

Lincoln Park Community Impact Measurement Report on 2013, 2016 and 2019 Data

(Scientific Version)

Introduction

NeighborWorks mandated the Community Impact Measurement project for its funding partners such that it could report out on the work that it was making possible. The two broad questions of interest that guided this project were as follows: 1) To what extent have resident perceptions of their community changed over time? 2) To what extent have actual, observable differences been made to building structures and general community/street conditions over time?

Organizations were asked to create a target area in which to collect measurements that pertained to the two above questions in 2013, and to continue collecting data that may assist with answering those questions over time. One Roof Community Housing is active in Duluth and the surrounding area. However, it and other organizations have chosen to focus special attention on the Lincoln Park neighborhood and so the selected target area that was chosen resides within this neighborhood (see Appendix: Map of target area for a graphical representation).

In 2013, 2016, and 2019, survey crews administered surveys in the target area which extends from 27th Avenue West to the new Lincoln Middle School and from 1st Street up to Skyline Parkway in Duluth, MN. Additionally, surveyors observed every ‘block’ within the target area and scored them according to the general condition of structures on a given block. Lastly, survey crews observed selected parcels (houses) in 2013, 2016, and 2019.

Methods

The survey contained questions about community perceptions about topics such as how safe the community was, how likely people would be to help each other, and the direction the

community had changed among other things. To see the survey that was administered in 2019, see Appendix: Resident Experience in the Community, Phase 3 (copies of the survey that was administered in 2013 and 2016 are available via request). In 2013, 200 survey responses were collected, in 2016, 234 survey responses were collected, and in 2019, 219 survey responses were collected. These surveys were collected in a random fashion, so some residents may have completed the survey in multiple years, but the majority of the residents who completed the survey likely only completed it in one of the years.

Additionally, in 2013, 2016, and 2019, all 105 blocks that fell within the target area were observed. Individuals assessed each block for the rough percentage of each structure type (i.e. single family homes, multiple family homes, etc.) that were in good condition as well as how much trash there was, and street conditions as well as other items of interest. For the instrument that observers used to assess block conditions in 2013, 2016, and 2019, see Appendix: Block Conditions.

While parcel observations were made, this report focuses on resident perceptions as well as general block conditions so details about the parcel observations are not included here.

Results and Discussion

General notes about this section

Only statistically significant models/results are graphically represented in this section. Additionally, the threshold for significance was set at $p \leq 0.01$ rather than the typical $p \leq 0.05$ due to large number of analyses that were performed (46 overall models with up to 372 possible post-hoc comparisons if all overall models were to be significant).

Typically, statistical analysis is conducted upon a data set with only a limited number of tests that are justified by theory driven hypotheses. As this is an atheoretical work where extensive analysis was conducted to examine a variety of interest questions, the number of tests is much higher than is typical. By reducing alpha to 0.01, the estimated number of false positives in overall model reporting has been reduced from over two to less than one. It has also reduced the estimated number of false positives on the post-hoc comparisons that were actually conducted based on overall models returning significance from just over one to a number that is close to zero. The result is that the differences that this paper details can be reported with a greater degree of confidence.

The results and discussion section is broken into three broad categories of analyses plus a free response analysis. The first section combined the block observation data with the resident experience in the community data (each resident survey was assigned to the block it resided in and then results were aggregated such that each block returned its own average survey response for each question of interest) and regression analyses were performed. The second section examines resident experience survey data for 2019 alone and then also with comparisons over time. The third section examines block observation data over time. The last section took most of the free response questions in the resident survey and categorized these responses by topic. These sections were spaced such that the charts and accompanying text fell on the same page. Please note that when statistical significance was found on overall models, post-hoc comparisons were always used instead of planned comparisons. The reason for this is because One Roof Community Housing expects improvement over time; post-hoc comparisons allow for deteriorations to be detected if in evidence in a way that only conducting planned comparisons

may hinder. A last note is that this is not a theory driven paper and as such, there are no hypothesis nor research questions beyond just assessing how scores have changed over time.

Block to resident analyses

A significant relationship between condition of building structures (single family homes) and satisfaction with community had been found in 2016, but this relationship was no longer significant in 2019 with only a trend existing. A number of other analyses were conducted to determine if the assessed condition of blocks had a relationship with how residents responded to questions on the survey but no other significant relationships were found in the pre-planned analyses, and additional analyses that would deviate from the planned analyses were not conducted. Notably, there were no statistically significant relationships between number of vacant lots and number of vacant buildings with any of the items in the resident experience in the community survey, although some trends were observed.

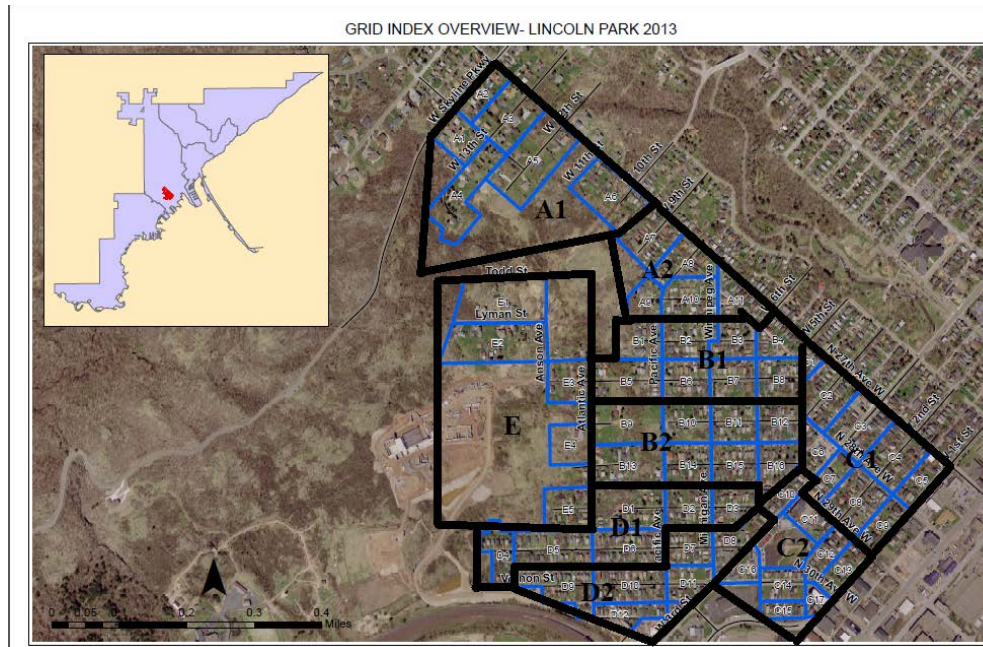
The block to resident analyses failed to return significant results for the most part in 2016 (the only exception being noted above where a relationship had been found between condition of single family homes and satisfaction) as well as in this round of analysis. There are three key reasons as to why statistically significant results may fail to be obtained in this section. The first reason comes down to lack of variance between blocks. The vast majority of blocks had zero observed vacant lots and zero observed vacant buildings. Additionally, the vast majority of blocks had almost all structures indicated as being in sound condition. When blocks are fairly uniform in terms of observed conditions, it becomes harder to detect a relationship between conditions and resident survey responses because so many of the blocks are similar to each other and in order for relationships to be found, there needs to be some variance within both measures.

The second reason comes down to the lack of sensitivity in the structure condition measure. The structure conditions on the block could fall into one of five categories where a block that had half of its properties in distress would return the same score as one where only one out of every four was in distress; meanwhile, there was a full point difference between a block that had all structures in good condition vs. a block that had only one structure that was not in good condition. This scale makes sense from a practical standpoint (the more sensitive the measure, the harder it is to get observers across the country to score measures with any degree of reliability between organizations), but it does have an impact when it comes to the analysis component later. The last reason has to do with how properties are not uniformly distributed throughout these blocks. Some blocks may have only two properties bound within them while others may have as many as 20-30 properties. This means that in this analysis, one resident on a block may have as much influence in the analysis as fifteen residents on another block while many other blocks end up being excluded from the analysis outright because no resident surveys were collected within them.

Resident experience in the community survey results

The first section for the resident experience in the community survey compares subdistricts within the target area in 2019. A map of the target area with a graphical representation that shows where each subdistrict lies is shown further below in this section for ease of reference as well as in the Appendix. Following the subdistrict commentary, an analysis of differences over time is reported on. An analysis was planned to compare race on questions of interest, but the sample sizes for the race categories that were not Caucasian/White responses were too small. Additionally, there were no significant differences between homeowners and renters with respects to perceptions about the community, nor were there any gender differences with respects to perceptions about the community that met the statistical significance criteria.

The across time comparisons for the survey results were analyzed with one-way between subjects ANOVAs. Repeated measures ANOVAs were considered for this section but were ultimately rejected for two reasons: 1) there was no readily apparent way to match data in a way that would be straightforward and easy as random samples were used across 2013, 2016, and 2019 and the overlap between addresses would not be systematic and 2) to the extent that positive changes were expected to be observed over time, a one-way between subjects ANOVA was a more conservative approach relative to the repeated measures ANOVA such that if positive changes were observed using one-way between subjects ANOVAs, the evidence would be more compelling. For a summary of means and standard deviations for each question that was part of this analysis, see Table 1: Resident Experience Scores from 2013 to 2019.



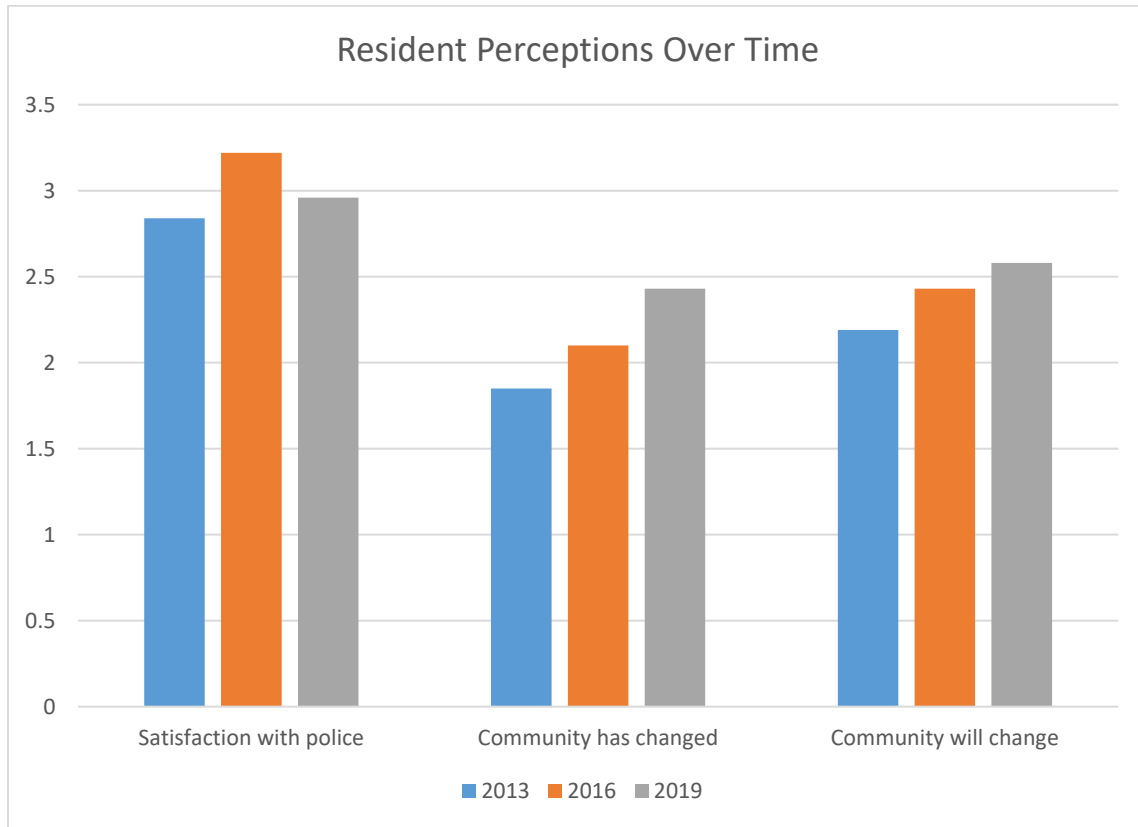
The above map shows how the Lincoln Park focus area was subdivided for the purposes of comparing how the subdistricts performed relative to the other subdistricts within the focus area.

A notable difference between the 2019 and 2016 data is that there were no longer significant differences between subdistricts. The common knowledge in 2016 was that the further up the hill, the better off the area was. This was borne out with the 2016 analysis finding that B2, C1, and C2 returned lower scores relative subdistricts A1 and E. However, these findings were not replicated in 2019.

This leads to the question of if the higher scoring subdistricts of 2016 returned lower scores in 2019, or if the lower scoring subdistricts of 2016 returned higher scores in 2019? The answer is that it is hard to tell. Trends exist, but significant increases or decreases were not typically observed within subdistricts when comparing their scores from 2016 to 2019.

Additionally, it should be noted that in 2016, most of the statistically significant differences that were reported on just met the threshold for statistical significance. It is possible that some of the statistically significant differences that were reported on in 2016 were just due to chance and were not a result of actual differences between subdistricts.

There were observed statistically significant differences in examining the 2019 results relative to the 2013 and 2016 results at the overall level. The below chart shows questions where significant differences exist.



A note, these are average scores in the chart above.

For Satisfaction with police: A four on this chart would mean that, on average, the residents in the given year thought the police response was “Very good.” A three means that they thought it was “Good,” a two means that they thought it was “Fair,” a one means that they thought it was “Poor,” and a zero means that they thought it was “Very poor.”

For the ‘community has changed’ question, a four on this chart would mean that, on average, the residents in the given year felt that “The community had improved a lot.” A three means that they felt “The community had improved some,” a two means that they felt that “the community had stayed about the same,” a one means that they felt “The community had declined some,” and a zero means that they felt “The community had declined a lot.” For the ‘community will change’ question, replace the past tense with future tense otherwise the values are exactly the same.

Satisfaction with the police appears to have decreased from 2016 to 2019; however, the only significant difference is between 2013 and 2016 and a score of around 3 still indicates an overall positive sentiment towards the police.

On the community has changed question, 2019 scores were significantly higher than both 2016 and 2013. On the community will change questions, the trend is apparent, but the only

significant difference is between 2013 and 2019. Please note that a score of '2' is not necessarily a negative indication in this section (while a score below '2' would be). If people feel really good about their community, stating that it had stayed about the same or would stay about the same could be considered an endorsement. That these questions are showing significant increases over time while a number of the other questions that were part of the pre-planned analysis did not return corresponding statistically significant increases indicates that something is happening, but it likely is not being directly captured by the survey questions.

It is possible that the business and housing developments that have been occurring mostly along Superior street within Lincoln Park may be driving these increases with respects to the optimism that is observed on the community has changed and will change questions. The vast majority of surveyed individuals ($N = 141$) responded that they believed that this development was very positive for the community. An additional 49 individuals responded that it would be somewhat positive. The remainder ($N = 25$) were either neutral or negative towards this development.

STATISTICAL REPORTING ON THIS SECTION

A one-way between subjects ANOVA was conducted to compare the mean scores across years on the following questions: Satisfaction in community, Willingness to recommend community, Willingness to volunteer, Satisfaction with police, Feelings of safety during day, Overall feelings of safety, Community has changed, and Community will change. The between subjects factor was year of survey response: 2013, 2016, and 2019.

Differences that failed to meet the threshold for statistical significance ($p \leq 0.01$) across years were observed for the following: Satisfaction in community, Willingness to recommend

community, Willingness to volunteer, Feelings of safety during day, and Overall feelings of safety. These questions are not commented on further. The means and standard deviations for all questions of interest can be found in Table 1: Residence Experience Scores from 2013 to 2019, which is at the end of this paper.

Prior to further analysis for the Satisfaction with police question, the Levene test for homogeneity of variance was used to examine whether there were serious violations of the homogeneity of variance assumption across groups such that Type I error might be increased, but no significant violation was found: $F(2, 585) = 1.266, p = 0.28$. The overall F for the One-Way ANOVA was statistically significant, $F(2, 585) = 7.093, p = 0.001$. This corresponded to an effect size of $\eta^2 = 0.02$, which is a moderate effect (roughly 30% of the variance in satisfaction with police can be accounted for by the year in which the survey was administered).

Post-hoc analysis using the Tukey HSD was conducted to examine all pair-wise comparisons. Based on this test (using $\alpha = 0.01$), it was found that the only significant difference was between the 2013 ($M = 2.84, SD = 1.08$) and 2016 ($M = 3.22, SD = 0.93$) responses.

Prior to further analysis for the Community has changed question, the Levene test for homogeneity of variance was used to examine whether there were serious violations of the homogeneity of variance assumption across groups such that Type I error might be increased, and a significant violation was found: $F(2, 610) = 6.088, p = 0.002$. For this reason, Welch's ANOVA was used instead of a One-Way ANOVA and the result was still statistically significant, $F(2, 398.855) = 14.620, p < 0.001$.

Because the Levene test found that the homogeneity of variance assumption had been violated, the Games-Howell test was used instead of the Tukey HSD for the post-hoc analysis.

Based on this test (using $\alpha = 0.01$), it was found that there were significant differences between 2013 ($M = 1.85$, $SD = 1.15$) and 2019 ($M = 2.43$, $SD = 1.05$) responses. The 2019 responses were also significantly higher than the 2016 ($M = 2.10$, $SD = 0.97$) responses and only the 2013 to 2016 comparison failed to yield statistically significant differences.

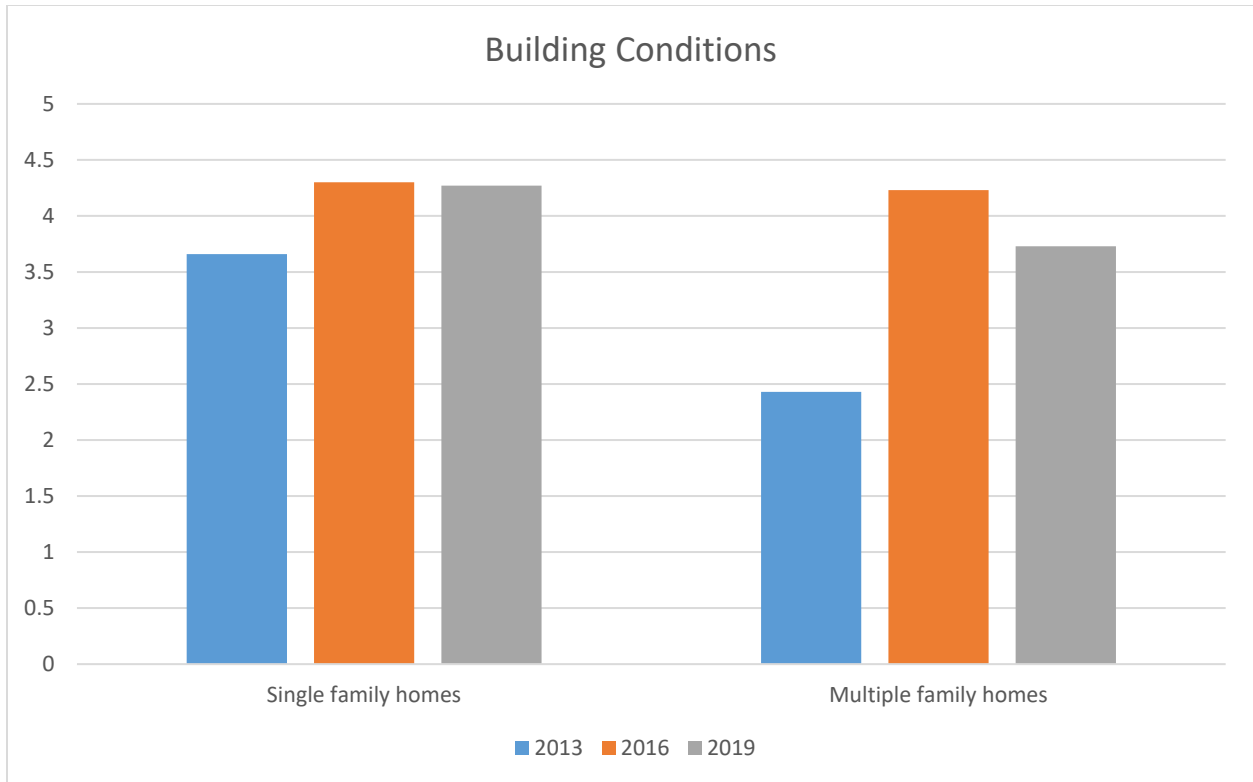
Prior to further analysis for the Community will change question, the Levene test for homogeneity of variance was used to examine whether there were serious violations of the homogeneity of variance assumption across groups such that Type I error might be increased, but no significant violation was found: $F(2, 620) = 1.493$, $p = 0.23$. The overall F for the One-Way ANOVA was statistically significant, $F(2, 620) = 15.597$, $p < 0.001$. This corresponded to an effect size of $\eta^2 = 0.03$, which is a moderate effect (roughly 35% of the variance in the Community will change responses can be accounted for by the year in which the survey was administered).

Post-hoc analysis using the Tukey HSD was conducted to examine all pair-wise comparisons. Based on this test (using $\alpha = 0.01$), it was found that the only significant difference was between the 2013 ($M = 2.19$, $SD = 1.06$) and 2019 ($M = 2.58$, $SD = 0.97$) responses.

Block observation results

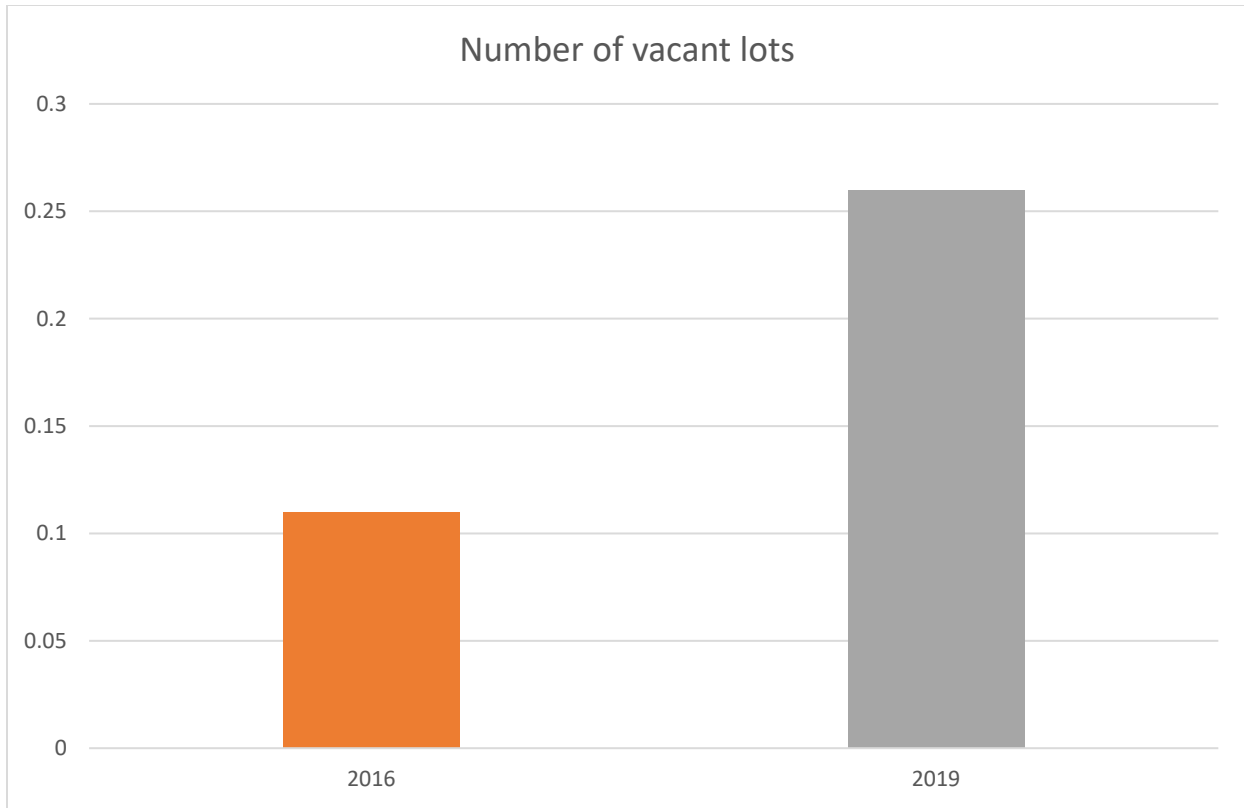
Differences over time for the block observation data were assessed with repeated measures ANOVAs for this section. The main difference from the resident experience in the community data that led to the utilization of repeated measures ANOVA comparisons instead of One-Way ANOVAs was that all blocks were observed in 2013 and in 2016 as well as in 2019 and so it was easy to match the blocks across time and this analyses type becomes the most appropriate type to utilize. A note, neither commercial, nor institutional, nor industrial properties were compared across time due to the very small sample size for these structure types. Additionally, after analyzing differences over time for the number of vacant lots for the 2016 report, it appeared that this item was operationalized in different ways in 2013 and 2016 such that the comparison is equivalent to an apples to oranges comparison and so this item was only compared for 2016 to 2019 using a paired samples comparison.

The overall findings in 2019 was that observed conditions either remained comparable to 2016 or decreased such that they were comparable to what was found in 2013. There were no statistically significant differences where 2019 outperformed 2016. For a summary of means and standard deviations for each question that was part of this analysis, see Table 2: Block Observation Scores from 2013 to 2019.



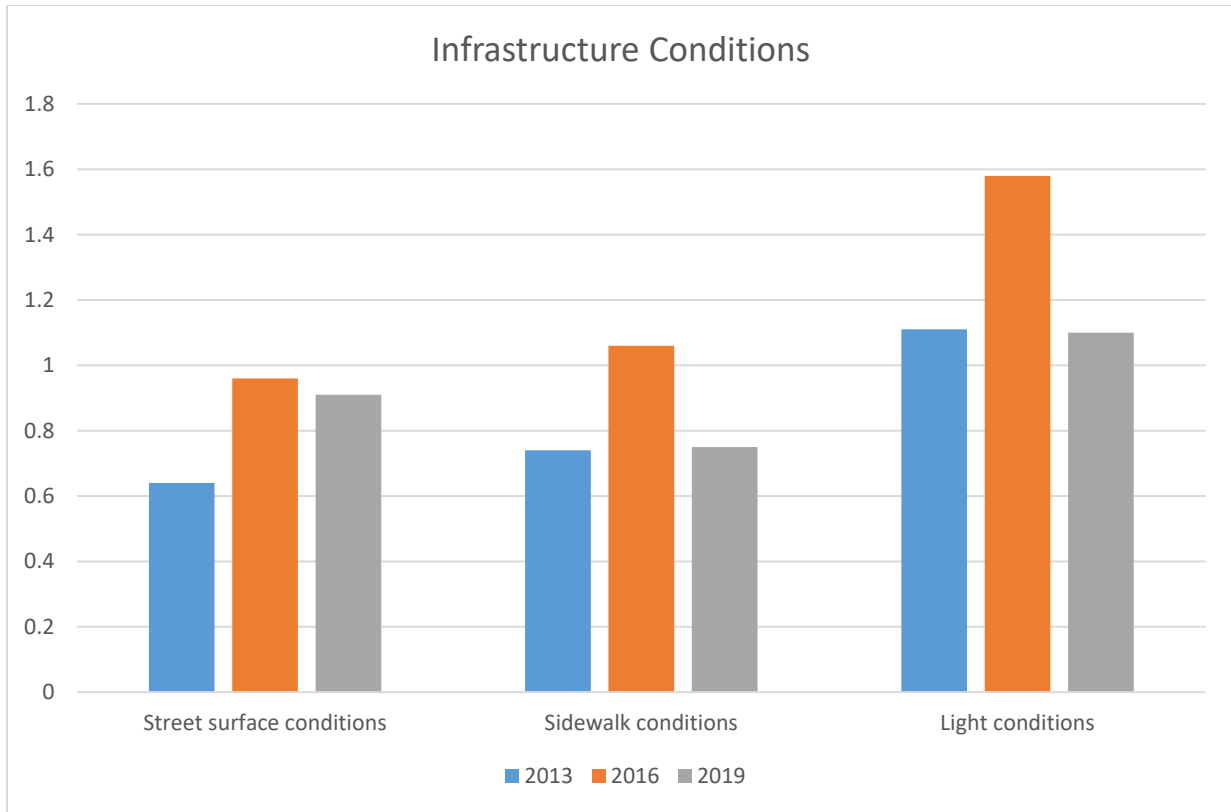
A note, these are average scores in the chart above. A five on this chart would mean that, on average, the structures within the blocks within a given year were “All” in good/sound condition. A four means that, on average, 75-99% of the structures within a given year were in good/sound condition. A three means that, on average, 50-74% of the structures within a given year were in good/sound condition. A two means that, on average, 25-49% of the structures within a given year were in good/sound condition. A one means that, on average, 1-24% of the structures within a given year were in good/sound condition. A zero means that, on average, none of the structures in a given year were in good/sound condition.

Please note that a score of ‘4’ or better could be considered to be good for this scale. To that extent, the condition of single family homes was already fairly good in 2013 and appears to have improved in 2016. The difference is a bit more marked when it comes to multiple family homes from 2013 to 2016. There were no significant differences between 2016 and 2019 on either measure, so while conditions have not improved, they appear to have remained stable. One thing to consider to contextualize this data, it appears that there are far more single family homes in the target area than multiple family homes. What this means is that improving the condition of one multiple family home would lead to a much larger increase in condition scores relative to improving the condition of one single family home.



A note, these are average scores in the chart above. This number is representing the average number of vacant lots per block. To contextualize this, as there are 105 blocks, 2019 had roughly 27 observed vacant lots while 2016 had roughly 12 observed vacant lots.

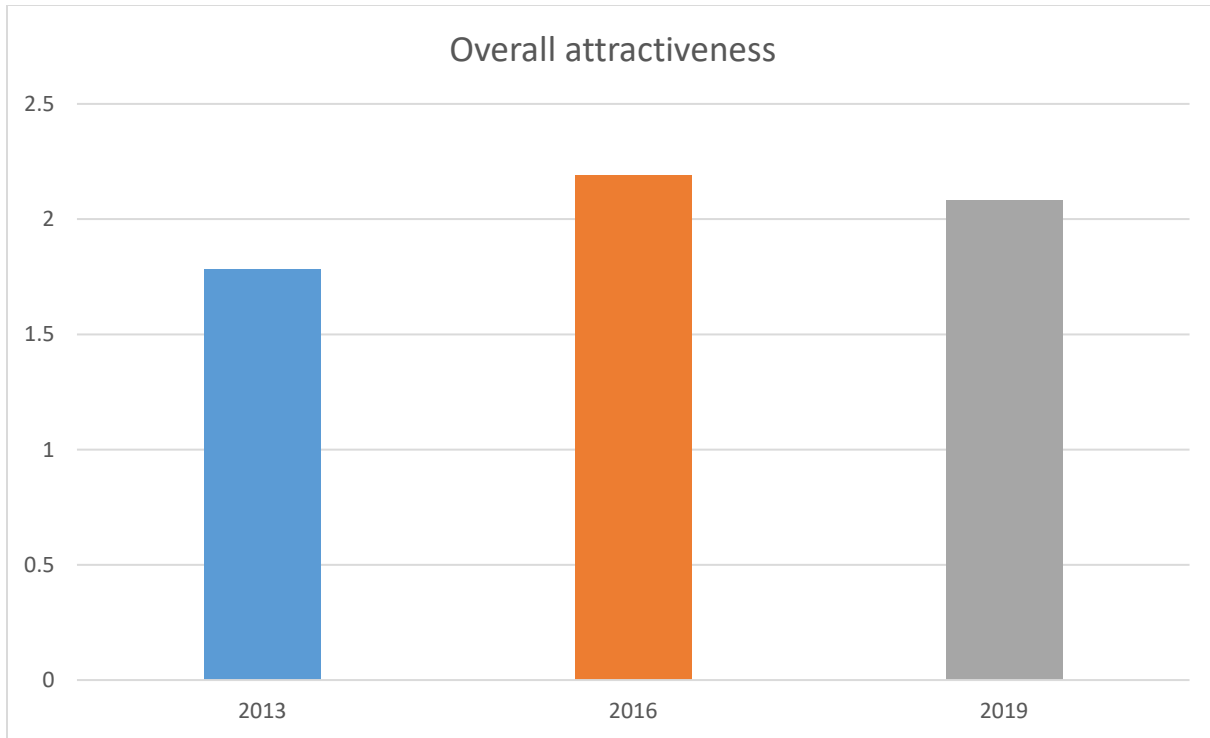
Please note that while higher scores on the building condition section immediately above this one indicated improvement, higher scores on this measure indicate deterioration. This measure was operationalized differently in 2013, so only comparisons between 2016 and 2019 were made. Many more vacant lots per block were observed in 2019 relative to 2016. This may be cause for concern. If the 2019 increase was the result of dilapidated properties being razed, it would have led to a corresponding decrease in the number of observed vacant properties; however, there were no significant differences between 2016 and 2019 with respects to observed vacant properties. This indicates that the number of vacant lots increased or that this measure was not reliably operationalized across years.



A note, these are average scores in the chart above. A two on this chart would mean that, on average, the items of interest within a given year were “Well maintained.” A one means that, on average, the items of interest within a given year were “Adequately maintained.” A zero means that, on average, the items of interest within a given year were “Poorly maintained.”

There were observed improvements across the board from 2013 to 2016 for street surface, sidewalk, and light conditions; however, observed conditions in 2019 remained the same to what was observed in 2016 (for streets) or decreased to levels comparable to what was observed in 2013 (sidewalks and lights). Note that a score that falls at or below ‘1’ means that there is considerable room for improvement. The target area may benefit from additional attention towards infrastructure.

An analysis was conducted on observed trash, graffiti, and illegal dumping; however, there were no statistically significant differences observed on these measures over time. A very strong trend existed with less trash being observed in 2019 relative to 2016 ($p = 0.02$).



A note, these are average scores in the chart above. A three on this chart would mean that, on average, the blocks in a given year were scored as appearing to be “Very attractive.” A two means that they were scored as “Somewhat attractive,” a one means that they were scored as “Somewhat unattractive,” and a zero means that they were scored as “Very unattractive.”

Please note that this question is fairly subjective and is included in the report as an interest question rather than as a hard point. A regression analysis was conducted for personal curiosity to see if the amount of trash would predict attractiveness and it did, so it is possible that at least some of the difference from 2013 to 2016/2019 may have been due to actual, observable differences in conditions over time. This instead of it just being the 2016 and 2019 observers being more generous in their scoring than the 2013 observers (but this is also a possibility).

STATISTICAL REPORTING ON THIS SECTION

A one-way repeated measures ANOVA was performed to evaluate if there were significant differences across years with respects to observed conditions of single family and multi-family properties. Structures contained within 105 blocks were observed in a systematic fashion in 2013, 2016, and in 2019. The Mauchly test was performed to assess possible violation

of the sphericity assumption and this was not significant for the single family assessment: Macuhly's $W = 0.949$, $\chi^2 = 4.207$, $p = 0.122$, nor was it significant for the multi family assessment: Macuhly's $W = 0.986$, $\chi^2 = 0.280$, $p = 0.869$. The overall F for differences across years was statistically significant for both single family property conditions $F(2, 164) = 21.657$, $p < 0.001$ as well as multi family property conditions $F(2, 42) = 10.505$, $p < 0.001$. These differences corresponded to respective effect sizes of single family partial $\eta^2 = 0.21$ and multi family partial $\eta^2 = 0.33$.

The post-hoc pairwise comparisons were conducted using $\alpha = 0.01$. For single family property conditions, significant differences were observed between 2013 ($M = 3.64$, $SE = 0.13$) and 2016 ($M = 4.34$, $SE = 0.10$), a difference was also observed between 2013 and 2019 ($M = 4.27$, $SE = 0.08$), but no difference was observed between 2016 and 2019. For multi family property conditions, significant differences were observed between 2013 ($M = 2.36$, $SE = 0.34$) and 2016 ($M = 4.05$, $SE = 0.20$), a difference was also observed between 2013 and 2019 ($M = 3.73$, $SE = 0.34$), but no difference was observed between 2016 and 2019. To summarize, 2016 and 2019 were equivalent to each other on both the single family and multi family condition assessments and both were observed to contain more structures in sound condition than what was observed in 2013.

A paired samples t-test was conducted to determine if there were significant differences between 2016 and 2019 with respects to number of observed vacant lots per block. This test did find a significant difference between the two years, $t(95) = 2.845$, $p = 0.005$. This corresponds to an effect size of $d = 0.40$. Significantly more vacant lots were found per block in 2019 ($M = 0.25$, $SD = 0.52$) than in 2016 ($M = 0.10$, $SD = 0.37$). The overall model for the one-way

repeated measures ANOVA was not significant for number of observed vacant properties, so vacant properties is not commented on further.

A one-way repeated measures ANOVA was performed to evaluate if there were significant differences across years with respects to observed infrastructure conditions with the condition of streets, sidewalks, and street lights being assessed. The Mauchly test was performed to assess the possible violation of the sphericity assumption and this was significant for the street assessment: Macuhly's $W = 0.795$, $\chi^2 = 21.839$, $p < 0.001$, for the sidewalk assessment: Macuhly's $W = 0.868$, $\chi^2 = 10.582$, $p = 0.005$, and for the light assessment: Macuhly's $W = 0.890$, $\chi^2 = 7.012$, $p = 0.03$.

As the assumption of sphericity was violated for all three of the evaluations, the Greenhouse-Geisser ϵ correction factor was applied to adjust the degrees of freedom for F in all of the tests that follow. Even with the adjustment, the overall model remained significant for all three assessments, street conditions $F(1.659, 159.286) = 6.505$, $p = 0.004$, sidewalk conditions $F(1.767, 134.324) = 7.176$, $p = 0.002$, and light conditions $F(1.801, 109.880) = 11.433$, $p < 0.001$. These differences corresponded to respective effect sizes of street condition partial $\eta^2 = 0.06$, sidewalk condition partial $\eta^2 = 0.10$, and light condition partial $\eta^2 = 0.16$.

The post-hoc pairwise comparisons were conducted using $\alpha = 0.01$. For street conditions, significant differences were observed between 2013 ($M = 0.64$, $SE = 0.07$) and 2016 ($M = 0.96$, $SE = 0.09$), a difference was also observed between 2013 and 2019 ($M = 0.91$, $SE = 0.08$), but no difference was observed between 2016 and 2019. For sidewalk conditions, significant differences were observed between 2013 ($M = 0.74$, $SE = 0.08$) and 2016 ($M = 1.08$, $SE = 0.08$), a difference was also observed between 2016 and 2019 ($M = 0.75$, $SE = 0.09$), but no difference was observed between 2013 and 2019. For street light conditions, significant differences were

observed between 2013 ($M = 1.11$, $SE = 0.05$) and 2016 ($M = 1.58$, $SE = 0.08$), a difference was also observed between 2016 and 2019 ($M = 1.10$, $SE = 0.10$), but no difference was observed between 2013 and 2019. To summarize, 2016 and 2019 were equivalent to each other on the street condition assessment and assessed to be in better condition than in 2013. On both the sidewalk and street light assessments, the 2016 assessment found these components to be in better condition than in 2013 and 2019. 2013 and 2019 did not differ significantly from each other on these two assessments.

The cleanliness/upkeep measures that assessed trash, graffiti, and illegal dumping all failed to obtain significant overall F values so are not commented on further beyond a mention that there was a strong trend for the overall model on trash that just missed the cutoff for being reported as being statistically significant.

A one-way repeated measures ANOVA was performed to evaluate if there were significant differences across years with respects to observed attractiveness of the blocks. The Mauchly test was performed to assess the possible violation of the sphericity assumption and this was significant for the attractiveness assessment: Macuhly's $W = 0.928$, $\chi^2 = 7.692$, $p = 0.02$.

As the assumption of sphericity was violated for this evaluation, the Greenhouse-Geisser ϵ correction factor was applied to adjust the degrees of freedom for F in this test. Even with the adjustment, the overall model remained significant for the attractiveness assessment, $F(1.866, 194.037) = 5.026$, $p < 0.001$. This difference corresponded to an effect size of partial $\eta^2 = 0.10$

The post-hoc pairwise comparisons were conducted using $\alpha = 0.01$. Significant differences were observed between 2013 ($M = 1.78$, $SE = 0.07$) and 2016 ($M = 2.19$, $SE = 0.07$), a difference was also observed between 2013 and 2019 ($M = 2.08$, $SE = 0.09$), but no difference was observed between 2016 and 2019.

Categorizing free response answers

Additionally, the 2019 free response question answers were categorized by topic area. Please note that this part of the report should be considered with extra scrutiny because it is hard to sort answers into categories in a way that does not have some sort of bias in it. One Roof tried to do this in an objective way and created categories based on common themes that emerged during the categorization process, but if a different entity had done this instead of One Roof, this section would likely look very different. This section is only provided for general information and is also One Roof's attempt to give voice to the people who gave their time in completing a survey to the best of its ability.

Responses could be assigned to more than one category (for example, "We like our neighbors but sometimes our cars get broken into," would have been scored as falling into "Good place/good people" as well as "Crime is an issue.") A last note is that there are a large number of nonresponses for the free response questions as residents were far more likely to skip these questions than the questions where they just had to pick an option. For this reason, the percentage of all responses that fell into a given category is provided in addition to the raw count of responses. A theme needed to account for at least 5% of all responses in order to be included in this section.

Please note that from a scientific method perspective, this section is the most methodologically unsound section as one person coded all responses. As a result, there are no reliability reports to generate. There were no planned themes/categories prior to examining the responses and the categories were created after a preliminary review based on what appeared to be emerging most frequently. This section has only been provided in an attempt to roughly surface common free response sentiments and should likely not be used for advocacy.

A note with respects to the City of Duluth and the present administration is provided here for some context. One of the common themes we observed was that, “The city could do more.” These comments were almost exclusively oriented around infrastructure with streets being the most common mention. However, the new Lincoln Park businesses were also frequently mentioned as a positive. The scene here in 2015 was very different than it is now in 2019. Despite its reputation for creating an environment that is not friendly for small businesses, the city has been providing generous business loans to small businesses that are located in Lincoln Park since 2016. It cannot be stated that the city is exclusively responsible for the emergence of the new businesses along Superior Street, but it would be an extremely bizarre coincidence if the observed changes were completely unrelated to the city’s efforts.

For the “Please describe why you feel this way?” question responses related to the satisfaction with community and willingness to recommend community responses, the following emerged as common themes: This is a good place/good people, there are crime issues/problem people, and the city can do more. Residents appear to fall into one of two camps for the most part, those who really like the community and those who have concerns about crime and safety. See table below:

Category	Examples	Number of responses in this category
This is a good place/good people	Good place to live, great people/Safe, nice neighbors/Neighbors are wonderful	142 (38% of responses)
Crime issues/problem people	Too much activity/Crime is moving up the hill/Used to feel like could walk down street, now can't/A sense of civic responsibility is greatly lacking/The people living here can be noisy and problematic	114 (30% of responses)
The city can do more	Don't like high RE Taxes and street neglect/Happy with mostly everything but my streets are awful/Bad roads/Really like it here, but roads are garbage	25 (7% of responses)

For the “Please describe why you feel this way?” question responses related to the community had changed and the community will change responses, the following emerged as common themes: This is a good place/people care, there are crime issues, new businesses in Lincoln Park. The developments along Superior Street are being noticed and appear to be driving a fair amount of the optimism that is noted further above in this report with respects to the direction that community had changed as well as the direction it would change. See table below:

Category	Examples	Number of responses in this category
Lincoln businesses	All the new businesses/Businesses, Brewery/Superior St improved/The Lincoln Park Business community has grown a lot	61 (21% of responses)
Crime issues	Crime is up/Drug, drug crimes/Backpack, “Shooting up”/Many break-ins/Had a few disturbing violent crimes	43 (15% of responses)
This is a good place/people care	A lot of people seem to be willing to help it improve/Nice friendlier neighbors/It is going in the right direction	38 (13% of responses)

For the “What else would you like One Roof to know about your community?” question, the following emerged as common themes: This is a good place, there are crime issues, homes need rehabilitation, the city can do more, and we need a grocery store. The two most dominant themes were optimism about the community as well as wanting more investment from the city with respects to infrastructure. It is clear from reading through these responses that many people take a large amount of pride in their community. It also appears that many people also feel neglected by the city, with the condition of roads being the most frequently cited issue. See table below:

Category	Examples	Number of responses in this category
This is a good place/Good things are happening	Happy to live here/Good place to live/Keep the great work going/Got a lot of good neighbors/Mission opened on 3 rd very good for community	27 (22% of responses)
The city can do more	Fix the pot holes/We just need new streets/More stop signs/Lighting needs improvement, it is so dark	24 (20% of responses)
Crime issues	More crime deals 24 hours a day/Crime up/Wish we could leave our house and cars unlocked like we used to	8 (7% of responses)
We need a grocery store	Need for grocery store, food accessibility is an issue/[Bring] community store back/Need a grocery store other than Kwik Trip	7 (6% of responses)
Homes need rehabilitation	Houses in area getting older and need new roofs/[Need] investment in distressed property/Could use a little rehab	7 (6% of responses)

Conclusion

First, one thing should be noted with respects to the alpha that was set in this work. As was previously stated, any analysis that did not return a p value of 0.01 or less was not treated as a significant finding. This threshold was set with the expectation that 2019 results would show across the board improvements over 2016 results in the same way that 2016 results showed across the board improvements over 2013. If this had been observed, the set p value would make it less likely that positive results were being reported when they did not merit reporting. However, as detailed in the paper, the 2019 results were a bit more mixed than anticipated where some improvements were noted in places and declines were noted in other places. This being said, the overall narrative of this piece would not have changed substantially had an alpha of 0.05 been set. On 2016 to 2019 comparisons, overall satisfaction with the police would have been noted to have declined, multifamily structure conditions would have been noted to have declined, and there would have been less trash observed in 2019 relative to 2016.

There are two primary ideas that this report has surfaced up. The first is grounded in the subdistrict comparisons on the resident experience survey. In 2016, it appeared that there was an overall trend towards more optimism towards the top of the hill relative towards the bottom of the hill. This effect was slight, but was a statistically significant difference. This effect is no longer found in 2019, which indicates that to the extent that this area used to be stratified, this may be becoming less true over time.

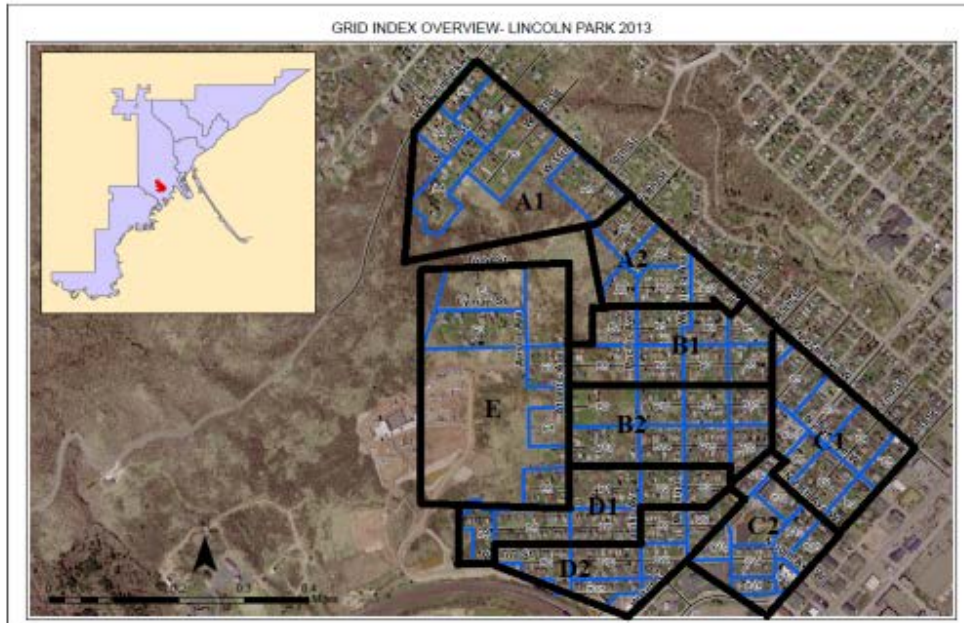
The other notable finding pertains to the comparisons over time. These findings provide a mixed picture. On several of the block observation measures, 2019 scores decreased from 2016. In other places, they remained similar to 2016 levels, which were higher than 2013 levels. On the residence experience analysis, 2019 numbers remained comparable to 2016 on all

analyzed measures excepting the community has changed question: Residents were significantly more positive about the direction the community had changed in the past 3 years. Given the lack of observed significant improvements found in other parts of the analysis, it is difficult to determine what may be causing this improvement based on the available data returned from this project alone. However, the changes elsewhere in Lincoln Park, notably in the business district, may be a potential cause and the free response analysis provides some context as well. Overall, the relatively stable scores from 2016 to 2019 indicate that this area likely has not received as much attention from 2016 to 2019 as it did from 2013 to 2016. It may benefit from renewed attention such that the trends that were observed from 2013 to 2016 may be realized from 2019 to 2022.

Author comment: I am more than happy to provide additional information/analyses types that are not in this report that pertain to the data if there is a desire for this. I am also more than happy to present the data in a different way if this would be helpful. Please direct requests to Zachary Wittrock at zwittrock@1roofhousing.org

Appendix

Map of target area



Resident Experience in the Community, Phase 3

Please answer the following questions about the community in which you live.

1. Address:

First, we'd like to know your thoughts about living in your community.

2. How long have you lived in this community?

	Years	Months
How long have you lived in this community?		

3. Overall, considering everything, how satisfied would you say you are living in this community?

- Very satisfied
- Somewhat satisfied
- Somewhat dissatisfied
- Very dissatisfied

4. Please describe why you feel this way.

5. Right now, how likely are you to recommend this community to someone else as a good place to live?

- Definitely would recommend
- Probably would recommend
- Probably would not recommend
- Definitely would not recommend

6. Please describe why you feel this way.

Next, we'd like to know in what ways, if any, you are involved in the community.

7. During the past year did you participate in the following community activities?

Activities	Yes	No	Not applicable
Participated in a community, resident, or tenant association	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Volunteered to help others in the community	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Participated in a community improvement project, such as a clean-up, community gardening, or other beautification effort	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Supported local business events, such as a sidewalk sale or "shop local" day	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Participated in an organized community social event, such as a festival, block party, or other celebration	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Supported a local political organization, candidate, or ballot initiative	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Participated in an advocacy group, such as a school parent-teacher association, environmental organization, or labor union	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Personally took action to improve the community, such as reporting a hazard or contacting authorities about an incident	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

8. Right now, how willing are you to become involved in your community by working with others to make things happen?

- Very willing
- Willing
- Somewhat willing
- Not that willing

9. How much of a positive difference do you feel that you, yourself, can make in your community?

- A great deal
- A fair amount
- Some
- A little or none

We are also interested in the ways in which other residents are involved in the community.

10. How likely would you say it is that people in your community would help out if the following occurred?

	Very likely	Somewhat likely	Somewhat unlikely	Very unlikely
I needed a ride somewhere	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I needed a favor, such as picking up mail or borrowing a tool.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
An elderly neighbor needed someone to periodically check on him or her.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A neighbor needed someone to take care of a child in an emergency.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Now, please tell us a little about services in the community.

11. How would you rate the following public services in your community?

	Very good	Good	Fair	Poor	Very poor	Not applicable
Police response	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fire department response	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ambulance response	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Trash collection	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other public service (e.g. snow removal, street cleaning)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

12. If you selected "other public service" above, please describe here.

13. With regard to all responses to the previous question, please describe why you feel this way.

Next, we have a few questions about safety in the community.

14. How safe would you say you feel walking in the community during the day time?

- Very safe
- Somewhat safe
- Somewhat unsafe
- Very unsafe

15. How safe would you say you feel walking in the community at night?

- Very safe
- Somewhat safe
- Somewhat unsafe
- Very unsafe

16. How safe do you feel children and youth in your community are going to and from school?

- Very safe
- Somewhat safe
- Somewhat unsafe
- Very unsafe

17. How safe do you feel senior citizens are living in the community?

- Very safe
- Somewhat safe
- Somewhat unsafe
- Very unsafe

Now, we'd like to know about how you think the community has changed in the past three years.

For the following questions, please compare your community now to how it was three years ago. If you have lived in the community for less than three years, please compare it to how it was when you first moved in.

18. Compared to three years ago, how would you say your community has changed overall?

- The community has improved a lot
- The community has improved some
- The community has stayed about the same
- The community has declined some
- The community has declined a lot

19. Please describe why you feel this way.

Next, please share your thoughts about how you see the future of the community.

20. Thinking about *the next three years*, how would you say your community is likely to change?

- This community will improve a lot
- This community will improve some
- This community will stay about the same
- This community will decline some
- This community will decline a lot

21. Please describe why you feel this way.

Finally, we'd like to finish up with a few quick questions.

22. Do you currently rent your home or do you own it?

- I rent my home
- I own my home
- I live with family or friends
- Other

23. If you answered "Other" above, please describe.

24. Including you, how many people 18 years of age or older live in your household?

25. How many children under 18 years of age live in your household?

26. *If one or more:* What are the ages of those children?

27. *If one or more:* How many of those children are in childcare in your community?

28. *If one or more:* How many of those children attend school in your community?

29. *If one or more:* How satisfied are you with the school(s) those children attend?
- Very satisfied
 - Somewhat satisfied
 - Somewhat dissatisfied
 - Very dissatisfied
30. In what year were you born?
31. What is your gender?
- Male
 - Female
32. Do you consider yourself to be Hispanic, Latino, or Latina?
- Yes, Hispanic/Latino/Latina
 - No, not Hispanic/Latino/Latina
33. What is your race?
- Black/African American
 - Caucasian/White
 - American Indian/Aleut/Eskimo/Alaska Native
 - Asian
 - Native Hawaiian/Pacific Islander
 - Mixed race
34. Would you like to be entered into a raffle to possibly win a gift card worth \$50?
If you win, the gift card will be sent to the address you provided for the first question.
- Yes
 - No
35. Many new businesses and apartment buildings have opened in the Lincoln Park neighborhood within the last three years (notably on Superior street). Overall, which statement best describes how you feel about these changes?
- These changes are very positive for the community
 - These changes are somewhat positive for the community
 - These changes are neither positive nor negative for the community
 - These changes are somewhat negative for the community
 - These changes are very negative for the community

36. What else, if anything, would you like 1 Roof to know about your community?

Thank you for completing this survey.

Block Conditions

1. Block description

2. Parcel Use

	Found on Block. Check ALL that apply.	Predominant use. Check only ONE.
Single-family homes	<input type="checkbox"/>	<input type="radio"/>
Multiple-family dwellings	<input type="checkbox"/>	<input type="radio"/>
Commercial/Office (e.g., restaurants, stores, companies)	<input type="checkbox"/>	<input type="radio"/>
Industrial (e.g., factories, warehouses, auto repair)	<input type="checkbox"/>	<input type="radio"/>
Institutional (e.g., schools, libraries, churches)	<input type="checkbox"/>	<input type="radio"/>

3. How many vacant lots are on the block? Please enter the number of vacant lots OR check "Don't know/can't tell."

	Number	Don't know/can't tell
Vacant lots		<input type="radio"/>

4. How many vacant or abandoned buildings are on the block? Please enter the number of vacant or abandoned buildings OR check "Don't know/can't tell."

	Number	Don't know/can't tell
Vacant or abandoned buildings		<input type="radio"/>

5. Condition of Buildings — Percentage of structures in sound condition and good repair.

Building type	All	Most 75-99%	Many 50-74%	Some 25-49%	Few 1- 24%	None
Single-family homes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Multiple-family dwellings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Commercial/Office (e.g., restaurants, stores, companies)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Industrial (e.g., factories, warehouses, auto repair)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Institutional (e.g., schools, libraries, churches)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

6. Conditions of Open Spaces — Indicate each type of open space found on the block, then select the best description of the condition for each type found.

	Found on block (Check ALL that apply)	Well maintained	Adequately maintained	Poorly maintained
Parks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Playgrounds	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sports fields, ballparks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Community gardens	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Commons, squares, plazas	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

7. Public Infrastructure — Condition of infrastructure element

Element	Well maintained	Adequately maintained	Poorly maintained	Not applicable
Street surfaces	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sidewalks and curbs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Street lighting	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

8. Cleanliness/Upkeep — Visible on the block

Item	A lot	Some	None
Trash, debris, or litter	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Graffiti	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Illegal dumping	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

9. Overall Attractiveness — Taken as a whole, looking at all elements of the block (including the structures, open spaces, sidewalks, and street), how visually attractive is the block?

- Very attractive
 Somewhat attractive

- Somewhat unattractive
- Very unattractive

10. Comments about the Block — Use the space below to respond.

Tables

Table 1: Resident Experience Scores from 2013 to 2019					
Question	Year	N	Mean	Std. Deviation	Std. Error Mean
3. Satisfaction With Community	2013	200	1.9800	.86216	.06096
	2016	234	2.1880	.82796	.05413
	2019	219	2.1781	.72963	.04930
5. Willingness to Recommend Community	2013	200	1.8700	.90398	.06392
	2016	230	1.8870	.98695	.06508
	2019	219	2.0457	.82824	.05597
8. Willingness To Volunteer	2013	199	1.5930	.94289	.06684
	2016	232	1.4612	.97955	.06431
	2019	218	1.4450	1.00193	.06786
11. Police Responsiveness	2013	184	2.8370	1.08419	.07993
	2016	209	3.2153	.92848	.06422
	2019	195	2.9641	1.04721	.07499
14. Safety During Day	2013	199	2.4673	.69463	.04924
	2016	230	2.6043	.62340	.04111
	2019	219	2.5342	.65837	.04449
14-17. Overall Safety (Add all safety question responses together)	2013	193	8.1244	2.49062	.17928
	2016	203	8.2167	2.76153	.19382
	2019	208	8.2644	2.25913	.15664
18. Community Has Changed	2013	189	1.8466	1.14518	.08330
	2016	211	2.0995	.97324	.06700
	2019	213	2.4319	1.04670	.07172
20. Community Will Change	2013	195	2.1949	1.06150	.07602
	2016	214	2.4299	.92042	.06292
	2019	214	2.5841	.96897	.06624

*Please note that the numbers in the figure above correspond with the question number on the survey (see above exhibit) and is for the entire area. Additionally, responses were converted into numbers in order to be able to analyze the data. The lowest possible score (i.e. 'Definitely would not recommend community' or 'Very dissatisfied') was coded as a 0 and one point was added for each step up (i.e. 'Probably would not recommend community' would be a 1 and 'Somewhat dissatisfied' would be a 1). Additionally, the number of responses is different for each question as residents were allowed to not respond to any question they did not wish to, the overall safety question has a lower number of responses as residents needed to answer all of the safety questions to be included in this analysis.

Table 2: Block Observation Scores from 2013 to 2019			
Question	Year	Mean	Std. Error
Single Family Conditions	2013	3.639	.125
	2016	4.337	.103
	2019	4.265	.084
Multi Family Conditions	2013	2.364	.251
	2016	4.045	.203
	2019	3.727	.337
Number of Vacant Lots (per block)	2013	*	*
	2016	.10	.038
	2019	.25	.053
Number of Vacant Buildings (per block)	2013	.215	.057
	2016	.108	.039
	2019	.172	.054
Street Conditions	2013	.639	.074
	2016	.959	.087
	2019	.907	.084
Sidewalk Conditions	2013	.740	.077
	2016	1.078	.084
	2019	.753	.087
Light Conditions	2013	1.113	.047
	2016	1.581	.081
	2019	1.097	.097
Amount of Trash (Higher scores indicate less trash was observed)	2013	1.629	.051
	2016	1.552	.059
	2019	1.743	.052
Attractiveness	2013	1.781	.069
	2016	2.190	.069
	2019	2.076	.087

Please note that when applicable, assessments were converted into numbers in order to be able to analyze the data. The lowest possible score (i.e. 'Poorly maintained' or 'A lot' of trash) was coded as a 0 and one point was added for each step up (i.e. 'Adequately maintained' would be a 1 and 'Some' trash would be a 1). Additionally, N is not given because unlike the resident responses where respondents could refuse to answer any question, all 105 observed blocks were scored for all items.