

No Place Like Home:

The Need for and Effectiveness of Home Repairs Among Older Homeowners in St. Louis



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Finally, we want to thank the hundreds of older homeowners in St. Louis who answered our surveys and talked to us about home repairs. We dedicate this report to them in the hope that each of them can get the help they deserve so that they can age in place with comfort and dignity.

PARTNER ORGANIZATIONS



EXECUTIVE SUMMARY

Housing deterioration is a serious problem, especially for older homeowners. It can damage their physical and mental health, financial well-being, social connections, and ability to age in place. This report uses an innovative methodology to determine the need for home repairs based on a survey of how people experience their homes. The survey of 583 older homeowners in St. Louis found that the average cost of needed repairs was \$13,023. The most commonly needed repairs were installing electrical plugs and weatherization. The most expensive repairs were replacing the furnace and replacing the roof. Many homeowners reported that they did not have adequate air conditioning, a condition that could be fatal during heat waves in St. Louis. The extent of needed home repairs was strongly correlated with worry about being required to move. Home repair needs varied widely across the city, with Black residents and North City neighborhoods being disproportionately burdened. Perversely, those with the lowest incomes had the greatest need for repairs. The estimated total to address all needed repairs by older homeowners in St. Louis was over \$302 million.

Researchers also evaluated subsidized home repairs for older homeowners using a survey followed by in-depth interviews. Two-thirds reported that as a result of the repairs they felt “much more positive” about the quality of their life. About three-quarters of homeowners reported feeling “a lot more” or “somewhat more” safe in their homes following the repairs. Over 78 percent reported that the repairs made their financial burdens “a lot” or “somewhat” easier, and 72 percent reported that their home was now “a lot” or “somewhat” more valuable as a financial asset to them and their family. Over 7 in 10 homeowners reported that they were now “a lot more likely” to stay in their homes as a result of the home repairs. The two repairs that respondents reported had the greatest impact on their quality of life were accessibility modifications (grab bars, ramps, etc.) and electrical repairs, such as installing outlets.

The report concludes with a discussion of the implication of the findings and policy recommendations. Housing deterioration, the researchers conclude, is an issue of economic and racial injustice. In neighborhoods impacted by systemic racism and redlining, Black residents are disproportionately impacted by low home values and low incomes, therefore they are more likely to be unable to fund home repairs themselves, and the resources for subsidized repairs fall far short of the need. No one should be forced, as one respondent said, to choose between paying for their medicine or fixing their roof. Unfortunately, the waiting lists for home repairs in St. Louis are long; applicants must wait years. The report ends with recommendations to improve the home repair system, including working with private lenders to fund repairs for homeowners who can afford them; reforming the home repair system by centralizing intake and synchronizing home repairs with social services; prioritizing repairs that deliver the biggest improvement in quality of life per dollar spent; and establishing clear and achievable goals to hold actors in the home repair system accountable. The report concludes: the time to act is now.

INTRODUCTION: WHY HOUSING DETERIORATION IS A SERIOUS PROBLEM, ESPECIALLY FOR OLDER ADULTS



No one should have to choose between buying needed medicine and making basic repairs to their home. Unfortunately, as our research documents, this may often be the case in St. Louis. As we also document, this is a problem that disproportionately affects older Black homeowners. We are a wealthy society and there is no reason why everyone should not be able to live in a home that is safe and protects them from the elements. We do not need extensive research to make this point. Our research, however, does help us to understand the magnitude of the problem in St. Louis and appreciate how basic home repairs can profoundly improve peoples' quality of life. A home is not just a physical container; it is part of our identity, it links us to community, and it can give us a feeling of pride. Home repairs benefit not just the individuals who live in the home but the city more generally, stabilizing communities and the city's tax base. At the end of this report, we outline policy recommendations to make St. Louis a stronger and more just city.

“The thing is having to pick between do I do home repair or do I pay this bill? Do I do a home repair or buy this medicine?”

**– Older homeowner
in St. Louis**

Housing deterioration is a significant problem in the United States. A 2018 national study estimated that the total cost of needed home repairs for owner-occupied and rental homes was \$126.9 billion. Researchers have linked substandard housing to a broad range of physical and mental health issues. Black mold (*S. chartarum*), for example, has been linked to serious health problems, such as asthma. Injuries and illnesses associated with poor housing conditions cause billions of dollars annually in direct and indirect health care costs.

As global warming causes rising temperatures and more frequent heat waves, deteriorated housing with inadequate air conditioning is an increasingly serious problem. As one researcher summed it up: “Extreme heat can trigger fatal heat exhaustion or heat stroke, which occurs when a person’s body cannot cool itself enough. Heat stress can also kill by exacerbating underlying conditions, such as cardiovascular or respiratory disease.” Especially for older adults, air conditioning can be the difference between life and death. The City of St. Louis’ Climate Vulnerability Assessment “reported that the number of days of “dangerously extreme heat” doubled between 1970 and 2015 and will rise to 63 days a year by 2050. As a result of the “urban heat island effect,” the City of St. Louis is hotter than surrounding areas. Moreover, Black neighborhoods in North St. Louis report the highest temperatures and the most heat-related emergency room visits. As we document, Black homeowners in North St. Louis also are more likely to report no central air conditioning or inadequately functioning air conditioning.

Housing dilapidation can be especially damaging for older adults. The population of older adults in the United States is growing, and a majority are homeowners. In 2021, 78.6 percent of households 65 and older in the United States owned their own homes; in the City of St. Louis, it was 57.5 percent. Older adults prefer to “age in place,” and being able to stay in their homes has a positive impact on their mental and physical health. According to a recent AARP survey of people 50 years and older, 76 percent would prefer to remain in their current residence as long as possible, but only 46 percent anticipate they will be able to do so. The previously mentioned national study found that the most acute housing repair needs were among older adults, especially those with low incomes. Long-term, low-income homeowners with a median age of 68 had the highest average repair costs (\$4,187). One reason older homeowners are unable to stay in their homes is a lack of home maintenance and repairs. Even if older homeowners are able to age in place, a home in disrepair can undermine the quality of their lives, damaging their physical health, mental outlook, and community connections.

Older homeowners count on the equity in their homes to help them through retirement. Many still have mortgages; in 2016, 41 percent of homeowners aged 65 and older were making payments on a home mortgage. Even very low-income homeowners have substantial equity in their homes. In 2016, homeowners 65 and older with incomes below \$15,000 had on average \$80,000 in home equity, compared to only \$9,000 in non-housing wealth. This equity can be threatened when home repair needs are not addressed. The lack of preventive maintenance can

be costly. Failure to fix a leaky roof, for example, can lead to serious damage to the interior of the home, resulting in even more costly repairs. Housing deterioration does not only damage individual homeowners but also erodes the tax base of the city, depleting the tax base to fund schools and city services.

The problem of dilapidated housing is especially severe in older industrial cities like St. Louis where older housing needs extensive repairs and homeowners often have fewer resources to pay for them. In our needs survey, the average age of participants' homes was 97 years. The largely brick homes in St. Louis are solidly built but expensive to maintain and repair. Many older homeowners lack the resources to pay for needed home repairs. Demand for home repairs far exceeds supply. A poll of six home repair providers in St. Louis in the summer of 2021 found that they had 1,376 applicants on their waiting lists. Members of a network of St. Louis home repair providers reported receiving between 590 and 1,120 calls for assistance each month. Based on a survey of older adults in St. Louis, 60 percent reported that home modifications were not affordable and 29 percent agreed "somewhat or a great deal" that "not being able to maintain their home" would be a reason they might need to move out of their current dwelling. With limited incomes and little equity in their homes, many older homeowners are unable to access conventional home improvement loans.



DATA AND METHODS

The Need for Home Repair.

The idea for this research came out of the Vacancy Prevention Working Group, part of the St. Louis Vacancy Collaborative (stlvacancy.com). Our thinking was that failure to repair homes could lead to uninhabitable homes and more vacant housing. To guide future action, we wanted to find out more about the need for home repairs in St. Louis. Precisely pinning down the need for home repairs, however, is challenging. An accurate assessment would require sending skilled housing inspectors into each home to estimate the need for physical repairs to bring the home up to code. This is prohibitively expensive.

With the help of the Federal Reserve Bank of Philadelphia, however, we developed a different, more affordable way to estimate repair needs. The Philadelphia Fed conducted a study that identified repair needs based on responses to the American Housing Survey (AHS), a survey conducted by the Census Bureau every two years that asks residents a series of questions about their experience of the home, its condition, and its quality. The Philadelphia study used responses that addressed issues, such as whether the home was uncomfortably cold, whether it went without running water, and whether the roof had holes, to estimate the need for repairs. Using the questions in the AHS, the Philadelphia researchers generated 99 “repair scenarios.” The researchers then used a proprietary database, the RSMeans 2018 Contractor’s Pricing Database, to estimate the cost of each repair scenario. Using this method, they produced the national estimate cited earlier of \$126.9 billion for needed housing repairs.

We asked the Philadelphia researchers if they could replicate their research for St. Louis. Their methodology, however, is not feasible for most cities. The AHS sample concentrates on the 15 largest metropolitan areas, and the data does not enable researchers to drill down to the city or neighborhood level. The only way we could estimate the need for home repairs was to adapt the Federal Reserve Bank of Philadelphia methodology and apply it to the City of St. Louis. In 2020, the RRF Foundation for Aging gave us a grant to do just that: develop and distribute our survey to determine the need for home repairs. As part of the same grant, we also proposed administering a second questionnaire and conducting qualitative interviews of older adult homeowners to explore the effects of subsidized home repairs.

Our needs survey instrument uses people’s experiences of their homes to estimate the need for repairs. By revising the AHS questions based on feedback from our experienced home repair partners (public and nonprofit agencies that provide subsidized home repairs), we were able to devise questions that pointed more unambiguously to specific repair scenarios. In some cases, getting to a specific scenario required combining the answers to more than one question. Eventually, we produced a survey that identified 43 different home repair scenarios. Our needs survey is attached as Appendix A. To ensure honest answers, following the human subject review

protocol required by the Institutional Review Board at the University of Missouri–St. Louis, we guaranteed confidentiality to survey respondents. No published findings would be identifiable by name or address.

Our methodology is not perfect. While not covering every conceivable home repair, we believe our scenarios cover all *major* home repairs. Repeatedly, our home repair partners warned us that housing repairs cannot be easily matched with standardized repair scenarios. Each repair job is different, they stressed. In one case, you may need to just replace the toilet, but in another case, you may need to first replace the rotted subflooring before replacing the toilet, a more complex and expensive job. Nevertheless, we believe, by drawing on the perceptions and experiences of those who live in the home, we can produce reasonable estimates of the need for repairs. These estimates could never substitute for the work of a skilled contractor doing a detailed physical inspection to devise a precise cost estimate for a specific home. However, our methodology does provide stable estimates when aggregated across many homes that can be used to compare home repair needs across time, as well as across cities, neighborhoods, and different demographic groups.

After writing the survey questions in collaboration with our home repair providers, we developed a database of the names and addresses of all homeowners in the City of St. Louis 60 and older. We chose to do a mail-in survey because it costs much less than phone interviews, and older persons generally respond well to mail-in surveys. We came up with 25,993 unique addresses. We chose to mail surveys to 2,500 households, or a little less than 10 percent of the total. To ensure that we did not under-sample low-income households, we divided city census tracts into three strata – low, medium, and high income – and then over-sampled the low-income tracts and under-sampled the high-income tracts. (Our detailed sampling plan and other information on how to replicate our research methodology is available online at <https://www.umsl.edu/ciac/homerepair.html>.) In late 2021, we mailed out 2,500 surveys; 3 percent (or 81 surveys) were returned unopened because the homeowner had moved or died. With the help of a reminder postcard, we received 583 completed surveys, a return rate of 24 percent, which is a high rate for mail-in surveys.



Table 1. Characteristics of Survey Respondents	
Characteristic (N = 583)	Percentage
Age:	
60 - 69 years	46.3
70 - 79 years	37.4
80 years +	16.1
Income:	
Low (Under \$35,000)	48.9
Moderate (\$35,001 - \$56,000)	22.6
High (Above \$56,001)	28.5
Race:	
Black/African American	48.9
White	45.8
Asian/Pacific Islander, American Indian/Alaskan Native, or Identifies as Other	5.1
Education:	
High School or Less	32.2
Some College/Associate Degree	32.9
Baccalaureate or Higher	34.6
Household Size:	
One	36.2
Two	43.7
Three	12.9
Four or More	7.0

Our survey respondents (Table 1) are roughly representative of the population of St. Louis homeowners 60 years and older. For example, the racial breakdown of our respondents was 49 percent African American or Black and 46 percent white.¹⁹ This is close to the racial breakdown for City of St. Louis in 2021: White alone, 46.3 percent; Black or African American alone, 44.8 percent.²⁰ Almost 80 percent of our respondents live in one or two-person households, which is common for older households. Our survey respondents were relatively low income, with 49 percent earning less than \$35,000 in before-tax household income.

To identify repair scenarios, we entered the answers to the survey questions into a spreadsheet which we supplemented with property records from the City Assessor’s database on each property (including information such as square footage and number of stories). We then linked answers to the survey questions, sometimes in combination with property records, to our 43 repair scenarios. We used the RSMeans database to estimate the cost of each repair scenario. We then convened a panel of home repair experts to critically examine the cost estimates and adjust them accordingly. As a result, in a few instances, we adjusted the RSMeans estimate with other publicly available data, such as HomeAdvisor, to arrive at more accurate cost estimates

for each scenario.²¹ In some cases, these may still be a conservative estimate, based on the experiences of our home repair experts. For our 583 respondents, we then had a record of which repair scenarios applied to them and the estimated cost of each scenario.

EFFECTIVENESS OF HOME REPAIRS

After determining the need for home repairs, we wanted to know what *effect* home repairs have on the quality of life of older homeowners and their ability to age in place. To determine the effects of home repairs, we surveyed older homeowners who received home repair services and followed with interviews to flesh out the answers in the survey. We modeled our survey on one devised by Rebuilding Together which asked homeowners to evaluate the effect of the home repairs retrospectively, comparing how things were before the repairs to how they were afterward.²² In consultation with our home repair partners, we reworked the Rebuilding Together questionnaire, utilizing the Activities of Daily Living (ADL), a list of the basic functions a home helps people perform, such as personal hygiene and food preparation.

To obtain a sample of homeowners who had received subsidized home repairs, we partnered with three home repair providers in St. Louis: Rebuilding Together, Mission: St. Louis, and the City of St. Louis Community Development Agency. Because our survey relies on remembering what it was like before the repairs, we limited our sample to older homeowners who had received repairs in the past two years. We mailed out surveys to 202 households and received back 83 completed surveys for a response rate of 41 percent. (Our survey questionnaire is attached as Appendix B.)

Our survey respondents tended to identify as Black, female, and reported a low overall income. Of our 83 respondents, 78 percent had incomes less than \$25,000 a year.²³ Over 85 percent of our respondents were Black; 10 percent were white. Over 84 percent of our respondents had two or fewer members in the household, and almost 83 percent of those who filled out the questionnaire were women.



“You know people want to stay in a house, but when you have it falling down and you don’t have the money to fix it up, [and] you on a fixed income, [it] is very, very hard.”

To deepen our understanding of fixed responses to our survey, we asked respondents if they were interested in participating in a follow-up interview and offered them a \$25 gift certificate for their time. As a result, 79 out of 83 survey respondents volunteered to be interviewed. From that group we interviewed 31, making every effort to select households from different parts of the city. Of the 31 homeowners interviewed, 23 were women and 25 were Black. Respondents were spread out over 14 zip codes. The interviewers asked homeowners to elaborate on their responses to the survey questions. The interviews enabled us to understand not just the physical condition of the home but how residents experienced their home. The interviews were recorded and transcribed with voice-recognition software and then edited by the interviewer for accuracy. The average interview was 50 minutes long, resulting in an average transcript of 18 pages. The research team analyzed the 572 total pages of interview transcripts to pull out themes on how residents experienced their homes and how the home repairs affected their quality of life.

FINDINGS: THE MAGNITUDE AND PATTERN OF NEEDED HOME REPAIRS

The Magnitude of Unmet Home Repairs in St. Louis

Older homeowners in St. Louis have a large backlog of repairs that are expensive to fix. According to our 2021 survey, the average older homeowner in St. Louis faced \$13,023 in needed repairs. By contrast, according to the 2018 national survey referred to earlier, the average cost for households with repair needs was \$2,920.²⁴ While our estimate is over four times higher than the national average, our estimate is consistent with a central finding of the Philadelphia Federal Reserve study: “Among homeowners, low-income older adults who were long-term occupants of their units had the costliest repairs.”²⁵ In general, the lower the income, the higher the cost of needed repairs. The average age of the homes our respondents lived in was 97 years, and 63 percent had owned their home for 26 years or more. Those who had lived in their homes for 26 years or more had higher home repair costs (\$13,373) compared to those who had owned the home for ten years or less (\$9,406). For older homeowners in St. Louis who cannot afford to pay for preventive maintenance, repair costs accumulate over time.



Figure 1. Average Building Age, Median Building Age, and Average Respondent Age in Years

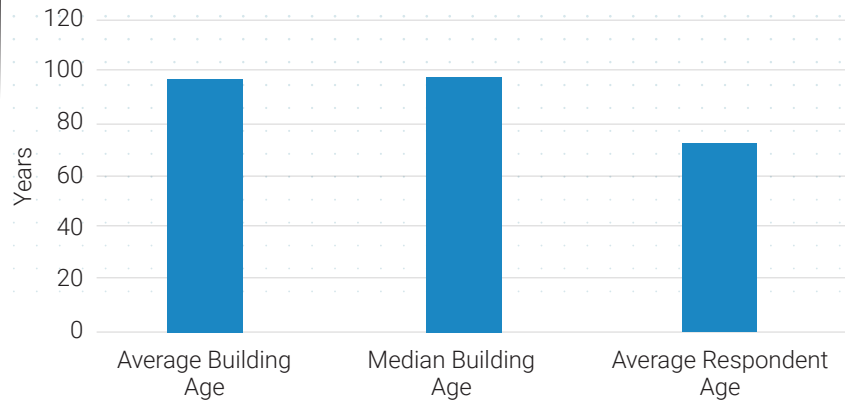


Figure 2. Years Lived at Home by Percentage of Participants

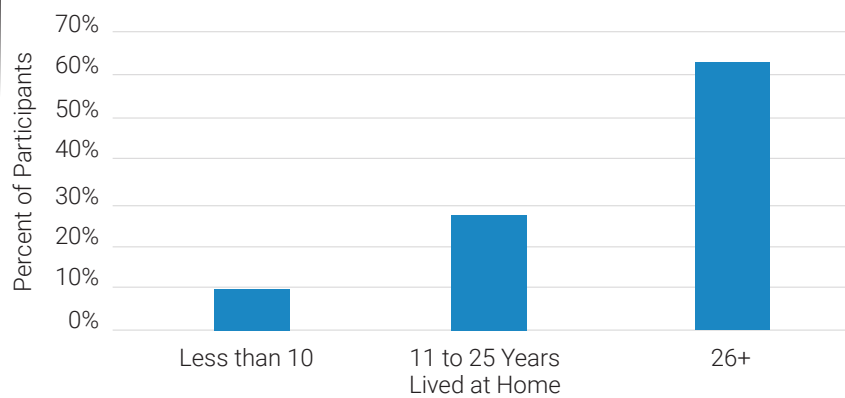
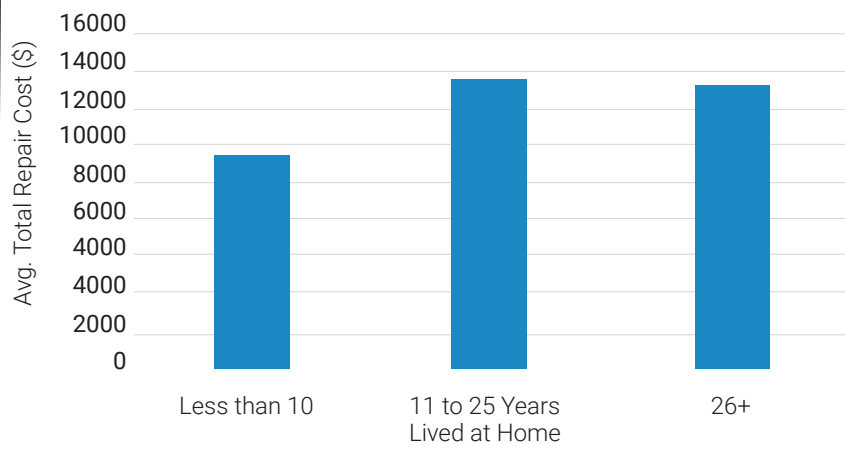


Figure 3. Time Lived at Home (Years) and Average Total Repair Cost (\$)



Given the age of the housing stock and the relatively low incomes of St. Louis' older homeowners, it is not surprising that the need for home repairs in St. Louis was higher than the national average, but the magnitude of the difference is significant. If we take the average cost of repairs per home according to our survey and project that to all older homeowners in St. Louis, the total cost of all needed repairs would be \$302.3 million.²⁶

The tables below show the most common repair scenarios, the most expensive repair scenarios, and which repair scenarios would require the most money to address citywide.

Repair	# Instances
Install Electric Plugs	477
Weatherization	399
Repainting	359
Seal Basement	335
Replace Piping	319
Repair Interior Wall	315
Repair Floor	269
Replace Exterior Wall	250
Snake / Auger Drain	234
Repair Foundation	229

“If we take the average cost of repairs per home according to our survey and project that to all older homeowners in St. Louis, the total cost of all needed repairs would be \$302.3 million.²⁶”

Repair	\$ Per Each Repair
Replace Heat Equipment	4,655
Replace Roof	4,287
Repair Additional Structure	2,921
Repair Sewer Line	2,904
Repaint Window Sashes	2,900
Replace Exterior Wall	2,254
Replace AC Equipment	2,100
Replace Water Heater	2,044
Weatherization	1,542
Replace Gutters	1,503

Table 4. Most Costly Repairs (Total Cost Citywide)

Repair	Number of Instances	\$ Per Each Repair	Total Cost of Repairs (\$)
Weatherization	399	1,542	615,258
Replace Exterior Wall	250	2,254	563,508
Repair Additional Structure	189	2,921	552,069
Replace Roof	125	4,287	535,890
Seal Basement	335	1,500	502,500
Repaint Window Sashes	140	2,900	406,000
Replace Piping	319	1,175	374,825
Repair Interior Wall	315	1,025	322,837
Replace Gutters	202	1,503	303,596

The need to install electric plugs or outlets was the most common repair scenario, with 82 percent of our respondents reporting this need. Many older homes have too few electrical outlets. According to national standards, no point along the wall in a room should be more than six feet from an outlet. Many older homes in St. Louis fail to meet this standard and, as a result, residents plug too many devices into one outlet. Over 81 percent of our respondents reported that they had at least one room where an electrical outlet was used for more than two devices. Outlets overloaded with electrical devices are a fire risk. In addition, 11 percent of our respondents reported that they had finished rooms with exposed electrical wires.

Table 5. Electrical Concerns

Characteristic (N = 583)	Percentage
Electrical Outlets Used for More Than Two Devices	
Yes, One or Two	32.2
Yes, Three or More	49.2
No, None	16.8
Don't Know	1.7
Finished Rooms With Exposed Wires	
Yes, One or Two	8.6
Yes, Three or More	2.4
No, None	87.3
Don't Know	1.7
Finished Rooms Without Electricity	
Yes, One or Two	8.6
Yes, Three or More	1.7
No, None	88.0
Don't Know	1.7

Electrical problems (Table 5) can strike fear into residents doing ordinary household tasks, such as cooking. As one homeowner explained, the repair workers fixed hazards in his kitchen, replacing ...

“... all the plugs around the appliances and the backsplash and so forth around when they were here, so that was another safety factor... I guess it’s a circuit breaker where it shuts off the ones in the kitchen... They put [in] all those plugs, so I don’t have to worry about, you know, being shocked or whatever. I don’t want to get shocked. I’m on my fourth pacemaker.”

The second most common repair scenario and the one with the highest total cost citywide was weatherization, including caulking windows and sealing doors. Over two-thirds of our respondents reported feeling drafts of cold air coming in through closed windows and doors, with 39 percent reporting feeling “uncomfortably cold” even though the heating equipment was on. As one homeowner noted before the repairs, *“I couldn’t sit down there and watch television because the couch is across [from] the window and the air was coming in.”* Similarly, 28 percent reported feeling “uncomfortably warm” even though the air conditioning was on. The advantage of weatherization is that it is relatively inexpensive (on average \$1,542), and it can reduce heating and air conditioning bills for financially stressed households, paying for itself over time.

Of course, being uncomfortably warm or cold can be caused not by leaks in the home but by poorly performing heating or air conditioning systems. Overall, 19 percent of our respondents reported that their central air conditioning failed for six or more consecutive hours and over 28 percent reported feeling uncomfortably warm even when the air conditioning was on. If we add that 15 percent of our respondents lacked central AC in the first place, clearly debilitating heat in the home is a widespread problem.

Table 6. Central Air Conditioner Concerns	
Characteristic (N = 583)	Percentage
Central Air Conditioning Failed For More Than 6 Hours	
Yes, Once or Twice	10.8
Yes, Three Times or More	8.4
No, None	65.9
N/A, No Central AC	14.9
Uncomfortably Warm Even With Air Conditioning On	
Yes, Once or Twice	11.3
Yes, Three Times or More	17.0
No, None	64.5
N/A, No Central AC	7.2

One woman talked about what it was like to live in a home with no air conditioning and only a ceiling fan for dealing with the summer heat.

“If it was really hot...I turn on my ceiling fan, but that was the only air – a ceiling fan in the hall... I’m really not an air-conditioned person but I like it. I’d like to be comfortable you know. If people come in to see me, you know, I want them to sit comfortable with the air conditioner while they up.”

If respondents answered that their air conditioning or heating had failed three or more times for at least six hours, we concluded that they needed to replace the furnace or the air conditioner. While only 6 and 8 percent of our respondents needed to replace their furnace or air conditioning system, respectively, these repairs were expensive – \$4,655 to replace the furnace and \$2,100 to replace the air conditioning unit.

Many homeowners reported problems with the exterior of the home, with over half reporting cracks in the foundation wider than a dime and over half reporting missing or worn away mortar between bricks. Some reported more serious structural issues, with 16 percent identifying sagging or buckling walls. One homeowner reported not being able to enjoy their backyard – for approximately five years – largely because the porch was falling apart: *“I couldn’t sit on my back porch. It was falling.... And I enjoy my back porch... We like to sit outside on the porch if I need that fresh air.”*

Damaged roofs are also a serious issue, with 16 percent reporting holes in their roof and 34 percent reporting water leaks from the roof. A homeowner described how a leak in the roof can disrupt home life. *“Oh yeah, roof leaks. About two-three years before I could get anything done. Oh, it messed up my ceiling in the dining room. My ceiling fan leaked on it and stopped it.... When the roof is leaking that messes up everything else.”* Unfortunately, for many homeowners, the cost of replacing a severely damaged roof (\$4,287) is prohibitive. (Roof replacement is often more expensive than this, ranging up to \$11,000.)

“I feel proud because I say I could sleep now in the house without worrying about it burning down [since the repair].”

Many homeowners also reported problems with the interior of the home, with 36 percent reporting uneven or cracked flooring, 40 percent major cracks in walls, and 24 percent holes in walls. Holes in the walls or roof contribute to another widespread problem: 45 percent reported evidence of rodents, such as mice, rats, or squirrels.

Plumbing issues were also common, with 22 percent reporting a toilet breakdown lasting six hours or more, 28 percent reporting a sewer backup, and 36 percent a backup in a kitchen or bathroom sink. Water leaks in homes were also common. According to our survey, over half of the homes had leaks in the basement, 1 out of 4 reported water leaks from around windows or closed doors, and 38 percent identified leaking pipes.

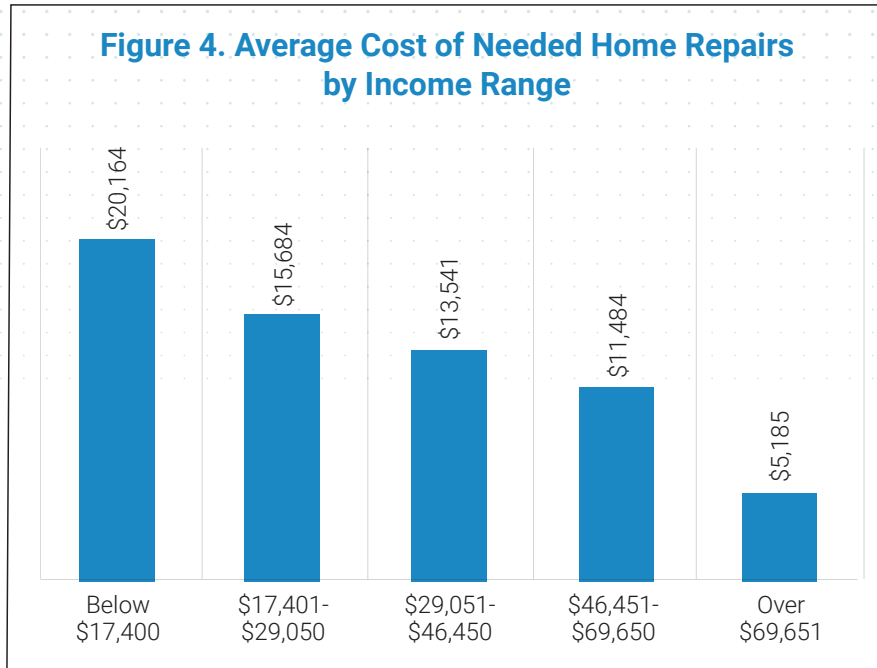
Water leaks and plumbing issues can cause mold. In our survey, over one in four homeowners reported having mold larger than an 8 ½ by 11-inch sheet of paper. A homeowner talked about learning that her home had a major mold problem, in part due to a leak that weakened the structure: *“It turned out that all my spools and my gutters had backed out and the water was going behind a wall. The water was coming down through that wall. It rotted part of the wood, which caused some of my flooring to fall down.”* She recalled how sick she got from breathing in the moldy air in her home. *“I got real sick. I got so sick. I was bending over to the hospital... All the symptoms had left from the time I left my house to finally get to the hospital. So, my stepson said you gotta have mold in your house.”* Mold can cause serious health problems and should be addressed immediately.

The Uneven Effects of Housing Deterioration: Race, Space, and Income

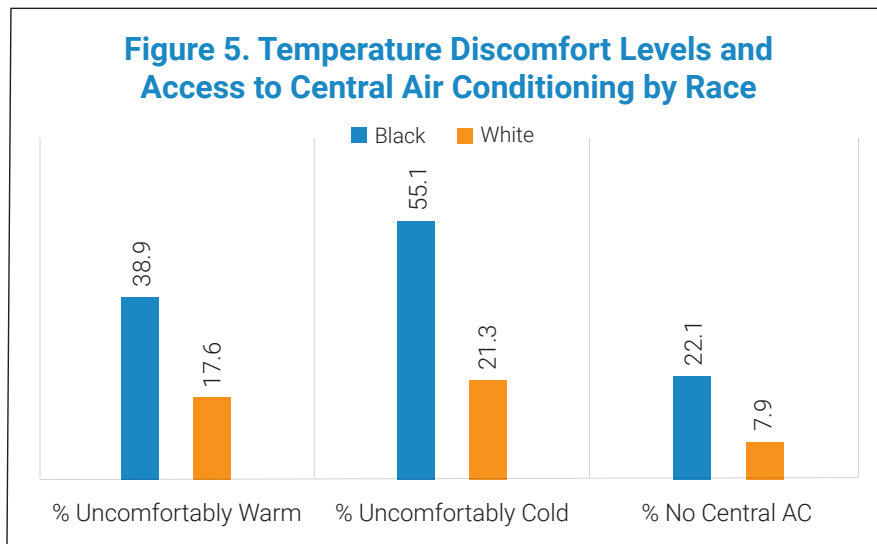
Housing disrepair is not evenly distributed among older homeowners in St. Louis. Black homeowners are disproportionately burdened by housing deterioration and, perversely, homeowners with the lowest incomes face the most expensive repairs. Moreover, the need for home repairs is greatest in the lowest income areas of the city where homeowners have less equity to tap into for financing repairs. Failure to address home repairs can lower property values, drive people out of the neighborhood, and lead to housing vacancy and abandonment.

Our survey found significant racial inequity in the need for home repairs. Overall, Black homeowners reported needed repair costs averaging \$17,904; white homeowners reported less than half that amount (\$7,832). We found a similar inequity across incomes: The lowest-income households faced home repair costs almost twice that of the highest-income homeowners (Figure 1). This is an especially disturbing pattern because lower-income households are less likely to have savings to pay for home repairs and often do not qualify for home repair loans.

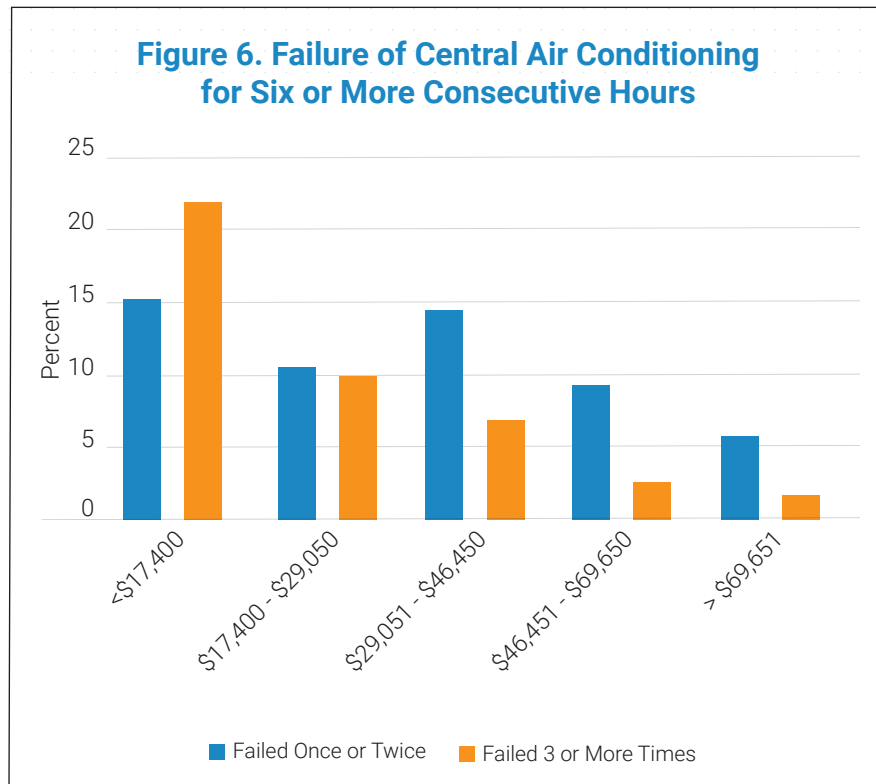
“I’ve been trying to save money, but it is a struggle to find the funds and the time and effort to be able to get things done...having people with expertise being able to help do the repairs for you can be so powerful.”



As we discussed, one of the most common deficiencies of the homes is discomfort during cold winters or the increasingly brutal St. Louis summers. A far higher percentage of Black respondents reported being uncomfortably warm or cold even though the heating or air conditioning was on (Figure 2). While 8 percent of white respondents lacked central AC, for Black respondents the corresponding figure was 22 percent.



Failure of central air conditioning was more common among Black and low-income respondents. More than one-quarter of Black homeowners reported that their central air conditioning failed for more than six consecutive hours more than once compared to only 11 percent of white respondents. Respondents in the lowest income category were much more likely to report such a failure of their air conditioning compared to the highest income homeowners (22 percent versus 2 percent) (Figure 3).



In order to compare the need for home repairs across different parts of the city, we divided the city into five sections (Figure 4).²⁷ Historically, North St. Louis has been the area of Black settlement and tends to be lower income. The South Side has traditionally been the white and middle- or working-class area, but now many parts of the South side are racially diverse. The Central Corridor is the area with the greatest revitalization in recent years; its racial diversity varies by district. (See Figure 5 for racial breakdowns.)

Figure 7. Map of the City of St. Louis: Five Districts

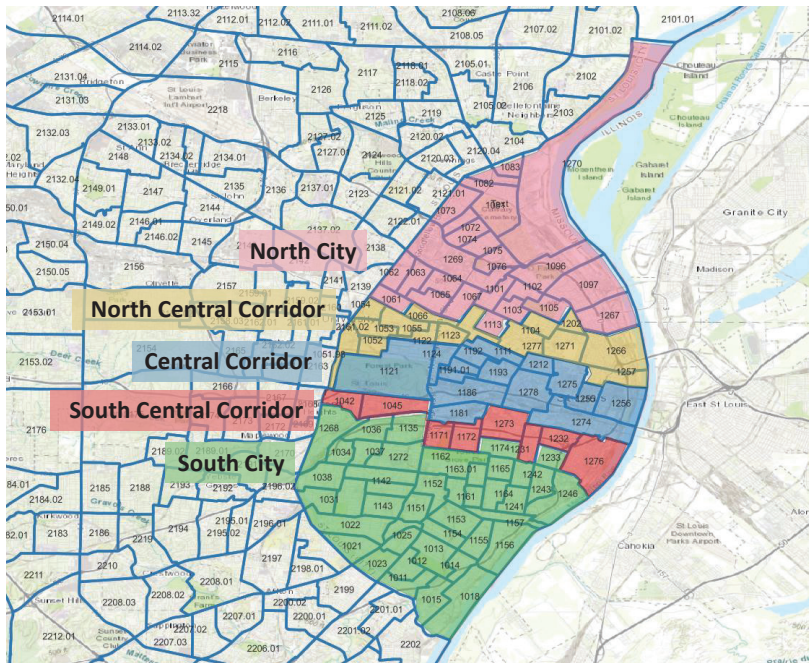
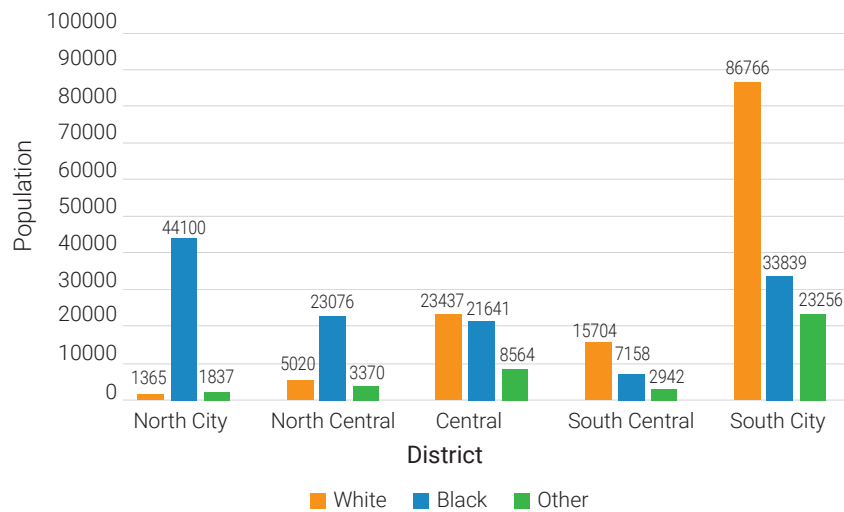
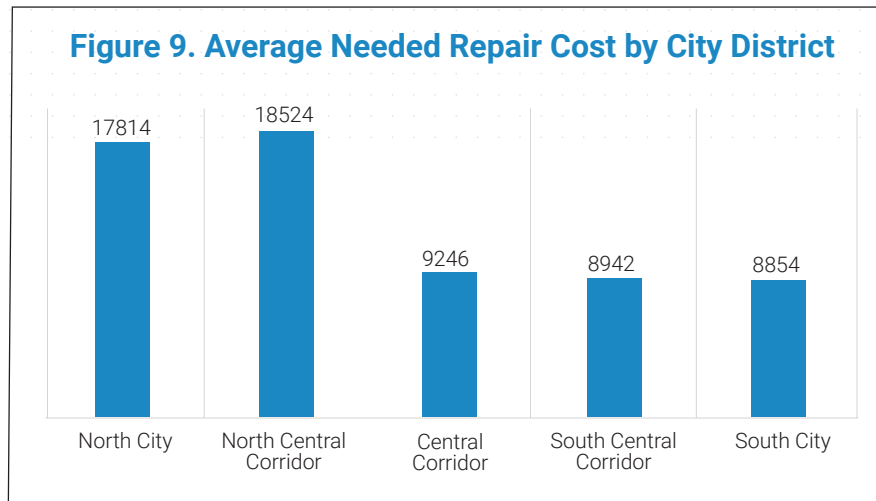


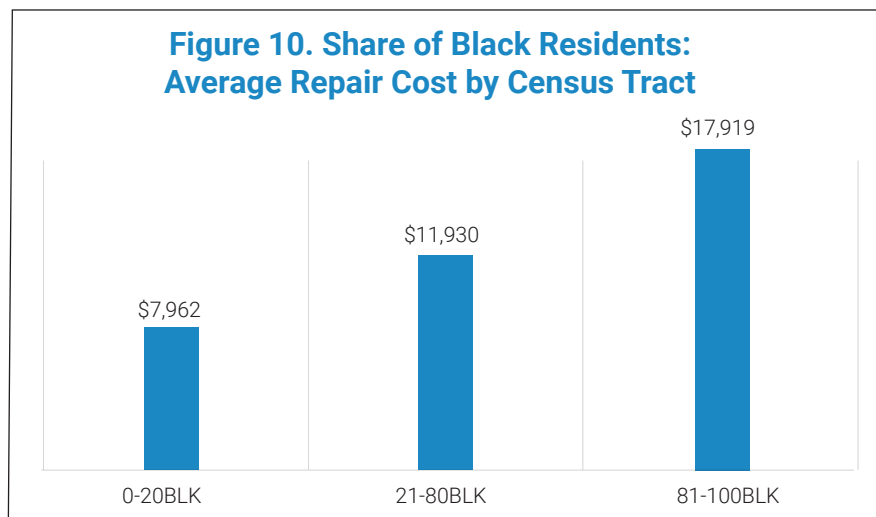
Figure 8. City of St. Louis: Five Districts by Race (2020 Decennial Census)



The average cost of repairs was highest in the parts of the city that are predominantly Black (North City and North Central Corridor). These are areas that have the lowest home values and the least home equity to help fund repairs. North City and the North Central Corridor, which are predominantly Black, had average repair costs about twice that of the other parts of the city further south (Figure 9).



If we examine the association between the percentage of Black homeowners at the census tract level and average costs, we find a similar pattern (Figure 10).



As we discussed earlier, this research project was motivated by a concern that the failure to address home repairs was leading to housing vacancy. We found evidence to support our hypothesis. We asked homeowners in our survey “how worried are you that you will have to move out of your current home in the next few years?” Overall, 20 percent were “somewhat” worried and 14 percent were “very” or “extremely” worried. The extent of needed home repairs was

strongly correlated with worry about being forced to move. Those who were “extremely” worried, for example, faced repairs averaging \$24,768, whereas those who were “not worried at all about moving” faced average repairs only about one-third as high (\$8,520). This suggests that a large backlog of repairs may be a cause of involuntary displacement. Worry about being forced to move varied by location: Over 40 percent of North City and North Central Corridor residents reported being worried about being forced to move; only 15 percent of the residents of the Central Corridor reported such a concern. The evidence suggests that failing to repair homes could be a factor in the falling population and housing vacancy in North St. Louis.

FINDINGS: THE EFFECT OF HOME REPAIRS ON QUALITY OF LIFE

The Overall Effect on Quality of Life

Answers to our second survey of recipients of repair services indicated that home repairs improved the quality of their lives. For example, two-thirds reported that following the repairs their quality of life was “a lot more positive.” During his interview, one elderly male homeowner described the joy of being able to enjoy the area outside his home after the repairs:

“I got a concrete patio... It’s a nice place. You can move from one place to the other as the sun moves around and have someplace to be comfortable. I’m just you know, a downhearted Old Country Boy, I guess I just enjoy being outdoors when I can. So, I like the nice weather and like to be able to get out in it. Watch the birds and the squirrels and rabbits... We got a couple of dogs out there. They sat around with me or run around and do whatever I can say. It’s just fresh air.”

As one South City homeowner summed up the effect of the repairs: *“They fixed it. They fixed everything. [It is] part of the reason I sleep better. They saved me, saved my life.”*

The repairs also improved the ability of people to move around safely in their homes. Over seven in ten respondents stated that the repairs made it easier for them “to get into and out of [their] home.” One homeowner, who has lived in her home in North City for more than 26 years, described how difficult it was to get up and down the back porch stairs without banisters: *“Could you imagine? My knees hurt [so much] sometimes I had to sit down on steps and come down step [by step].”* The interviewer clarified her response, asking “so you’re saying if you’re at the top of the stairs, you had to kind of sit down and scoot down each step?” She answered, *“Yes, each [time], and then I had to crawl by back up to step seven. Now that I got the banister, if my knee hurts one time, I’ll just turn backwards and walk back. [But] at first ... I didn’t have the banisters. Oh, my goodness. It was hard.”* As another South City homeowner said: *“And then they finally did the flat work concrete out in the yard and*

“They fixed it. They fixed everything. [It is] part of the reason I sleep better. They saved me, saved my life.”

put in new back steps. That was very important because I had had a really nasty fall the year before and mashed/shattered my clavicle on my left shoulder because of the ice covering the steps. ...I don't worry now. Then I worried all the time."

Over half reported that the repairs made it easier for them to cook at home. Repairs can help in unanticipated ways. One homeowner of Boulevard Heights in South City described how the new screen door she had installed brightened up her life in many ways. For ten years she could not afford a screen door. Now, the newly installed door helps her to maintain her balance as she walks in and out of her home, but it also helps her in another way. She was not able to afford the installation of a vent for her oven. The new screen door helps her to ventilate her kitchen.

"When I have my oven on, you know, I can open the door in case the smoke detector would go off, if I don't have air through the house. So I'll open the front door, to air it out and stuff. And having the screen door there it really helps me from keeping people from coming in or the dogs leaving the house."

Repairs make the home safer. About three out of four homeowners reported feeling "a lot more" or "somewhat more" safe in their homes following the repairs. Almost one-third rated their chances of falling "a lot less likely" as a result of the repairs. Almost two-thirds reported that the repairs made it easier for them "to take a bath or shower safely." One South City homeowner talked about how at some point it became clear to her that she needed grab bars in her bathroom: *"I was involved in a few car accidents. So, that's where my back came on. So, I don't fall or anything, [but I need] help [to] get in and out. So, when they put those bars in you know, were really, really good, you know..."*

I had had a really nasty fall the year before and mashed shattered my clavicle on my left shoulder because of the ice covering the steps. ...I don't worry now. Then I worried all the time."

In our survey of repair needs, we identified poorly functioning air conditioning as a serious problem for homeowners in the City of St. Louis. Almost 59 percent of those who received repairs reported that the repairs made them "a lot" or "somewhat" more comfortable regarding air temperature and air quality. As one woman who lives in Tower Grove South said: *"Oh, my goodness. I couldn't have done any of the work without it [repair program]. I would be sitting here frying. Probably would have killed me eventually. Because there's no way in heck I could have paid for that [AC]."* Another homeowner residing in the Mount Pleasant neighborhood in South City noted how the repairs improved her life in the winter: *"Before, [repairs] I would walk around with a throw blanket."*

Home repairs also had a positive effect on mental health and happiness, with half reporting that the repairs made them “a lot more positive” about their “overall mental health and emotional well-being.” One homeowner who has lived in his home for more than 26 years talked about the enormous responsibility of keeping up his home. As people age, that responsibility becomes more physically and emotionally taxing. The repairs made life easier:

“Like I say, it’s easier. You know, be comfortable inside and out and not have to be worried about ‘what are we going to do or how we’re going to replace that or whatever.’ You know, it makes it a little easier for me to breathe. I don’t have to worry about, you know, repairing certain things. You know, in the course of the 45 years, there was a lot of things that I could do repair wise and so forth. Like I say, I don’t want to be on a ladder no more. You know, I just say I enjoy it more instead of worrying.”

“Like I say, it’s easier. You know, be comfortable inside and out and not have to be worried about ‘what are we going to do or how we’re going to replace that or whatever.’”

The repairs also had positive effects on financial security. Over 78 percent reported that the repairs made their financial burdens “a lot” or “somewhat” easier, and 72 percent reported that their home was now “a lot more valuable” or “somewhat more valuable” as a financial asset to them and their family. A lower percentage (44 percent) reported that the repairs made the cost of home maintenance and upkeep “somewhat” or “much” lower. Over half reported that the repairs made “not much difference” in utility costs, but about 1 in 10 reported that their utility bills were “much lower” following the repairs. One homeowner, whose daughter and grandchild also live in the home, described how the repairs reduced his utility bills: “Yes, ma’am. We generally track below, you know, whatever it was last year, both in electric and gas, you know. I know that it’s got to be caused by a lot of the improvements and so forth.”

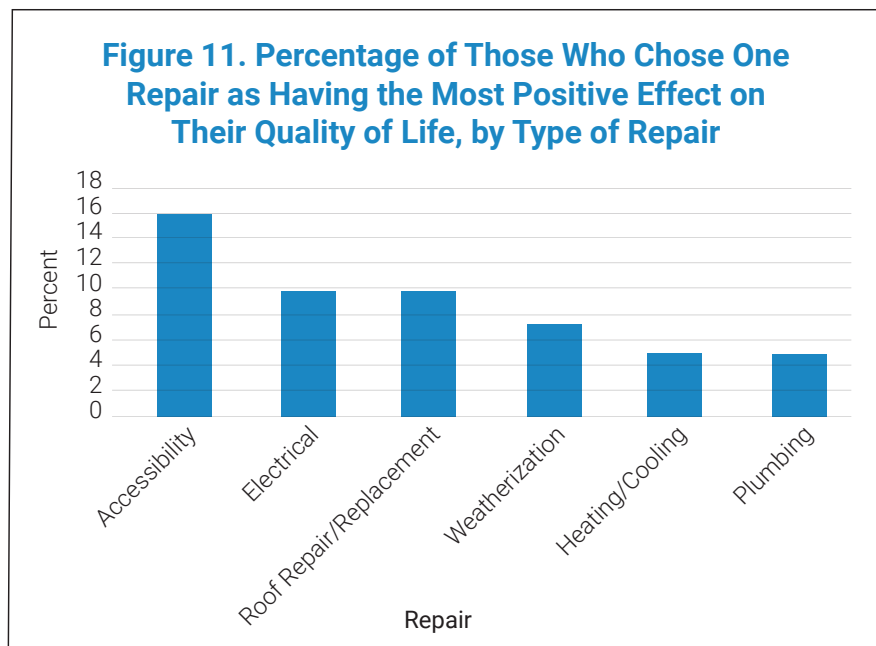
The repairs also made homeowners feel more pride in their homes. Over half reported the repairs made them feel “very proud” of their home. One homeowner from the Penrose neighborhood in North City said:

“I feel proud because I say I could sleep now in the house without worrying about it burning down [since the repair]. And it just looks better. I mean, you know, the wires are up now the way they supposed to be. They fixed the lighting on the outside. So, you know they make you proud of your house, so you don’t look bad.”

Another homeowner who also lives in the Penrose neighborhood put it this way: “And the fact that the gutters were new versus the old gutters that I had, and they also made the downspouts bigger than the ones that I had on there. You know, so yeah, I felt real proud about that.”

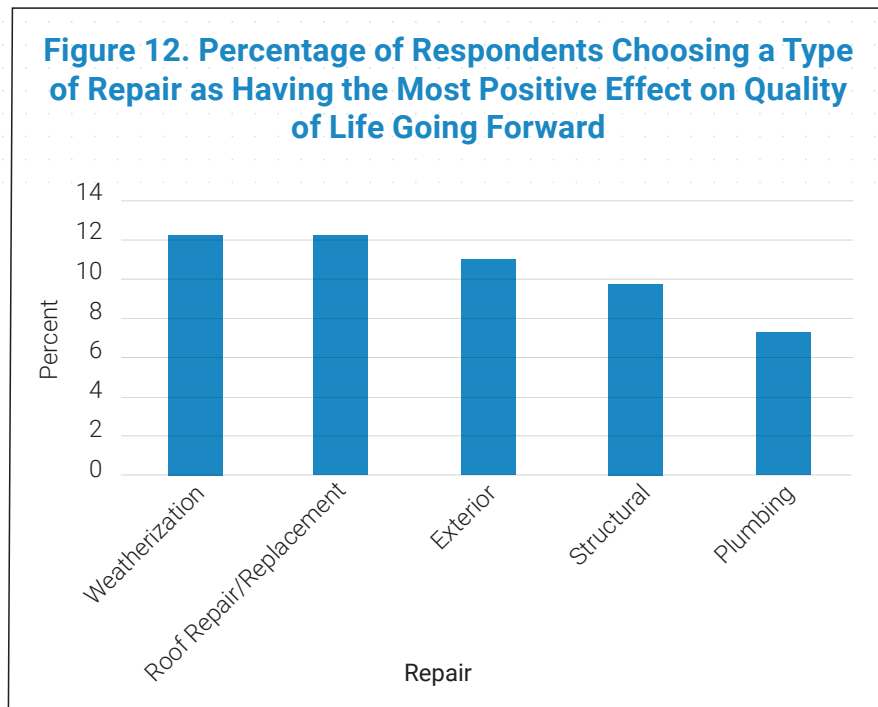
Nearly 71 percent reported that they were now “a lot more likely” to stay in their home as a result of the home repairs, and 61 percent reported that it was “somewhat” or “a lot more” likely that they would pass their home on to another person later in life. One homeowner described how much sweat and effort he had put into his home over the years. His wife “*wanted a big bedroom*” so he had one built for her, one with “*a walk-in closet.*” He later made additions to the laundry room, the dining room, and other areas. For him, it was about creating a refuge at home, so that they wouldn’t need to go anywhere else. “*You know, do you want to take and sell your house, move out [into the] county or, you know, do you want to stay where you’re at and just enhance it? Oh yeah, we’re not going anywhere... There’s too much stuff in this house, it would have to be moved. I will be here until, you know, it’s time for me not to be.*” He also expressed plans to keep the home in his family even after his death: “*That’s about all my kids will get or whatever.*”

We asked respondents to rate which repair had the most positive impact on the quality of their lives. The results are below. “Accessibility” refers to improvements like grab bars and ramps. Accessibility add-ons are relatively inexpensive, but they can dramatically improve safety in the home. Electrical, the most common needed repair according to our needs survey, is viewed by respondents as very important. Rated highly, weatherization and heating/cooling repairs address the problems identified earlier around temperature discomfort.



We also asked respondents, “*If there were repairs that were not done, which one do you think would have the most positive effect on the quality of your life going forward?*” The results are in Figure 12. Weatherization is clearly something that many homeowners think would be valuable. Roof repair or replacement, which is much more expensive than weatherization, was also

ranked highly for future repairs. Like roof repairs, repairs to the exterior of the home, such as tuckpointing and new siding, are essential to preventing moisture from entering and causing mold. “Structural” refers to things like repairing foundations and moving walls.



The Uneven Effects of Home Repairs

Generally, respondents with more education reported that the repairs had a more positive effect on the quality of their lives than those with less education. For example, 78 percent of those with a BA degree or higher reported the repairs made them “a lot more positive” about their quality of life compared to 63 percent for those with a high school education or less. Although Black homeowners consistently reported that the repairs had positive effects on their lives, white homeowners generally reported more positive effects. For example, almost 63 percent of Black homeowners compared to 88 percent of white homeowners reported that the repairs made them feel “a lot more positive” about their overall quality of life. Similar correlations with education and race were found for other variables, such as the effect of repairs on mental health and emotional well-being, overall happiness, and feelings of safety.

The length of residence in the home was also a consistent predictor of the reported effects of repairs – with those who had lived in their home longer reporting somewhat less positive effects. For example, almost two-thirds of those who had lived in the home for 26 years or more reported “a lot more positive” overall quality of life, while 8 in 10 of those who had been in the home 10

years or less reported feeling “a lot more positive.” Length of residence had a similar effect on reported overall happiness, physical health, pride in the home, and financial security. One exception to these trends is that over 75 percent of those who had lived in their home 26 years or more reported that they were “a lot more likely” after the repairs to stay in the home compared to only 60 percent for those who had been in the home 10 years or less.

Characteristic (N = 83)	Percentage
Lived in Their Home for 10 Years or Less	
A Lot More Positive	80.0
Somewhat More Positive	20.0
Not Much Difference	0.0
Somewhat More Negative	0.0
A Lot More Negative	0.0
Don't Know, Prefer Not to Say	0.0
Lived in Their Home for 11 to 25 Years	
A Lot More Positive	70.8
Somewhat More Positive	20.8
Not Much Difference	8.3
Somewhat More Negative	0.0
A Lot More Negative	0.0
Don't Know, Prefer Not to Say	0.0
Lived in Their Home for 26 Years or More	
A Lot More Positive	65.3
Somewhat More Positive	18.4
Not Much Difference	10.2
Somewhat More Negative	2.0
A Lot More Negative	0.0
Don't Know, Prefer Not to Say	4.1

We can only speculate about the reason for these associations, but certain explanations seem plausible. Black homeowners and homeowners with less education may have deeper issues in their homes and their lives that the home repair grants were unable to address. For that reason, the repairs may not have had as positive effects as for more educated or white homeowners. An important goal of home repair programs is to help older people age in place. It is encouraging that those who have lived in the home longer were more likely to report that the repairs made them more likely to stay in their homes. Many homeowners stated that they wanted to age in place. As one North Central Corridor homeowner in the Jeff Vander Lou neighborhood put it: “Any nursing home I’ve seen is a nursing home. I don’t want to go.” As a result of the repairs, another homeowner said, “I can stay in my home as long as I can ... you know independent? Not disabled. I can call these places and they can help me remain in my home.... And people can heal better at home.”

CONCLUSION: WHAT SHOULD BE DONE?

Our research demonstrates that older homeowners in the City of St. Louis have a pressing need for home repairs. Indeed, we estimate the backlog of needed home repairs is over \$300 million. We also document that subsidized home repairs have significant positive effects on residents' quality of life – including their physical well-being, mental health and happiness, financial security, and social stability. *Why is it then that home repair programs are sorely underfunded?* (Although our findings are restricted to older homeowners, we believe our analysis also applies to younger homeowners and renters who need home repair support.)

Those who received home repairs were overwhelmingly positive about the experience. Below are representative quotes:

- *“I was just grateful. They came and did what they did. ... They’re a great group.”*
- *“They were so gracious, and you know, they’re wonderful. They’re wonderful workers, and so courteous and so kind.”*
- *“I have worked with Mission St. Louis, and they are just fantastic group of people. Yes, they are. They do a lot of great work for the community for sure. Yes, they do. Yes, they do.”*
- *“Lord have Mercy! I bless them and I thank them very much. You know, the people that were out here, they were so nice. All the guys and workers were very nice and courteous. Just wonderful! Just wonderful! I wouldn’t mind having them come in and stay”.*

**“Lord have Mercy!
I bless them and I thank
them very much.”**

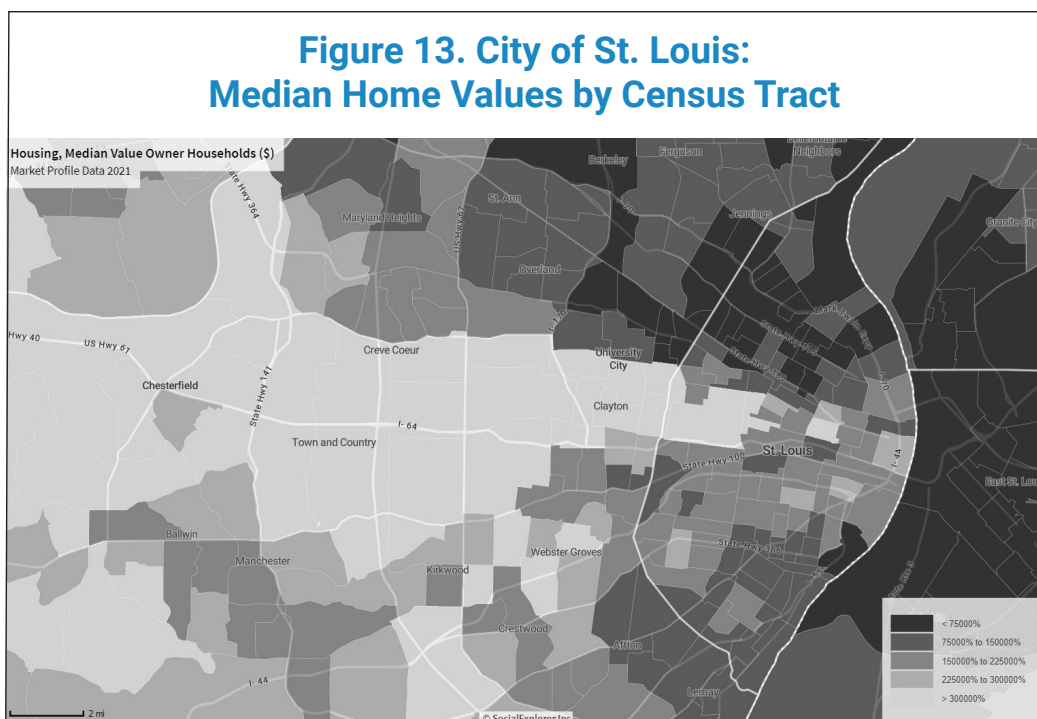
Our home repair partners should be proud of the work they are doing. The only consistent complaint we heard concerned the long wait times. One homeowner reported waiting seven or eight years before getting a phone call from the program – and then had to wait a couple more years before work was begun. Another respondent got their name on the list in 2012 but did not get a call back until a few years ago. This is not surprising. As we noted in the Introduction, home repair providers in St. Louis have thousands of people on their waiting lists.

The main reason so many people are applying to home repair providers is that they lack the resources to pay for home repairs themselves. According to our survey of older homeowners in St. Louis, 42 percent have incomes less than \$29,050 a year. Many older homeowners live on Social Security and have little money left over for expensive home repairs. Below are some quotes explaining why it is so difficult for them to pay for home repairs:

- *“You know people want to stay in a house, but when you have it falling down and you don’t have the money to fix it up, [and] you on a fixed income, [it] is very, very hard.”*

- *“I’ve been trying to save money, but it is a struggle to find the funds and the time and effort to be able to get things done. Do you know having people with expertise being able to help do the repairs for you can be so powerful.”*
- *“I know I would not have been able to get it [electrical repairs] done. Yes, because to put a new [electrical] box in and everything, I think it was like \$3,000. And I didn’t have somebody to finance it for me because I didn’t...have the money. And my credit isn’t all that good. So, you know, to get it financed and everything that would have been real hard for us.”*

Older homeowners who are behind on their repairs often have low incomes and lack savings or equity in their homes that they can tap to fund repairs. As the map below shows, median home values in North St. Louis and some neighborhoods in Southeast St. Louis are below \$75,000; in many North City census tracts, median home values are below \$50,000. Beyond the continuing problem of bank redlining, banks are reluctant to approve home repair loans (second mortgages) because of the limited value of the homes. As one of our interviewees from the Penrose neighborhood in North City said, *“It’s hard to get lending in so many North City neighborhoods too... If you even have the credit and the income to renovate a home in some North City neighborhoods, the banks still won’t lend to you just because of what all the other homes are like.”*



In many city neighborhoods, the weak housing market means that homeowners are unable to recoup the money they invest in home repairs when they sell the home. Investing in home repairs will not, by itself, turn around the market in poor neighborhoods. Nevertheless, there are many good reasons for greater public investment in home repairs.

First, homes are a major source of household wealth, and repairing them helps to preserve that wealth. Also, older homes in St. Louis are a valuable architectural legacy, and by repairing them we preserve them for future generations. More and more people are looking for pedestrian-friendly neighborhoods with distinctive historic architecture. In the years ahead, there is a chance many disinvested neighborhoods will revive, but those chances are slim if the historic housing stock has deteriorated beyond repair. It is also more environmentally sustainable to invest in older neighborhoods that have the infrastructure already in place (water, sewer, roads, sidewalks, etc.) than to abandon them and build anew on greenfield sites.

Home repairs also preserve affordable housing. Older homes provide “naturally occurring affordable housing.” In the United States, most affordable housing is provided not by building new housing for low-income households but by building higher-income housing on the suburban fringe and letting the older homes left behind filter down to lower-income households. Most lower-income households in St. Louis live in older housing in the city or inner-ring suburbs. Home repair programs can provide affordable housing at less cost than new construction.²⁸ Home repairs can also prevent housing abandonment and reduce homelessness. As one long-time Penrose neighborhood homeowner said,

“What stands out with me is they’re willing to help low-income people. And that’s a blessing cause a lot of us don’t have the money to get our homes repaired... You know, like I said, there’s a lot of homeless people out there and they can’t stay in the house because they don’t have the money to get their homes repaired and they’re falling apart.”



“What stands out with me is they’re willing to help low-income people. And that’s a blessing cause a lot of us don’t have the money to get our homes repaired...”

Home repairs do not just benefit the individual homeowner but provide spillover benefits to the surrounding community. According to a study of a program in Philadelphia that provided up to \$20,000 for structural repairs, such as plumbing and roofing, home repairs reduce crime. Based on an analysis of 13,632 home repairs, the researchers found that blocks receiving home repairs enjoyed a 22 percent reduction in total crime compared to blocks that received no repairs, and the greater the number of repairs on a block the greater the crime reduction.²⁹ Investing in home repairs can be a cost-effective way to fight crime. And when one homeowner fixes up their home, neighbors are motivated to do the same, increasing property values and the tax base.

As we discussed in the Introduction, most older adults would prefer to remain in their current homes as long as possible. Aging in place fosters independence, preserves existing social networks, and slows down memory loss. Healthwise, people who remain in their homes do better than those who move into a nursing home. If an older adult needs medical care and cannot remain in the home, Medicaid will pay for nursing home care. To be eligible for Medicaid, older adults must have incomes below 85 percent of the federal poverty level and have few assets. (In 2022, the federal poverty level for a two-person household was \$18,310.) Many of those we interviewed would be eligible. In 2021, the annual cost of a shared room in a nursing home in the St. Louis region was \$67,525; the Medicaid reimbursement rate is about 70 percent of the private rate, or approximately \$47,268.³⁰ The typical subsidized home repair project is less than half of that amount. If a home repair program enabled an older homeowner to stay in their home for only one additional year, the savings to Medicaid would pay for the costs of the repairs many times over. If repairs enabled older persons to stay in their homes for many years, the savings to taxpayers would be enormous.

The case for subsidizing home repairs, however, is not only economic. Housing disrepair is an issue of *economic and racial injustice*. All physical structures deteriorate over time and need regular maintenance and repair. If properly maintained, houses can last for centuries. Housing disrepair does not impact people equally; it has a *disparate impact*: Low-income households suffer the most, especially those owned by people of color and women. Our survey of the need for home repairs among older homeowners in St. Louis documented that low-income households and Black homeowners have a larger backlog of needed home repairs than higher-income white homeowners. Almost 83 percent of those who filled out our survey of homeowners receiving subsidized home repairs were women. Homeowners need to set aside money for recurring repairs. If they do not do routine repairs, the costs will balloon and small problems (a leak in the roof) will lead to big problems (mold and structural decay).

Despite these facts, many people dispute the need for subsidized home repairs because they believe individuals, not the government, should be responsible for maintaining private homes. The “personal responsibility” approach to home repairs is valid when people have adequate resources to fund repairs. When they lack those resources, however, and the deficit is due not due to a lack of effort, then the personal responsibility argument falls apart.

Lacking the resources to maintain their homes in good condition is a problem that disproportionately affects people of color, who for historical reasons, including discrimination in labor markets, are more likely to be low-income. Moreover, racial discrimination in housing markets has undermined their ability to accumulate household wealth, which for most Americans is predominantly the equity in their home. In 2019 the median white household wealth (\$188,200) was 7.8 times that of the typical Black household (\$24,100).³¹ By preserving home values for Black households, subsidized home repairs help address the wealth gap, as well as the Black-white gap in homeownership.



In St. Louis, a tangle of private practices and public policies, including zoning laws and restrictive covenants, prevented Black Americans from purchasing homes in more advantaged parts of the region.³² As a result, Black homeowners have historically been concentrated in neighborhoods north of Delmar. For the most part, white residents shun predominantly Black neighborhoods and Black housing demand, by itself, is not enough to maintain strong housing prices. If a Black person purchased a home in North St. Louis and did everything to maintain the property, its value, *through no fault of their own*, would stagnate or even decline. With low incomes and little home equity, it is not surprising that many homes in North St. Louis have

“You know, the people that were out here, they were so nice. All the guys and workers were very nice and courteous. Just wonderful!”

large backlogs of needed home repairs. The disparate impact of housing disrepair is a racial injustice that must be addressed.

Putting aside the question of whether people are responsible for their low levels of income and wealth, denying people basic home repairs is unjust. Housing is a necessity, not a luxury. In many countries, housing is a fundamental right guaranteed in the constitution. The United States did something like that after World War II when the Housing Act of 1949 committed the nation “to the goal of a decent home and a suitable living environment for every American family.” As we documented, many older homeowners in St. Louis live in homes that do not protect them from the elements and cause illness and stress. Many low-income St. Louisans do not enjoy “a decent home and a suitable living environment.” That is wrong.

This is not the place for detailed policy recommendations to address the disparate impact of housing disrepair, but the broad outlines of what needs to be done are clear.³³ We need to...

1. Invest more resources in home repair programs.

The public, private, and nonprofit sectors should work together to insure adequate funding for home repairs in St. Louis. The **public sector** has a key role to play in ensuring that those who cannot afford basic home repairs receive the assistance to do so.³⁴

Public subsidies should be combined with **private-sector loans**. A program that only provides 100 percent of the cost of home repairs, like that in the City, risks creating a moral hazard where people who have resources to repair their homes refrain from investing their own money in the hope of receiving subsidized repairs. Those who can afford to pay for all, or part of, needed home repairs should do so out of their own resources. The city should consider mortgage counseling to help homeowners fund their own repairs. As part of their Community Reinvestment Act (CRA) obligations, banks should develop new home repair loan products that offer lower interest rates and/or longer terms and that can be targeted to low- and moderate-income census tracts. The City could establish a loan guarantee program to reduce the risk for lenders and leverage private dollars with public funds. **Nonprofit** agencies administer many home repair programs in St. Louis. As we documented, they do great work, but the system is fragmented and lacks strategic planning. Foundations could fund the formation of a home repair consortium in St. Louis to build a more comprehensive and effective home repair system.³⁵

2. Improve the home repair delivery system.

At the same time that we invest more resources in home repair, St. Louis needs to reform the home repair delivery system. Stakeholders should identify opportunities for increased efficiency, such as centralizing and streamlining the application and eligibility determination process and synchronizing social services with home repairs. Other reforms could include addressing workforce and business development needs in the home repair industry so that there are enough

skilled workers and contractors to complete additional home repairs in a timely fashion. The goal should be a “zero waitlist system” with as much of the work as possible being performed by Black workers and Black-owned contractors. Efficiencies could also be realized by developing long-term contracts with specialized contractors to service high-priority needs identified in this report, such as installing electrical plugs, weatherization, and roofing.

3. Prioritize home repairs.

Not all repairs are equal. Some repairs deliver a greater “bang for the buck” in improving residents’ quality of life. Grab bars and other modifications to homes were ranked #1 in terms of improving the quality of life. They can dramatically reduce dangerous falls for older adults at relatively little cost. Electrical repairs came next. The fire hazard created by overburdened electrical outlets merits high priority. Weatherization and roof repair/replacement ranked next in improving quality of life, followed by heating/cooling and plumbing. Weatherization is inexpensive and pays for itself over time. Fixing a roof is expensive but the damage done when moisture gets into the home will, in most cases, justify the expenditure. A major finding of our research is that many older homeowners lack adequate air conditioning. This is potentially life-threatening. No older person in St. Louis should be without adequate air conditioning. The city should consider targeting some home repair funds to neighborhoods where the repairs could jumpstart more private investment. Finally, limits should be placed on public investments: If the home repair costs exceed the value of the home, the city should consider relocation assistance and the sale of the home to the city’s Land Reutilization Authority.

4. Set tangible, realistic goals.

The city should set goals for improving the home repair system and then monitor progress toward those goals. The specific goals should be worked out with the home repair providers but they could include: 1) Setting funding goals, with one third of the funding achieved in the first three years and one half within five years and one hundred percent in ten years; 2) Reducing the number of people on waitlists, cutting that number in half within five years; 3) Creating a centralized intake system for all subsidized home repairs in St. Louis within three years.

Home repair assistance serves multiple policy goals. It prevents displacement, stabilizes neighborhoods, stimulates investment, and preserves affordable housing. It can also prevent illness and save lives. For reasons we discussed, addressing the backlog of home repairs in St. Louis will disproportionately benefit Black residents and North City neighborhoods. It is a matter of economic and racial justice.

The time to act is now.

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APPENDIX A

CITY OF ST. LOUIS OLDER ADULT HOME REPAIR SURVEY

Dear Homeowner,

Having quality homes that are in tiptop shape is very important. University of Missouri–St. Louis (UMSL) has partnered with eight local organizations to work together with you and your fellow citizens to keep St. Louis’s homes in good repair. To accomplish that - including raising the resources required to do the job - we need to learn more about what repairs are required. That’s where you can help.

You are one of 2,500 City of St. Louis older adult homeowners chosen at random to represent all older adult homeowners. By completing this questionnaire being administered by the UMSL Community Innovation and Action Center, and funded by grants from the RRF Foundation for Aging and the St. Louis City Senior Fund, we will learn what repairs are most needed. There are no special risks involved, and your participation is voluntary.

Please take 6 to 10 minutes to complete the questionnaire and then return it to the UMSL researchers no later than December 15, 2021, in the enclosed postage-paid envelope. Your responses are confidential and will only be used in statistical summaries. We do not require your name. Thanks!

NOTE: For the following questions, “home” is the entire structure and any detached structures you regularly use.

If there are other residential units where you only occupy one unit in the building, such as a duplex, please answer based on the unit where you live as well as any shared features such as a roof.

PARTNER ORGANIZATIONS



YOU CAN KEEP THIS SHEET FOR YOUR REFERENCE

INFORMED CONSENT FOR PARTICIPATION IN RESEARCH ACTIVITIES

St. Louis Older Adults Home Repair Research Grant

HSC Approval Number _____

Principal Investigator: Todd Swanstrom PI's Phone Number: 314-516-5259

Summary of the Study

You are invited to participate in a research study conducted by Dr. Todd Swanstrom at the Community Innovation and Action Center at UMSL. The purpose of this research is to assess the need for, and effectiveness of, home repairs for older adults in the City of St. Louis in order to advocate for funding for home repairs and to make existing home repair programs more effective. We will mail out questionnaires to approximately 2,500 older adult homeowners in St. Louis. We obtained the names and addresses of homeowners in St. Louis through public records. Your participation, if you so choose, will involve filling out a mail-in questionnaire on the condition of your home. It will take you about 10 minutes to fill out the questionnaire. There are minimal risks involved in participating in this research. There are no direct benefits for participating in this research. Your participation is voluntary, and you may choose not to participate in this research study or withdraw your consent at any time. You will NOT be penalized in any way should you choose not to participate or withdraw. We expect the research to be completed by the Summer of 2022.

We will do everything we can to protect your privacy. As part of this effort, your identity will not be revealed in any publication that may result from this study. In rare instances, a researcher's study must undergo an audit or program evaluation by an oversight agency (such as the Office for Human Research Protection) that would lead to disclosure of your data, as well as any other information collected by the researcher.

If you have any questions or concerns regarding this study, or if any problems arise, you may call the Investigator, Dr. Todd Swanstrom, 314-516-5259. You may also ask questions or state concerns regarding your rights as a research participant to the Office of Research, at 314-516-5897.

Here are some home issues that you may or may not face. Thinking back over the last 12 months, how much of a problem – if at all – has each been for you? Just check the category that best describes your situation.

HEATING & COOLING

1. During the past 12 months:

	Yes Once or Twice	Yes Three or more	No None	N/A No Central AC
A. Has your main heating equipment (furnace or boiler) failed for more than six consecutive hours?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	–
B. Have you been uncomfortably cold even though the heating equipment is on?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	–
C. Have you felt drafts of cold air coming through windows or closed doors?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	–
D. Has your central air conditioning failed for more than six consecutive hours?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E. Have you been uncomfortably warm even though the air conditioning is on?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

ELECTRICAL

2. In your home:

	Yes 1 or 2	Yes 3 or more	No None	Don't Know
A. Are there any finished rooms without electricity?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B. Are there any finished rooms without an electrical outlet?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C. Are there any finished rooms with exposed wires?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D. Are there light fixtures or ceiling fans that do not work?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E. In how many rooms are electrical outlets being used for more than two devices?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F. In how many rooms have fuses blown or circuit breakers tripped during the past 12 months?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G. How many times have fuses blown or circuit breakers tripped during the past 12 months?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

PLUMBING • MOLD • PESTS

3. During the past 12 months, has there been in your home:

	Yes Once or Twice	Yes Three or more	No None
A. Room(s) with mold larger than an 8½ by 11-inch sheet of paper?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B. A toilet breakdown lasting six hours or more?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C. Fixtures (bathtub, sink, toilet) with low or no water flow?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D. No hot water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E. A sewer backup?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F. A backed-up drain in a kitchen or bathroom sink?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G. A backed-up drain in a shower or bathtub?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
H. Evidence of termites?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I. Evidence of rodents (mice, rats, squirrels)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

LEAKS

4. During the last 12 months, have there been any water leaks in your home:

	Yes 1 or 2	Yes 3 or more	No None
A. In the basement?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B. Around windows or closed doors?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C. From the roof?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D. From leaking pipes?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E. Coming through or within the walls?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F. From the hot water heater?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G. From a water faucet or toilet?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
H. From a backed-up drain (bathtub, sink, or shower)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

STRUCTURAL: HOME EXTERIOR

5. Does the exterior of your home currently have:

	Yes 1 or 2	Yes 3 or more	No None	Don't Know
A. Cracks in the foundation wider than a dime?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B. Holes in the roof?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C. Missing shingles on the roof?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D. A sagging roof?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E. Missing, broken, or sagging gutters?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F. Bricks or siding missing from exterior walls?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G. Places with missing or worn away mortar between bricks on walls?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
H. Peeling paint on exterior walls?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I. Sagging or buckling exterior walls?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
J. Broken or boarded up windows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

STRUCTURAL: HOME INTERIOR

6. Does the interior of your home currently have:

	Yes 1 or 2	Yes 3 or more	No None	Don't Know
A. Uneven or cracked flooring?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B. Major cracks on walls?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C. Peeling paint on walls?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D. Holes in walls?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E. Peeling paint on window sashes?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F. Internal stairway(s) with torn carpeting or loose floorboards?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G. Soft or sagging flooring under toilet or sink?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
H. Missing or broken door or window locks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

EXTERIOR PROPERTY

7. Does your home's lot currently have:

	Yes 1 or 2	Yes 3 or more	No None	Don't Know
A. Large tree(s) that need be removed because they are a danger for you or your home?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B. Walkway(s) dangerous to walk on because they are cracked, sagging, or broken?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C. Concrete or brick patios dangerous to walk on because they are cracked, sagging, or broken?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D. Porches or decks dangerous to walk on because they are cracked, sagging, or broken?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E. External stairway(s) that are broken or in poor condition?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F. External structure(s) like a garage or a carport that need major repairs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Lastly, a few questions to help interpret the results:

8. How many people, including yourself, live in your household?

- One
- Two
- Three
- Four or more

9. How long have you owned the home you now live in?

- 26 years or more
- 11 to 25 years
- 10 years or less

10. Does your home have a pitched or flat roof?

- Pitched roof
- Flat roof
- Both pitched and flat

11. How worried are you that you will have to move out of your current home within the next few years?

- Extremely worried
- Very worried
- Somewhat worried
- Not very worried
- Not at all worried

12. What year were you born?

- 1952-1961
- 1942-1951
- 1941 or earlier

13. What was your 2020 household income before taxes?

- \$17,400 or less
- Between \$17,401 and \$29,050
- Between \$29,051 and \$46,450
- Between \$46,451 and \$69,650
- \$69,651 or more

14. What was the last year of formal education you completed?

- 0-12 years (high school or less)
- 13-15 years (some college, trade school, associate's degree)
- 16 or more years (baccalaureate degree or more)

15. What is your ethnic group?

- Hispanic or Latino
- Not Hispanic or Latino
- Unknown or prefer not to say

16. What is your race?

- American Indian/Alaskan Native
- Asian/Pacific Islander
- Black/African American
- White/Caucasian
- Other

Thanks for completing the survey and helping make the St. Louis region an even better place for older adult homeowners!

Just mail the completed survey in the enclosed stamped envelope by December 15, 2021.

APPENDIX B

CITY OF ST. LOUIS HOME REPAIR EVALUATION SURVEY

Dear Homeowner,

In [year and month] you received home repair services from one of the three organizations conducting this survey. The repairs included _____, _____, and _____.

We would like to know what may have changed for you since those repairs took place so that we can better understand how our services can help you.

Please take 10 minutes to complete the questionnaire and then return it to the UMSL researchers no later than March 25, 2022, in the enclosed postage-paid envelope. Your responses are confidential and will only be used in statistical summaries. Thanks!

If you have any questions or concerns about this study, you may contact UMSL Professor Todd Swanstrom at 314-516-5259 or email him at swanstromt@umsl.edu.

PARTNER ORGANIZATIONS



YOU CAN KEEP THIS SHEET FOR YOUR REFERENCE

Informed Consent for Participation in Research Activities **St. Louis Older Adults Home Repair Research Grant**

HSC Approval Number _____

Principal Investigator: Todd Swanstrom PI's Phone Number: 314-516-5259

Summary of the Study

You are invited to participate in a research study led by Dr. Todd Swanstrom at the Community Innovation and Action Center at UMSL. The purpose of this research is to assess the need for, and effectiveness of, home repairs for older adults in the City of St. Louis in order to advocate for funding for home repairs and to make existing home repair programs more effective. We are mailing out survey questionnaires to about 200 homeowners who received repairs. We will also ask a group of 25-50 homeowners who filled out the written questionnaire if they are willing to be interviewed on their experiences. We are partnering with and received your contact information from one of our four home repair partners: the Community Development Agency of the City of St. Louis, Mission St. Louis, Rebuilding Together, and the Urban League.

Your participation, if you so choose, will involve answering a series of questions about your experience with home repairs. The written survey below should take about 15 minutes. The interview, if you choose to participate, will be recorded and will take about 30 minutes. There are minimal risks involved in participating in this research. There are no direct benefits for participating in this research. Your participation is voluntary, and you may choose not to participate in this research study or withdraw your consent at any time. You will NOT be penalized in any way should you choose not to participate or withdraw. We expect the research to be completed by the Summer of 2022.

Your answers in both the written survey and the spoken interview will be held in strict confidentiality. We will do everything we can to protect your privacy. As part of this effort, your identity will not be revealed in any publication that may result from this study. In rare instances, a researcher's study must undergo an audit or program evaluation by an oversight agency (such as the Office for Human Research Protection) that would lead to disclosure of your data as well as any other information collected by the researcher.

If you have any questions or concerns regarding this study, or if any problems arise, you may call the Investigator, Dr. Todd Swanstrom, (314) 516-5259. You may also ask questions or state concerns regarding your rights as a research participant to the Office of Research, at (314) 516-5972.

LIVING IN YOUR HOME

We are going to start with some questions about what living in your home was like for you since the repairs have been completed.

1. **What impact has the home repair had on your overall quality of life?**
 - A lot more positive
 - Somewhat more positive
 - Not much difference
 - Somewhat more negative
 - A lot more negative
 - Don't know, Prefer not to say

2. **What impact has the home repair had on how easy it is for you to get into and out of your home?**
 - A lot easier
 - Somewhat easier
 - Not much difference
 - Somewhat more difficult
 - A lot more difficult
 - Don't know, Prefer not to say

3. **What effect has the home repair had on how easy it is for you to cook at home?**
 - A lot easier
 - Somewhat easier
 - Not much difference
 - Somewhat more difficult
 - A lot more difficult
 - Don't know, Does not apply

4. **What effect has the home repair had on how easy it is for you to take a bath or shower safely?**
 - A lot easier
 - Somewhat easier
 - Not much difference
 - Somewhat more difficult
 - A lot more difficult
 - Don't know, Prefer not to say

5. **What effect has the home repair had on your comfort level in the home with regard to air temperature and air quality?**

- A lot more comfortable
- Somewhat more comfortable
- Not much difference
- Somewhat uncomfortable
- A lot more uncomfortable
- Don't know, Prefer not to say

MENTAL HEALTH AND HAPPINESS

6. **What impact has the home repair had on your overall mental health and emotional well-being?**

- A lot more positive
- Somewhat more positive
- Not much difference
- Somewhat more negative
- A lot more negative
- Don't know, Prefer not to say

7. **Since the home repairs were made, what impact has it had on your level of stress about home repairs and maintenance?**

- A lot more stress
- Somewhat more stress
- Not much difference
- Somewhat less stress
- A lot less stress
- Don't know, Prefer not to say

8. **What effect has the home repair had on the happiness you feel living in your home?**

- A lot more happiness
- Somewhat more happiness
- Not much difference
- Somewhat less happiness
- A lot less happiness
- Don't know, Prefer not to say

9. **What impact has the home repair had on your feelings of safety in your home?**
(For example, secured windows, better lighting, new door locks)

- A lot more safe
- Somewhat more safe
- Not much difference
- Somewhat unsafe
- A lot more unsafe
- Don't know, Prefer not to say

PHYSICAL HEALTH AND WELL-BEING

10. What effect has the completed home repair had your overall physical health?

- A lot more positive
- Somewhat more positive
- Not much difference
- Somewhat more negative
- A lot more negative
- Don't know, Prefer not to say

11. In general, how would you rate your chances of falling on your property since the repairs have been made?

- A lot more likely
- Somewhat more likely
- Not much difference
- Somewhat less likely
- A lot less likely
- Don't know, Prefer not to say

FINANCIAL SECURITY

12. Overall, how did the home repairs affect your financial security and well-being?

- Much more secure
- Somewhat more secure
- Not much difference
- Somewhat insecure
- Much more insecure
- Don't know, Prefer not to say

13. How has the completion of the home repair(s) eased your financial burden?

- A lot easier
- Somewhat easier
- Not much difference
- Somewhat more difficult
- A lot more difficult
- Don't know, Prefer not to say

14. What impact has the home repair had on the costs of your utility bills (like gas or electric)?

- Much higher
- Somewhat higher
- Not much difference
- Somewhat lower
- Much lower
- Don't know, Prefer not to say

15. Since the home repair, what effect has it had on the cost of your regular home maintenance and upkeep?

- Much higher
- Somewhat higher
- Not much difference
- Somewhat lower
- Much lower
- Don't know, Prefer not to say

HOME PROPERTY

16. What impact has the home repair had on how proud you feel about your home?

- Very proud
- Somewhat proud
- Not much difference
- Not very proud
- Not at all proud
- Don't know, Prefer not to say

17. Given its condition after the repairs, how valuable do you feel your home is as a financial asset to you and your family?

- A lot more valuable
- Somewhat more valuable
- Not much difference
- Somewhat less valuable
- A lot less valuable
- Don't know, Prefer not to say

The next questions ask about your plans to stay in your home. Please think about what you would expect to do if things stayed pretty much the same as they are now.

18. Since the completion of the home repair, how likely do you think you will stay in your home?

- A lot more likely
- Somewhat more likely
- Not much difference
- Somewhat less likely
- A lot less likely
- Don't know, Prefer not to say

19. **As a result of the home repair, has it made it more or less likely that you will pass your home to another person later in your life?**

- A lot more likely
- Somewhat more likely
- Not much difference
- Somewhat less likely
- A lot less likely
- Don't know, Prefer not to say

20. **If you had multiple repairs, which one had the most positive effect on the quality of your life? Please select one.**

- Electrical
- Heating/ Cooling
- Plumbing
- Weatherization (Sealing holes and cracks around doors, windows, and pipes, replacing windows)
- Leaks & Mold
- Roof Repair/Replacement
- Structural (foundations, moving walls, doors)
- Exterior (tuckpointing, siding)
- Accessibility (grab bars, ramps)
- Misc. (painting, landscaping)
- Other_____

21. **If there were repairs that were not done, which one do you think would have the most positive effect on the quality of your life going forward? Please select one.**

- Electrical
- Heating/ Cooling
- Plumbing
- Weatherization (Sealing holes and cracks around doors, windows, and pipes, replacing windows)
- Leaks & Mold
- Roof Repair/Replacement
- Structural (foundations, moving walls, doors)
- Exterior (tuckpointing, siding)
- Accessibility (grab bars, ramps)
- Misc. (painting, landscaping)
- Other_____

Lastly, a few questions to help interpret the results.

22. How many people, including yourself, live in your household?

- One
- Two
- Three
- Four or more

23. How long have you owned the home you now live in?

- 26 years or more
- 11 to 25 years
- 10 years or less

24. What was the last year of formal education you completed?

- 0-12 years (high school or less)
- 13-15 years (some college, trade school, associate degree)
- 16 or more years (baccalaureate degree or more)

25. What was your 2020 household income before taxes?

- \$15,000 or less
- Between \$15,001 and \$24,999
- Between \$25,000 and \$34,999
- Between \$35,000 and \$49,999
- Between \$50,000 and \$74,999
- \$75,000 or more

26. What is your ethnic group?

- Hispanic or Latino
- Not Hispanic or Latino
- Unknown or prefer not to say

27. What is your sex?

- Male
- Female

28. What is your race?

- American Indian/Alaskan Native
- Asian/Pacific Islander
- Black/African American
- White/Caucasian
- Other _____

29. Is there anything else you'd like to share with us about the impact of the home repairs on you and your family?

We would like to follow-up with you in a telephone interview about your home repairs.

If you would like to participate, please provide us with your telephone number below. We will not give away your number to anyone else. All your responses will be strictly confidential. Interviewed participants will receive a \$25 gift card that will be mailed to you after the interview. Please note that not everyone who is willing to be interviewed will be called.

30. Are you willing to take part in a follow-up telephone interview about your home repairs?

- Yes
- No, please do not call me

31. If you answered "Yes," what is your telephone number?

(_____) _____ - _____

Thanks for completing the survey and helping make the St. Louis region an even better place for older adult homeowners! Just mail the completed survey in the enclosed stamped envelope by April 8, 2022.

ENDNOTES

- 1 Eileen Divringi, Eliza Wallace, Keith Wardrip, and Elizabeth Nash, *Measuring and Understanding Home Repair Costs: A National Typology of Households* (Philadelphia, PA: Federal Reserve Bank of Philadelphia, September 2019).
- 2 Gary W. Evans, Nancy M. Wells, and Annie Moch, "Housing and Mental Health: A Review of the Evidence and a Methodological and Conceptual Critique" *Journal of Social Issues* 59:3, (2003), pp. 475–500; David E. Jacobs, Jonathan Wilson, Sherry L. Dixon, Janet Smith, and Anne Evens, "The Relationship of Housing and Population Health: A 30-Year Retrospective Analysis" *Environmental Health Perspectives* 117:4 (2009), pp. 597–604; Sandra J. Newman, "Does Housing Matter for Poor Families? A Critical Summary of Research and Issues Still to be Resolved" *Journal of Policy Analysis and Management* 27:4 (2008), pp. 895–925.
- 3 W. J. Fisk, Q. Lei-Gomez, and M. J. Mendell, "Meta-Analyses of the Association of Respiratory Health Effects with Dampness and Mold in Homes," *Indoor Air* 17 (4) (2007), pp. 284–296.
- 4 Federal Healthy Homes Work Group, *Advancing Healthy Housing: A Strategy for Action*. Washington, D.C.: U.S. Department of Housing and Urban Development, 2013, www.hud.gov/sites/documents/STRATPLAN_FINAL_11_13.PDF.
- 5 Alexandra Witze, "The Deadly Impact of Urban Heat," *Nature* Vol. 595 (July 2021), p. 350.
- 6 For a careful study of how high temperatures can be lethal for older people in cities, see Eric Klinenberg, *Heat Wave: A Social Autopsy of Disaster in Chicago* (University of Chicago Press, 2002). Because of rising temperatures in St. Louis and the tight connection between extreme heat and morbidity, we concluded that properly functioning air conditioning is not a luxury but a necessity for older city residents.
- 7 *City of St. Louis Climate Vulnerability Assessment 2018*, p. 6.
- 8 For research documenting that historically redlined neighborhoods of color suffer more from the urban heat island effect, see Jeremy Hoffman, Vivek Shandas, and Nicholas Pendleton, "The Effects of Historical Housing Policies on Resident Exposure to Intra-Urban Heat: A Study of 108 US Urban Areas," *Climate* 2020, 8, 12.
- 9 For nation: Joint Center for Housing Studies, *State of the Nation's Housing 2022* (Cambridge, MA: Harvard University, 2022), p. 23; for St. Louis: American Community Survey 2021 5-Year Estimates.
- 10 Joanne Binette and Kerri Vasold, *Home and Community Preferences: A National Survey of Adults Aged 18-Plus*. Washington, DC: AARP Research, August 2018 (<https://doi.org/10.26419/res.00231.001>); see also P. H. Feldman, M. R. Oberlink, E. Simantov, & M. D. Gursen, *A Tale of Two Older Americas: Community Opportunities and Challenges*. AdvantAge Initiative: 2003 National Survey of Adults Aged 65 and Older. New York: Center for Home Care Policy and Research, Visiting Nurse Service of New York, 2004.
- 11 Divringi et al., *Measuring and Understanding Home Repair Costs*.
- 12 Joint Center for Housing Studies, *State of the Nation's Housing 2022*.
- 13 Joint Center for Housing Studies.
- 14 Jonathan Reckford, "Housing Groups Should Expand to Repair Work to Help Seniors Age in Place," *Shelterforce*, August 16, 2016.
- 15 HRN Submission for Public Comment, Public Hearing Notice: 2022 CDBG Funding Priorities, July 23, 2021 (authors' files).
- 16 Cynthia Berry, *Seniors Count: Summary of St. Louis City Needs Assessment Data*, Developed for St. Louis City Senior Fund Strategic Planning (2017).
- 17 Joint Center for Housing Studies, *Housing America's Older Adults 2018, Supplement to the State of the Nation's Housing Report* (Cambridge, MA: Harvard University, 2018).
- 18 Eliza Wallace, Eileen Divringi, and Keith Wardrip, "A New Cost-Based Index of Housing Quality and Repair Needs," *Cityscape: A Journal of Policy Development and Research*, 21 (3) (2019), p. 302.

19 Almost 95 percent of our respondents identified as African American/Black or Caucasian/White. Because the data for American Indian, Asian and other racial identities is small, we do not report those results separately.

20 United States Census Bureau, Quick Facts: <https://www.census.gov/quickfacts/stlouiscitymissouri>.

21 The most significant difference is that RSMMeans estimated the cost of replacing heating equipment at \$1,737. Our panel of experts thought this was far too low; we came up with an estimate of \$4,655, which we believe is still a conservative estimate. It is important to note that RSMMeans adjusts costs according to the cost of living in each metropolitan area. Since St. Louis is very close to the norm (100), we did not adjust the estimates.

22 Rebuilding Together, *Impact Measurement Pilot Report, 2019-2020* (Prepared by Actionable Insights, LLC), Appendix E

23 The lower incomes were expected because eligibility for home repair assistance under federal guidelines is restricted to those making less than 80 percent of area median income.

24 Divringi, et al, *Measuring and Understanding Home Repair Costs*, p. 3.

25 Divringi, et al, op. cit. p. 3. Another reason our estimate was higher was probably because the national study examined homeowners and renters. We only covered homeowners. Individual homes are generally larger and probably have more expensive repair needs than apartments.

26 We derived this estimate by multiplying the average cost of repairs for our survey respondents (\$13,023) times the total number of owner-occupied units with householders aged 60 or over (23,213). In order to calculate the latter number, we had to extrapolate from ACS 5-year 2016-2020 data which reports age data for owner-occupants 65 and over and ages 35-64. Our home repair providers told us that with rising costs and other complications, many of our estimates of the cost of home repair scenarios were low. For this reason, we believe our estimate of the cost of needed repairs is conservative.

27 This breakdown of the city is based on Henry S. Webber and Jodie Lloyd, *Regional Success in St. Louis* (n.d.).

28 According to one study of multifamily rentals, building new affordable housing can be 30-50 percent more expensive than repairing and upgrading existing units. Charles Wilkins, et al, "Comparing the Life-Cycle Costs of New Construction and Acquisition-Rehab of Affordable Multifamily Rental Housing," *Housing Policy Debate*, 2015, Volume 25, Issue 4. For a discussion of how home repairs can address the affordable housing challenge in St. Louis, see the Affordable Housing Trust Fund Coalition, *St. Louis Affordable Housing Report Card*, p. 20 (2021): <https://tinyurl.com/3kfzms8k>.

29 Eugenia C. South, John MacDonald, and Vincent Reina, "Housing Repairs for Low-Income Homeowners and Neighborhood Crime," *JAMA Network Open* July 21, 2021.

30 American Council on Aging: <https://www.medicaidplanningassistance.org/nursing-home-costs/>.

31 Emily Moss, et al, *The Black-White Wealth Gap Left Black Households More Vulnerable*, Brookings Institution (December 8, 2020).

32 For detailed documentation of how private discrimination and public policies deliberately segregated St. Louis, see Colin Gordon, *Mapping Decline: St. Louis and the Fate of the American City* (Philadelphia, PA: University of Pennsylvania Press, 2008).

33 The recommendations that follow address the needs of older homeowners but also apply to the need for home repairs across all groups in the population.

34 Philadelphia is leading the way in subsidizing home repairs. It passed a 0.1 percent increase in its real estate transfer tax that raised \$100 million. The City has committed over \$60 million to the Healthy Rowhouse Project that will invest \$100 million on grants to repair older homes. The City has also launched a \$40 million low-interest housing preservation loan program for low- and moderate-income homeowners.

35 The Association of Baltimore Area Grantmakers convened the actors in housing and services to seniors and funded the Baltimore Housing Upgrades to Benefit Seniors (HUBS) program that, among other things, provides a central intake for all seniors seeking home repairs and coordinates home repairs with social services. For a comprehensive evaluation of HUBS, see Kelsey Walter, et al, *Housing Upgrades to Benefit Seniors: Efficiency, Impact, and Replication Evaluation*, IMPAQ International, 2019.







