Parkview Gardens Walk/Bike Audit: Results Report

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A Project by **trailnet**
BIKE   WALK   LIVE

In Partnership with

City of University City

Department of Transportation, United States of America

U.S. Department of Housing and Urban Development

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Introduction

At the Parkview Gardens Walk/Bike Audit, over 50 people gathered to survey the streets of the Parkview Gardens neighborhood, bounded by Olive Boulevard to the north, Delmar to the south, the Delmar MetroLink stop to the east, and Kingsland Avenue to the west. The walk/bike audit began with a presentation about the benefits of walkable streets and design features that enhance walkability. Participants learned about the connection between the physical conditions of a neighborhood and its influence on individuals' ability to live active and healthy lives. After this training, the participants were then given an overview of the walkability/bikeability checklist to fill out for their assigned audit areas. Ten teams (of three to six people each) participated in the walk/bike audit.

The Parkview Gardens Walk/Bike Audit was conducted through a grant provided by the Department of Housing and Urban Development (HUD) and the Department of Transportation (DOT). This grant, titled "Parkview Gardens: A Sustainable and Accessible Neighborhood", is leading to the creation of a redevelopment and sustainability plan for the Parkview Gardens neighborhood of University City, Missouri. The walk/bike audit expands upon the 2009 Parkview Gardens Park Plan created by H3 Studio. The park plan recognized the importance of walking as a healthy and vital transportation option that supports neighborhood vibrancy, which led University City to decide to conduct a walk/bike audit as a way of promoting walking. Through the walk/bike audit, priority issues for improving walking and bicycling in Parkview Gardens were identified while providing an opportunity for the public to experience the neighborhood in a new way.

On the spectrum of walk/bike audits (from highly technical and more objective to less technical and more subjective), the Parkview Gardens walk/bike audit was closer to the less technical and more subjective. This type of walk audit was specifically chosen to meet the objectives of the task force. Despite its subjective nature, the results from the Parkview Gardens walk audit were geocoded in a sophisticated format, which allows stakeholders to spatially understand what specific conditions are present at precise locations throughout the neighborhood in regard to the various walkability/bikeability issues (e.g. sidewalk continuity). This mapping format was produced by Trailnet, H3 Studio, and the Regional Housing and Community Development Alliance (RHCDA).

The results of the walk/bike audit will support the broader Parkview Gardens Sustainable Plan, and can further be used to support policy changes, such as Streetscape Design Guidelines, or infrastructure improvements such as adding curb ramps and bicycle lanes. When codified, such changes can dramatically enhance pedestrian comfort. The walk/bike audit helped educate community stakeholders regarding pedestrian and bicycle issues, which will help the aforementioned policy changes come about through community support.

Photos taken of each area can be viewed at http://www.flickr.com/photos/26129297@N02/sets/72157626017877963/with/5592852677/ (a copy of the photo log used to record photos taken can be found in Appendix D).

Image 1. Map showing the eight different walk teams' routes through the neighborhood. The event took place at the Regional Arts Commission symbolized by a house.
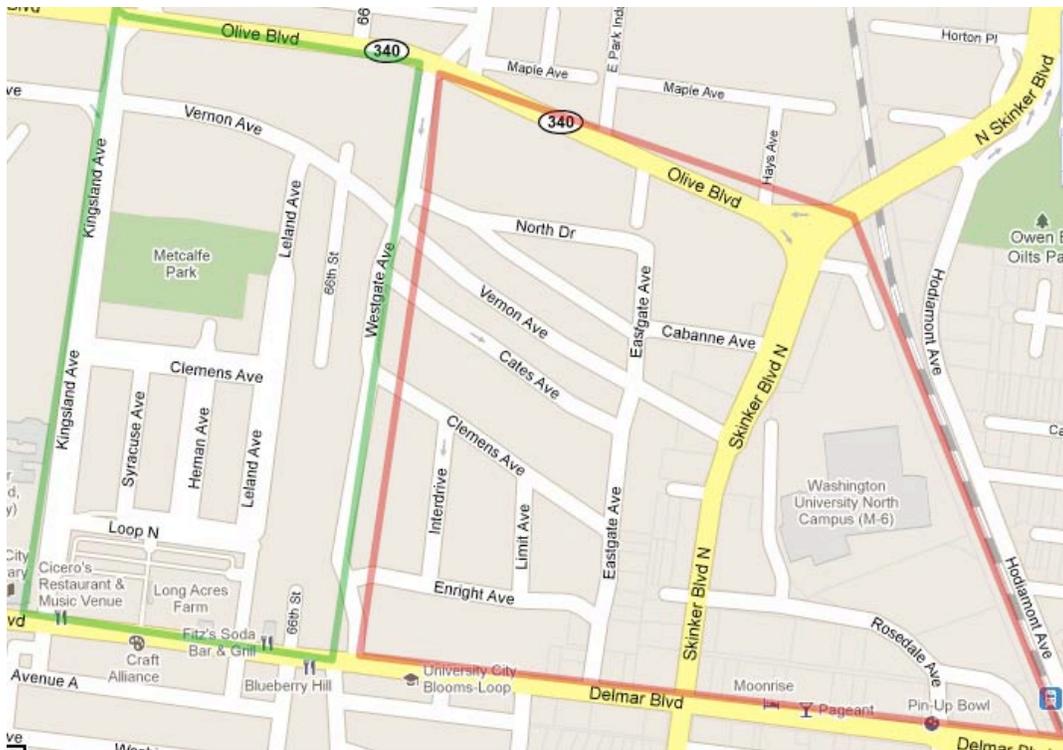

Image 2. Each of the two bicycling teams covered half of the neighborhood's streets.

Understanding the Results

When looking at the data in the following pages, keep the following in mind:

- Eight walking teams (3-5 individuals per team) analyzed the walkability of a distinct portion of the Parkview Gardens neighborhood, resulting in the entire neighborhood's walkability being analyzed.

- Two cycling teams (5-7 individuals per team) analyzed the bikeability of half of the Parkview Gardens neighborhood, resulting in the entire neighborhood's bikeabilty being analyzed.

- Each walking team had two forms with them, an intersection form (Appendix A), and a midblock form (Appendix B). Each walking team filled out one form for each intersection they were assigned, as well as two forms for each midblock section between each intersection (one midblock form for one side of the street, another midblock form for the other side of the street).

- Each cycling team had one type of form with them (Appendix C). Each cycling team filled out the cycling conditions for the entire street in question.

- Each form had questions with multiple-choice responses, and each response was worth a certain point total (2, 1, or 0). Teams tallied the total points from each form to determine which walkability/bikeability attribute best described each intersection, street, or mid-block area surveyed. The three scores were *Very Walkable* (2 points), *Somewhat Walkable* (1 point), and *Unwalkable* (0 points).

- Teams were given the option to increase or decrease an area's score based on unmeasured influences, such as the positive presence of a community garden or the deleterious effect of intimidating dogs.

- Following the walk/bike audit, data was analyzed and geocoded into a digital map program (ARCGIS) by RHCDA. By geocoding each question, the lead consultant (H3 Studio) could spatially depict what specific conditions are present at precise locations throughout the neighborhood. This level of sophistication is rare in walk/bike audits, but such data recording makes the walk/bike audit results more robust, and is a testament to the ability of such a project to aid in future decision-making and planning in a neighborhood.

Results Summary

Eight teams filled out a walkability checklist with the below questions for the intersections and blocks within their assigned areas. Two teams filled out a bikeability checklist for the Parkview Gardens Neighborhood. A quantitative compilation of the responses follows. A copy of the two walkability checklists can be found in Appendix A, and a copy of the bikeability checklist in Appendix B.

INTERSECTION RESULTS

1. Are there curb-ramps present on all corners?
52% of intersections have curb-ramps on all corners

41% of intersections only have some curb-ramps

7% of intersections had no curb-ramps or there was no response to the question

2. Are curb-ramps perpendicular to the street?
35% of intersections have all curb-ramps placed perpendicular to the street

30% of intersections have some curb-ramps placed perpendicular to the street

35% of intersections have no curb-ramps placed perpendicular to the street

3. For intersections with stoplights, how many crosswalks are present?
73% of intersections with stoplights have all crosswalks present

18% of intersections with stoplights only have some crosswalks present

9% of intersections with stoplights had no crosswalks present

4. For intersections with stoplights, how many crosswalks have walk signals?

100% of intersections with stoplights have walk signals at all locations
5. For intersections with stoplights, how many crosswalks have countdown timers?
55% of intersections with stoplights have countdown timers at all locations

0% of intersections with stoplights have count-down timers at some locations

45% of intersections with stoplights have no count-down timers

6. For intersections with stoplights, how many crosswalk count-down timers were long enough?
45% of intersections with stoplights have count-down timers that are long enough

10% of intersections with stoplights have count-down signals, but they were not long enough

45% of intersections with stoplights did not have count-down timers

7. For intersections without stoplights, is there signage indicating a crosswalk or the presence of pedestrians?
11% of intersections without stoplights have some signage indicating a crosswalk or presence of pedestrians

40% of intersections without stoplights do not need any signage to indicate a crosswalk or pedestrians

49% of intersections without stoplights need signage indicating a crosswalk or the presence of pedestrians but do not have it present

8. For intersections without stoplights, how many intersections have adequate lighting?
36% of intersections without stoplights have adequate lighting

53% of intersections without stoplights have sparse lighting

11% of intersections without stoplights have no lighting

9. For intersections without stoplights, are cars parked (and trees planted) far enough away from the intersection to allow motorists or cyclists to see pedestrians?
70% of intersections without stoplights have ample vision for motorists/cyclists to see pedestrians

16% of intersections without stoplights have some vision for motorists/cyclists to see pedestrians

14% of intersections without stoplights have no vision for motorists/cyclists to see pedestrians

10. Are cars moving at an appropriate speed through the intersection?
67% of intersections have cars that are moving at an appropriate speed, or there are no cars

22% of intersections have only some cars that are moving at an appropriate speed

11% of intersections have cars moving at inappropriate speeds

11. Do you feel safe crossing the street?
48% of intersections are very safe for people to cross

37% of intersections are fairly safe for people to cross

15% of intersections are unsafe for people to cross

12. Do you feel safe waiting/standing at the intersection?
55% of intersections are very safe to wait or stand at

38% of intersections are fairly safe to wait or stand at

7% of intersections are not safe to wait or stand at

Other Observations
- Individuals in wheelchairs were seen on the street

- Thought it would be dangerous at night
- Skinker and Olive felt unsafe to cross
- Severe drainage issues at some intersections

INTERSECTION ANALYSIS

Intersections along Delmar scored the highest on the walkability checklists. The intersections with stoplights all had walk signals or were fairly walkable, but countdown timers would be a welcome addition at many intersections. Many peripheral intersections on less walkable streets were surprisingly well suited to walking, even though the block following such intersections were typically difficult or unsafe to walk. Interior intersections were less pedestrian-friendly, with few crosswalks and inadequate curbramps, lighting, and pedestrian signage.

Walk Audit Preliminary Results
Intersection Data
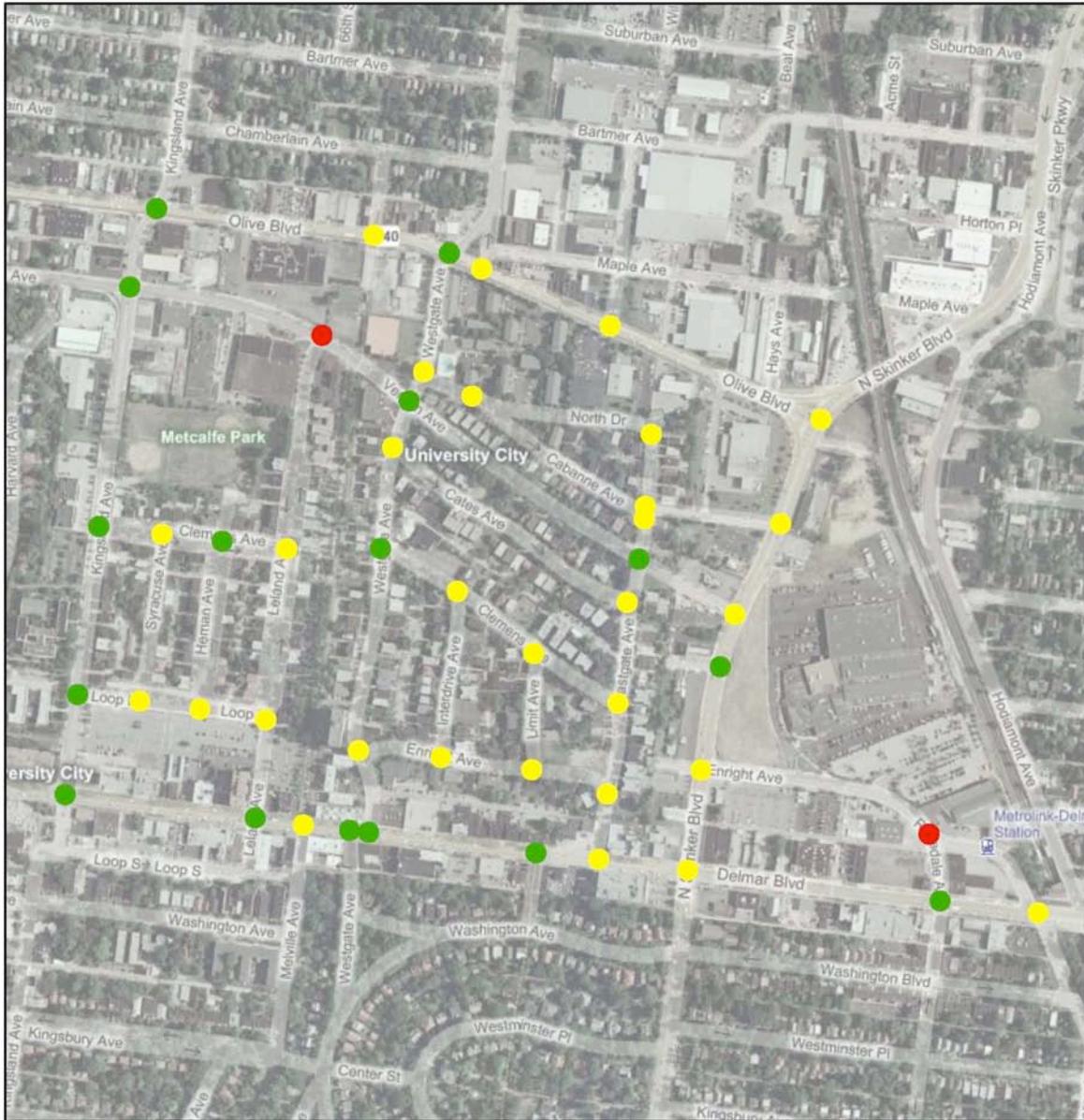
Poor (0-4 points)

Fair (5-11 points)

Excellent (12+ points)

Image 3. A graphical representation of the walk audit scores for all Parkview Gardens intersections.

1. Sidewalk is continuous and smooth on this block...
55% of blocks have sidewalks that are continuous and smooth in all places

41% of blocks have sidewalks that are continuous and smooth in only some places

4% of blocks have no sidewalks

2. What is the condition of the buffer/tree lawn?
20% of blocks have buffers/tree lawns that are in great condition

43% of blocks have buffers/tree lawns that are in decent condition

38% of blocks have no buffer or tree lawn

3. Do driveway curbcuts interfere with the pedestrian in the sidewalk?
56% of blocks are hardly interfered with by driveway curbcuts, or there are no driveways

35% of blocks are sometimes interfered with by driveway curbcuts

9% of blocks are often interfered with by driveway curbcuts

4. Are there permanent obstructions in the sidewalk?
66% of blocks have no permanent obstructions in the sidewalk

28% of blocks have some permanent obstructions in the sidewalk

6% of blocks have many obstructions in the sidewalk

5. How many people can walk comfortably side-by-side?
18% of blocks can accommodate 3 or more people walking side-by-side

67% of blocks can accommodate 2 people walking side-by-side

15% of blocks can accommodate only 1 person or there is no sidewalk

6. Are there pedestrian-scale lights along the street?
16% of blocks have adequate pedestrian lighting along the street

5% of blocks have some pedestrian lighting, but they need more

79% of blocks have no pedestrian lighting at all

7. Is there shade along the walk?
42% of blocks have a lot of shade along the street

40% of blocks have some shade along the street

18% of blocks have no shade along the street

8A. If in a commercial area, are building built up to the sidewalk?
50% of commercial blocks have all buildings built up to the sidewalk

18% of commercial blocks have some buildings built up to the sidewalk

32% of commercial blocks have no buildings built up to the sidewalk

8B. If in a residential area, what is the condition of buildings?

37% of residential blocks contain buildings that are in good condition

28% of residential blocks contain buildings that are in fair condition

35% of residential blocks contain buildings that are dilapidated or vacant

9A. If in a commercial area, do the majority of buildings have windows facing the street?
71% of commercial blocks have street-facing windows in all buildings

27% of commercial blocks have street-facing windows in some buildings

2% of commercial blocks have no street-facing windows

9B. If in a residential area, are building close enough to provide eyes on the street?
55% of residential blocks have all buildings close enough to the street

40% of residential blocks have some buildings close enough to the street

5% of residential blocks have buildings that are too far setback from the street

10. Is trash or graffiti present?
50% of blocks have little trash or graffiti

44% of blocks have some trash or graffiti

6% of blocks have lots of trash or graffiti

11. How safe do you feel walking here?
46% of blocks feel very safe to walk

44% of blocks feel relatively safe to walk

10% of blocks feel unsafe to walk

12. Is walking here an enjoyable experience?
28% of blocks are enjoyable to walk

47% of blocks are somewhat enjoyable to walk

25% of blocks are not enjoyable to walk

13. Is there a transit stop?
26% of blocks have a safe transit stop

7% of blocks have a transit stop, but it's unsafe

67% of blocks have no transit stop

14 & 15. Do transit stops have a shelter, and what amenities do shelters contain?
6% of transit stops have shelters, and those all have seating and lighting

94% of transit stops have no shelter, and no seating or lighting

16. Is the transit stop easy for disabled users to access and use?
24% of stops are easy for disabled users to access

41% of stops are relatively easy for disabled users to access

35% of stops are difficult for disabled users to access

Other Observations
   a. Planted medians make the street more enjoyable
   b. Curbcuts in bad condition
   c. Need for bus stops mid-block
   d. May be unsafe at night
   e. Transit stops inadequately improved
   f. Severe drainage issues
   g. Lighting must be improved

MIDBLOCK ANALYSIS

The midblock sections were less walkable around the periphery of the neighborhood, where automobile traffic is higher (Skinker, Olive, Vernon). The exceptions to this rule are Kingsland and Delmar, which were both scored as more walkable streets. There is a need for increasing the tree lawn coverage and sidewalk widths, and some tree lawns are currently in the wrong location (in between the building and the sidewalk, as opposed to in between the street and the sidewalk). There was not much trash or graffiti, and teams felt safe, but transit stops were grossly inadequate at providing safe, comfortable places to wait for transit.
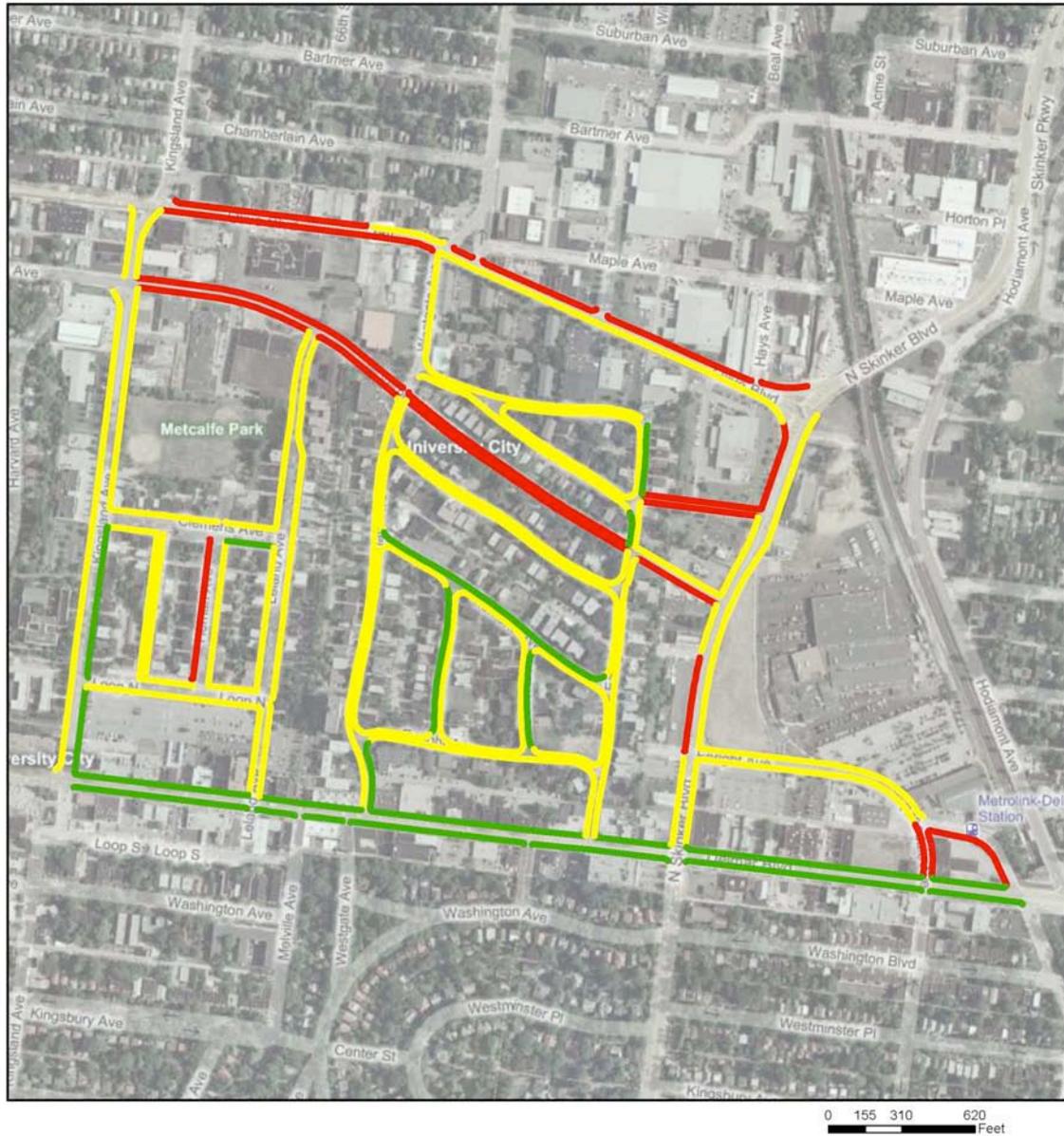
Image 4. A visual representation of the walk audit scores for all Parkview Gardens mid-blocks.

1. On collector roads, is there bicycle signage?
0% of streets have ample bicycle signage

22% of streets have some bicycle signage

78% of streets have no bicycle signage

2. If on a collector road, are there street markings (bike lanes, sharrows, etc.)?
0% of streets have ample street markings signage

0% of streets have some street markings

100% of streets have no street markings

3. Are there bicycle racks?
4% of streets have ample bicycle racks

30% of streets have some bicycle racks

66% of streets have no bicycle racks

4. If there are bike racks, they are located by...
75% of bike racks are located by residences

25% of bike racks are located by storefronts

0% of bike racks are located by transit stops

0% of bike racks are located by park entrances

5. Identify where bike racks are crowded or new racks are needed...

Bicycle racks are needed by the MetroLink stop, and in front of storefronts and residences

6. What is the condition of the street pavement?
31% of streets are in good condition

52% of streets are in fair condition

17% of streets are in poor condition

7. Does the street have potholes, grates, or other obstructions?
17% of streets have no obstructions

70% of streets have some obstructions

13% of streets have many obstructions

8. What is the condition of lighting for cycling?
17% of streets have good lighting conditions for cycling

39% of streets have fair lighting conditions for cycling

44% of streets have poor lighting conditions for cycling

9. Do drivers respect cyclists?
30% of streets carry drivers that show cyclists a lot of respect

61% of streets carry drivers that show cyclists some respect

9% of streets carry drivers that are disrespectful or unaware of cyclists

10. Is there enough space to safely bike outside of the door zone?
17% of streets have plenty of space to ride outside of the door zone

26% of streets have a little room to ride outside of the door zone

57% of streets have no room to ride outside of the door zone

11. Are cars going too fast to feel safe while cycling?

65% of streets carry cars that travel at safe speeds

31% of streets carry cars that travel a little too fast

4% of streets carry cars that travel way too fast

12. Would an average citizen feel safe cycling on this street?

35% of streets are very safe for the average citizen to ride a bicycle

35% of streets are fairly safe for the average citizen to ride a bicycle

30% of streets are unsafe for the average citizen to ride a bicycle

BICYCLING ANALYSIS

When asked how to improve cycling conditions, the most frequent improvement idea shared was to add a bicycle lane to existing streets. Bike racks, street sweeping, improved lighting, and decreased vehicle speeds were also mentioned. Although there are bicycle racks at the MetroLink stop, they were not visible enough since the bike team could not see them.

It would have been helpful to have the cycling teams analyze some major intersections. With residential intersections, the walk teams' analysis was on a similar scale to what a cyclist would experience, but larger intersections present different challenges to cyclists (e.g. what lane to ride in), and this information was not captured in this field study.
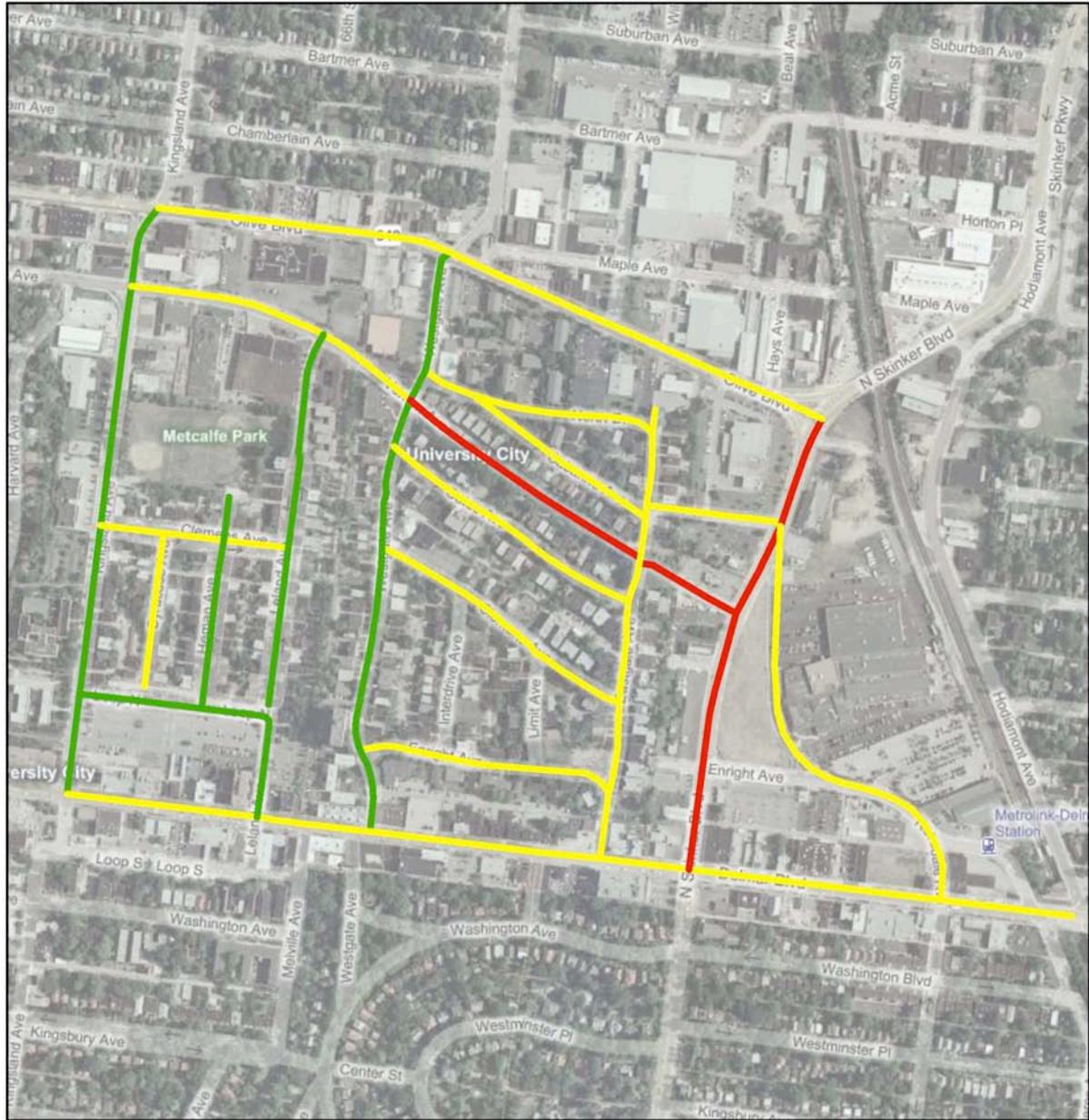
I*mage 5*. A graphical representation of the walk audit scores for all Parkview Gardens intersections.

Top 2 Priority Issues Summary

At the end of the walk/bike audit, each team shared their top two priority issues to be addressed in their surveyed area. The below categories were created to capture the themes of each team's priority issues. The walk teams' priorities were balanced among the categories below, whereas the bicycling teams emphasized the lack of bicycle lanes, with the other priorities being secondary.

Top 2 Priority Issues Categories
Walk Teams
Lighting deficiencies
Sidewalk Obstructions and Barriers
Sidewalk Deterioration
Street Quality
Curb-cuts Interfere with the Pedestrian
Bicycling Teams
Lack of bicycle lanes
Drivers not respecting cyclists
Cars moving too fast
Lack of bicycle racks

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INTERSECTION FORM

Team Number _____

Intersection of

_____ **&** _____

Sidewalks
1) Are there curb-ramps present on all corners?
☐ All   ☐ Some   ☐ None

2) Are curb-ramps perpendicular to curb?
☐ All   ☐ Some   ☐ None

Crosswalks
For intersections **with stoplights**,

3) How many crosswalks are present?
☐ All   ☐ Some   ☐ None

4) How many crosswalks have walk signals?
☐ All   ☐ Some   ☐ None

5) How many crosswalks have count-down timers?
☐ All   ☐ Some   ☐ None

6) Are count-down timers long enough?
☐ Yes   ☐ Too short   ☐ No countdown

For intersections **without stoplights**,

7) Is there signage indicating a crosswalk or the presence of pedestrians?
☐ Some   ☐ None needed   ☐ Needed but not present

8) Is there lighting by the intersection?
☐ Adequate   ☐ Sparse   ☐ None

POINT SYSTEM
Left box = 2 points
Middle box = 1 point
Right box = 0 points
"Other observations" = add or reduce points based on intangibles, if necessary

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9) Are cars parked (and trees planted) far enough away from the intersection to allow motorists/cyclists to see pedestrians?

☐ Ample vision   ☐ Some vision   ☐ Cars/trees block vision

Safety
10) Are cars moving at an appropriate speed through the intersection?
☐ Yes/no cars   ☐ Some   ☐ None

11) Do you feel safe crossing the street?
☐ Very safe   ☐ Fairly safe   ☐ No

If not, what would you change?

_____

12) Do you feel safe waiting/standing at the intersection?
☐ Very safe   ☐ Fairly safe   ☐ No

If not, what would you change?

_____

Other Observations

TOTAL SCORE: _____out of 16
12+ = Celebrate! You have a great place to walk!
5-11 = I can walk, but there's work to be done.
0-4 = A nightmare for walking.

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MID-BLOCK FORM

Team Number _____

Street Name _____ **Side of street** _____

Between _____ **&** _____

Sidewalks

1) Sidewalk is continuous and smooth on this block…
☐ In all places   ☐ In some places   ☐ No sidewalk

2) What is the condition of the buffer/tree lawn?
☐ Looks great   ☐ Decent   ☐ No Buffer

3) Do driveway curbcuts interfere with the pedestrian?
☐ Hardly/No driveways   ☐ Sometimes   ☐ Often

4) Are there permanent obstructions?
☐ None   ☐ Some   ☐ Many

If yes, please describe:_____

5) How many people can walk comfortably side-by-side?
☐ 3+   ☐ 2   ☐ 1 or no sidewalk

6) Are there pedestrian-scale lights along the street?
☐ Adequate   ☐ Some needs   ☐ None present

7) Is there shade along the walk?
☐ A lot of shade   ☐ Some shade   ☐ No shade

Building Conditions

8A) If a **commercial** area, are buildings built up to the sidewalk?
☐ All   ☐ Some   ☐ None

8B) If a **residential** area, what is the condition of buildings?
☐ Good   ☐ Fair   ☐ Dilapidated/Vacant

9A) If a **commercial** area, do the majority of the buildings have windows facing the street?
☐ All   ☐ Some   ☐ None ☐ N/A

9B) If a **residential** area, are buildings close enough to provide eyes on the street?
☐ All   ☐ Some   ☐ Too far setback

10) Is trash or graffiti present?
☐ Little   ☐ Some   ☐ Lots

Safety

11) How safe do you feel walking here?
☐ Safe   ☐ Relatively Safe   ☐ Unsafe

12) Is walking here an enjoyable experience?
☐ Enjoyable   ☐ Somewhat Enjoyable   ☐ Not enjoyable

If not, what would you change?
_____

Transit Data (not for walk score)

13) Is there a transit stop?
☐ Yes and it's safe   ☐ Yes but it's not safe   ☐ No

14) If it has a shelter, which amenities are present?
☐ Seating   ☐ Lighting   ☐ Schedules   ☐ None/NA

15) What is the overall condition of the shelter?
☐ Good   ☐ Fair   ☐ Poor   ☐ No Shelter

16) Is the transit stop easy for disabled users to access and use?
☐ Easy   ☐ Relatively Easy   ☐ Difficult

Other Observations

TOTAL SCORE: _____ out of 24
19+ = Celebrate! You have a great place to walk!
11-18 = I can walk, but there's work to be done.
0-10 = A nightmare for walking.

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BICYCLING FORM

Team Number _____

Street_____

Signage

1) On collector roads, is there bicycle signage?
☐ Ample   ☐ Some   ☐ None

If yes, what type?
_____

Bicycle Facilities

2) If on a collector road, are there street markings (bike lanes, sharrows, etc)?
☐ Ample   ☐ Some   ☐ None

3) Are there bicycle racks?
☐ Ample   ☐ Some   ☐ None

4) If yes, they are located by…
☐ Residences
☐ Storefronts
☐ Transit Stops
☐ Park Entrances
☐ Other

5) Identify where bike racks are crowded or new racks are needed:_____

Safety

6) What is the condition of the street pavement?
☐ Good   ☐ Fair   ☐ Poor

7) Does the street have potholes, grates or other obstructions?
☐ None   ☐ Some   ☐ Many
What types? Check all that apply.
☐ Cracks
☐ Debris
☐ Glass
☐ Potholes
☐ Grates   ☐ Other _____

8) What is condition of lighting for cycling?
☐ Good   ☐ Fair   ☐ Poor

9) Do drivers respect cyclists?
☐ Very much   ☐ Some   ☐ Disrespectful/unaware

10) Is there enough space to safely bike outside of the door zone?
☐ Plenty of space   ☐ A little tight   ☐ Not enough

11) Are cars going too fast to feel safe while biking?
☐ Not an issue   ☐ A little fast   ☐ Way too fast

12) Would an average citizen feel safe cycling on this street?
☐ Very safe   ☐ Fairly safe ☐ Unsafe

Why or why not?
_____

13) How would you improve cycling conditions?

_____

_____

Other Observations

POINT SYSTEM
Left box = 2 points
Middle box = 1 point
Right box = 0 points
"Other observations" = add or reduce points based on intangibles, if necessary

TOTAL SCORE: _____out of 20
12+ = Congrats! Almost anyone can bike here and feel safe!
6-11 = Can bike, but not a preferred route.
0-5 = Terrifying. Many improvements needed!

Photo Log

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TEAM # _____

PHOTO #	STREET	BETWEEN _____ & _____	PHOTO DESCRIPTION