalk received the lowest average score 0.61. The range of the average scores for all material types is small (Figure 14).

Neighborhood Survey vs. Online Survey (n=206)

Concrete sidewalks received the highest average score, and bituminous sidewalks received the lowest score for both neighborhood and online survey respondents (Figure 15).

			Brick Sidewalk	Concrete Sidewalk	Bituminous Sidewalk
All Survey Respondents	All Survey Respondents (n=206)	Mean	0.88	1.07	0.61
		SD	1.04	0.70	0.99
		Mode	1	1	1
Neighborhood Survey vs. Online Survey	Neighborhood Respondents (n=33)	Mean Score	0.73	1.00	0.64
	Online Respondents (n=173)		0.91	1.08	0.61
Gender	Female (n = 128)	Mean Score	0.87	1.16	0.74
	Male (n = 74)		0.88	0.96	0.42
Length of Tenure in Current Home (years)	<1 year (n = 14)	Mean Score	1.00	1.21	0.71
	1-5 years (n = 51)		1.04	1.10	0.59
	6-10 years (n = 39)		0.87	0.87	0.69
	11-20 years (n=48)		0.92	1.08	0.56
	>20 years (n=44)		0.52	1.11	0.64

Figure 15: Mean scores for sidewalk materials for all respondents and all demographic categories measured

Gender (n=203, No Response: n=3)

Both female and male-identifying respondents scored the image with concrete sidewalk highest on average, and the image of the bituminous (asphalt) sidewalk lowest. Female respondents scored the bituminous sidewalk slightly higher than male respondents on average, though there is little notable variation in the remaining average scores between female and male respondents (Figure 15).

Length of Tenure in Current Home (n=196, No Response: n=10)

Respondents across all categories scored concrete sidewalks the highest and bituminous sidewalks the lowest on average (though respondents in the 6-10 years category recorded an identical average score for concrete and brick sidewalks) (Figure 15).

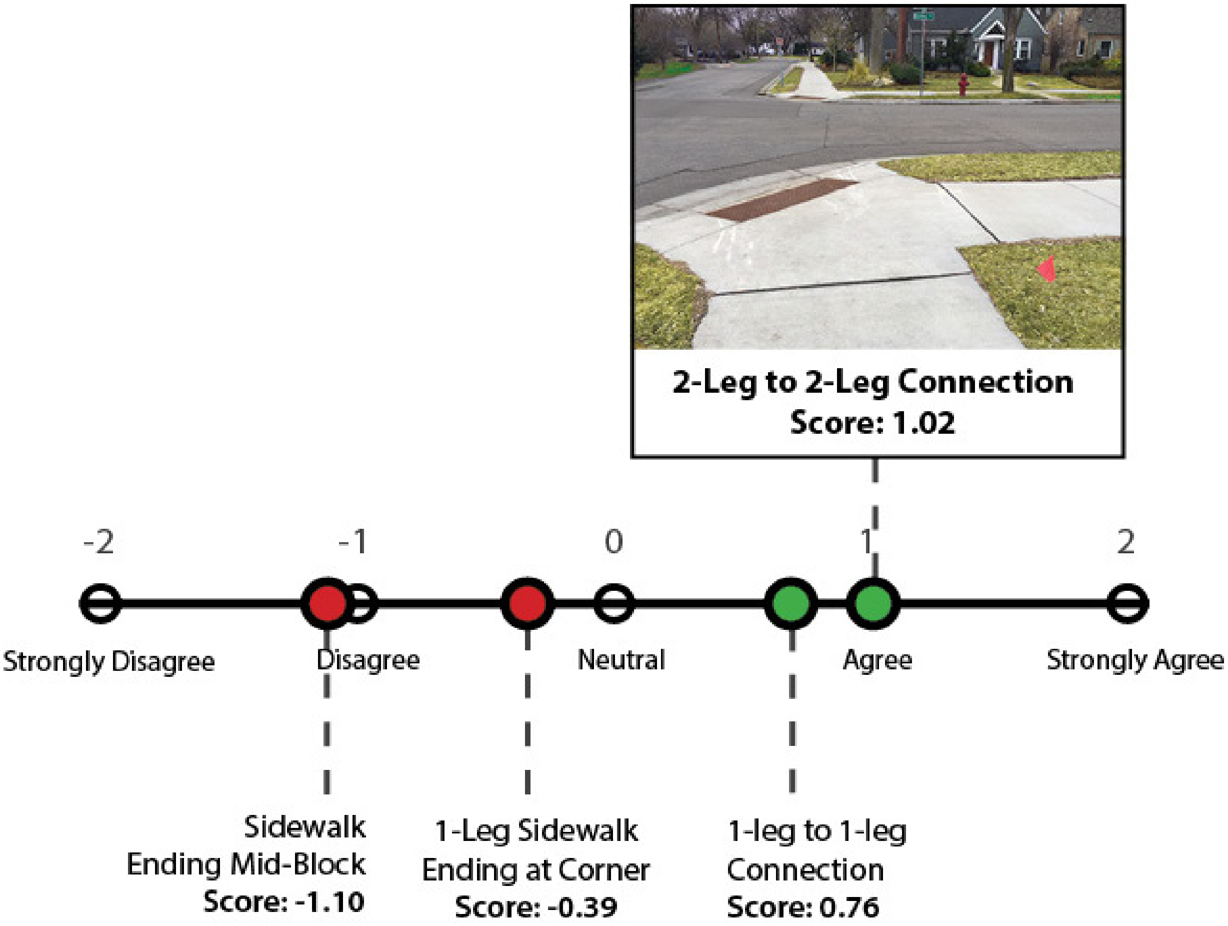


Figure 16: Mean Scores for all Survey Respondents (n=206) for the Images Depicting Sidewalk Connectivity

4. SIDEWALK CONNECTIVITY

Key finding: Respondents Prefer higher levels of connectivity

To measure if connectivity to other sidewalks influenced where respondents wanted to walk, the following images depicting varying sidewalk connectivity were presented:

- Image showing a 2-leg to 2-leg sidewalk connection
- Image showing a 1-leg to 1-leg sidewalk connection
- Image showing a 1-leg sidewalk ending at the corner
- Image showing a sidewalk ending mid-block

Results for all Survey Respondents (n=206)

The image depicting the most connectivity (a 2-leg sidewalk to another 2-leg sidewalk) received the highest mean score of 1.02. The image depicting the least amount of connectivity (a sidewalk ending mid-block) received the lowest average score of -1.1 (Figure 16).

Neighborhood Survey vs. Online Survey (n=206)

Average scores for the neighborhood and online survey respondents are largely similar across all images, with the image showing a 2-leg to 2-leg intersection scoring highest, and the sidewalk ending mid-block scoring lowest.

			2-leg to 2-leg	1-leg to 1-leg	1-leg dead end	Mid-block dead end
All Survey Respondents	All Survey Respondents (n=206)	Mean	1.02	0.76	-0.39	-1.10
		SD	0.79	0.90	1.01	0.78
		Mode	1	1	-1	-1
Neighborhood Survey vs. Online Survey	Neighborhood Respondents (n=33)	Mean Score	1.06	0.79	-0.52	-0.91
	Online Respondents (n=173)		1.01	0.76	-0.36	-1.13
Gender	Female (n = 128)	Mean Score	1.09	0.80	-0.27	-1.08
	Male (n = 74)		0.97	0.74	-0.55	-1.12
Length of Tenure in Current Home (years)	<1 year (n = 14)	Mean Score	0.86	0.79	-0.14	-0.79
	1-5 years (n = 51)		1.06	0.69	-0.41	-0.96
	6-10 years (n = 39)		1.10	0.72	-0.33	-1.23
	11-20 years (n=48)		0.96	0.92	-0.67	-1.31
	>20 years (n=44)		1.00	0.75	-0.23	-1.05

Figure 17: Mean scores for sidewalk connectivity for all respondents and all demographic categories measured

Notably, the images presented in this category recorded a larger distribution of average scores than most, with the sidewalks dead-ending mid-block or at the corner receiving lower scores than most other sidewalk features included in the VPS (Figure 17).

Gender (n=203, No Response: n=3)

There are no appreciable differences in the average scores between female and male respondents for sidewalk connectivity, with both scoring the image with a 2-leg to 2-leg connection highest, and the image with a mid-block dead-end lowest (Figure 17).

Length of Tenure in Current Home (n=196, No Response: n=10)

While there is minor variation in the average scores recorded for sidewalk connectivity, respondents throughout the full range of tenure recorded provided similar scoring for the images presented, with a 2-leg to 2-leg connection highest, and the image with a mid-block dead-end lowest (Figure 17).

Figure 18: Mean Scores for all Survey Respondents (n=206) for the Images Depicting Age of Boulevard Trees

5. Age of Boulevard Trees

Key finding: Respondents prefer mature trees

The age and density of trees has an appreciable impact on the visual aesthetics of a street and walking facility. Trees can also serve as a buffer from the roadway, and can provide shelter from the sun and some weather. To measure if varying ages and densities of trees adjacent to sidewalks influences where people want to walk, the following images were included in the VPS:

- Image showing mature trees adjacent to a sidewalk
- Image showing medium-aged trees adjacent to a sidewalk
- Image showing immature, dense trees adjacent to a sidewalk

Results for all Survey Respondents (n=206)

For all aggregated survey responses, the image depicting mature trees adjacent to a sidewalk scored highest with an average score of 1.28, and the image showing immature trees scored lowest, with an average score of 0.83. While mature trees yielded the highest scores, medium-aged trees received only a slightly lower average score of 1.22 (Figure 18).

			Mature Trees	Medium-aged Trees	Immature Trees
All Survey Respondents	All Survey Respondents (n=206)	Mean	1.28	1.22	0.83
		SD	0.74	0.73	0.83
		Mode	1	1	1
Neighborhood Survey vs. Online Survey	Neighborhood Respondents (n=33)	Mean Score	1	1.06	0.91
	Online Respondents (n=173)		1.33	1.25	0.82
Gender	Female (n = 128)	Mean Score	1.36	1.32	0.86
	Male (n = 74)		1.20	1.11	0.82
Length of Tenure in Current Home (years)	<1 year (n = 14)	Mean Score	0.93	1.07	0.71
	1-5 years (n = 51)		1.31	1.31	0.86
	6-10 years (n = 39)		1.31	1.41	1.05
	11-20 years (n=48)		1.31	1.08	0.75
	>20 years (n=44)		1.30	1.16	0.73

Figure 19: Mean scores for age of boulevard trees for all respondents and all demographic categories measured

Neighborhood Survey vs. Online Survey (n=206)

Outside of a slightly higher average score for mature and medium-aged trees from online survey respondents, there is little identifiable variation in the average scores for tree age/ density between the neighborhood and online survey results (Figure 19).

Gender (n=203, No Response: n=3)

Average scores for the images relating to tree age / density are largely similar across female and male – identifying respondents. Female respondents scored mature and medium-aged trees slightly higher than male respondents, but the difference between calculated average scores is small and not particularly explanatory (Figure 19).

Length of Tenure in Current Home (n=196, No Response: n=10)

The highest average scores vary between the image depicting mature trees and the image depicting medium-aged trees throughout the full range of tenure. For all categories of residency, the image showing immature trees scored lowest. Interestingly, respondents living in their home for less than one year scored the image of mature trees lower than all other tenure categories, though the difference between calculated average scores remains relatively small (Figure 19).

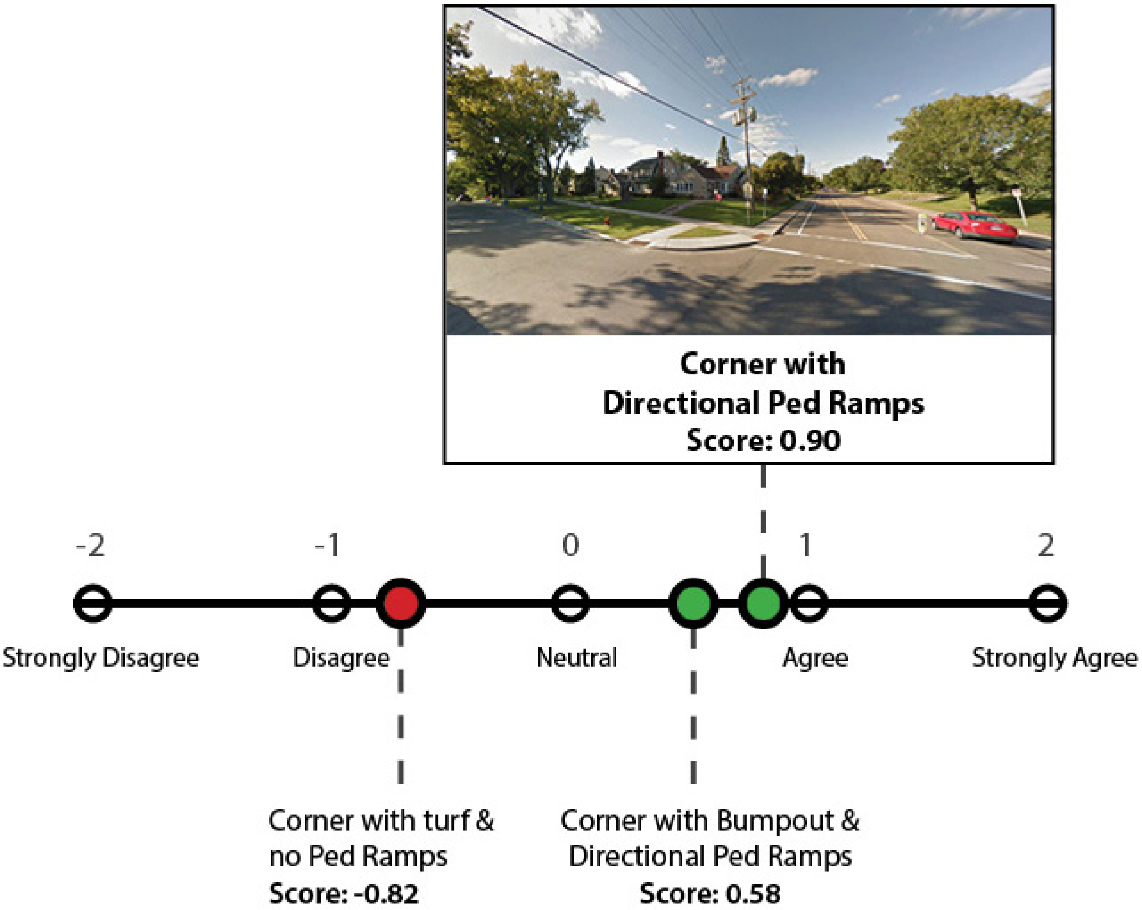


Figure 20: Mean Scores for all Survey Respondents (n=206) for the Images Depicting Corner Design

6. CORNER DESIGN

Key finding: Respondents prefer corners with directional pedestrian ramps

The design of a walking facility at a corner can vary significantly, and a variety of infrastructure tools can be implemented to influence how a person walking crosses the street. To determine if some of these infrastructure tools may influence where a person would want to walk, the following images were included in the VPS:

- Image showing a quadrant (one corner at an intersection) with a bumpout and directional pedestrian ramps
- Image showing a corner with directional pedestrian ramps
- Image showing a corner with turf and no pedestrian ramps

Results for all Survey Respondents (n=206)

The image showing a corner with directional pedestrian ramps received the highest average score, and the image showing a corner with turf and no pedestrian ramps scored lowest for all aggregated survey responses (Figure 20).

			Corner with bumpout and directional ped ramps	Corner with directional ped ramps	Corner with turf and no ped ramps
All Survey Respondents	All Survey Respondents (n=206)	Mean	0.58	0.90	-0.82
		SD	1.12	0.66	0.86
		Mode	1	1	-1
Neighborhood Survey vs. Online Survey	Neighborhood Respondents (n=33)	Mean Score	0.64	0.94	-0.58
	Online Respondents (n=173)		0.57	0.89	-0.87
Gender	Female (n = 128)	Mean Score	0.49	0.98	-0.85
	Male (n = 74)		0.74	0.80	-0.76
Length of Tenure in Current Home (years)	<1 year (n = 14)	Mean Score	0.64	0.86	-0.57
	1-5 years (n = 51)		0.59	0.86	-0.92
	6-10 years (n = 39)		0.79	0.97	-1.03
	11-20 years (n=48)		0.42	0.83	-0.71
	>20 years (n=44)		0.50	0.91	-0.70

Figure 21: Mean scores for corner design for all respondents and all demographic categories measured

Neighborhood Survey vs. Online Survey (n=206)

The neighborhood and online survey responses varied little between the images shown in this category. While respondents along the routes of planned sidewalks scored the image of a corner with no ped ramps higher than the average score from online respondents, the difference between calculated averages is small (Figure 21).

Gender (n=203, No Response: n=3)

The results between female and male-identifying respondents are largely similar to the overall aggregated results, though female respondents scored the image of a corner with a bumpout and pedestrian ramps moderately lower than male respondents (Figure 21).

Length of Tenure in Current Home (n=196, No Response: n=10)

Across all categories of tenure, there are no particularly notable variations in calculated average scores for the images shown relating to corner design, and the results are largely similar to the aggregated overall results (Figure 21).

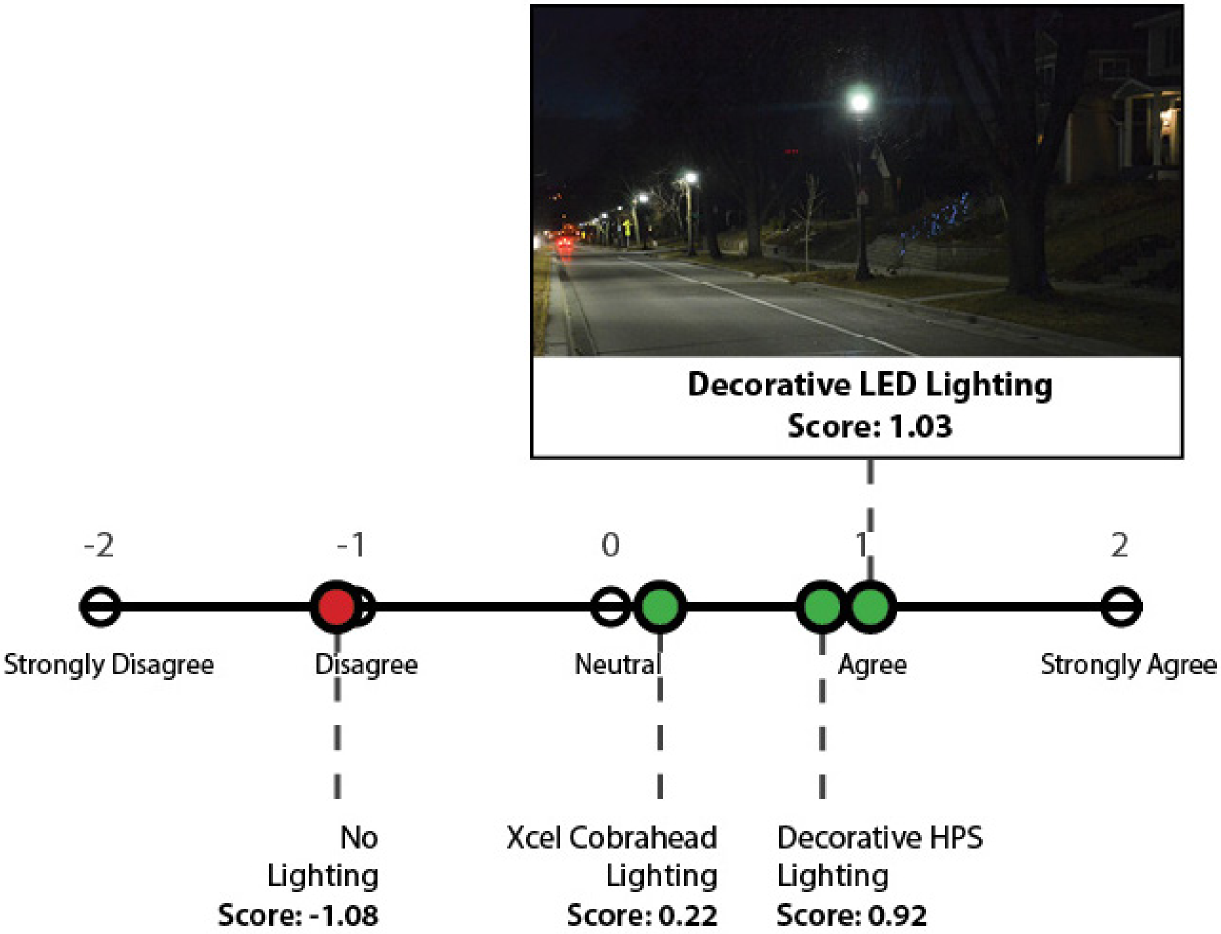


Figure 22: Mean Scores for all Survey Respondents (n=206) for the Images Depicting Lighting

7. LIGHTING

Key finding: Respondents prefer decorative LED lighting

Street lighting comes in many varieties, and can impact the aesthetic characteristics of a street. Street lighting can also impact interpretations of safety, including statistical safety, perceived safety, and public safety. To better understand whether street lighting influences where people would want to walk, the following images were included in the VPS:

- An image showing decorative "lantern style" LED street lighting at night
- An image showing decorative "lantern style" HPS street lighting at night
- An image showing "Xcel Cobrahead street lighting at night
- An image showing no street lighting at night

Results for all Survey Respondents (n=206)

While calculated average scores were similar between decorative LED and HPS lighting, the decorative LED lighting received the highest average score of 1.03. The image showing no street lighting received the lowest average score of -1.08. The lighting category also produced one of the larger. Notably, the images presented in this category recorded a larger range of average scores than most other categories (Figure 22).

			"Decorative" LED Lantern Lighting	"Decorative" HPS Lantern Lighting	Xcel "Cobrahead" Lighting	No street lighting
All Survey Respondents	All Survey Respondents (n=206)	Mean	1.03	0.92	0.22	-1.08
		SD	0.96	0.87	0.90	0.83
		Mode	1	1	1	-1
Neighborhood Survey vs. Online Survey	Neighborhood Respondents (n=33)	Mean Score	0.91	0.61	0.24	-1.03
	Online Respondents (n=173)		1.06	0.98	0.21	-1.09
Gender	Female (n = 128)	Mean Score	1.11	0.98	0.22	-1.16
	Male (n = 74)		0.93	0.82	0.24	-0.93
Length of Tenure in Current Home (years)	<1 year (n = 14)	Mean Score	0.93	0.5	0	-1
	1-5 years (n = 51)		1.27	0.94	0.12	-1.12
	6-10 years (n = 39)		1.18	1.08	0.44	-1.15
	11-20 years (n=48)		1.08	1.08	0.35	-1.00
	>20 years (n=44)		0.73	0.70	0.00	-0.95

Figure 23: Mean scores for lighting for all respondents and all demographic categories measured

Neighborhood Survey vs. Online Survey (n=206)

The neighborhood and online survey responses received were largely similar to each other, with decorative LED lighting scoring highest on average, and the image with no street lighting scoring lowest by a considerable margin (Figure 23).

Gender (n=203, No Response: n=3)

Outside of minor variations in the calculated average scores between female and male-identifying respondents, both categories scored the images relating to lighting quite similarly (Figure 23).

Length of Tenure in Current Home (n=196, No Response: n=10)

The average scores were somewhat similar across all categories of length of home tenure, though there are a few interesting variations in the ratings. Respondents who have lived in their home for more than twenty years yielded a slightly lower score for decorative LED lights than all other residency categories, though LED lighting still represented the highest average score for all images for these respondents. Residents living in their home for less than one year scored decorative HPS lights lower on average than all other tenure categories (Figure 23).

Figure 24: Mean Scores for all Survey Respondents (n=206) for the Images Depicting Overall Quality

8. OVERALL QUALITY

Key finding: Respondents prefer the "high-quality" image with wide sidewalks, wide boulevards, mature trees, and decorative lighting

To measure if the confluence of different streetscape variables influences where people would want to walk, the following representative images were included in the VPS:

- An image of "high quality" street features, including a wide sidewalk, wide boulevard, and mature trees
- An image of "average quality" street features, including and average-width sidewalk, average width boulevard, and medium-aged trees
- An image of "low quality" street features, including no sidewalk or associated boulevard space, and limited street trees

Results for all Survey Respondents (n=206)

The "high quality" image received the highest score across all aggregated responses, with an average score of 1.42. This represents the high-

			High Quality Example	Medium Quality Example	Low Quality Example
All Survey Respondents	All Survey Respondents (n=206)	Mean	1.42	1.28	-0.69
		SD	0.71	0.66	0.88
		Mode	2	1	-1
Neighborhood Survey vs. Online Survey	Neighborhood Respondents (n=33)	Mean Score	1.21	0.97	-0.33
	Online Respondents (n=173)		1.46	1.34	-0.76
Gender	Female (n = 128)	Mean Score	1.49	1.34	-0.67
	Male (n = 74)		1.36	1.24	-0.74
Length of Tenure in Current Home (years)	<1 year (n = 14)	Mean Score	1.29	1.07	-0.14
	1-5 years (n = 51)		1.55	1.31	-0.75
	6-10 years (n = 39)		1.54	1.38	-0.90
	11-20 years (n=48)		1.40	1.27	-0.69
	>20 years (n=44)		1.23	1.20	-0.57

Figure 25: Mean scores for overall quality for all respondents and all demographic categories measured

est average score across all images presented in section one of the VPS. The "low quality" image received the lowest average score of -0.69 (Figure 24). It should be noted that determining the quality of varying types of street infrastructure is inherently subjective.

Neighborhood Survey vs. Online Survey (n=206)

Average scores from neighborhood and online survey respondents are largely similar for the images presented to assess overall quality. Neighborhood respondents along the proposed sidewalk routes scored the "medium-quality" image slightly lower than online respondents, and the "low-quality" image slightly higher (Figure 25).

Gender (n=203, No Response: n=3)

Average scores of female and male-identifying respondents were largely similar and consistent across all images shown in this question (Figure 25).

Length of Tenure in Current Home (n=196, No Response: n=10)

All ranges of tenure length recorded the highest average scores for the "high quality" image, and the lowest average scores for the "low quality" image. Interestingly, residents of less than one year scored the "low quality" image higher than all other categories of tenure, and the "medium quality" image lower than all other categories (Figure 25).

PART 2 RESULTS: BUILD YOUR STREET

Part 2 of the survey was an interactive activity. We presented a picture of a suburban residential street and asked respondents to select elements they would like to see on their street. Respondents had the option of not selecting a response. When the respondent selected an element, like a sidewalk or a rain garden, the element would appear in the picture. Respondents could only select one feature from each category at a time. For example, under boulevard preference, a respondent could not select both rain gardens and trees at the same time. Respondents had the ability to try out each feature before submitting their final design. Figures 26-30 show submitted respondent preferences for boulevard features, lighting, and sidewalks.

Sidewalks on both sides, lantern lights, and trees were the most popular choices overall. There was a higher response rate for the sidewalk preference question than the boulevard and lighting questions.

Boulevard preference

Option	Responses
No response	30
Just grass	7
Lots of trees!	106
Rain gardens	63
Grand Total	206

Figure 26: Boulevard preferences

Demographic analysis

There was no notable difference in responses to this question by gender. Of those who responded to this question, a majority (about 60%) of males and females chose "lots of trees," with about 35% choosing "rain gardens" and less than 5% choosing "just grass."

"Lots of trees" was the most popular response across all housing tenure categories. "Rain gardens" were more popular among those who have lived in their homes for 1-10 years than those who have lived in their homes longer.

Lighting preference

Option	Responses
No response	20
Basic lights that just keep the street lit	48
Decorative lantern lights	118
No / minimal street lights	20
Grand Total	206

Figure 27: Lighting preferences

Demographic analysis

Responses to this question differed by gender. 70% of females selected "decorative lantern lights" compared to 53% of males. 23% of females selected "basic lights that just keep the street lit" compared to 30% of males. 7% of females selected "No / minimal street lights" compared to 17% of males.

"Decorative lantern lights" was the most popular choice for every length of tenure category, followed by "basic lights that just keep the street lit." The gap between the popularity of decorative lights and basic lights generally decreased as housing tenure increased: 71% of those who have lived in their homes for 1-5 years preferred decorative lights and 19% preferred basic lights, while 47% of those who have lived in their homes for over 20 years preferred decorative lights and 37% preferred basic lights (See Figure 27).

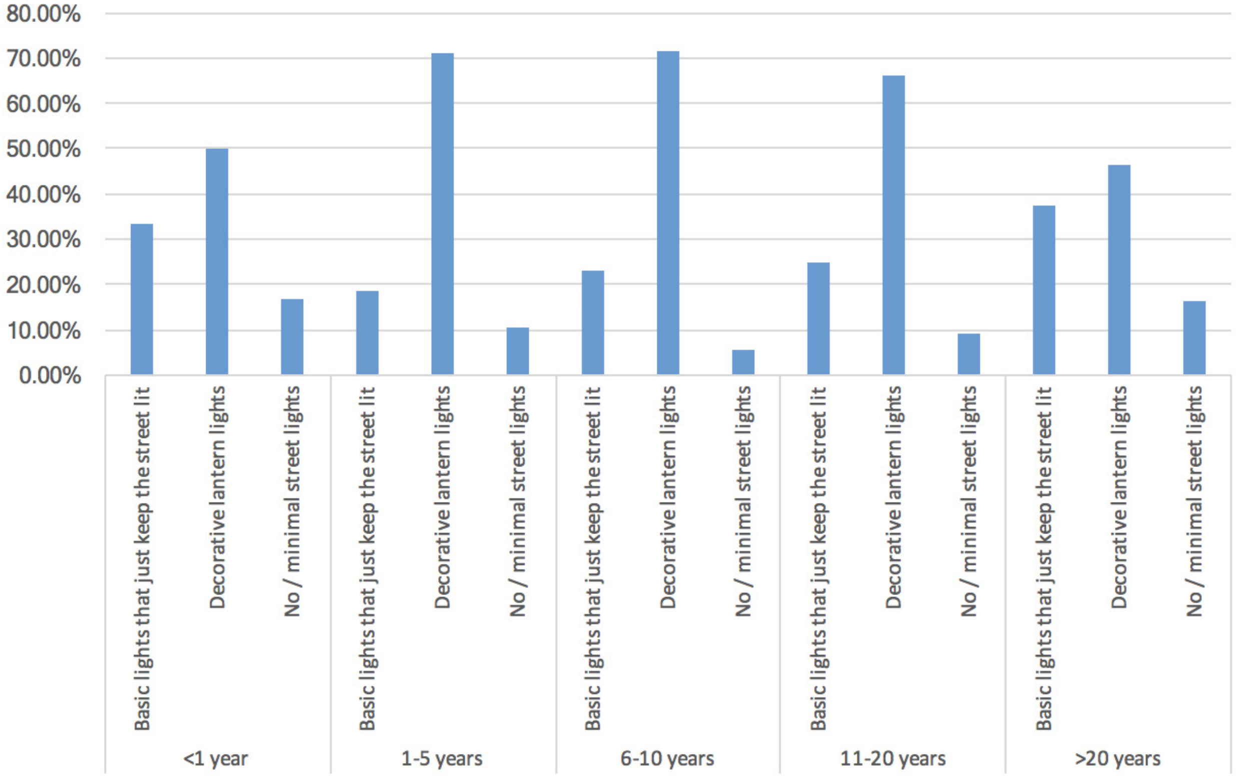


Figure 28: What sort of lighting would you like to see?

Sidewalk preference

Option	Responses
No response	4
Decorative sidewalks	35
No sidewalks on either side	8
Sidewalk on one side, regular concrete	43
Sidewalks on both sides	116
Grand Total	206

Figure 29: Sidewalk preferences

Demographic analysis

Responses to this question differed by gender. While "sidewalks on both sides" was the most popular choice for both males and females, a higher percentage of females (62%) of females selected this option than males (50%). 20% of females selected "decorative sidewalks" compared to 12% of males. 14% of females selected "sidewalk on one side, regular concrete" compared to 34% of males. 3% of females chose "no sidewalks on either side" compared to 4% of males. 82% of females chose designs with sidewalks on both sides (both decorative and concrete), compared to 62% of males.

"Sidewalks on both sides" was the most popular choice for every length of tenure category, from those who have lived in their home less than one year to those who have lived in their home for over 20 years. Of the 112 respondents who have lived in their home for ten years or less, all but one chose a sidewalk on at least one side of the street. 83 of the 90 respondents who have lived in their home for 11 years of more chose a sidewalk on at least one side of the street.

Answers to this question differed significantly based on whether the respondent took the survey online or in-person/in response to a flyer at their home. Of the 173 people who took the survey online, 60% preferred sidewalks on both

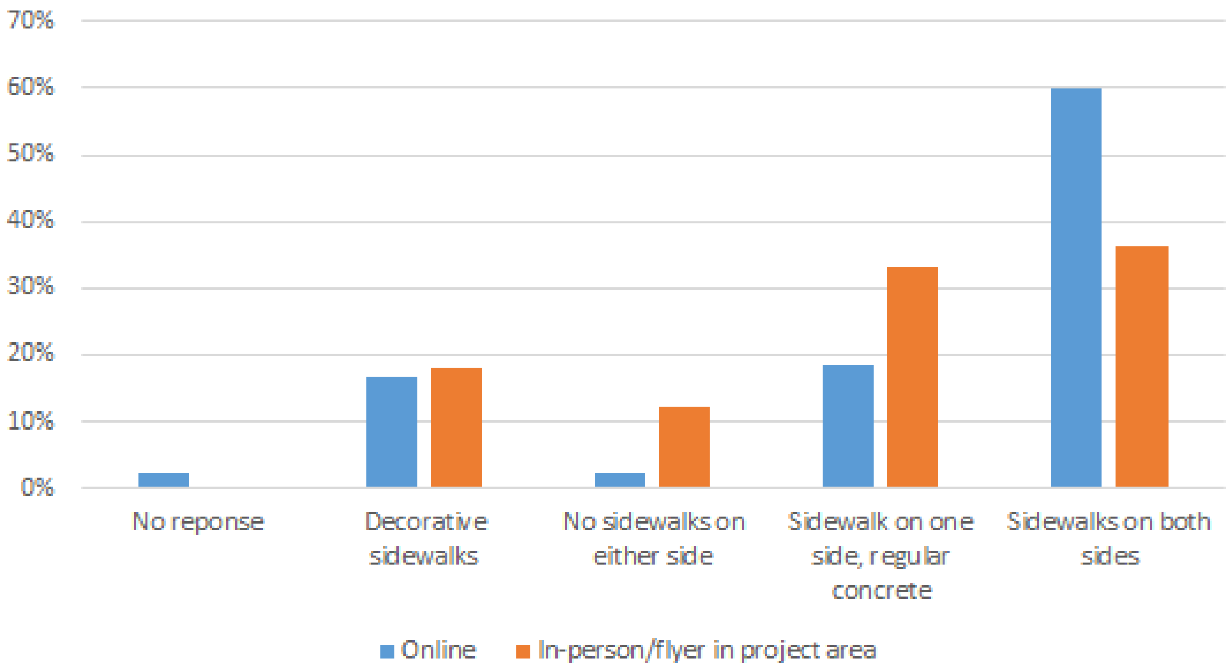


Figure 30: Sidewalk preferences by survey type.

sides, while only 36% of the 33 people who took the survey in-person or in response to a flyer preferred sidewalks on both sides. This is important because most of the in-person respondents lived along Cedar Lake Road, a route with one sidewalk currently, and a second sidewalk under consideration. Combining those who chose sidewalks on both sides with the number who chose decorative sidewalks (also depicted on both sides), a majority in this area supported sidewalks on both sides — but a relatively slim majority compared to the online group.

Overall design combination preferences

There were 80 possible combinations of options, leading us to expect about 2.5 responses per combination if the preferences were random. Instead, we found that respondents converged around a few combinations. 117 people (57%) chose one of five street designs. All top five designs featured sidewalks on both sides, lighting, and vegetation beyond grass. Figure 31 details the top five street designs.

Boulevard	**Lights**	**Sidewalks**	**Responses**
Lots of trees!	Decorative lantern lights	Sidewalks on both sides	42
Raingardens	Decorative lantern lights	Sidewalks on both sides	29
Lots of trees!	Basic lights that just keep the street lit	Sidewalks on both sides	20
Lots of trees!	Decorative lantern lights	Decorative sidewalks	14
Raingardens	Decorative lantern lights	Decorative sidewalks	12
Total top five			117
Grand Total			206

Figure 31: Top five most popular street design combinations

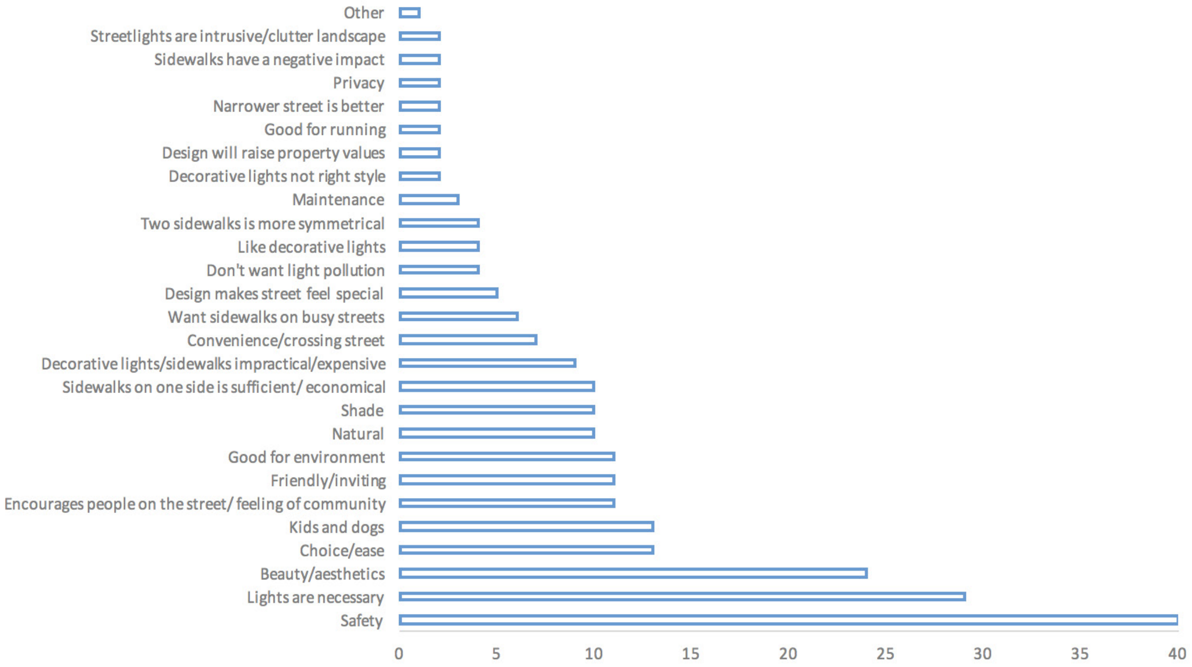
Comments from respondents on preferences

In addition to the multiple choice questions, we asked respondents to answer the question "Tell us more about why you built your street like this." About half of survey respondents (103 people) provided a response. We read and coded the responses using 27 tags. Responses could be coded with more than one tag.

- Concern for safety was the most commonly noted reason behind the chosen street design
- Lighting was important, both for safety reasons and concern with beauty and aesthetics
- Choice and ease were important factors, including ability to choose a side of the street to walk on while walking a dog, or walking with children.
- Some commented that sidewalks encourage people to be on the street and create a sense of community.
- Concern for the environment was important, including a desire for shade and appreciation for a "natural" feel.
- Some expressed the sentiment that a sidewalk on one side is sufficient and cost-effective. 10 respondents made these comments.
- Other than those advocating for one-side sidewalks, there were no comments that specifically identified sidewalks as wasteful. This contrasts with feedback from public meetings.

69 of the respondents to this question identified as female, 31 identified as male, and 3 did not identify, roughly the same proportion as respondents to the survey as a whole. Safety, lighting and aesthetics were the top concerns for males and females. A higher percentage of female respondents than male respondents noted concern for kids and dogs and a desire for a friendly and inviting streetscape. A higher percentage of male respondents than female re-

Figure 32: Reasons behind respondents' street design choices: number of responses by each category of qualitative feedback



spondents said that sidewalks on one-side only should be sufficient.

The percentage of people who cited safety as part of the reasoning behind how they designed their street declined steadily from those who have lived in their home 1-5 years (53%) to those who have lived in their home longer than 20 years (22%). A higher percentage of those who have lived in their home 1-10 years (39%) noted a desire for lighting than those who lived in their home longer than ten years (22%). A higher percentage of those who have lived in their home over 20 years (22%) talked about shade than those who have lived in their home less than 20 years (6%).

To help inform upcoming lighting policy decisions in St. Louis Park, we have included in Appendix B a list of responses related to lighting categorized by lighting choices.

Example Comments

Examples of representative comments along with respondent street designs are below.

"Sidewalks build safe communities!"

Boulevard	Lighting	Sidewalks
Lots of trees!	Basic lights that just keep the street lit	Sidewalks on both sides

----

"It's visually appealing and inviting while being safe and well lit. It encourages people to be out and about in their neighborhood."

Boulevard	Lighting	Sidewalks
Rain gardens	Decorative lantern lights	Decorative sidewalks

"It's nice to be able to walk somewhere and see where you're going even when it's dark. Sidewalks on both sides make it easier to choose a safe path depending on your destination. Rain gardens are nice to see, interesting to look at textures/colors."

Boulevard	Lighting	Sidewalks
Rain gardens	Decorative lantern lights	Sidewalks on both sides

----

"I like walking with our young family. Sidewalks on both sides makes it nice when walking around the city. Rain gardens on the boulevard don't require mowing which, as a homeowner, I like the idea of. The decorative street lights class up the neighborhood and provide a sense of safety in the neighborhood as far as walking at night alone, as a woman, and also lighting is said to help keep crime down in the neighborhood."

Boulevard	Lighting	Sidewalks
Rain gardens	Decorative lantern lights	Decorative sidewalks

"I walk my dog outside, and as long as there's plenty of light and a sidewalk on one side we're happy."

Boulevard	Lighting	Sidewalks
Rain gardens	Decorative lantern lights	Sidewalks on one side, regular concrete

----

"A quiet neighborhood street does not require sidewalks, I prefer lots of nature and less concrete, asphalt"

Boulevard	Lighting	Sidewalks
Lots of trees!	Decorative lantern lights	No sidewalks on either side

----

"I like trees for the shade and character they give a neighborhood. The rain gardens were lovely, but trees are a must. I do a lot of walking and do not like walking in the dark; anything to increase lighting for walkers at night is appreciated (even if I don't think these particular lampposts fit with the existing houses); I'm a huge fan of sidewalks so of course want them on both sides of the street! Decorative sidewalks are pretty but harder for kids to ride their little bikes on; sidewalks invite people to engage with the world beyond their home and help keep us safe from cars. I love them."

Boulevard	Lighting	Sidewalks
Lots of trees!	Decorative lantern lights	Sidewalks on both sides

----

"Most green space and functional without being extravagant."

Boulevard	Lighting	Sidewalks
Lots of trees!	Basic lights that just keep the street lit	Sidewalks on one side, regular concrete

Verbal comments from in-person surveys mirrored written responses on the survey. Many people did not notice the subtler differences between pictures in part one of the survey, generally scrolling quickly through those that had sidewalks, and pausing only to consider pictures with no sidewalks, discontinuous sidewalks, narrow sidewalks, and low levels of street lighting. Many people voiced support for street lighting, with a few noting that lighting can be too bright and that light poles clutter the visual landscape. A few were concerned with possible tree removal associated with sidewalk installation. Several people said that decorative sidewalks look nice but are harder to use and maintain.

CONCLUSIONS

In both parts of the survey, we found that respondents preferred sidewalks and lighting. In fact, the most popular street design included trees, decorative lights, and concrete sidewalks on both sides of the street. There was also strong support for connected, continuous sidewalks. Although there may have been some self-selection bias in the responses, these results suggest that negative feedback about sidewalk projects from public meetings may not be representative of the community at large.

While all demographic groups seem to have roughly the same preferences in terms of Complete Streets amenities, the strength of preferences varied across demographic groups. Women more strongly preferred high-quality, decorative lighting and sidewalks on both sides of the street. People who have lived in their homes for shorter periods of time were more likely to voice concerns about safety and express preferences for lighting, shade, and rain gardens. We also saw variation between those who completed the survey in person and online. This may be due to self-selection bias — for online users, those more passionate about sidewalks saw and engaged with the survey. Or it may be due to the fact that visual surveys capture preferences, but don't account for trade-offs related to cost or maintenance concerns. These may be factors influencing the less-enthusiastic responses from the door-to-door surveys.

We recommend that St. Louis Park conduct additional surveys to gather information beyond public meetings to provide a more complete perspective of the community. A visual survey allows residents to share more detail than simply voicing support for or against a specific change. We found residents to be very receptive to a survey in this format. We also found it helpful to offer respondents the opportunity to share their opinions on many types of streetscapes in part one, and then ask them to construct their street in part two. Part one gave us a general sense of respondent preferences, and respondents were able to rate many streetscapes equally. In constructing their own street, respondents were forced to choose between different options, and in doing so revealed their priorities, which can inform city decision-making.

For surveys conducted after infrastructure projects are complete, a visual survey may not be the best choice to gather nearby resident opinions. For those who live on the street and have witnessed the transformation, visual surveys may be less useful in gathering information about opinions about opinions on a change. Visual surveys post-project could be more useful for those who are not as familiar with the specific street.

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APPENDIX A: FULL SURVEY AND RESULTS (PART 1)

Welcome

This survey is set up in three parts. Part 1 (below) asks you, in general, what streets you would most like to walk in. In Part 2, you will be able to build your own preferred street. Part 3 is some quick information about you.

1. Sidewalk Location

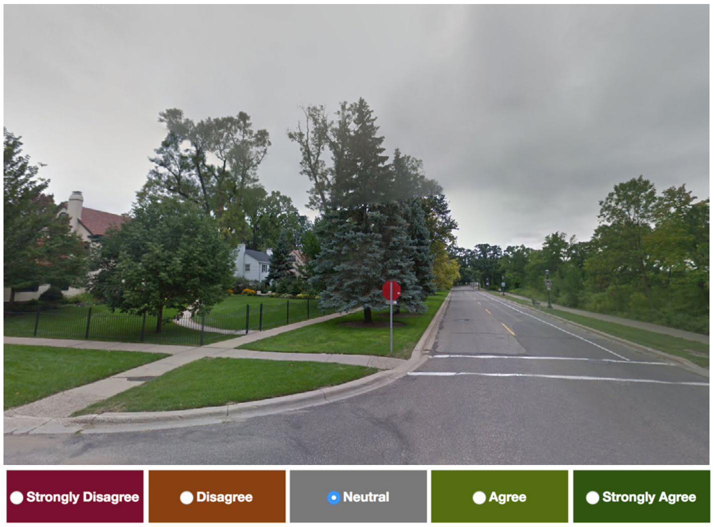
Considering where the sidewalk is located relative to the street, answer your agreement for the following for each image:
"This is a place I would like to walk."

1. SIDEWALK LOCATION

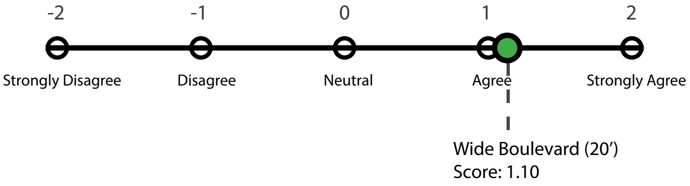
Considering where the sidewalk is located relative to the street,
answer your agreement for the following for each image:
"This is a place I would like to walk."

SIDEWALK WITH WIDE BOULEVARD (20')

			Sidewalk with Wide Boulevard (20')
All Survey Respondents	All Survey Respondents (n=206)	Mean	1.10
		SD	0.82
		Mode	1
Neighborhood Survey vs. Online Survey	Neighborhood Respondents (n=33)	Mean Score	1.00
	Online Respondents (n=173)		1.12
Gender	Female (n = 128)	Mean Score	1.13
	Male (n = 74)		1.08
Length of Tenure in Current Home (years)	<1 year (n = 14)	Mean Score	1.14
	1-5 years (n = 51)		1.25
	6-10 years (n = 39)		1.44
	11-20 years (n=48)		0.75
	>20 years (n=44)		0.95



Average (mean) score for all survey respondents (n=206)



1. SIDEWALK LOCATION

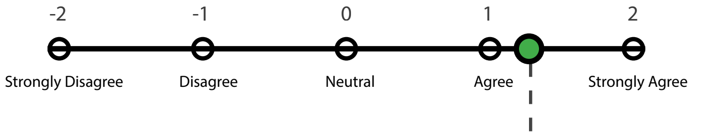
Considering where the sidewalk is located relative to the street,
answer your agreement for the following for each image:
"This is a place I would like to walk."

SIDEWALK WITH AVERAGE WIDTH BOULEVARD (6')

			Sidewalk with Average Boulevard (6')
All Survey Respondents	All Survey Respondents (n=206)	Mean	1.26
		SD	0.97
		Mode	1
Neighborhood Survey vs. Online Survey	Neighborhood Respondents (n=33)	Mean Score	1.03
	Online Respondents (n=173)		1.30
Gender	Female (n = 128)	Mean Score	1.28
	Male (n = 74)		1.26
Length of Tenure in Current Home (years)	<1 year (n = 14)	Mean Score	1
	1-5 years (n = 51)		1.29
	6-10 years (n = 39)		1.26
	11-20 years (n=48)		1.35
	>20 years (n=44)		1.16

○ Strongly Disagree ○ Disagree ◉ Neutral ○ Agree ○ Strongly Agree

Average (mean) score for all survey respondents (n=206)



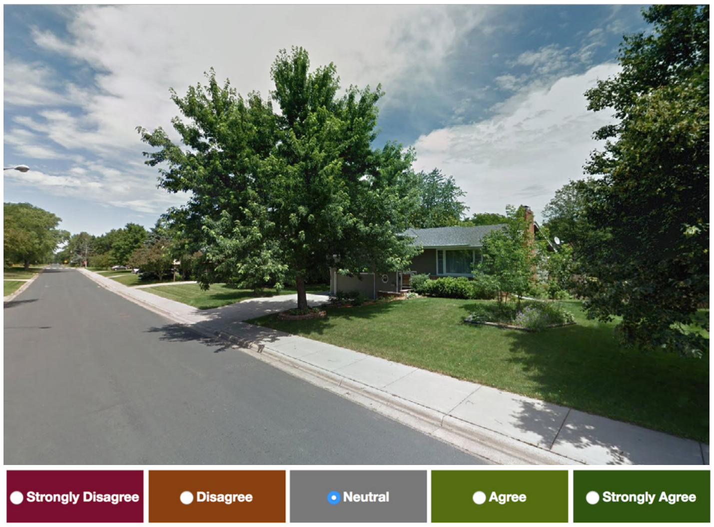
Average-Width Boulevard (6')
Score: 1.26

1. SIDEWALK LOCATION

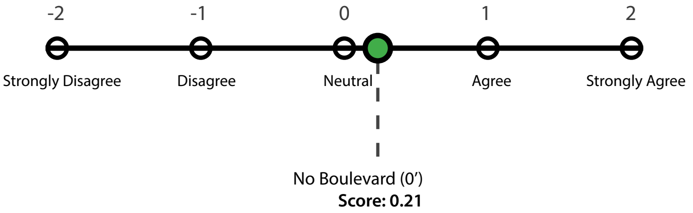
Considering where the sidewalk is located relative to the street,
answer your agreement for the following for each image:
"This is a place I would like to walk."

SIDEWALK WITH NO BOULEVARD (0')

			Sidewalk Back of Curb (0')
All Survey Respondents	All Survey Respondents (n=206)	Mean	0.21
		SD	1.07
		Mode	1
Neighborhood Survey vs. Online Survey	Neighborhood Respondents (n=33)	Mean Score	0.85
	Online Respondents (n=173)		0.09
Gender	Female (n = 128)	Mean Score	0.22
	Male (n = 74)		0.22
Length of Tenure in Current Home (years)	<1 year (n = 14)	Mean Score	0.36
	1-5 years (n = 51)		0.16
	6-10 years (n = 39)		-0.23
	11-20 years (n=48)		0.19
	>20 years (n=44)		0.59



Average (mean) score for all survey respondents (n=206)

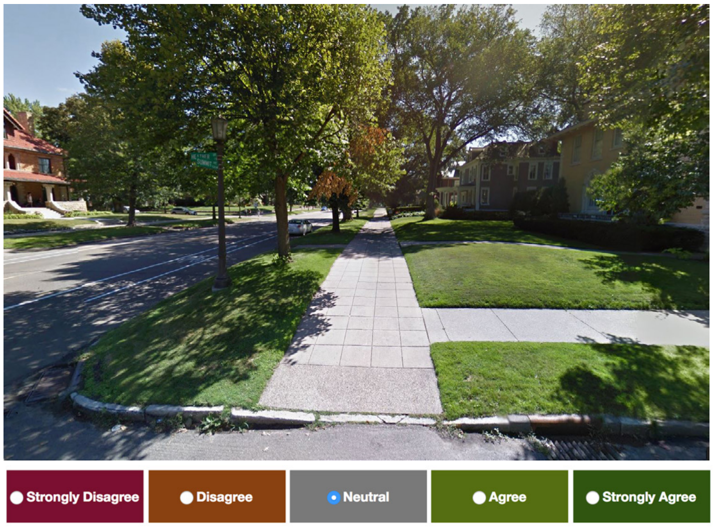


2. SIDEWALK WIDTH

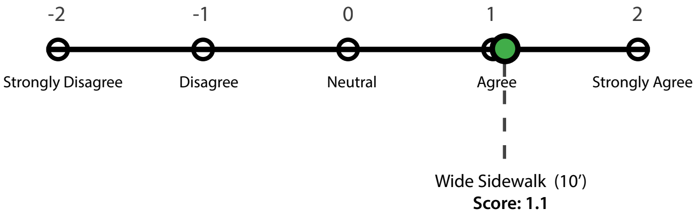
Considering the width of the sidewalk shown, answer your
agreement for the following for each image:
“This is a place I would like to walk.”

WIDE SIDEWALK (10’)

			Wide Sidewalk (10’)
All Survey Respondents	All Survey Respondents (n=206)	Mean	1.10
		SD	1.02
		Mode	2
Neighborhood Survey vs. Online Survey	Neighborhood Respondents (n=33)	Mean Score	0.97
	Online Respondents (n=173)		1.12
Gender	Female (n = 128)	Mean Score	1.21
	Male (n = 74)		0.96
Length of Tenure in Current Home (years)	<1 year (n = 14)	Mean Score	1.07
	1-5 years (n = 51)		1.29
	6-10 years (n = 39)		1.15
	11-20 years (n=48)		0.92
	>20 years (n=44)		1.09



Average (mean) score for all survey respondents (n=206)

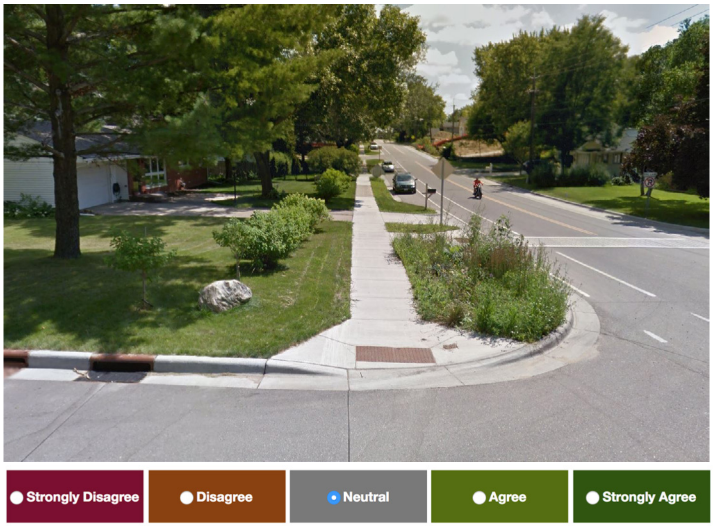


2. SIDEWALK WIDTH

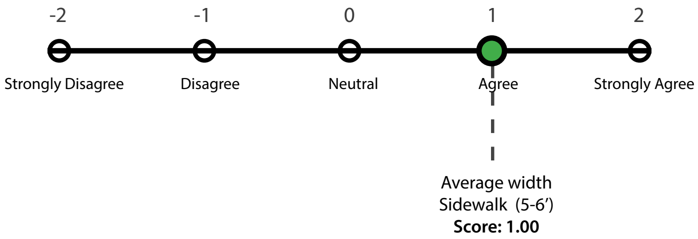
Considering the width of the sidewalk shown, answer your agreement for the following for each image:
"This is a place I would like to walk."

SIDEWALK OF AVERAGE WIDTH (5-6')

			Average-Sized Sidewalk (5-6')
All Survey Respondents	All Survey Respondents (n=206)	Mean	1.00
		SD	0.73
		Mode	1
Neighborhood Survey vs. Online Survey	Neighborhood Respondents (n=33)	Mean Score	0.97
	Online Respondents (n=173)		1.00
Gender	Female (n = 128)	Mean Score	1.11
	Male (n = 74)		0.88
Length of Tenure in Current Home (years)	<1 year (n = 14)	Mean Score	0.93
	1-5 years (n = 51)		0.92
	6-10 years (n = 39)		1.08
	11-20 years (n=48)		1.02
	>20 years (n=44)		0.98



Average (mean) score for all survey respondents (n=206)

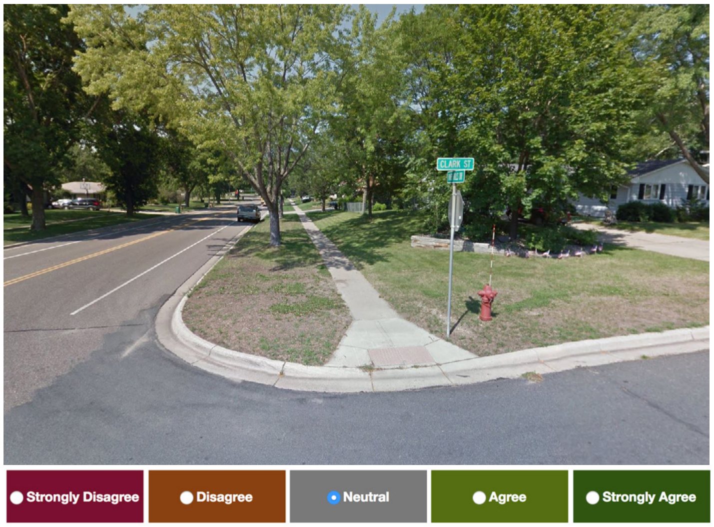


2. SIDEWALK WIDTH

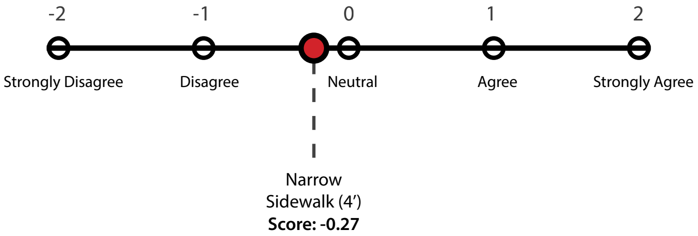
Considering where the sidewalk is located relative to the street,
answer your agreement for the following for each image:
"This is a place I would like to walk."

NARROW SIDEWALK (4')

			Narrow Sidewalk (4')
All Survey Respondents	All Survey Respondents (n=206)	Mean	-0.27
		SD	0.98
		Mode	-1
Neighborhood Survey vs. Online Survey	Neighborhood Respondents (n=33)	Mean Score	-0.09
	Online Respondents (n=173)		-0.30
Gender	Female (n = 128)	Mean Score	-0.24
	Male (n = 74)		-0.30
Length of Tenure in Current Home (years)	<1 year (n = 14)	Mean Score	-0.29
	1-5 years (n = 51)		-0.39
	6-10 years (n = 39)		-0.18
	11-20 years (n=48)		-0.15
	>20 years (n=44)		-0.30



Average (mean) score for all survey respondents (n=206)

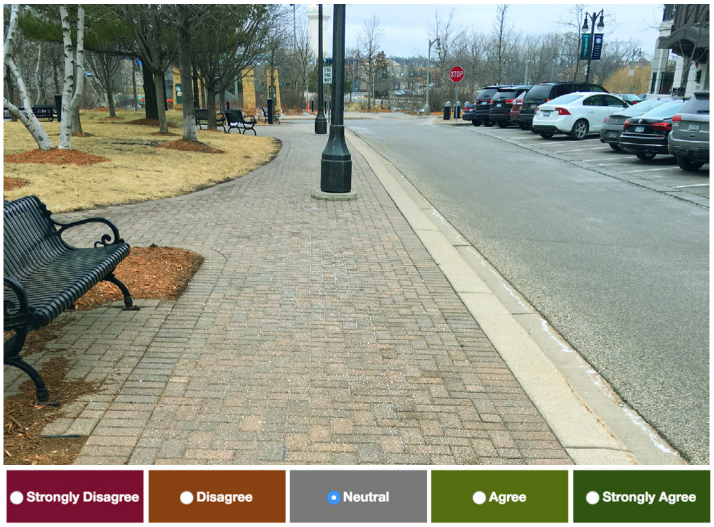


3. SIDEWALK MATERIALS

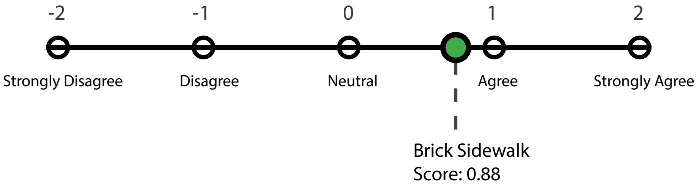
Considering the pavement material of the sidewalks shown, answer your agreement for the following for each image:
"This is a place I would like to walk."

BRICK SIDEWALK

			Brick Sidewalk
All Survey Respondents	All Survey Respondents (n=206)	Mean	0.88
		SD	1.04
		Mode	1
Neighborhood Survey vs. Online Survey	Neighborhood Respondents (n=33)	Mean Score	0.73
	Online Respondents (n=173)		0.91
Gender	Female (n = 128)	Mean Score	0.87
	Male (n = 74)		0.88
Length of Tenure in Current Home (years)	<1 year (n = 14)	Mean Score	1.00
	1-5 years (n = 51)		1.04
	6-10 years (n = 39)		0.87
	11-20 years (n=48)		0.92
	>20 years (n=44)		0.52



Average (mean) score for all survey respondents (n=206)

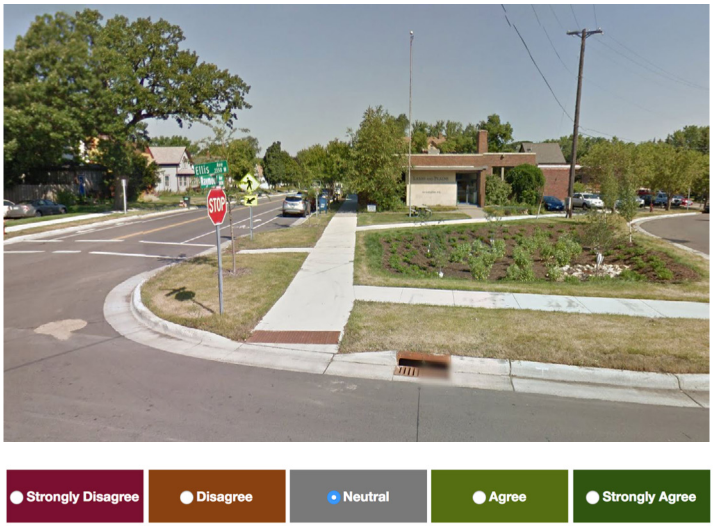


3. SIDEWALK MATERIALS

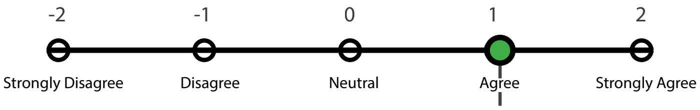
Considering the pavement material of the sidewalks shown, answer your agreement for the following for each image:
"This is a place I would like to walk."

CONCRETE SIDEWALK

			Concrete Sidewalk
All Survey Respondents	All Survey Respondents (n=206)	Mean	1.07
		SD	0.70
		Mode	1
Neighborhood Survey vs. Online Survey	Neighborhood Respondents (n=33)	Mean Score	1.00
	Online Respondents (n=173)		1.08
Gender	Female (n = 128)	Mean Score	1.16
	Male (n = 74)		0.96
Length of Tenure in Current Home (years)	<1 year (n = 14)	Mean Score	1.21
	1-5 years (n = 51)		1.10
	6-10 years (n = 39)		0.87
	11-20 years (n=48)		1.08
	>20 years (n=44)		1.11



Average (mean) score for all survey respondents (n=206)



Concrete Sidewalk
Score: 1.07

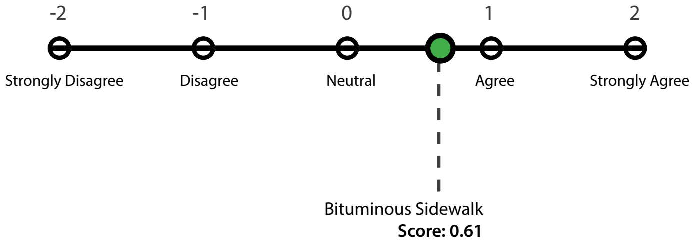
3. SIDEWALK MATERIALS

Considering the pavement material of the sidewalks shown, answer your agreement for the following for each image:
"This is a place I would like to walk."

BITUMINOUS SIDEWALK

			Bituminous Sidewalk
All Survey Respondents	All Survey Respondents (n=206)	Mean	0.61
		SD	0.99
		Mode	1
Neighborhood Survey vs. Online Survey	Neighborhood Respondents (n=33)	Mean Score	0.64
	Online Respondents (n=173)		0.61
Gender	Female (n = 128)	Mean Score	0.74
	Male (n = 74)		0.42
Length of Tenure in Current Home (years)	<1 year (n = 14)	Mean Score	0.71
	1-5 years (n = 51)		0.59
	6-10 years (n = 39)		0.69
	11-20 years (n=48)		0.56
	>20 years (n=44)		0.64

Average (mean) score for all survey respondents (n=206)

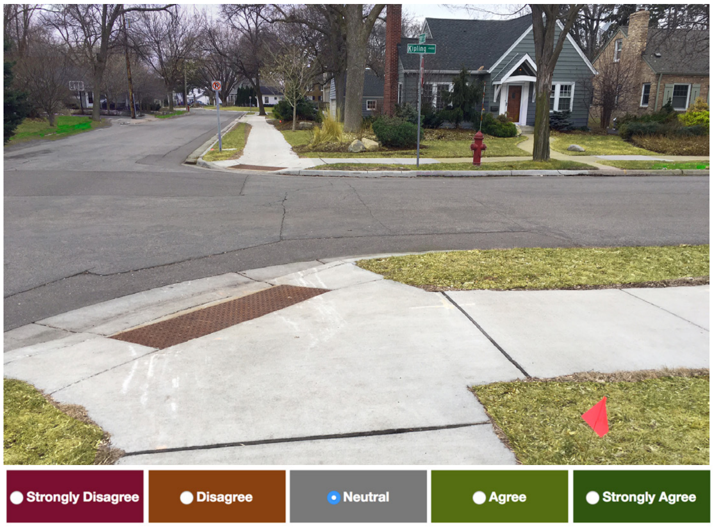


4. SIDEWALK CONNECTIVITY

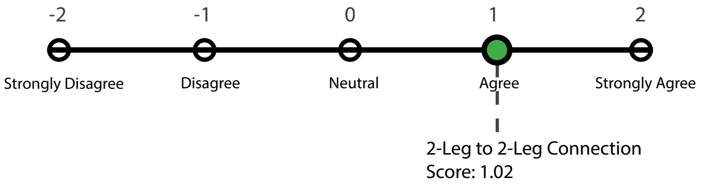
Considering how the sidewalk connects to other places to walk,
answer your agreement for the following for each image:
"This is a place I would like to walk."

2-Leg to 2-Leg

			2-leg to 2-leg
All Survey Respondents	All Survey Respondents (n=206)	Mean	1.02
		SD	0.79
		Mode	1
Neighborhood Survey vs. Online Survey	Neighborhood Respondents (n=33)	Mean Score	1.06
	Online Respondents (n=173)		1.01
Gender	Female (n = 128)	Mean Score	1.09
	Male (n = 74)		0.97
Length of Tenure in Current Home (years)	<1 year (n = 14)	Mean Score	0.86
	1-5 years (n = 51)		1.06
	6-10 years (n = 39)		1.10
	11-20 years (n=48)		0.96
	>20 years (n=44)		1.00



Average (mean) score for all survey respondents (n=206)

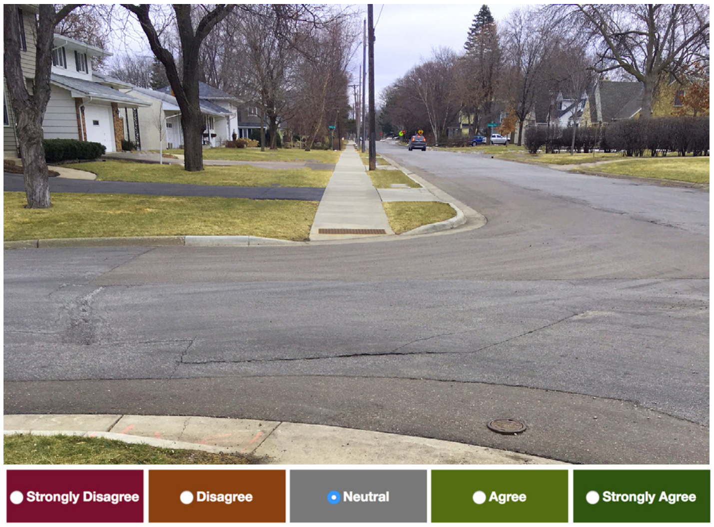


4. SIDEWALK CONNECTIVITY

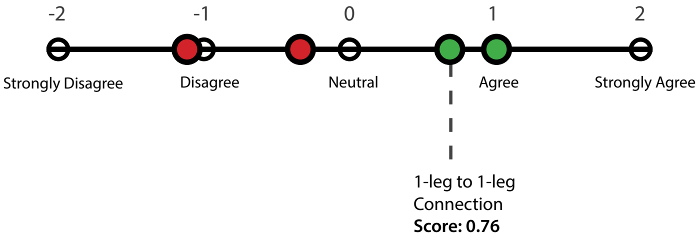
Considering how the sidewalk connects to other places to walk,
answer your agreement for the following for each image:
"This is a place I would like to walk."

1-Leg to 1-Leg

			1-leg to 1-leg
All Survey Respondents	All Survey Respondents (n=206)	Mean	0.76
		SD	0.90
		Mode	1
Neighborhood Survey vs. Online Survey	Neighborhood Respondents (n=33)	Mean Score	0.79
	Online Respondents (n=173)		0.76
Gender	Female (n = 128)	Mean Score	0.80
	Male (n = 74)		0.74
Length of Tenure in Current Home (years)	<1 year (n = 14)	Mean Score	0.79
	1-5 years (n = 51)		0.69
	6-10 years (n = 39)		0.72
	11-20 years (n=48)		0.92
	>20 years (n=44)		0.75



Average (mean) score for all survey respondents (n=206)

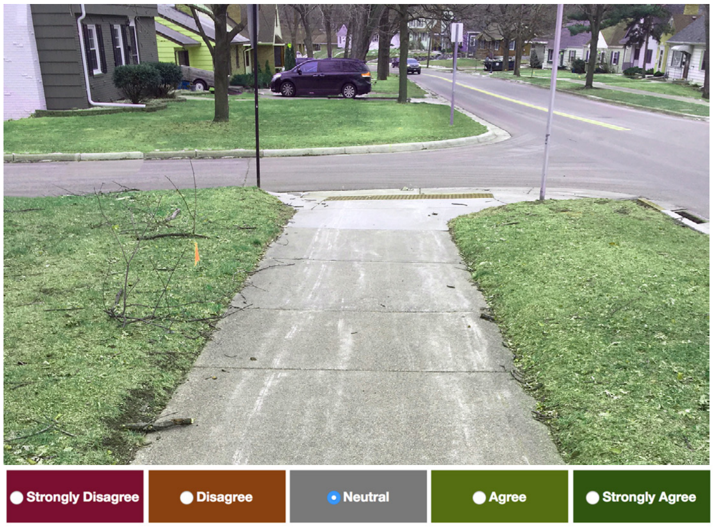


4. SIDEWALK CONNECTIVITY

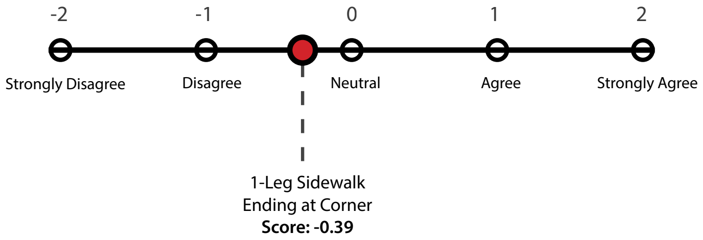
Considering how the sidewalk connects to other places to walk,
answer your agreement for the following for each image:
"This is a place I would like to walk."

1-LEG DEAD END

			1-leg dead end
All Survey Respondents	All Survey Respondents (n=206)	Mean	-0.39
		SD	1.01
		Mode	-1
Neighborhood Survey vs. Online Survey	Neighborhood Respondents (n=33)	Mean Score	-0.52
	Online Respondents (n=173)		-0.36
Gender	Female (n = 128)	Mean Score	-0.27
	Male (n = 74)		-0.55
Length of Tenure in Current Home (years)	<1 year (n = 14)	Mean Score	-0.14
	1-5 years (n = 51)		-0.41
	6-10 years (n = 39)		-0.33
	11-20 years (n=48)		-0.67
	>20 years (n=44)		-0.23



Average (mean) score for all survey respondents (n=206)

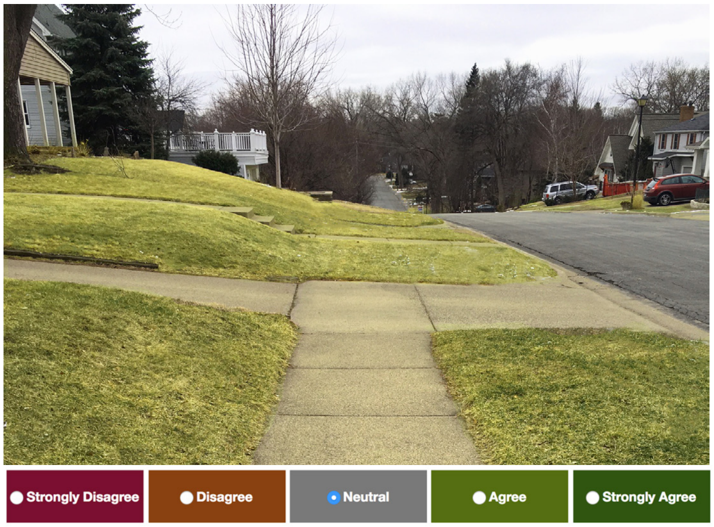


4. SIDEWALK CONNECTIVITY

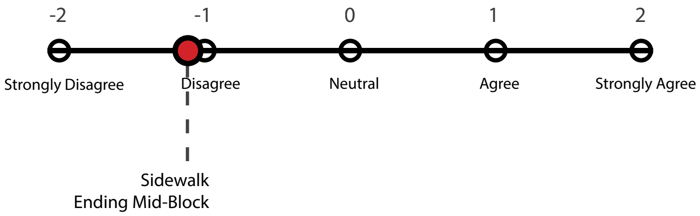
Considering how the sidewalk connects to other places to walk,
answer your agreement for the following for each image:
“This is a place I would like to walk.”

MID-BLOCK DEAD END

			Mid-block dead end
All Survey Respondents	All Survey Respondents (n=206)	Mean	-1.10
		SD	0.78
		Mode	-1
Neighborhood Survey vs. Online Survey	Neighborhood Respondents (n=33)	Mean Score	-0.91
	Online Respondents (n=173)		-1.13
Gender	Female (n = 128)	Mean Score	-1.08
	Male (n = 74)		-1.12
Length of Tenure in Current Home (years)	<1 year (n = 14)	Mean Score	-0.79
	1-5 years (n = 51)		-0.96
	6-10 years (n = 39)		-1.23
	11-20 years (n=48)		-1.31
	>20 years (n=44)		-1.05



Average (mean) score for all survey respondents (n=206)



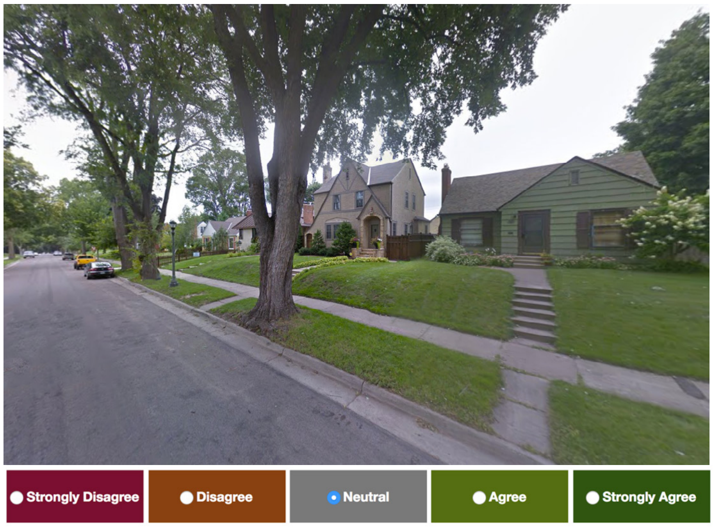
Sidewalk
Ending Mid-Block
Score: -1.10

5. AGE OF BOULEVARD TREES

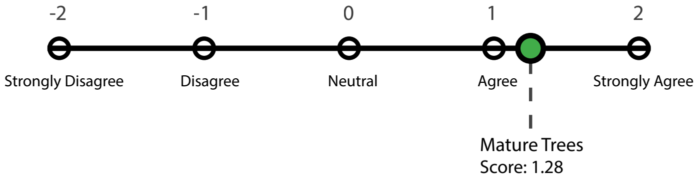
Considering the coverage and type of trees shown, answer your agreement for the following for each image:
"This is a place I would like to walk."

MATURE TREES

			Mature Trees
All Survey Respondents	All Survey Respondents (n=206)	Mean	1.28
		SD	0.74
		Mode	1
Neighborhood Survey vs. Online Survey	Neighborhood Respondents (n=33)	Mean Score	1
	Online Respondents (n=173)		1.33
Gender	Female (n = 128)	Mean Score	1.36
	Male (n = 74)		1.20
Length of Tenure in Current Home (years)	<1 year (n = 14)	Mean Score	0.93
	1-5 years (n = 51)		1.31
	6-10 years (n = 39)		1.31
	11-20 years (n=48)		1.31
	>20 years (n=44)		1.30



Average (mean) score for all survey respondents (n=206)

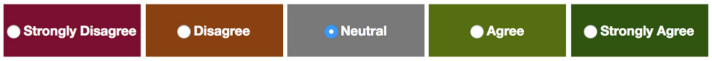


5. AGE OF BOULEVARD TREES

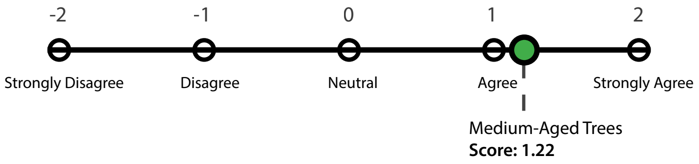
Considering the coverage and type of trees shown, answer your agreement for the following for each image:
"This is a place I would like to walk."

MEDIUM-AGED TREES

			Medium-aged Trees
All Survey Respondents	All Survey Respondents (n=206)	Mean	1.22
		SD	0.73
		Mode	1
Neighborhood Survey vs. Online Survey	Neighborhood Respondents (n=33)	Mean Score	1.06
	Online Respondents (n=173)		1.25
Gender	Female (n = 128)	Mean Score	1.32
	Male (n = 74)		1.11
Length of Tenure in Current Home (years)	<1 year (n = 14)	Mean Score	1.07
	1-5 years (n = 51)		1.31
	6-10 years (n = 39)		1.41
	11-20 years (n=48)		1.08
	>20 years (n=44)		1.16



Average (mean) score for all survey respondents (n=206)

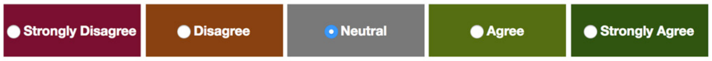


5. AGE OF BOULEVARD TREES

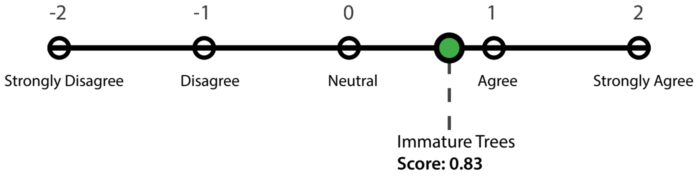
Considering the coverage and type of trees shown, answer your agreement for the following for each image:
“This is a place I would like to walk.”

IMMATURE TREES

			Immature Trees
All Survey Respondents	All Survey Respondents (n=206)	Mean	0.83
		SD	0.83
		Mode	1
Neighborhood Survey vs. Online Survey	Neighborhood Respondents (n=33)	Mean Score	0.91
	Online Respondents (n=173)		0.82
Gender	Female (n = 128)	Mean Score	0.86
	Male (n = 74)		0.82
Length of Tenure in Current Home (years)	<1 year (n = 14)	Mean Score	0.71
	1-5 years (n = 51)		0.86
	6-10 years (n = 39)		1.05
	11-20 years (n=48)		0.75
	>20 years (n=44)		0.73



Average (mean) score for all survey respondents (n=206)



6. CORNER DESIGN

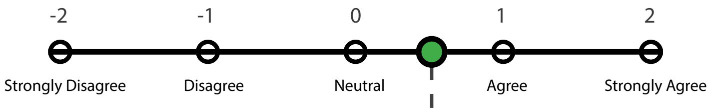
Considering the design of the corners of these intersections, answer your agreement for the following for each image:
“This is a place I would like to walk.”

CORNER WITH BUMPOUT AND DIRECTONAL PEDESTRIAN RAMPS

			Corner with bumpout and directional ped ramps
All Survey Respondents	All Survey Respondents (n=206)	Mean	0.58
		SD	1.12
		Mode	1
Neighborhood Survey vs. Online Survey	Neighborhood Respondents (n=33)	Mean Score	0.64
	Online Respondents (n=173)		0.57
Gender	Female (n = 128)	Mean Score	0.49
	Male (n = 74)		0.74
Length of Tenure in Current Home (years)	<1 year (n = 14)	Mean Score	0.64
	1-5 years (n = 51)		0.59
	6-10 years (n = 39)		0.79
	11-20 years (n=48)		0.42
	>20 years (n=44)		0.50

○ Strongly Disagree ○ Disagree ● Neutral ○ Agree ○ Strongly Agree

Average (mean) score for all survey respondents (n=206)



Corner with Bumpout & Directional Ped Ramps
Score: 0.58

6. CORNER DESIGN

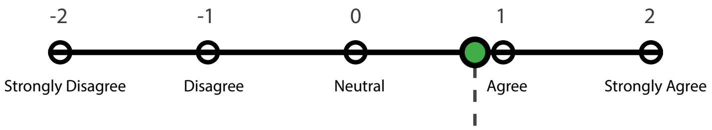
Considering the design of the corners of these intersections, answer
your agreement for the following for each image:
"This is a place I would like to walk."

CORNER WITH DIRECTONAL PEDESTRIAN RAMPS

			Corner with directional ped ramps
All Survey Respondents	All Survey Respondents (n=206)	Mean	0.90
		SD	0.66
		Mode	1
Neighborhood Survey vs. Online Survey	Neighborhood Respondents (n=33)	Mean Score	0.94
	Online Respondents (n=173)		0.89
Gender	Female (n = 128)	Mean Score	0.98
	Male (n = 74)		0.80
Length of Tenure in Current Home (years)	<1 year (n = 14)	Mean Score	0.86
	1-5 years (n = 51)		0.86
	6-10 years (n = 39)		0.97
	11-20 years (n=48)		0.83
	>20 years (n=44)		0.91

○ Strongly Disagree ○ Disagree ◉ Neutral ○ Agree ○ Strongly Agree

Average (mean) score for all survey respondents (n=206)



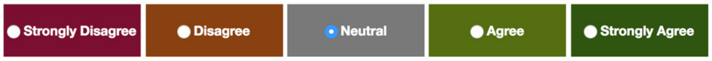
Corner with
Directional Ped Ramps
Score: 0.90

6. CORNER DESIGN

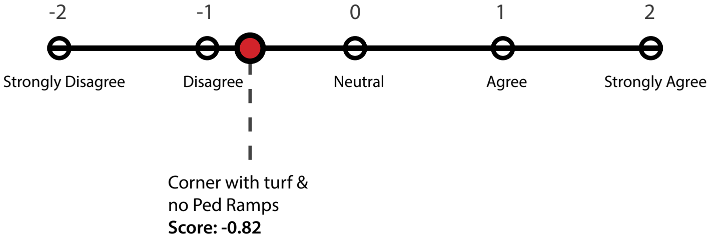
Considering the design of the corners of these intersections, answer your agreement for the following for each image:
"This is a place I would like to walk."

CORNER WITH TURF AND NO PEDESTRIAN RAMPS

			Corner with turf and no ped ramps
All Survey Respondents	All Survey Respondents (n=206)	Mean	-0.82
		SD	0.86
		Mode	-1
Neighborhood Survey vs. Online Survey	Neighborhood Respondents (n=33)	Mean Score	-0.58
	Online Respondents (n=173)		-0.87
Gender	Female (n = 128)	Mean Score	-0.85
	Male (n = 74)		-0.76
Length of Tenure in Current Home (years)	<1 year (n = 14)	Mean Score	-0.57
	1-5 years (n = 51)		-0.92
	6-10 years (n = 39)		-1.03
	11-20 years (n=48)		-0.71
	>20 years (n=44)		-0.70



Average (mean) score for all survey respondents (n=206)



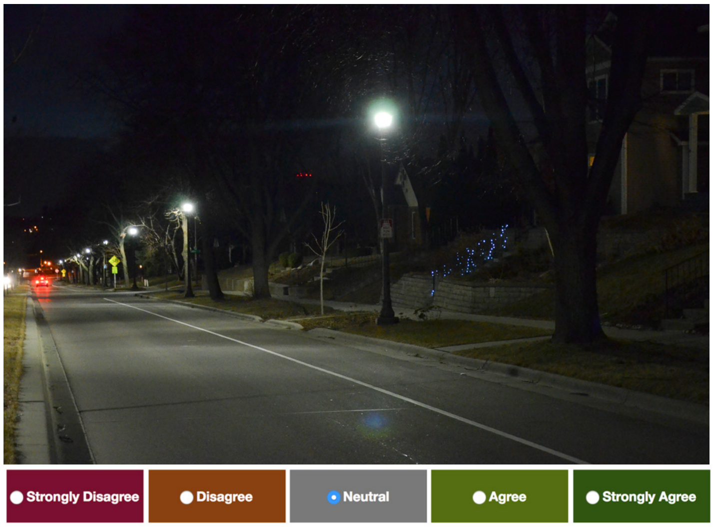
Corner with turf &
no Ped Ramps
Score: -0.82

7. LIGHTING

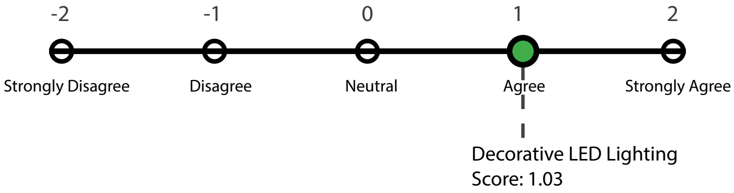
Considering the lighting in each picture, answer your agreement for the following for each image:
“This is a place I would like to walk.”

DECORATIVE LED LANTERN LIGHTING

			“Decorative” LED Lantern Lighting
All Survey Respondents	All Survey Respondents (n=206)	Mean	1.03
		SD	0.96
		Mode	1
Neighborhood Survey vs. Online Survey	Neighborhood Respondents (n=33)	Mean Score	0.91
	Online Respondents (n=173)		1.06
Gender	Female (n = 128)	Mean Score	1.11
	Male (n = 74)		0.93
Length of Tenure in Current Home (years)	<1 year (n = 14)	Mean Score	0.93
	1-5 years (n = 51)		1.27
	6-10 years (n = 39)		1.18
	11-20 years (n=48)		1.08
	>20 years (n=44)		0.73



Average (mean) score for all survey respondents (n=206)

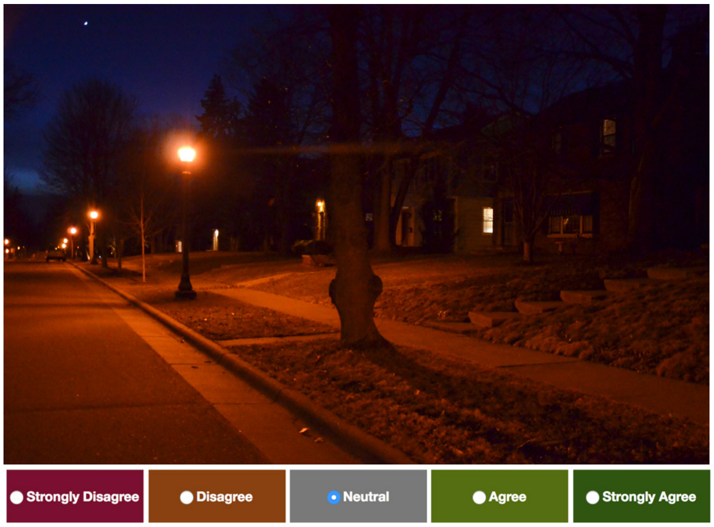


7. LIGHTING

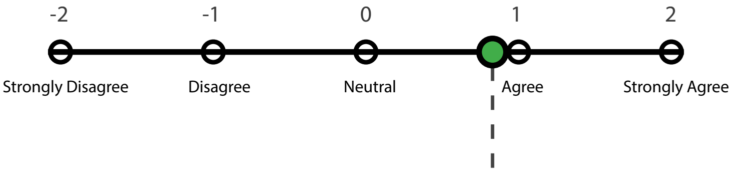
Considering the lighting in each picture, answer your agreement for the following for each image:
“This is a place I would like to walk.”

DECORATIVE HPS LANTERN LIGHTING

			“Decorative” HPS Lantern Lighting
All Survey Respondents	All Survey Respondents (n=206)	Mean	0.92
		SD	0.87
		Mode	1
Neighborhood Survey vs. Online Survey	Neighborhood Respondents (n=33)	Mean Score	0.61
	Online Respondents (n=173)		0.98
Gender	Female (n = 128)	Mean Score	0.98
	Male (n = 74)		0.82
Length of Tenure in Current Home (years)	<1 year (n = 14)	Mean Score	0.5
	1-5 years (n = 51)		0.94
	6-10 years (n = 39)		1.08
	11-20 years (n=48)		1.08
	>20 years (n=44)		0.70



Average (mean) score for all survey respondents (n=206)



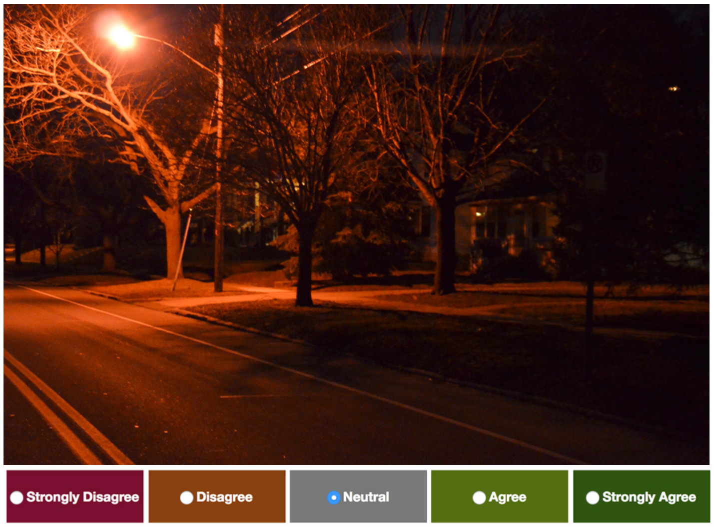
Decorative HPS Lighting
Score: 0.92

7. LIGHTING

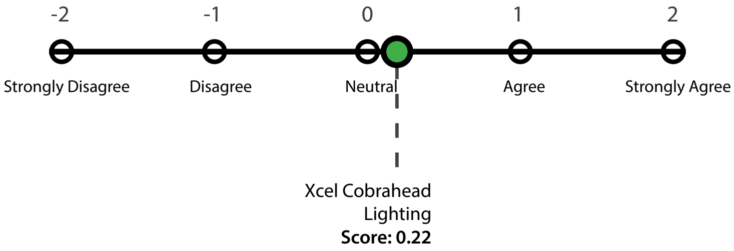
Considering the lighting in each picture, answer your agreement for the following for each image:
"This is a place I would like to walk."

XCEL "COBRAHEAD" LIGHTING

			Xcel "Cobrahead" Lighting
All Survey Respondents	All Survey Respondents (n=206)	Mean	0.22
		SD	0.90
		Mode	1
Neighborhood Survey vs. Online Survey	Neighborhood Respondents (n=33)	Mean Score	0.24
	Online Respondents (n=173)		0.21
Gender	Female (n = 128)	Mean Score	0.22
	Male (n = 74)		0.24
Length of Tenure in Current Home (years)	<1 year (n = 14)	Mean Score	0
	1-5 years (n = 51)		0.12
	6-10 years (n = 39)		0.44
	11-20 years (n=48)		0.35
	>20 years (n=44)		0.00



Average (mean) score for all survey respondents (n=206)

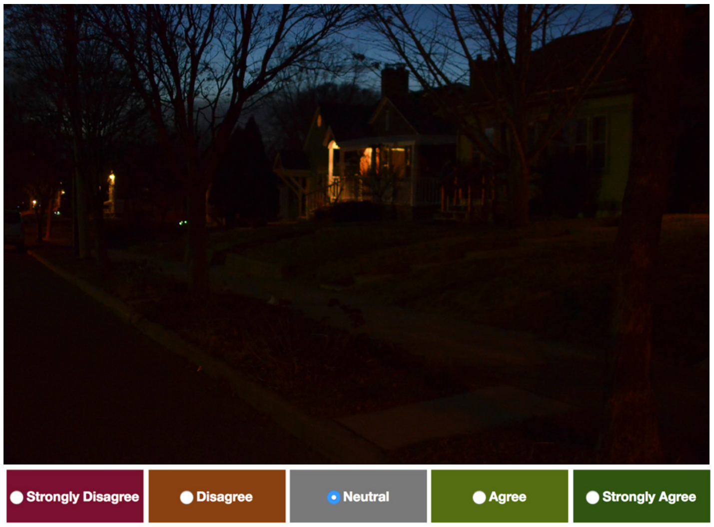


7. LIGHTING

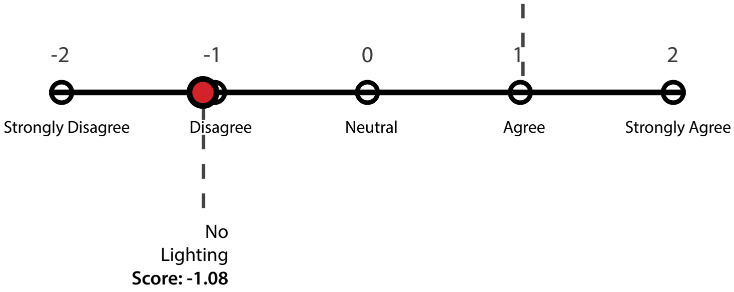
Considering the lighting in each picture, answer your agreement for the following for each image:
"This is a place I would like to walk."

NO STREET LIGHTING

			No street lighting
All Survey Respondents	All Survey Respondents (n=206)	Mean	-1.08
		SD	0.83
		Mode	-1
Neighborhood Survey vs. Online Survey	Neighborhood Respondents (n=33)	Mean Score	-1.03
	Online Respondents (n=173)		-1.09
Gender	Female (n = 128)	Mean Score	-1.16
	Male (n = 74)		-0.93
Length of Tenure in Current Home (years)	<1 year (n = 14)	Mean Score	-1
	1-5 years (n = 51)		-1.12
	6-10 years (n = 39)		-1.15
	11-20 years (n=48)		-1.00
	>20 years (n=44)		-0.95



Average (mean) score for all survey respondents (n=206

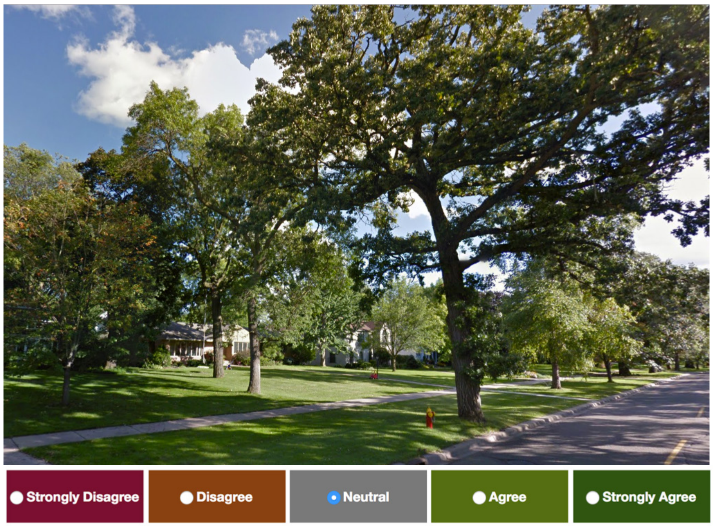


8. OVERALL QUALITY

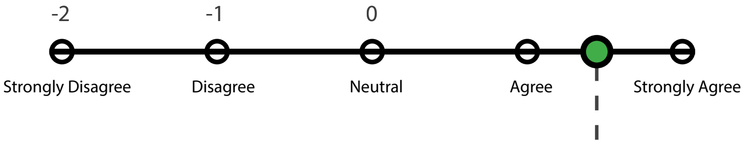
Considering the overall feel in each picture, answer your agreement
for the following for each image:
“This is a place I would like to walk.”

“HIGH QUALITY” EXAMPLE (WIDE SIDEWALK, WIDE BLVD, MATURE TREES)

			High Quality Example
All Survey Respondents	All Survey Respondents (n=206)	Mean	1.42
		SD	0.71
		Mode	2
Neighborhood Survey vs. Online Survey	Neighborhood Respondents (n=33)	Mean Score	1.21
	Online Respondents (n=173)		1.46
Gender	Female (n = 128)	Mean Score	1.49
	Male (n = 74)		1.36
Length of Tenure in Current Home (years)	<1 year (n = 14)	Mean Score	1.29
	1-5 years (n = 51)		1.55
	6-10 years (n = 39)		1.54
	11-20 years (n=48)		1.40
	>20 years (n=44)		1.23



Average (mean) score for all survey respondents (n=206



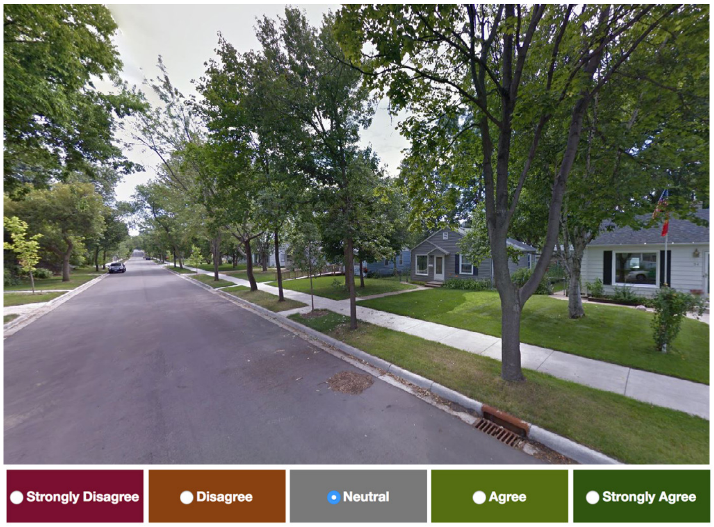
“High Quality Example”
(wide sidewalks, wide blvds, mature trees)
Score: 1.42

8. OVERALL QUALITY

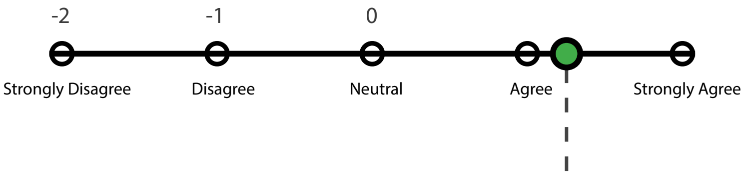
Considering the overall feel in each picture, answer your agreement for the following for each image:
"This is a place I would like to walk."

"AVERAGE QUALITY" EXAMPLE (AVERAGE SIDEWALK, AVERAGE BLVDS, MEDIUM-AGED TREES)

			Medium Quality Example
All Survey Respondents	All Survey Respondents (n=206)	Mean	1.28
		SD	0.66
		Mode	1
Neighborhood Survey vs. Online Survey	Neighborhood Respondents (n=33)	Mean Score	0.97
	Online Respondents (n=173)		1.34
Gender	Female (n = 128)	Mean Score	1.34
	Male (n = 74)		1.24
Length of Tenure in Current Home (years)	<1 year (n = 14)	Mean Score	1.07
	1-5 years (n = 51)		1.31
	6-10 years (n = 39)		1.38
	11-20 years (n=48)		1.27
	>20 years (n=44)		1.20



Average (mean) score for all survey respondents (n=206



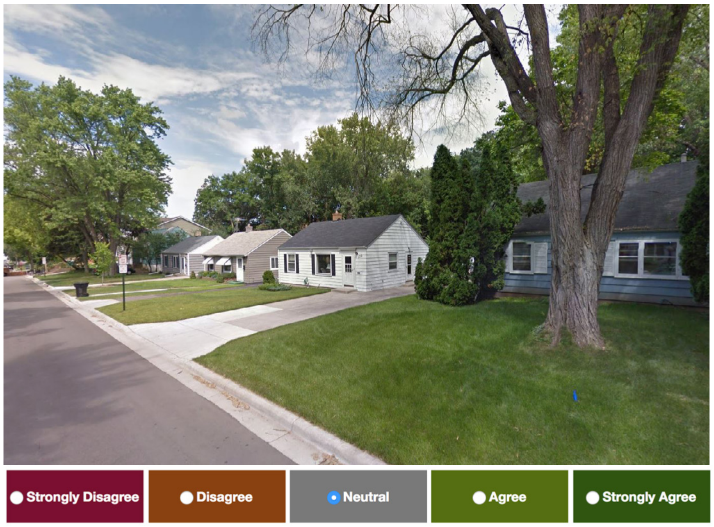
"Average Quality Example"
(Average sidewalk, average blvd, medium-aged trees)
Score: 1.28

8. OVERALL QUALITY

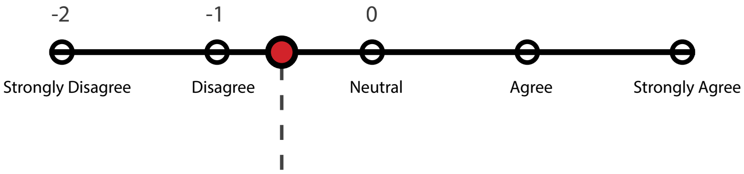
Considering the overall feel in each picture, answer your agreement
for the following for each image:
"This is a place I would like to walk."

"LOW QUALITY" EXAMPLE (NO SIDEWALK, FEW TREES)

			Low Quality Example
All Survey Respondents	All Survey Respondents (n=206)	Mean	-0.69
		SD	0.88
		Mode	-1
Neighborhood Survey vs. Online Survey	Neighborhood Respondents (n=33)	Mean Score	-0.33
	Online Respondents (n=173)		-0.76
Gender	Female (n = 128)	Mean Score	-0.67
	Male (n = 74)		-0.74
Length of Tenure in Current Home (years)	<1 year (n = 14)	Mean Score	-0.14
	1-5 years (n = 51)		-0.75
	6-10 years (n = 39)		-0.90
	11-20 years (n=48)		-0.69
	>20 years (n=44)		-0.57



Average (mean) score for all survey respondents (n=206



"Low Quality Example"
(No sidewalk, few trees)
Score: -0.69

APPENDIX B: RESPONSES RELATED TO LIGHTING

Decorative lantern lights:

- Pedestrian-scale lighting that still works for motor vehicle users.
- Like decorative lights
- I want lights so I can walk at night.
- I prefer good lighting, but decorative lighting is so much more appealing.
- The decorative street lights class up the neighborhood and provide a sense of safety in the neighborhood as far as walking at night alone, as a woman, and also lighting is said to help keep crime down in the neighborhood.
- The lights are aesthetically pleasing and functional at providing both light to see where you're walking, but also safety because surroundings are visible and street traffic can see you as well.
- Lights that just light the street offer no light for walkers.
- I like lighting
- In my current neighborhood there are no sidewalks and inadequate lighting. I do not enjoy walking in my neighborhood because of this.
- decorative lights and many of them, not just at intersections.
- The safety of lighting and one sidewalk is appealing.
- Decorative lighting adds more character and looks less industrial.
- I would love to have better lighting in our neighborhood.
- I would prefer street lights only on main streets.
- I want safe lighting but low lights, yellow lights, that do no make it feel like daylight 24/7.
- Better sidewalks and lights bring people to the street.
- Light in needed for safety for homeowners and those using sidewalks.
- I wish that you had an option for street lights that light below but not above--I do not care for light pollution but want to walk safely at night.
- Decorative lighting makes the environment feel like a close, welcoming neighborhood instead of a generic city street.
- I value the comfortable aesthetic of the upgraded lights
- Safety and lighting are first priority
- I do a lot of walking and do not like walking in the dark; anything to increase lighting for walkers at night is appreciated (even if I don't think these particular lampposts fit with the existing houses)
- lighting is nice looking and useful for both walkers and drivers
- I walk my dog outside, and as long as there's plenty of light and a sidewalk on one side we're happy.
- I like the small town feel with the decorative lighting.

APPENDIX B: (CONTINUED)

Basic Lighting:

- Decorative lights would be nice, but they are more expensive.
- I prefer minimal lighting because it's better for birds navigating at night. The decorative lighting chosen does not match the architecture of the neighborhood. It would look good in a Victorian neighborhood.
- Adequate lighting is essential, decorative not necessary.
- Decorative lights tend to break or look unsightly more quickly. I'd rather have simple, reliable street lights.
- Basic lights keep things illuminated at less cost than decorative lights, more chance of getting them installed.
- I like lights but economical ones

No Lighting:

- Your street lights become to intrusive during the day, clutters the look of the street
- Limited light pollution

Minimal Lighting

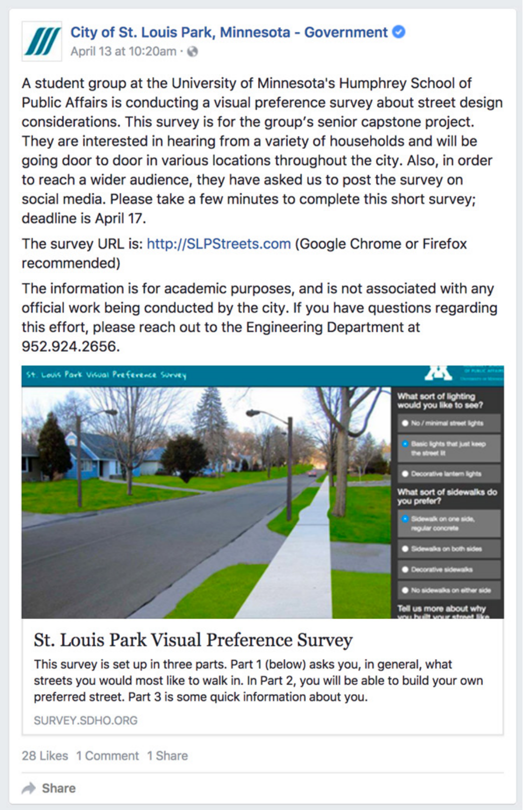
- There is already too much artificial light in our city. It doesn't make us safer. Just ugly and disruptive.
- Too many lights are poorly designed and just supply glare hurting visibility. Few but good lights (no glare) and trees & rain gardens save energy & protect the environment. Decorative lights are especially bad for glare & light pollution.

No response:

- My kids! When I walk my dogs. I really wish Slp had better street lighting especially in the Texa Tonka neighborhood

APPENDIX C:
FACEBOOK POSTINGS OF SURVEY

Note: times listed are Central Daylight Time. In the raw survey results, they were recorded in UTC (5 hours later).



City of St. Louis Park, Minnesota - Government
April 13 at 10:20am

A student group at the University of Minnesota's Humphrey School of Public Affairs is conducting a visual preference survey about street design considerations. This survey is for the group's senior capstone project. They are interested in hearing from a variety of households and will be going door to door in various locations throughout the city. Also, in order to reach a wider audience, they have asked us to post the survey on social media. Please take a few minutes to complete this short survey; deadline is April 17.

The survey URL is: http://SLPStreets.com (Google Chrome or Firefox recommended)

The information is for academic purposes, and is not associated with any official work being conducted by the city. If you have questions regarding this effort, please reach out to the Engineering Department at 952.924.2656.

St. Louis Park Visual Preference Survey

What sort of lighting would you like to see?
- ○ No / minimal street lights
- ● Basic lights that just keep the street lit
- ○ Decorative lantern lights

What sort of sidewalks do you prefer?
- ● Sidewalk on one side, regular concrete
- ○ Sidewalks on both sides
- ○ Decorative sidewalks
- ○ No sidewalks on either side

Tell us more about why you built your street like

St. Louis Park Visual Preference Survey

This survey is set up in three parts. Part 1 (below) asks you, in general, what streets you would most like to walk in. In Part 2, you will be able to build your own preferred street. Part 3 is some quick information about you.

SURVEY.SDHO.ORG

28 Likes 1 Comment 1 Share

Matthew Flory shared a link.
April 13 at 3:59pm

Have YOU taken this walking survey yet?

St. Louis Park Visual Preference Survey

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