APPENDIX B

Photo Data Analysis

Photo Data Analysis

COALITION OF COMMUNITIES OF COLOR, RESEARCH JUSTICE INSTITUTE | 2024-01-16

About the engagement session and activity

Portland Bureau of Transportation (PBOT), Division Midway Alliance (DMA), and Coalition of Communities of Color (CCC) collaborated to plan and host an engagement session with communities of color to learn about their perceptions and experiences of safety in Portland's public spaces. This session focused on five topics that community members in prior engagements had identified as being important for safety: getting to bus stops, safe street crossings, public gathering spaces, lighting, and sidewalk accessibility.

During the current engagement session, community members participated in one main activity – sorting and discussing photos of real places in Portland. We created 5 sets of photos, with one set for each of the key topics. Most sets had 6 photos (except for the Lighting set which had 7 photos). We selected the photos to show a variety of spaces and places that we thought would range in safety. We asked community members to tell us about their sense of physical and emotional safety, based on their lived experiences of these spaces and places. Each community member received a large piece of paper with a horizontal line – a Safety Spectrum that went from "most safe" to "least safe". Community members individually placed the photos from one set alone the line based on their experiences and thoughts about the safety of the spaces and places in the photos. They then wrote down brief explanations about why they placed the photos where they did on sticky notes. Finally, they discussed together as a group the similarities and differences in where they had each placed the photos. During these discussions, one person was available to take notes. We instructed note-takers to "capture as many stories that are shared by the group as possible while they discuss each photo", in order to "record the richness and nuance of what folks say." We encouraged note-takers to include details, and when possible, exact quotes. The note-taker entered their notes into a web-based form that was designed to have one entry box per photo. Each note-taker filled out this form multiple times, once per topic that their group discussed. At the end of the session, community members completed a survey that asked about their transportation use, their feelings of safety in public spaces in Portland, and their identities (demographic information). We created surveys in Chinese, English, Nepalese, Spanish, and Vietnamese.

An overview of the data

Six groups of community members – a total of 39 individuals – participated in the engagement session. These groups collectively sorted and discussed 74 sets of photos. This yielded a dataset of 458 individual photos. The table below shows the number of communities, people, and photos per each of the five key topics: getting to bus stops ("bus"), safe street crossings ("crossings"), public gathering spaces ("gatherings"), lighting ("lighting"), and sidewalk accessibility ("sidewalks"). For example, there were 6 photos in the set for the bus topic (Photo A - Photo F). Three communities discussed the bus topic, which included a total of 14 people. This resulted in community members rating a total of 84 individual photos for the bus topic (14 of Photo A + 14 of Photo B + 14 of Photo C + 14 of Photo D + 14 of Photo E + 14 of Photo F = 84 total photos).

***Table 1**. Amount of data per key topic*

TOPIC	PHOTOS (PER SET)	COMMUNITIES	PEOPLE	TOTAL PHOTOS RATED
Bus	6	3	14	84
Crossings	6	1	6	36
Gatherings	6	4	19	114
Lighting	7	2	14	98
Sidewalks	6	3	21	126

Data analyses

We had two goals for analyzing these data: 1) to determine which individual photos within each photo set showed places that community members experience as physically and/or emotionally safe or unsafe, and 2) to learn about why community members experienced certain places as safe or unsafe. In this section, we explain the approaches we used to analyze all the different types of data generated during the engagement session, which included the safety spectrums of photos, the sticky notes, notes from each group's discussions, and the survey. Then, in the Results section, we present the findings of these analyses, integrating information across all the types of data to address the two goals above.

To make sense of the photo Safety Spectrum data, we created 3 metrics:

1. **"Section":** To assess where people placed photos along the Safety Spectrum, we divided

each spectrum into thirds. We labeled photos placed in the third closest to the "Least Safe" side of as being in Section 1, photos in the middle third as being in Section 2, and photos closet to the "Most Safe" side as Section 3.

2. **"Position":** To capture the order in which people placed photos along the Safety Spectrum, we numbered photos 1 through n. We gave the photo closest to the "Least Safe" side the number 1 and the photo closest to the "Most Safe" side 6-8 (depending on the number of photos in the set or on the spectrum). The position value indicates how each photo relates to the other photos rather than how safe or unsafe community members judged each photo to be.
3. **"Safety Score"**: In order to compare one photo to another both within and across topics, we created a composite, standardized score to represent the photo's overall level of safety. First, we multiplied the Section value by the Position. This created one value per person and per photo. We then summed the values across people for each photo to create one value per photo. Because the topics had different numbers of people and different numbers of photos, the summed values were not comparable across topics. We determined the maximum possible sum by multiplying the number of sections (3) by the highest possible photo position (6-8) and by the number of people per topic (6-21, see Table 1). We then divided each summed value by the maximum possible score and multiplied by 100. Thus, we created a final composite, standardized Safety Score with a possible range of 0-100, where a higher score means that community members considered the photo to be more safe. We then categorized the Safety Scores into three levels: "Low" (0-33), "Medium" (34-66), and "High" (67-100).

We computed these metrics separately for each topic. Then we visualized the information in two ways: First, we present a set of scatter plots by topic, with one plot for each photo. In these plots, Section is on the horizontal axis and Position is on the vertical axis. Each dot represents one person's judgement of a photo. Then, we show the composite, standardized Safety Score for each photo, with one bar graph per topic. The height of the bar shows the value of the Safety Score, with higher values indicating that community members collectively considered the place in the photo to be safer. We describe these plots in more detail below.

Next, we analyzed the data in the sticky notes on the Safety Spectrums and the data in the note-taking forms generated during the groups' discussions. This analysis involved two steps: first we created initial codes by identifying words, phrases, or sentences in the data that convey meaning and labeling each with a code

to capture its meaning. We generated 442 initial codes. We then reviewed these initial codes, sorting them based on both key topic and safety score level (high, medium, low). Within each set, we grouped initial codes by similarities or emerging themes. We used these groupings to create a smaller list of thematic focus codes. This resulted in a total of 83 focus codes. In Table 2, we present the number of initial and focus codes per topic.

***Table 2**. Number of initial and focus codes per topic*

TOPIC	NUM. OF INITIAL CODES	NUM. OF FOCUS CODES
Bus	128	16
Crossings	76	20
Gatherings	108	20
Lighting	41	14
Sidewalks	89	13

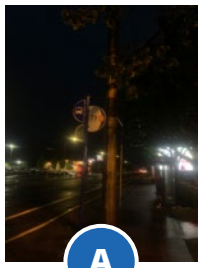
Results

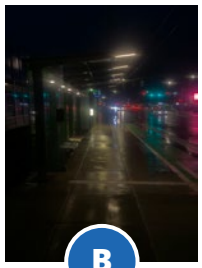
On the following pages, for each topic, we first present and describe the scatter plot data visualization that reflects where community members placed individual photos on the Safety Spectrums. Then, we include and explain the bar graph of the Safety Scores for each photo within the topic. We conclude each section with a table presenting the focus codes for each topic, accompanied by a narrative description of our interpretation of the data based on the community members' conversations. In the Conclusion section, we highlight the main takeaway from these findings, across all 5 key topics.

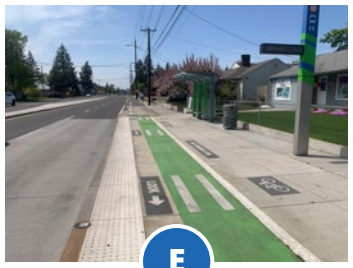
Community members sitting around a table discussing PBOT's asset image. Photo: Division Midway Alliance

Getting to the bus stop

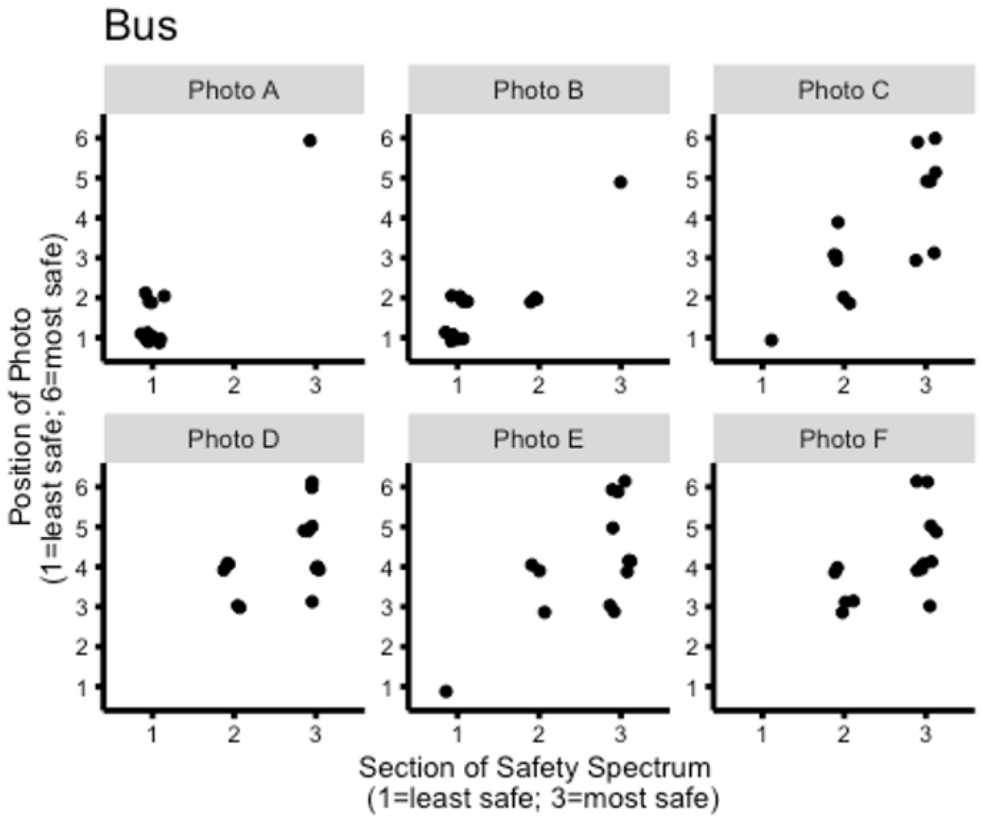
The following analyses focus on the data for the Getting to the Bus Stop topic. The "Bus" photo set had six photos. Fourteen people in three community groups sorted photos for Bus. Thus, the Bus dataset has 84 photos.







In the figure to the right, we show where 14 community members placed the 84 individual photos for the Bus topic based on Section (horizontal axis) and Position (vertical axis). Each dot represents one person's judgement of a photo. Horizontally, the farther to the left side of the space a dot is, the closer it was placed to "least safe". The farther to the right side of the space a dot is, the closer it was placed to "most safe". Vertically, the more clumped together to dots are, the more people agreed about the order of the photo relative to the other



photos in the set; whereas the more spread out the dots are, the more people disagreed about the order of the photo relative to the other photos in the set. A dot closer to the bottom of the space indicates that a person put the photo closer to “least safe”, while a dot closer to the top of the space indicates that a person put the photo closer to “most safe”. We jittered the dots, meaning we added a little bit of random space among the dots. This makes it so that dots in the same place are not directly on top of one another, so it’s easier to see how many photos are in each location within this space.

The top-left panel shows where the 14 people placed Photo A. Most of the dots are clumped together in the lower-left part of the plot, showing high agreement across people. These folks judged the place in Photo A as being UNSAFE (Section 1) and placed Photo A either closest (Position 1) or second closest (Position 2) to “least safe” relative to the other photos.

The dot in the upper-right part of the plot shows where one person disagreed – this person judged the place in Photo A as being safe (Section 3) and put it closest to “most safe” (Position 6) relative to the other photos in the set. This pattern of dots is similar to that of Photo B.

Let’s now look at the bottom-right panel, which shows where 14 people placed Photo F. The dots are more spread out here than for Photo A. This indicates more disagreement across people for Photo F versus for Photo A. Looking horizontally, five people put Photo F in Section 2 and 9 put it in Section 3, meaning they varied in how safe or unsafe they judged the place in Photo F to be, but overall judged it to be MORE SAFE than unsafe. Vertically, four people put Photo F in Position 3, 6 people put it as Position 5, and 2 people each put it as Position 5 or Position 6. This shows their disagreement about the relative order of the photos – although

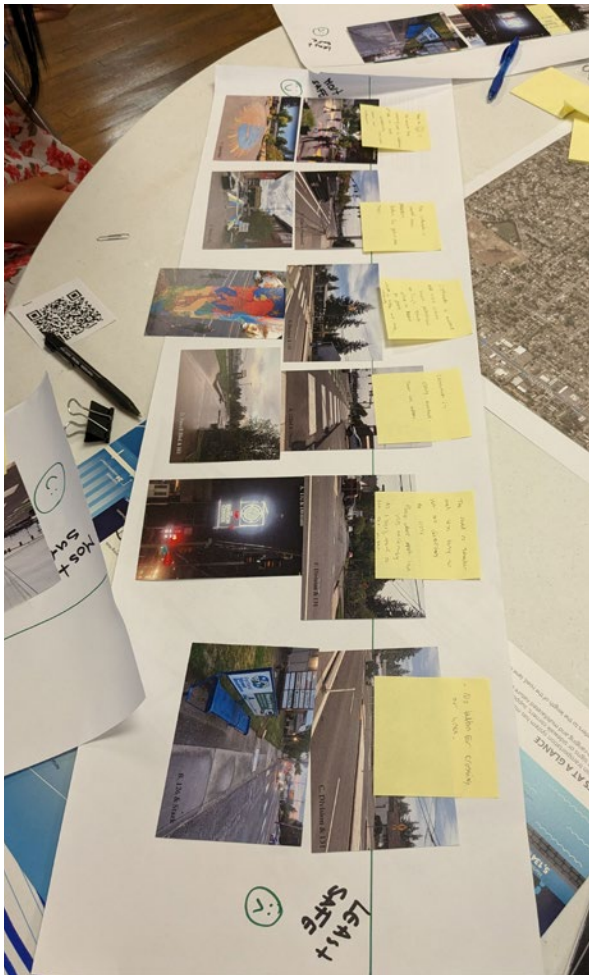
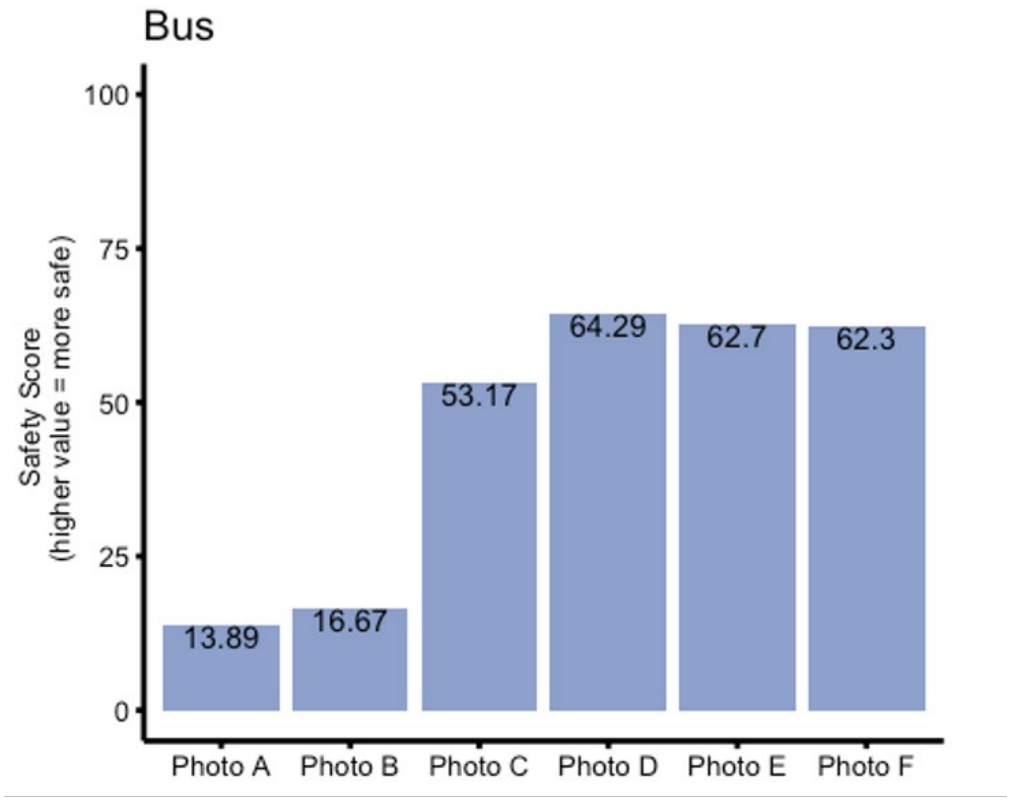


Image of worksheet where community members have sorted images between most to least safe. Photo: Division Midway Alliance



the highest number of people put it as Position 4. This pattern of dots is similar to those of Photos C, D, and E.

The bar graph on this page condenses the information across people into one composite, standardized Safety Score for each photo. The height of the bar shows the value of the Safety Score, with higher values indicating that community members collectively considered the place in the photo to be safer.

In the bar graph above, we show the Safety Scores of the 6 photos in the Bus topic. As we saw in the scatter plots, community members collectively gave the bus stops in Photos A and B low Safety Scores and the bus stops in Photos C, D, E, or F medium Safety Scores. Community members did not rate any of the photos in this set with a high Safety Score.

We examined the qualitative information community members wrote in the sticky notes and the notes from their group discussions of these photos to understand more about WHY they judged these photos in this way. In Table 3 below, we show which photos from the Bus set were categorized as “high”, “medium”, and “low” based on their Safety Score. We also present a list of the final focus codes for this topic. Below the table, we provide a more in-depth explanation of the findings that are based on these thematic focus codes.

Based on the focus codes for the “Bus” topic, we learned that community members connect safety with having functional bus stops, protected and clean bus stops, and accessible bus stops. Community members feel safe when bus stops are designed in ways that make the whole

process of taking the bus easy and comfortable for everyone. For getting to and from bus stops, they noted the importance of having multiple, strategically placed crosswalks so people can easily and safely cross nearby roads (see the next section for details about safety at crosswalks).

Once at the bus stop, community members value having ample space to wait. Bus stops that are clean and well-maintained feel inviting to people. Ones that have shelters provide protection from various weather conditions. Shelters also often provide places to sit. Having trees and plants at bus stops adds beauty and can also provide shade. These features make bus stops more pleasant and comfortable for people to use.

Bus stops that are brightly lit help people clearly see cars, bicycles, and others who are passing through and using the space. The physical design of bus stops can add or detract from

***Table 3**. What community says about safety for Getting to Bus Stops*

SAFETY SCORE LEVEL	PHOTOS	FOCUS CODES
High	None	N/A
Medium	C, D, E, F	Amenities and services make bus stops vibrant; Brightly lit spaces help people to see and to be seen; Bus reliability and frequency are important to riders; Cleanliness invites use of the space; Clear signs and markings orient pedestrians, cyclists, and drivers; Shelters and tree canopy protect riders to use the bus stop in any weather conditions; Strategic placement of bus stops and crossings makes them easier to use; Sufficient space and accessible design are needed for use by people of all ability types; Users feel more protected in spaces with steady flow of people and cars; Visible and present security adds to safety
Low	A, B	Clean, active bus stops that are monitored and well-maintained invite use; Crime and violence deter people from waiting at the bus stop and from using the bus; Lack of clarity about where pedestrians, cyclists, and drivers go means people are not well protected from cars; More bright lights are needed to help drivers see pedestrians and street markings; Physical assets of bus stops and roads do not deter reckless driving; People prefer driving cars to walking or using the bus

this, making it easier or harder for people waiting at bus stops to see each other and others using the space. Community members like being at vibrant bus stops that are well-populated with a steady flow of people and cars. The presence of other people makes them feel better protected, knowing they're not alone and others are around who could help them if anything bad were to happen. Community members also noted the importance of having bus stops with accessible features, to make them more inclusive. For example, they mentioned having blind bricks helps folks with visual impairments and having the height of the bus stop be even to the height of the bus helps folks using wheelchairs.

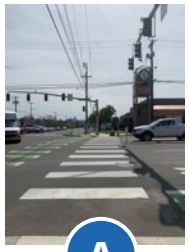
While community members prefer active bus stops, they also mentioned several features that are critical to keeping everyone safe at busy bus stops: Community members value having easy-to-see and easy-to-understand signs and markings to direct pedestrians, cyclists, and drivers to their separate designated areas. They also make each type of user better aware of where other types of users are. When bus stops lack clear signs and markings, people are not well protected from cars. Community members are concerned about dangerous driving near bus stops, especially when they observe that the physical assets of roads and bus stops don't necessarily deter drivers from being reckless. Seeing or hearing about crime and violence also detracts from community members' ease and comfort, deterring them from waiting at bus stops and from using the bus. In some cases, these issues lead to people preferring to drive or walk, rather than use the bus. Community members value having visible security cameras and suggest adding them to bus stops that don't already have them. They also appreciate the presence of security guards at bus stops.

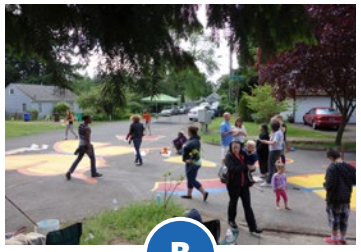
When it comes to taking the bus, it is not surprising that community members value having buses that arrive frequently and reliably. People are more likely to use bus stops when the bus schedules are convenient for them and when they can count on the bus being on time. Signs at bus stops that display real-time bus schedule information are also helpful to riders.

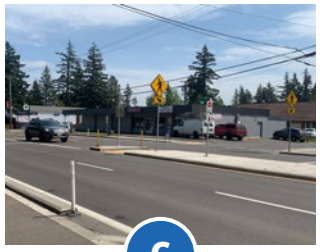
In sum, community members want bus stops to have the same features of community spaces like parks and plazas, such as being clean, vibrant, social, and accessible. This vision for bus stops as "hubs for community activity" is consistent with how Project for Public Spaces (PPS) is working to re-imagine public transit. In an article about their work, PPS explains that "[w]hen created in close collaboration with the community, these spaces [bus stops] become shared resources for all people to occupy, to interact with the neighbors, to gather and celebrate their community, or to simply walk through."

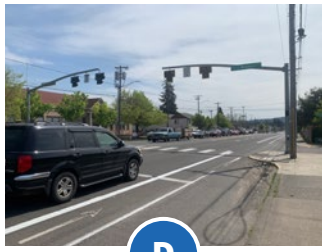
Crossings

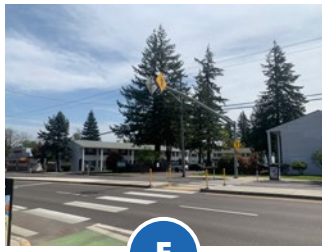
The following analyses focus on the data for the Safe Crossings topic.
The “Crossings” photo set had six photos. Six people in one community group sorted photos for Crossings. Thus, the Crossings dataset has 36 photos.

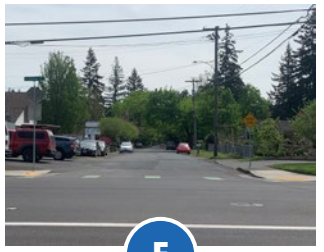






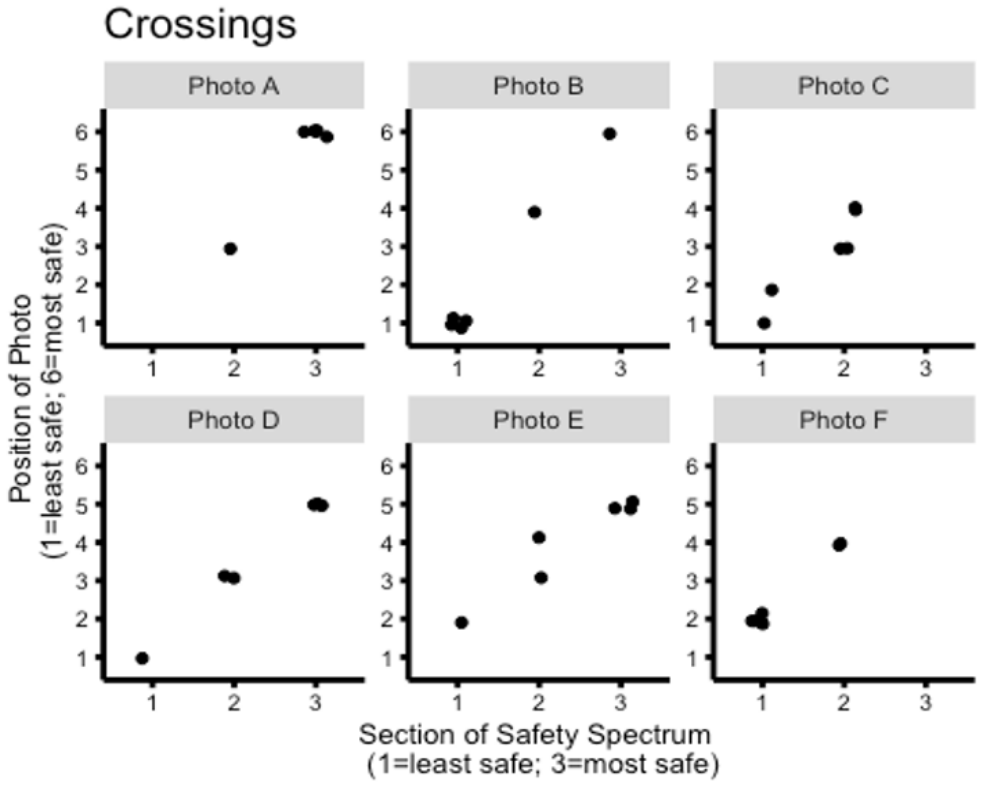






In the figure to the right, we show where 6 community members placed the 36 individual photos for the Crossings topic based on Section (horizontal axis) and Position (vertical axis).

In the Photo A panel, four of the dots are clumped together in the upper-right part of the plot area, showing that most people judged this photo to be SAFE (Section 3) and that most placed this photo closest to “most safe” (Position 6). One person judged Photo A to be a

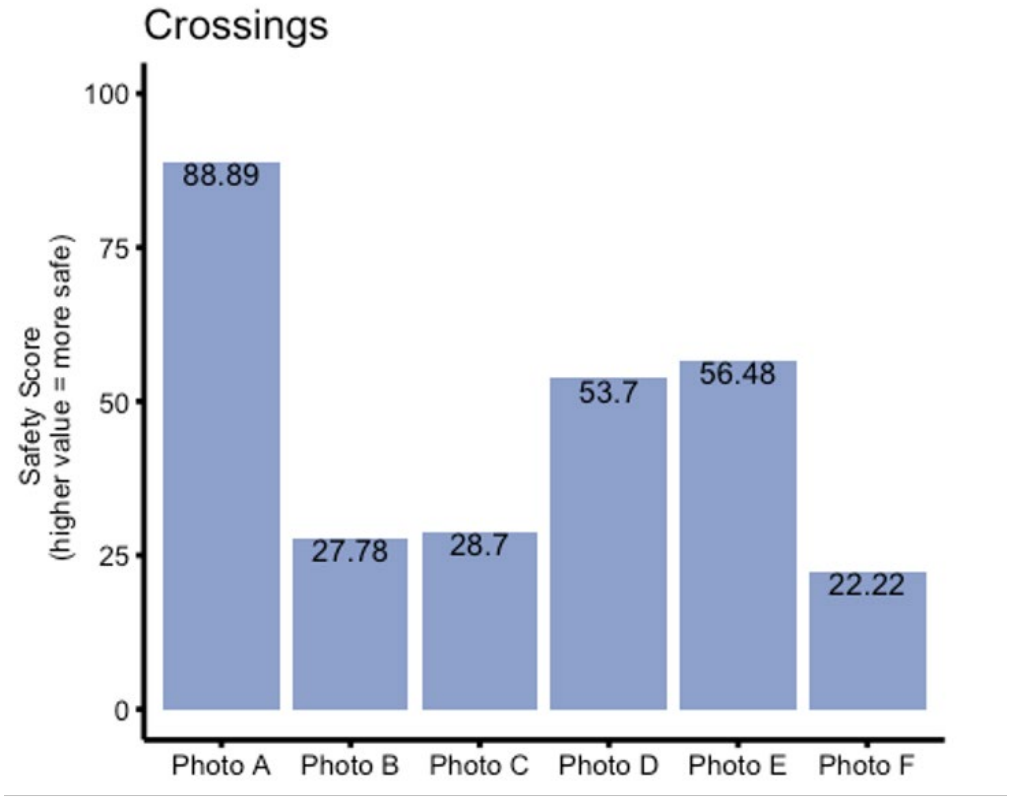


bit less safe, putting it in Section 2 and Positions 3. In the Photo C panel, we see a similar pattern, except that all of the dots are shifted closer to "least safe". Four people put Photo C in Section 2 while two put it in Section 1. They placed Photo C in Positions 1-4. For Photo F, community members mostly agreed that the crossing was UNSAFE, with most placing it in Section 1 and Position 2.

For Photos B, D, and E, we see disagreement in how the six people rated these photos. Across the group, they placed each of these photos in all three Sections, meaning some people rated these photos as SAFE and others as UNSAFE. They also placed each of these photos in either 3 or 4 different Positions, meaning they disagreed about the order of each photo relative to the others and which ones were more or less safe.

In the bar graph to the right, we condense the information across people into one composite, standardized Safety Score for each of the six photos in the Crossing topic. We see that community members gave the crossing in Photo A a high Safety Score, the crossings in Photos D and E medium Safety Scores, and the crossings in Photos B, C, and F low Safety Scores.

In Table 4 below, we show which photos from the Crossings set were categorized as "high", "medium", or "low" based on their Safety Score. We also present a list of the focus codes, based on our analysis of the qualitative data from the sticky notes and group discussion notes. This information adds to our understanding about what features influence community members' sense of safety at street crossings.



Based on the focus codes for "Crossings", we learned that community members connect safety with having street crossings that are designed to protect pedestrians from people driving and that are located in neighborhoods where they feel welcome. Community members shared the importance of features that tell drivers how to navigate street crossings, including speed bumps to slow drivers down, instructions to drivers that people crossing go first, and lights and signs showing drivers when and where to stop and that people are crossing. When street crossings lack these features, community members worry about drivers not seeing them as they cross. Their concerns are elevated when they observe drivers who drive too fast, who speed up as they approach a crossing instead of slowing down, or who drive recklessly over medians. Likewise, community members value features that are designed for people

***Table 4**. What community says about safety for Street Crossings*

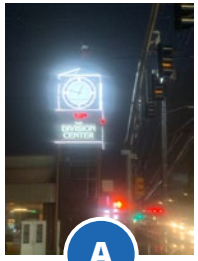
SAFETY SCORE LEVEL	PHOTOS	FOCUS CODES
High	A	Crossers desire plants and art that make the area welcoming without blocking drivers' view; Crossers value features that protect them from getting hit by cars; Evidence of crime and policy activity make crossers uneasy in this space; Lack of other people in busy areas with folks experiencing homelessness detracts from easy use of crosswalks; Lights, signs, markings, buttons, and wider sidewalks help pedestrians cross big roads; Lights, speed bumps, and stop signs direct cars to stop for people crossing
Medium	D, E	Pedestrians can't cross because drivers speed up instead of stopping; Pedestrians fear walking near folks experiencing homelessness; Signs, buttons, markings, and the median help protect crossers from cars; Signs, lights, and speed bumps tell drivers to slow and stop for people crossing; Space with active people, cars, and community make crossers feel secure; Trees and colors create a welcoming space
Low	B, C, F	Drivers get angry about the median and drive recklessly; Evidence of crime and policy activity makes crossers feel uneasy about this neighborhood; Lack of clear signs and lights means drivers might not see people crossing; Median provides protected space for crossers to watch and wait for cars to pass; More colors and a coffee shop would help people enjoy the space more; Pedestrians can't cross because drivers speed up instead of stopping; Smaller street with stop signs helps prevent crossers getting hit by cars driving too fast; Trees are welcoming, if not too dense

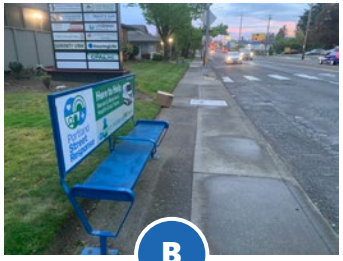
crossing to use in order to make it easier to cross. These features include buttons to push that activate signals to tell crossers when to cross, buttons that activate flashing lights to alert cars that people are crossing, and markings on the road to indicate the presence of crosswalks. In addition to these features, community members also appreciate how physical assets of roads and crosswalks can reduce potential danger from drivers, such as narrower streets to make crossings faster, tall medians to divide wider streets, and poles and markings to separate pedestrians from drivers. Community members especially like street crossings with medians that provide protected spaces for crossers to stop in the middle of wide, busy roads. This gives them a space to wait in the middle, essentially turning one large road into two smaller roads to cross. Medians with waiting spaces help people crossing to better see people driving in each direction and enable them to take more time as they cross the entire street.

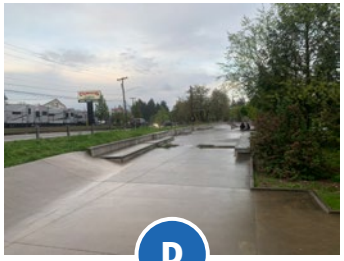
Beyond the street crossing itself, community members care about the areas surrounding street crossings. They want to spend time in neighborhoods that are beautiful and where they feel welcome. They want crossings to have trees, plants, and colorful art to make the spaces more welcoming, so long as these are placed in ways that don't block drivers' or crossers' views. Similarly to bus stops, community members like street crossings that are active and vibrant, so they don't feel alone and so they feel protected if anything bad were to happen. This is particularly important to them when they are in areas where there is evidence of crime and police activity and/or where there are lots of folks experiencing homelessness. In another similarity to bus stops, community members want the built spaces near street crossings to be engaging and inviting. For example, one idea they offered was to add a coffee shop nearby to the street crossing to help people using the crossing better enjoy the surrounding space. For this topic, like for bus stops, community members did not simply focus on how to get from one side of a street to the other safely. Instead, they discussed how to make the whole experience of moving through spaces – and crossing streets along the way – easy, enjoyable, comfortable. They consider safe street crossings to be another important part of building active and vibrant community spaces.

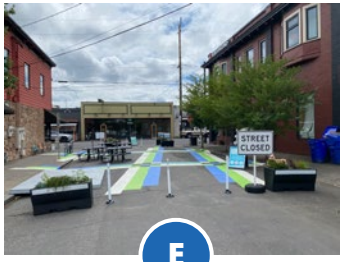
Neighborhood Gatherings

The Gathering photo set had six photos. Nineteen people in four community groups sorted photos for Gatherings; thus, the Gathering dataset includes 114 individual photos.

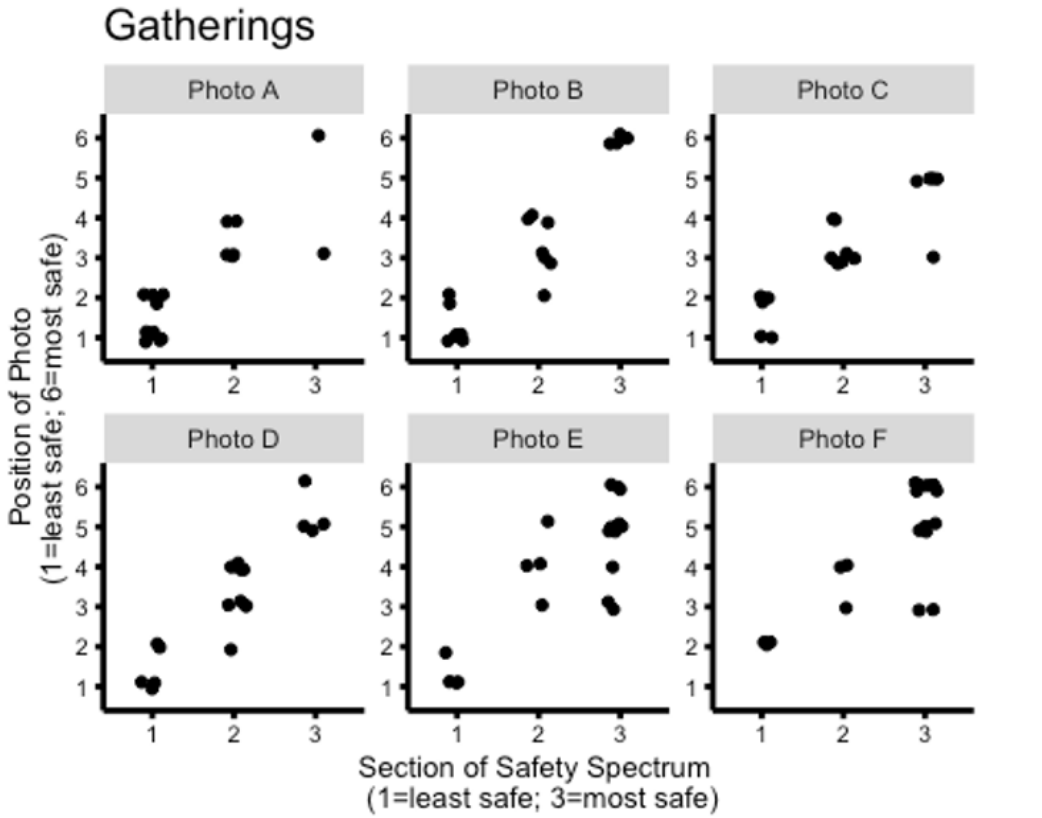








In the figure to the right, we show where 19 community members placed the 114 individual photos for the Gatherings topic based on Section (horizontal axis) and Position (vertical axis). Community members show the same overall pattern of variable ratings for all six photos. They placed each photo across all three Sections and across almost all six Positions. This means that people varied in their sense of safety for each of the neighborhood gathering places. The dots in the panel for Photo A are slightly more clustered in the bottom-left,

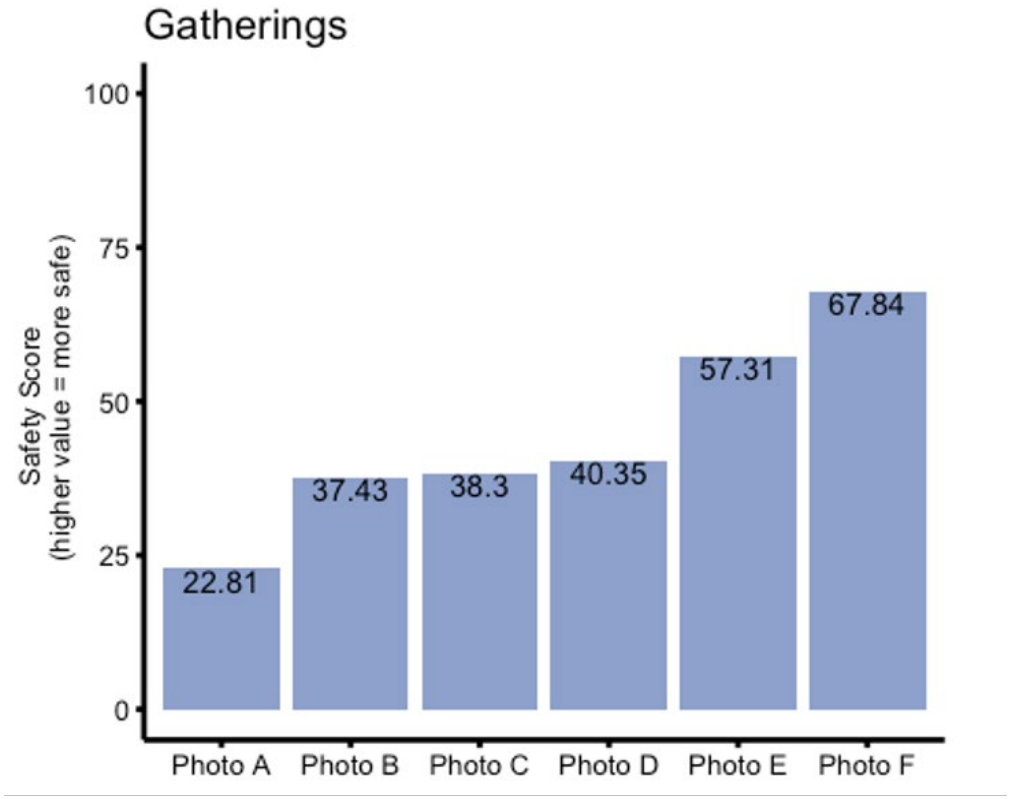


meaning more people rated this gathering place as unsafe, placing it in Section 1 and Positions 1 or 2. The reverse is true for Photo F – more people rated this gathering place as safe, with more dots clustered in Section 3 and Position 5 and 6.

In the bar graph to the right, we condense the information across people into one composite, standardized Safety Score for each of the six photos in the Gatherings topic. We see that community members gave the neighborhood gathering place in Photo A a low Safety Score, those in Photos B, C, and D medium Safety Scores, and that is Photo F a high Safety Score.

In Table 5 on the next page, we show which photos from the Gatherings set were categorized as "high", "medium", and "low" based on their Safety Score along with summaries of the qualitative data from the sticky notes and group discussion notes. These data provide more nuanced information about what contributes to community members' senses of safety in neighborhood gathering places.

Based on the focus codes for "Gatherings", we learned that community members connect safety with having neighborhood gathering places that are designed to bring people together for recreation, beautiful and clean, and protected from cars and crime. Community members described vibrant spaces that are used and enjoyed by children, families, and neighbors. They mentioned multiple features that support people to come together for recreation, such as benches where people can sit and hang out, tables where people can share a meal or do an activity, parks where people can run, skateboard, play, and relax, and



shady spots where people can stay cool. Community members desire lively and active gathering spaces, because empty, exposed spaces invite unwanted attention and interactions. They take comfort in seeing lights and activity from nearby stores, and they suggest adding bookstores and cultural centers to make gathering spaces more vibrant. Having clean, beautiful spaces enhances community members' experiences while using gathering spaces. Colorful art and street paintings are welcoming and add beauty. Community members noted how art might also prevent drivers from hitting pillars or walls, helping drivers be safer, as long as the art isn't too distracting to them. Gathering spaces located in quiet neighborhoods with nearby houses, lawns, and trees are inviting. Community members enjoy spending time in clean gathering spaces, as garbage makes these spaces dirty and deters people from using them.

***Table 5**. What community says about safety for Neighborhood Gathering Places (like plazas)*

SAFETY SCORE LEVEL	PHOTOS	FOCUS CODES
High	F	Colorful street painting is welcoming and vibrant; People are protected from cars because traffic is residents-only and cars have space outside of painted area; Quiet neighborhood on a cul-de-sac with houses, lawns, and trees makes the space inviting; Space encourages use by children and families, even though children may be hit by cars; Street with bench provides place for neighbors to come together, adding vibrancy;
Medium	B, C, D, E	Crime, folks experiencing homelessness, and lack of space to walk deter people from using this space; Exposed, empty space invites unwanted attention and interactions; Garbage makes the space dirty and deters use; Gathering space would be improved by adding benches, shade, barriers to separate cars and people, and spaced-out tables; If not distracting to drivers, art adds beauty and vibrancy and may prevent drivers from hitting pillars; Lack of crossing lights and signs leads to cars driving too fast and not stopping for people; Pedestrian bridge makes crossing easier for those with no fear of heights; Skate park and soccer field attract vibrancy, especially when spaces are separate or buffered from busy streets; Small road with little traffic that's clear of plants makes street activity easily visible; Street closed to cars with plants and flowers provides good place for people to gather

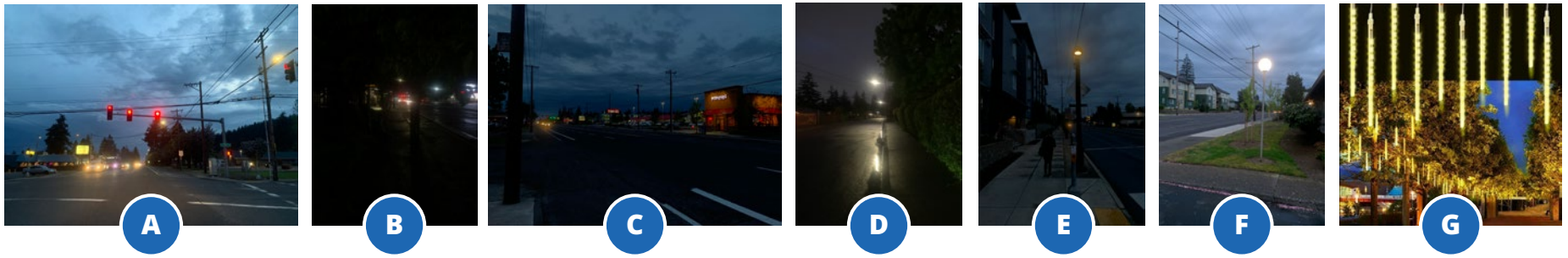
Another key feature of safety for gathering places is having spaces that are protected from cars and crime. People are deterred from using gathering spaces with too much traffic or people who drive too fast. Community members prefer gathering spaces where nearby roads are small with little traffic or are closed off to cars. They desire having designated areas for people and for cars, and they appreciate physical barriers that separate these spaces. For example, they noted that pedestrian bridges make it easier for people to cross streets to get to gathering places, at least for folks with no fear of heights. When there are no crossing lights or signs, community members are concerned about speeding cars not stopping for people. Having separation of cars and people is particularly important to prevent children from getting hit by cars. This also helps people to more fully enjoy gathering spaces, as they do not have to constantly monitor for cars while they engage in their activities. People are also deterred from using gathering spaces in areas where there are rumors of break-ins and kidnappings, where there are too many folks experiencing homelessness, or where there are high rates of crime. They are especially wary of these places at night, when car crashes and other dangers are more likely due to lack of light (see the next section for details about safety and lighting). We note that there is considerable overlap and similarities in how community members describe safety for getting to bus stops and for crossing streets to how they describe safety for gathering spaces. This further supports the idea that community members feels safe in places that feel and function like community gathering spaces.

***Table 5 (continued)**. What community says about safety for Neighborhood Gathering Places (like plazas)*

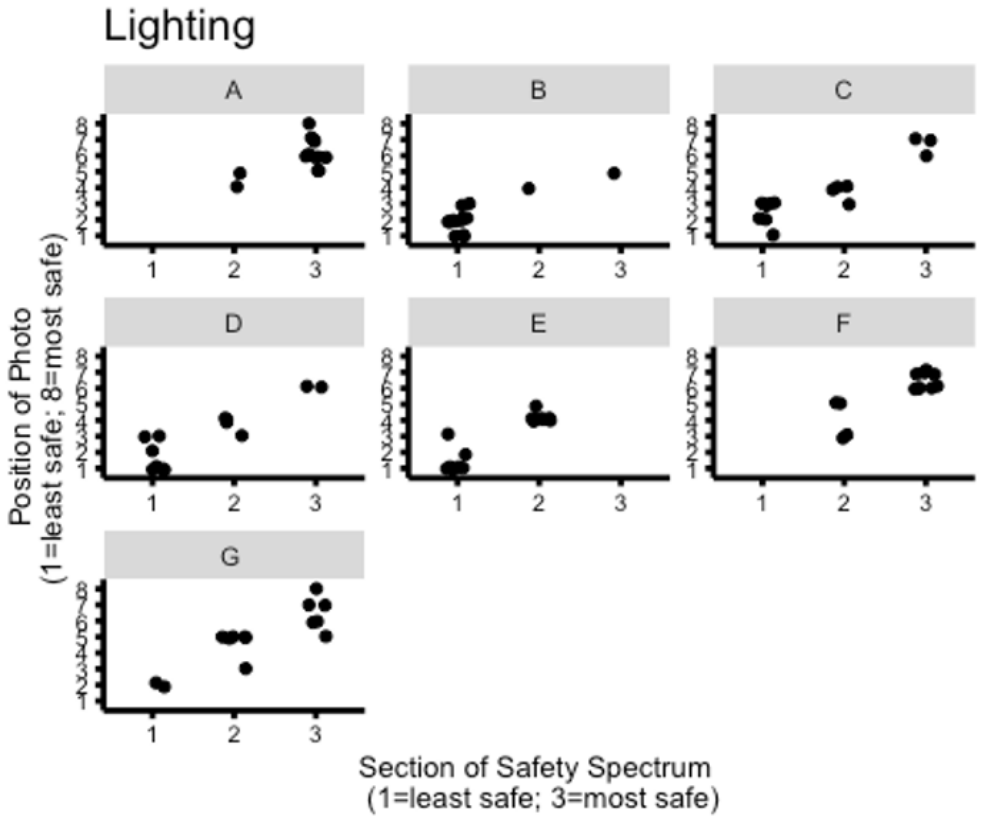
SAFETY SCORE LEVEL	PHOTOS	FOCUS CODES
Low	A	Bright lights and activity from nearby stores improve people's comfort; Crashes and other dangers are more likely at night due to lack of light; People are deterred from using this space by too much traffic, cars driving too fast, rumors of break-ins, too many people experiencing homelessness, and the likelihood of kidnappings; This space lacks places to gather and hang out; This space would be better for gathering if there were a bookstore or cultural center

Lighting

The Lighting photo set had seven photos. Fourteen people across two community groups rated photos for Lighting, resulting in a dataset of 98 individual photos.



In the figure to the right, we show where 14 community members placed the 98 individual photos for the Lighting topic based on Section (horizontal axis) and Position (vertical axis). Community members agreed that the lighting in Photo A was SAFE, placing it mostly in Section 3 and Positions 5-8. They rated the lighting in Photo F similarly, although with a little more disagreement about both section and position. Folks mostly agreed that the lighting in Photo B was UNSAFE, placing it mostly in Section 1 and Positions 1-3. They rated the

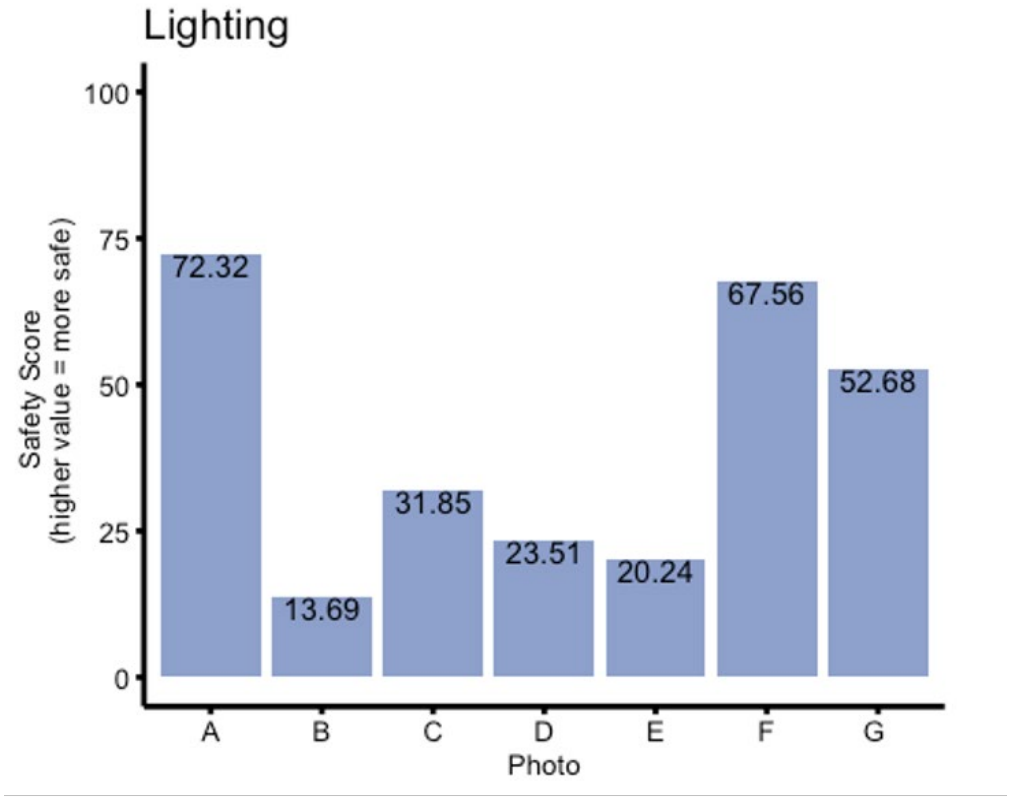


lighting in Photo E similarly, but with a bit more disagreement. Community members varied in their judgments of the lighting in Photos C, D, and G, across both Section and Position.

In the bar graph to the right, we condense the information across people into one composite, standardized Safety Score for each of the seven photos in the Lighting topic. We see that community members gave the lighting in Photo A a high Safety Score, the lighting in Photos F and G medium Safety Scores, and the lighting in Photos B, C, D, and E low Safety Scores.

In Table 6 on the next page, we show which photos from the Lighting set were categorized as "high", "medium", or "low" based on their Safety Score along with summaries of the qualitative data from the sticky notes and group discussion notes. We use this information to help us understand the factors that contributed to community members' senses of safety in these areas with different kinds of lighting.

Based on the focus codes for "Lighting", we learned that community members connect safety with bright lights, clear visibility, and populated areas. People inherently associate nighttime with possible danger. Dark places with insufficient lighting are scary and add to people's concerns about crime, deterring them from going out. Also, tight streets and public spaces with obstructed views contribute to people's fear and discomfort. Bright lights reduce these issues by creating a sense of comfort, trust, and confidence through the ability to clearly see and be seen



while they use streets and public spaces. Well-lit streets with ample space for people, bicycles, and cars are inviting. Lights illuminate the beauty of streets with houses, trees, benches, and clean sidewalks, which people experience as calming and pleasant. Community members also feel protected when they are using active, well-populated streets because other people are around who could provide aid if something bad were to happen. They value streets with features that help people sit, stay, and move through the spaces, like restaurants, seating areas, and clear signs at intersections. While bright lights, clear visibility, and populated areas might not resolve all fears of nighttime dangers, they assure community members that the built environment and active use of public space support their safety and well-being.

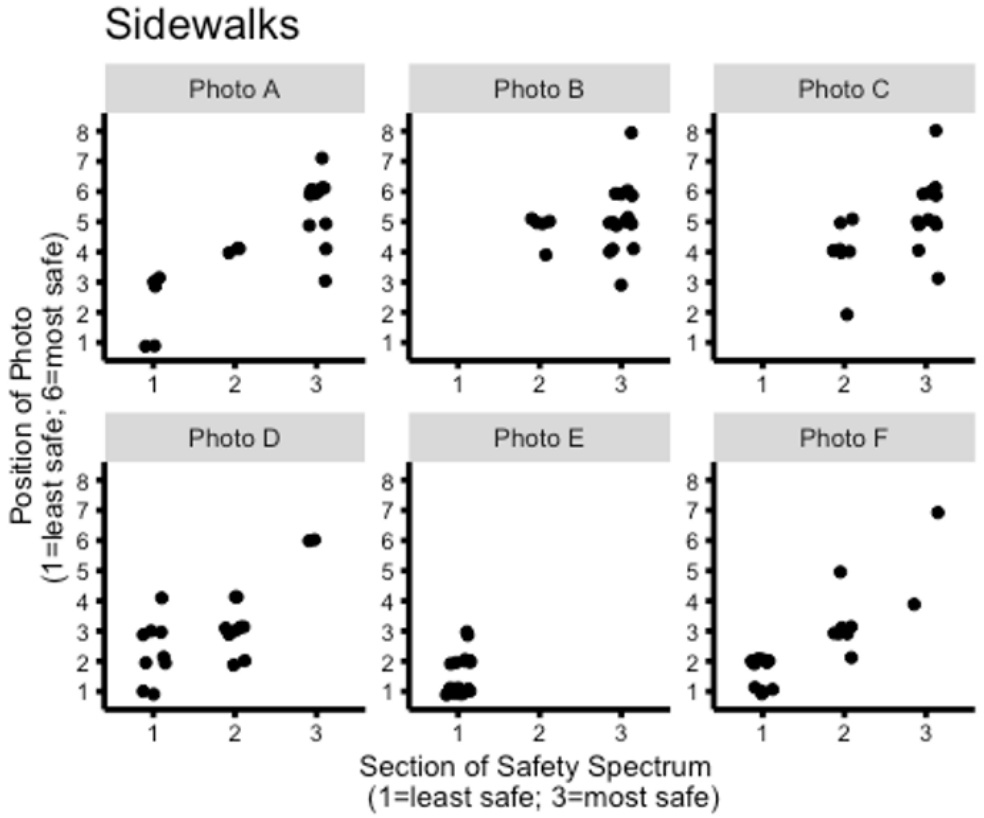
***Table 6**. What community says about safety for Lighting*

SAFETY SCORE LEVEL	PHOTOS	FOCUS CODES
High	A	Bright lights help people feel confident to use the space; Concerns about crime deter people from going out, regardless of lighting levels; Features that help people sit, stay, and move through spaces are inviting
Medium	F, G	Light adds beauty, making places more pleasant; Populated areas provide potential bystander aide; Streets with lights, houses and trees, and space for people, bicycles, and cars are calming and comfortable; Well-lit streets invite use by pedestrians, cyclists, and drivers
Low	B, C, D, E	Ability to see clearly helps protect people while they use streets; Bright lights create a sense of comfort and trust; Dark places with insufficient lighting are scary; People perceive night time as inherently dangerous; Populated areas provide potential bystander aide; Spaces with activity, trees, and decorative lights have a calming vibe; Tight spaces with obstructed views contribute to fear and discomfort

Sidewalks

The following analyses focus on the data for the Sidewalk Accessibility topic. The "Sidewalks" photo set had six photos. Twenty-one people in three community groups sorted photos for Sidewalks. Thus, the Sidewalks dataset has 126 individual photos.

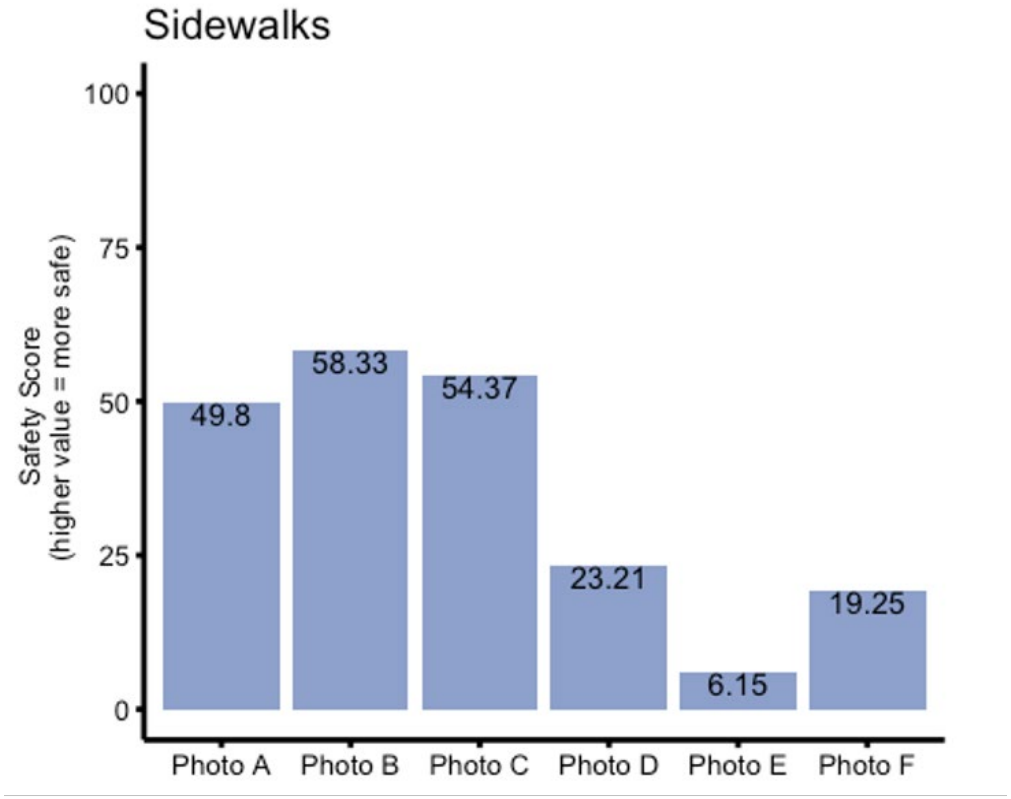
In the figure to the right, we show where 21 community members placed the 126 individual photos for the Sidewalks topic based on Section (horizontal axis) and Position (vertical axis). People had the highest agreement about the sidewalk in Photo E being unsafe, with everyone placing it in Section 1 and Positions 1-3. Community members mostly agreed the that sidewalks in Photos B and C were safe, placing these photos in either Section 2 or 3. They agreed less about the order of these two photos relative to the other



photos, placing them in Positions 2-8. For Photos A, D, and F, people varied more in their ratings. At least one person put these photos in each of the three Sections. However, more people put Photo A in Section 3, meaning more folks rated it as safer; and more people put Photos D and F in Section 1, meaning more folks rated these photos as unsafe. Community members varied in how they ordered these photos, placing them in every Position from 1 to 7.

In the bar graph to the right, we condense the information across people into one composite, standardized Safety Score for each of the six photos in the Sidewalks topic. We see that community members rated the sidewalks in Photos A, B, and C with medium Safety Scores and those in Photos D, E, and F with low Safety Scores. In Table 7 below, we summarize the qualitative data from the sticky notes and group discussion notes for the Sidewalks topic, combining it with the Safety Score levels. We present this information to help what about sidewalks contributed to how community members rated the safety of these places.

Based on the focus codes for "Sidewalks", we learned that community members connect safety with clean and clear sidewalks and streets, active and vibrant spaces, and beauty from nature. Community members feel deterred from using sidewalks where there are many folks experiencing homelessness who block the walking space, make the area dirty and smelly, and may be aggressive, unpredictable, and/or using drugs. Community members worry for children who



are sometimes kidnapped while walking along sidewalks in these areas. These fears are amplified at night because darkness creates conditions for dangerous activities, such as drinking and partying.

Community members like clear, concrete sidewalks that provide ample space, because these sidewalks are easy to use. People are more likely to use sidewalks when they are located in communities with cars, stores, lights, homes, and activity, because people feel more secure and less isolated in these spaces, especially during the daytime. When sidewalks are distanced from streets, people feel better protected from the possibility of getting hit by a driver. Idle, parked cars and people driving recklessly create a sense of fear in sidewalk users. On roads with more traffic, community members desire speed bumps and signs to slow cars down, making it safer for

***Table 7**. What community says about safety for Sidewalks*

SAFETY SCORE LEVEL	PHOTOS	FOCUS CODES
High	None	N/A
Medium	A, B, C	Clean, quiet streets with crosswalks that are distanced from sidewalks invite use; Clear, concrete sidewalks provide ample space for easy use; Communities with people, cars, activity, and beautiful homes feel more secure and less isolated; People feel more comfortable here during the day than at night; Police help if somethings happens, if they can arrive quickly; Trees, plants, and flowers add beauty, tranquility, and shade, if they do not block the sidewalk; Users desire signs and speed bumps to slow nearby traffic
Low	D, E, F	Dangerous for children because they are sometimes kidnapped here; Parked cars and cars driving recklessly create sense of fear in sidewalk users; Spaces with cars, activity, stores, plants, and lights make people feel more secure and less isolated; Street is clean, clear, and calm; Users are deterred from sidewalks by the presence of folks experiencing homelessness; Users feel more fear at night because darkness creates conditions for dangerous activities

them to use the nearby sidewalks. Crosswalks also help protect sidewalk users from cars and traffic.

Finally, community members like sidewalks where there are trees, plants and flowers. These add beauty and provide shade. People don't like it when plants block sidewalks, because it makes it more difficult to use the sidewalk and the plants could harm people trying to move past them. When they are appropriately placed and well-maintained, trees, plants, and flowers create a sense of tranquility.

Conclusion

The most important takeaway from our analyses of the qualitative data and interpretation of the focus codes across all five key topics – grounded in the experiences of community members – is that safety is felt when spaces are designed and function like community spaces. By "community spaces", we mean public spaces that are inclusive and welcoming to all, that facilitate people to come together for shared activities and interactions, and that foster a sense of belonging within a neighborhood. Community members consistently and repeatedly describe features of community spaces, such as being active and well-populated, colorful and vibrant, and easy and comfortable to use, when they talk about physical and psychological safety in relation to bus stops, crosswalks, neighborhood gatherings, lighting, and sidewalks. They value and desire these features, because they recognize how these features contribute to lively, vibrant spaces that bring people together in a variety of ways.

NOTES ABOUT THE DATA

Lighting– one Safety Spectrum had 2 sets of Lighting photos on it, but it was not possible for us to determine how to separate them. Changed Table 1 to count this as 2 "People", making the total people =14, because there are 14 sets of photos for this Topic. However, the 14 individual photos that were on this one spectrum were treated as one group in the analyses.

Sidewalks – one Safety Spectrum had 3 sets of Sidewalks photos on it, but it was not possible for us to determine how to separate them. Changed Table 1 to count this as 3 "People", making the total people =21, because there are 21 sets of photos for this Topic. However, the 18 individual photos that were on this one spectrum were treated as one group in the analyses.