

ABSTRACT

Title of Thesis: STRONG FOUNDATIONS: EXPLORING
THE ROLE OF EDUCATIONAL
ARCHITECTURE IN MITIGATING
BALTIMORE'S RACIAL DISPARITIES

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Architecture, 2021

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The underfunding of public infrastructure in majority Black communities of the USA is an historic issue exacerbated by disenfranchisement, redlining, 'slum' clearance, and systemic racism. The Harlem Park neighborhood in West Baltimore needs a new school complex to replace the current Harlem Park Elementary/Middle and Augusta Fells High School building. The existing building is a relic of the disastrous 1961 Urban Renewal plan that created Route 40 (the "Highway to Nowhere") and destroyed hundreds of homes in the neighborhood. This thesis will explore the role of educational architecture in both repairing a community harmed by discriminatory design and lessening racial disparities in education. As we grapple with yet another wave of societal reckoning, let us imagine a world where the children of Harlem Park have equal opportunity to a strong foundation of public education.

STRONG FOUNDATIONS: EXPLORING THE ROLE OF EDUCATIONAL
ARCHITECTURE IN MITIGATING BALTIMORE'S RACIAL DISPARITIES

by

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Thesis submitted to the Faculty of the Graduate School of the
University of Maryland, College Park, in partial fulfillment
of the requirements for the degree of
Master of Architecture
2021

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Preface

I was bussed for a few years in elementary school. At seven years old, I rode a bus an hour away from home to get to a wealthy school in Potomac, Maryland. With this opportunity, the black daughter of a Salvadorean immigrant had the chance to rub elbows with the children of diplomats and scientists. I learned in comfortable well-lit classrooms and had access to experienced teachers who could spend more time educating and less time feeding their students. I cannot imagine who I would be today without that opportunity - and the fact that I was lucky was never lost on me.

In the Summer of 2020, I was able to conduct community outreach in Harlem Park, West Baltimore on behalf of Ayers Saint Gross. One of the biggest issues for community members was the school complex at the center of the neighborhood. How were students expected to learn without adequate AC or heat? With rats and cockroaches infesting the building? With the lack of concern over their welfare written all over the asbestos-insulated walls, leaky pipes, and cracked windows? I wondered what my life would have been like if I had attended their school. I doubt I would be here now.

This thesis is more than a design exercise to me. It is acknowledging the privilege of my childhood and asking what it would take for more people to have what I did. While architecture alone cannot fix all the problems of our society, it is still a symbol of what we value most. Why should the children of Harlem Park Baltimore be valued less than the children of Potomac?

Acknowledgements

Thank you to my family, mi familia, my partner, and my friends for your love and support.

Thank you to my chair, Professor Noonan, and Professor Tilghman for your expert guidance; and a huge thank you to my mentors at Ayers Saint Gross who helped shape this thesis.

Finally, my gratitude goes to the people of Harlem Park who were kind enough to spend their precious time with me.

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Chapter 1: Racial Disparity

On May 25, 2020, George Floyd was murdered by a police officer for allegedly using a counterfeit \$20 bill¹. The officer pinned him down with a knee on his neck, ignoring Floyd's desperate pleas that he could not breathe until he perished. The deaths of George Floyd, Breonna Taylor, Tamir Rice, Trayvon Martin and more are injustices - combined with the disparate effects of COVID-19 on the African American population, these tragedies have sparked a wave of societal reckoning regarding the disparity between the Black and White experience in the United States.

Disparity in the United States

From the Japanese internment camps to the Zoot Suit murders of Mexican Americans and the infamous Trail of Tears, the United States has a contentious history of injustice against racial minorities. When speaking specifically of the African American experience, one cannot discount the long-reaching effect of slavery - the economic incentive to dehumanize black bodies.

Slavery was legally established in the British colony in 1641, and Mississippi was the last state to formally ratify the Thirteenth Amendment in

¹ New York Times. "What We Know About the Death of George Floyd in Minneapolis." September 12, 2020, www.nytimes.com/article/george-floyd.html.

1995². With slavery came a series of policies designed to prevent all African Americans (even when freed) from accessing the rights given to white men at the time – freedom, voting, property ownership, assembly, and education. After the Emancipation Proclamation and the Thirteenth Amendment, these laws continued in the form of the Black Codes and the later Jim Crow laws. Although the Civil Rights Act of 1964 finally prohibited legal discrimination on the basis of skin color, it would be remiss to believe that 54 years of legal ‘equality’ would remedy over 350 years of economically and socially entrenched discrimination.

History affects the present. The current discrepancies between the Black and White populations of the United States reveal the generational impacts of slavery and racism. White families in the US had the potential to accrue wealth and property across multiple generations, leading to a median wealth of \$171,000 in 2016 – ten times the \$17,100 wealth of Black households³. Even within education, the disparities continue throughout childhood.

In 2018 the national high school graduation rate for White students was 89 percent, about ten percent higher than Black students⁴. When it comes to academic achievement, about 40% of White students earn any

² Caryl-Sue, and National Geographic Education Staff. A History of Slavery in the United States. National Geographic Society. June 23, 2020. www.nationalgeographic.org/interactive/slavery-united-states/.

³ Kochhar, Rakesh, and Anthony Cilluffo. How wealth inequality has changed in the U.S. since the Great Recession, by race, ethnicity and income. Pew Research Center. November 1, 2017. <https://www.pewresearch.org/fact-tank/2017/11/01/how-wealth-inequality-has-changed-in-the-u-s-since-the-great-recession-by-race-ethnicity-and-income/>.

⁴ The Condition of Education: Public High School Graduation Rates. U.S. Department of Education. May 2020. https://nces.ed.gov/programs/coe/indicator_coi.asp.

number of Advanced Placement (AP) or International Baccalaureate (IB) credit, compared to 23% of Black students⁵. The gap is noticeable in children as early as grade 4, where the White-Black achievement gap in reading was nearly 30 points⁶. One of the highest discrepancies between public school students is the rate of punishment – 14% of Black students received an out-of-school suspension while only 3.4% of White students received the same punishment. Many of these issues are social in cause and potential solutions will involve incremental societal change, however, the economic root cannot be denied. If a school has 90% or more students of color, they will spend \$733 less per student each year than a school with majority White students in the US⁷. This number includes the money spent on the school itself: the built environment that enables these students to learn is especially underfunded in Black urban communities.

Baltimore City Disparity

Baltimore, Maryland's unique history has reinforced discrepancies in the built environment between Black and White communities. Maryland was a slave state until one year after the Emancipation Proclamation (1864), but its location near the Mason-Dixon line caused a large community of free people to live within the city. Before the Civil War, Baltimore had the largest free

⁵ Brey, de, and L. , McFarland, J. , Wilkinson-Flicker, S. , Diliberti, M. , Zhang, A. , Branstetter, C., and Wang, X. Musu. Status and Trends in the Education of Racial and Ethnic Groups 2018. Institute of Education Sciences, National Center for Education Statistics, Washington, DC: U.S. Department of Education, 2019, 90.

⁶ K-12 Disparity Facts and Statistics. UNCF. August 2012. <https://uncf.org/pages/k-12-disparity-facts-and-stats>.

⁷ Ibid.

Black community of any city⁸. Unfortunately, this led to the creation of laws to uphold the “racial superiority” of White Baltimoreans – particularly through segregating neighborhoods, denying the right to own property, and limiting the access and upkeep of public infrastructure⁹.

Freed slaves paid taxes but were not allowed to use the amenities they paid for, such as public schools. Before the Civil War, most Black people (both free and enslaved) lived in the Fells Point area near the Inner Harbor - but they were outlawed from owning property for more than one year. As Fells Point became attractive to White families in Baltimore, racial covenants in deeds and violence against the remaining Black families pushed them and their descendants out of the city center towards East and West Baltimore in the early 1900s¹⁰. Despite this forced movement, more Black families were gaining the option to move into majority-White neighborhoods. As a result, Baltimore's 1910 "West Ordinance" was the first municipal law to require racially segregated housing in the US¹¹. This ordinance was reinforced by redlining. As a result, East and West Baltimore remain majority- African American today, with lower housing values, incomes, and tax revenue than

⁸ A Lasting Legacy: Baltimore's African American History. Baltimore Heritage Area Association. 2018. <https://www.explorebaltimore.org/city-history/a-brief-overview-of-baltimores-african-american-history>.

⁹ 1831-1884: Abolition and Emancipation. NPS Heritage Initiatives Program, Preservation Maryland Heritage Fund, PNC Foundation. 2018. <https://baltimoreheritage.github.io/civil-rights-heritage/1831-1884/>.

¹⁰ 1885-1929: Segregation and the Fourteenth Amendment. NPS Heritage Program, Preservation Maryland Heritage Fund, PNC Foundation. 2018. <https://baltimoreheritage.github.io/civil-rights-heritage/1885-1929/>.

¹¹ Ibid.

majority-White communities in the city.

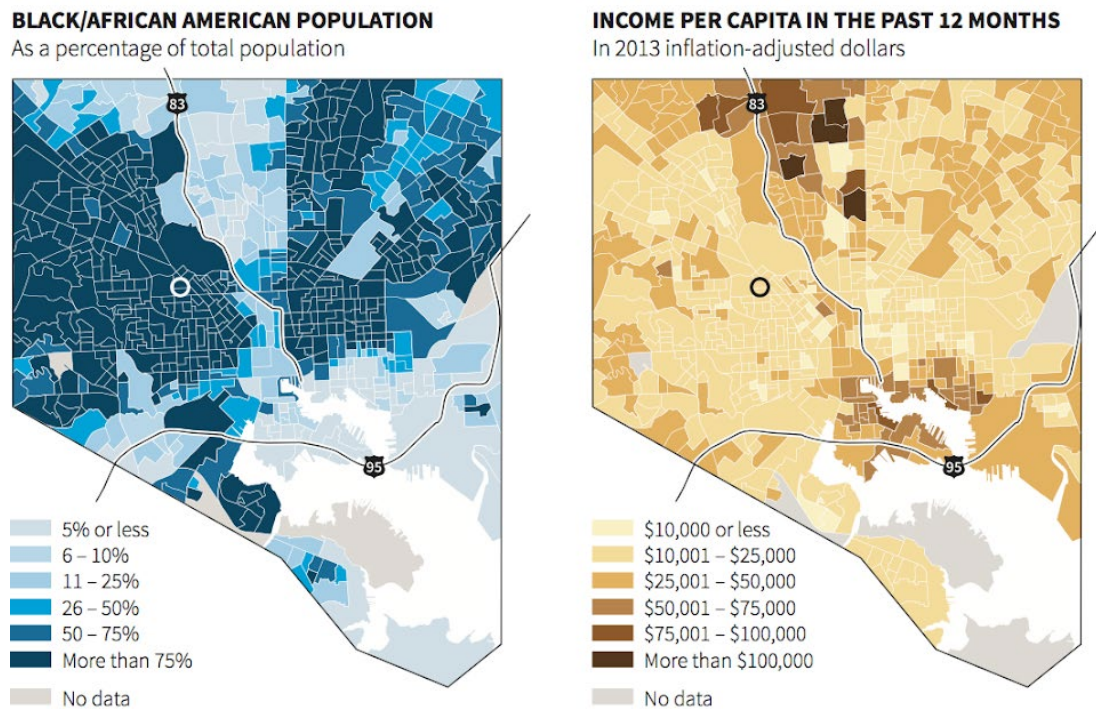


Fig. 1. Comparison between Black population and Income per Capita in Baltimore, by C. Chan, 2015, <https://www.businessinsider.com/these-maps-show-the-depth-of-baltimores-inequality-problem-2015-4>. Copyright 2020 by Reuters

The rise of the suburbs post-WWII led to further imbalance of investment in Baltimore's Black communities. Urban renewal efforts of the 60s and 70s demolished thousands of homes and businesses in East and West Baltimore, replacing an extensive streetcar system with state highways like Route 40¹². On top of the demolition of homes and businesses, tax dollars from majority-Black urban households went to these 'improvements' for majority-White suburban commuters – leading to crumbling urban infrastructure and a lasting skepticism of development efforts today.

¹² Harlem Park. Baltimore Heritage, Inc. Last Modified 2020. <https://baltimoreheritage.org/programs/harlem-park/>.

Harlem Park Neighborhood Disparity

The Harlem Park neighborhood in West Baltimore is a few blocks south of the site where Freddie Gray was found dead in a police cruiser – sparking weeks of protests. Harlem Park’s population is about 98% Black, with generations kept in the area by the policy of redlining and physical

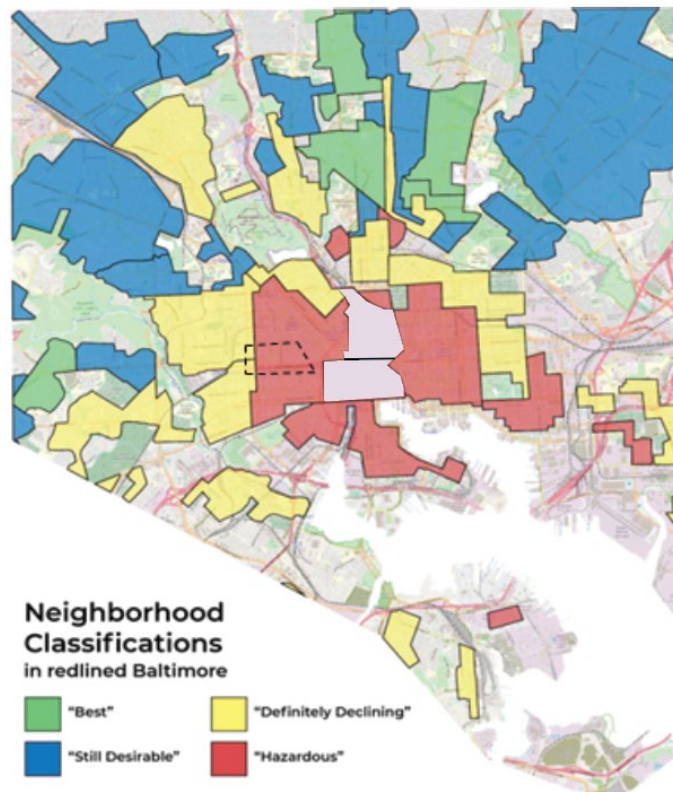


Fig. 2. Redlining Classifications in Baltimore with Harlem Park marked by dashed lines, by Ready, Diffendal, Gallion, and Mussenden, 2019, edited by Author, <https://cnsmaryland.org/interactives/summer-2019/code-red/role-of-trees.html#story> Copyright 2020 by Howard Center for Investigative Journalism

boundaries such as MLK Jr. Boulevard to the east, Route 40 to the south, and the MARC railroad to the west¹³.

¹³ Race and Ethnicity in Harlem Park, Baltimore, Maryland. Statistical Atlas. September 14, 2018. <https://statisticalatlas.com/neighborhood/Maryland/Baltimore/Harlem-Park/Race-and-Ethnicity>.

The median income in Harlem Park is about \$18,000, which is less than half of Baltimore's \$44,000 city-wide median and about a quarter of the \$72,000 median income for White households in the city¹⁴.

When it comes to education, the Harlem Park neighborhood similarly lags behind majority-White neighborhoods in Baltimore. 29% of the citizens aged 25 or older have no high school diploma. For about 60%, a high school diploma is the highest level of education they have achieved. Only 7.5% have a Bachelor's degree – compare this to Patterson Park, which is 92% White with over 72% of the neighborhood attaining a Bachelor's degree¹⁵.

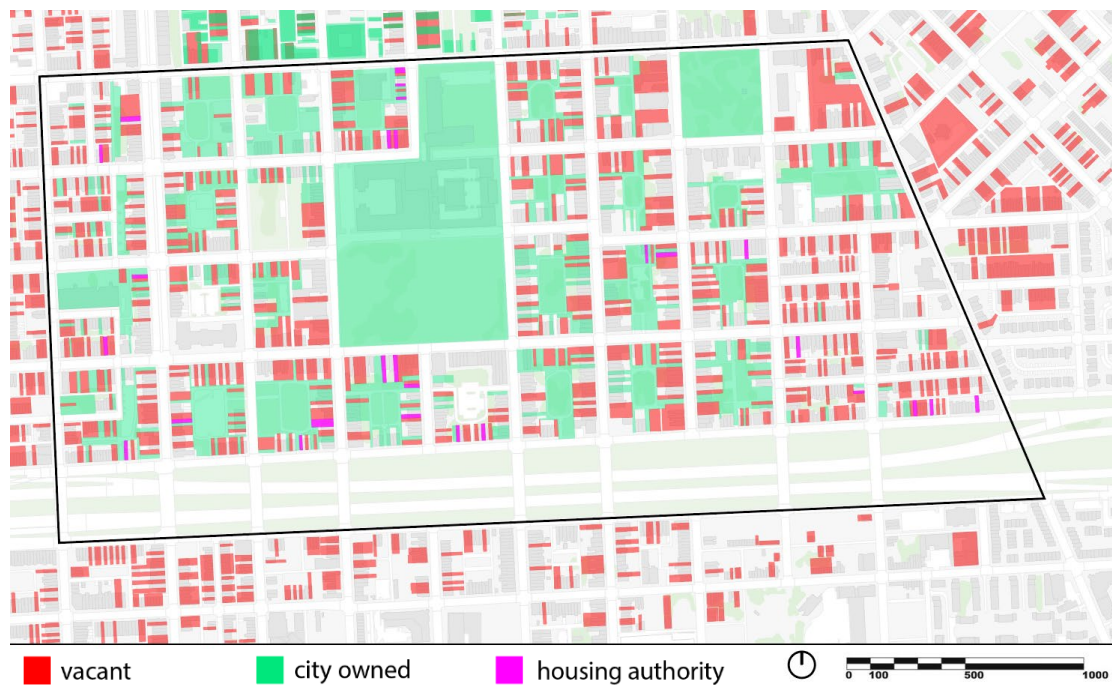


Fig. 3. Harlem Park is facing widespread vacancies and city-owned properties, which further lessens the tax revenue for upkeep of the community. By Author, 2020.

¹⁴ Household Income in Harlem Park, Baltimore, Maryland. Statistical Atlas. September 14, 2018. <https://statisticalatlas.com/neighborhood/Maryland/Baltimore/Harlem-Park/Household-Income>.

¹⁵ Educational Attainment in Harlem Park, Baltimore, Maryland. Statistical Atlas. September 14, 2018. <https://statisticalatlas.com/neighborhood/Maryland/Baltimore/Harlem-Park/Educational-Attainment>.

The neighborhood fabric is punctuated with empty lots. About 30% of the buildings in Harlem Park are vacant¹⁶.



Fig. 4. This overgrown Inner Block Park “K 101” above is one of many unkempt, unsafe parks. Below that is a view of Edmondson Avenue – notice the vacant lots on both sides of the street. Image Capture June/July 2019, Copyright 2020 Google.

There are no libraries in the neighborhood and the only community center is in the school. Even street tree cover in the neighborhood is a sign of disparate wealth – with majority White Roland Park having over 50% canopy

¹⁶ Rodricks, Dan. "In the midst of West Baltimore blight, an ambition for new housing and a cup of coffee." The Baltimore Sun, March 12, 2019.
<https://www.baltimoresun.com/opinion/columnists/dan-rodricks/bs-md-rodricks-column-0313-story.html>

cover, while Harlem Park has about 20% due to a lack of maintenance for the young trees planted there¹⁷.

The extent of the impact caused by urban renewal in the 1960s sets Harlem Park apart from similarly disadvantaged neighborhoods in West and East Baltimore. The Edmondson streetcar line once connected the neighborhood to the Inner Harbor.



Fig. 5. An extensive network of streetcars once connected Harlem Park to Baltimore's Inner Harbor. The bolded line represents the Edmondson Line. By Author, 2020.

Businesses and homes lined the avenue, working as early public-transit-oriented development. The 1961 Urban Renewal Plan replaced this mile-long stretch of urban fabric with Route 40, now commonly called “the Road to Nowhere”¹⁸. 29 inner block parks were also created in Harlem Park. Hundreds of back alley homes (admittedly in poor condition) were

¹⁷ Ready, Roxanne, Theresa Diffendal, Bryan Gallion, and Sean Mussenden. The Role of Trees. Howard Center for Investigative Journalism. September 3, 2019.

<https://cnsmaryland.org/interactives/summer-2019/code-red/role-of-trees.html#story>

¹⁸ Harlem Park. Baltimore Heritage, Inc. Last Modified 2020.

<https://baltimoreheritage.org/programs/harlem-park/>.

demolished. However, no alternative affordable housing was created in its place – only a collection of isolated grassy patches hidden behind rowhomes.

City entities debated over the maintenance of the parks, leaving them neglected and overgrown. The design move also ignored the culture of stoop sitting and utilizing the sidewalk and other street-facing spaces as important public space. The 1961 plan not only led to Route 40 and the inner block parks, it also directly resulted in the construction of Harlem Park's school complex.



Fig. 6. Each red boundary marks the demolition extents of the 1961 Urban Renewal Plan. The school complex takes up an entire four blocks. By Author, 2020.

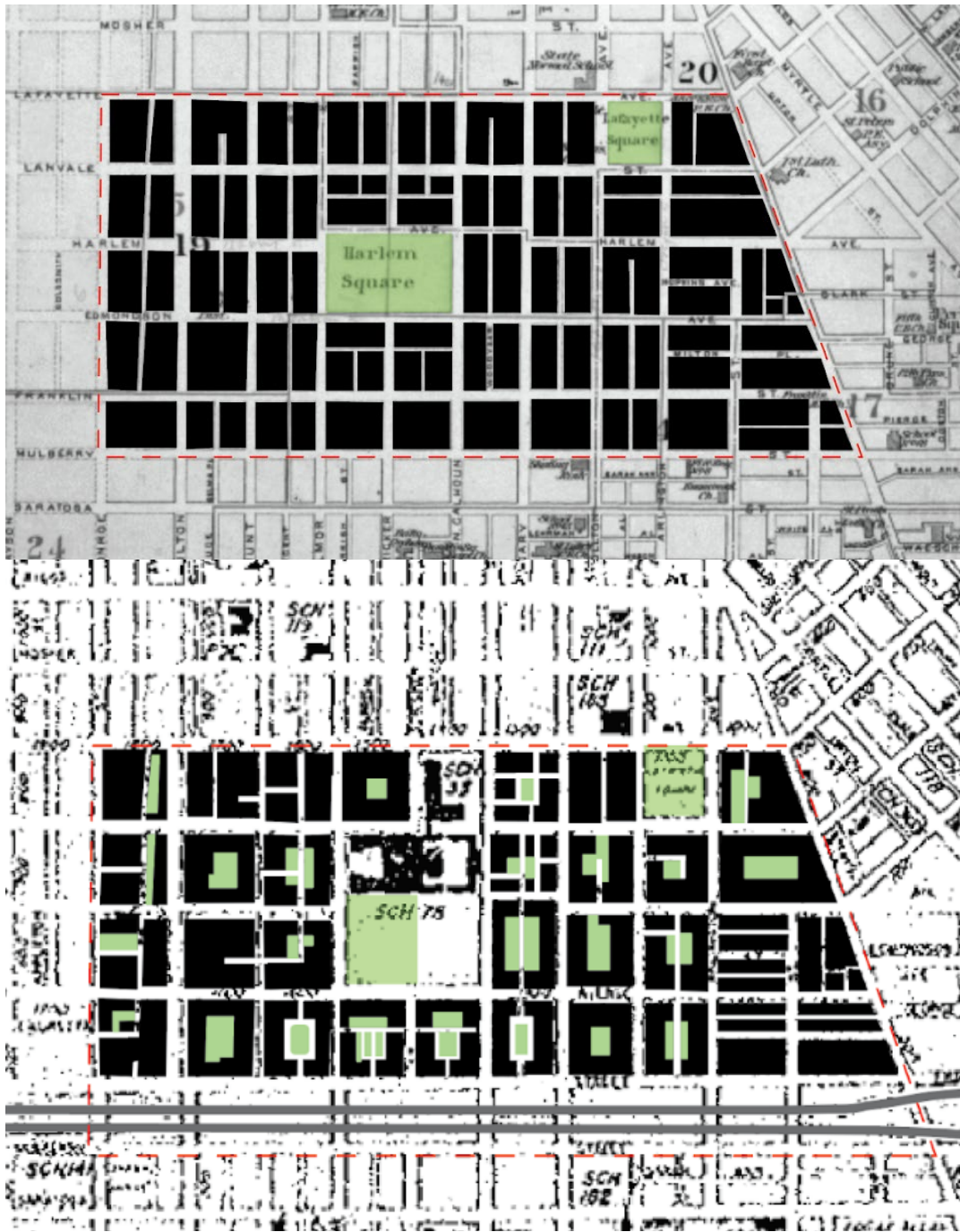


Fig. 7. This diagram visualizes the change in Harlem Park's urban fabric from 1876 (near construction) to 1977 (after urban renewal efforts). By Author, 2020.



Fig. 8. The current figure-ground of Harlem Park. By Author, 2020.

Chapter 2: School Conditions

The Harlem Park Elementary/Middle school complex (currently also the Augusta Fells High School and Harlem Park Recreation Center) was controversial from schematic design to its completion. Three blocks of homes had to be demolished for the site. The placement of the school fields also occupied half of the original area of the Harlem Square Park – a decision that sparked the protest of the NAACP¹⁹. The park was a rare historic green space in the segregated Black neighborhoods of the time.



Fig. 9. In this axonometric view of the school complex, you can see the remaining half of Harlem Square Park to the left. By Author, 2020. (underlay from Google Maps, copyright 2020 Google, 2020 CNES/Airbus, Commonwealth of Virginia, Maxar Technologies, Sanborn, U.S. Geological Survey, USDA)

¹⁹ Harlem Park. Baltimore Heritage, Inc. Last Modified 2020. <https://baltimoreheritage.org/programs/harlem-park/>.

Building Experience

One of the greatest oversights in the \$5,300,000 school complex (over \$46,500,000 when adjusted for today's inflation) is the lack of consideration for the culture of the area²⁰. The building ignores the existing typology of the



Fig. 10. The western side of the building is sunken back from the street on the left. Image Capture Jul 2019, Copyright 2020 Google.

rowhome and guards itself from the street, conflicting with the prevailing culture of street-facing public space. On the western side, the building is even sunken into the ground with a grass “moat” setting it back from the street.

The four main entrances of the complex do little to promote interaction with the street. The setback of the recreation center entrance facing east



Fig. 11. On the left is the east-facing entrance of the recreation center in the school complex. Image Capture June 2019, Copyright 2020 Google.

²⁰ Harlem Park. Baltimore Heritage, Inc. Last Modified 2020. <https://baltimoreheritage.org/programs/harlem-park/>.

Calhoun street restricts visibility for those exiting the building – causing a safety concern.

The northern entrance into the elementary/middle school portion of the complex is sunken away from the West Lafayette Avenue. ADA access is



Fig. 12 The northern entrance of the Elementary/Middle school portion of the complex has no dialogue with the street. Image Capture July 2019, Copyright 2020 Google.

only available through the parking lot, forcing students with mobility issues to move from the sidewalk bus stop down to the parking lot entrance on North Calhoun street, or find private transportation.



Fig. 13. A chain link fence and a bus loop block the Western entrance from North Gilmore Street. Image Capture July 2019, Copyright 2020 Google.

The western entrance facing North Gilmore street is separated from the street by a chain link fence and the bus loop for the middle and high school

students. After going up the central staircase, middle school students can enter the building to the left, and the high school students can enter using the door on the right. Straight ahead of the staircase is a paved space flanked by the building on three sides. Visible cameras on every corner highlight the security issues in this space.

The 'ceremonial' entrance of Augusta Fells High School is a subterranean path leading down from Edmonson Avenue, then back up to the



Fig. 14. The ceremonial entrance leading from Edmonson Avenue dips below the ground level. Edited by Author. Image Capture June 2019, Copyright 2020 Google.

building entrance. This literal scar on the landscape cuts through the original extent of the Harlem Square Park, mirroring the path of Route 40 to the south of the neighborhood. To the left of the path, one can see the mature oaks of the remaining half of Harlem Square Park, and to the right is the baseball field that replaced the other half.

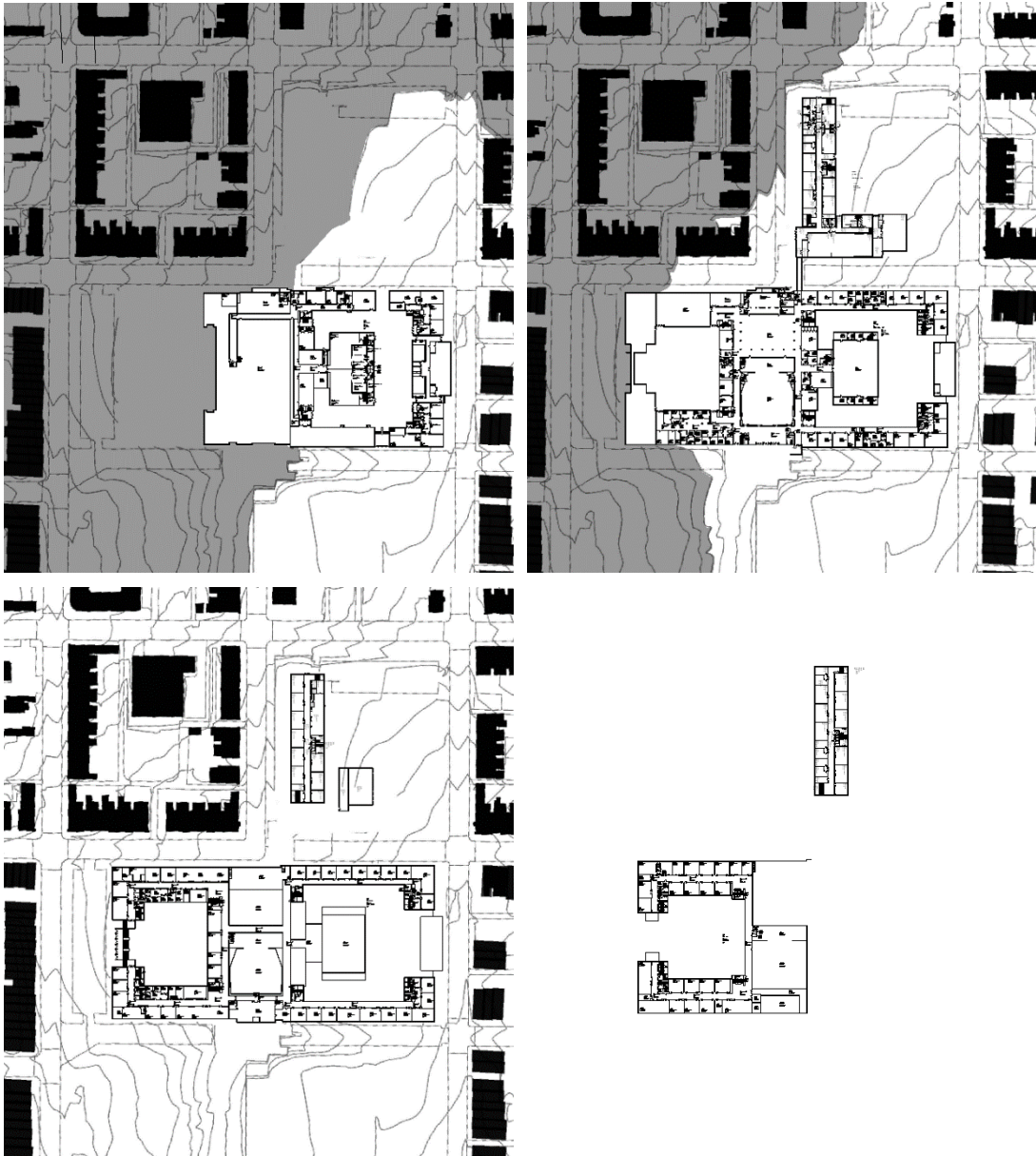


Fig. 15. The school plans reveal the original school complex's struggle with the topography. (top left ground floor, top right level 1, bottom left level 2, bottom right level 3) By Author with original plans courtesy of Baltimore City Public Schools, 2020

Building Quality

In 2013, the Baltimore City Board of School Commissioners published the Baltimore City Public School's 10-year plan, commonly known as the 21st Century Schools Plan. Although the plan has not been followed for the last seven years, it contains individual condition ratings for the 183 schools housed in district buildings and recommends whether the building should be replaced, renovated, or vacated²¹. This data shapes decisions made today.

Jacobs Project Management conducted the building condition analysis based on three factors. The first was the Facilities Condition Index (FCI), a percentage comparing the cost of repairs and 10 years of maintenance with the cost to replace the building with a brand new one of the same size. The higher the percentage, the better it would be to replace the building rather than renovate (75% is the general cut-off for the decision)²². The second factor is the Educational Adequacy Score, which rates the building's layout, instructional space, and technology. This "include everything from overall building security to technology infrastructure; storage space, open space and flow of space; classroom size and shape; proximity of special use areas to classrooms; lighting; and equipment and space to support specific curriculum offerings such as music, sports, science and technology programs"²³. The minimum Educational Adequacy Score for a functional school is 80. The last

²¹ Jacobs Project Management. 21st Century Buildings for Our Kids: Baltimore City Public Schools' 10-Year Plan. Baltimore: Baltimore City Board of School Commissioners, 2013, 34.

²² Ibid, 15.

²³ Jacobs Project Management. 21st Century Buildings for Our Kids: Baltimore City Public Schools' 10-Year Plan. Baltimore: Baltimore City Board of School Commissioners, 2013, 16.

factor was Functional Capacity, which measured the maximum student capacity by comparing the room sizes to the necessary square footage per student per the classroom's function²⁴.

The building quality evaluation of the Harlem Park school complex was split into two categories: Augusta Fells High School and Harlem Park Elementary/Middle School.

Augusta Fells High School was a high priority originally slated for improvement within the first year of the plan. The high school portion of the complex received an FCI of 57.5 percent, indicating that renovation would be cheaper than replacing with a school of equal size. However, the report states that the high school should be downsized. The estimated cost of building a new smaller high school is then less than the estimated \$41 million needed to renovate the existing school and maintain it for ten years. The Educational Adequacy score of the high school is only 55.6, lower than the 80-point minimum required for "excellent teaching and learning" ²⁵. The functional capacity of the building is 2,133 students, however, only 419 students were enrolled in 2020.²⁶ This leaves the utilization rate of the high school at 19% - far below the suggested 65% minimum utilization rate²⁷. The final suggestion for the high school was to close the nearby Excel Academy (at Francis M

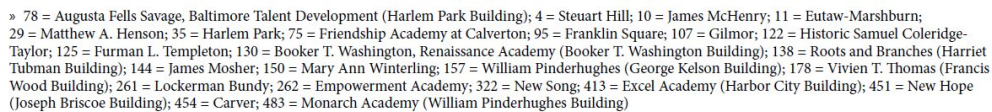
²⁴ Ibid, 18.

²⁵ Ibid, 51.

²⁶ Baltimore City Public Schools. Augusta Fells Savage Institute of Visual Arts. 2020. <https://www.baltimorecityschools.org/schools/430>

²⁷ Jacobs Project Management. 21st Century Buildings for Our Kids: Baltimore City Public Schools' 10-Year Plan. Baltimore: Baltimore City Board of School Commissioners, 2013, 51.

Harlem Park Elementary/Middle School was mid-priority with improvement originally scheduled for year 4 of the 10-year plan²⁸. The FCI for Harlem Park Elementary/Middle School is 76.8 percent, suggesting that a



\$14.7 million new building would be more economic than renovation²⁹. The Educational Adequacy Score is 65.9, higher than the high school but still lower than the 80% minimum required³⁰. The functional capacity of the elementary/middle school is 499 students. In 2020, 306 were enrolled – this

³⁰ Jacobs Project Management. 21st Century Buildings for Our Kids: Baltimore City Public Schools' 10-Year Plan. Baltimore: Baltimore City Board of School Commissioners, 2013, 131.

61% utilization rate is near the suggested 65% minimum, suggesting that the K-8 portion of the complex would not need re-sizing³¹.

Overall, the study found the Harlem Park school complex below acceptable standards for learning. The building lacked “human comfort”, “indoor air quality”, proper “lighting”, and necessary specialty education space (i.e. sufficient STEM labs)³². The consolidation of the city schools, however, may not be an appropriate design move in this urban context – exploration into the necessity of the high school and possible breakdown of the school complex into smaller components will be critical to the design process.

Community Sentiment

While building data is critical for design decisions, the input from the community is an equally important factor of a school’s existing conditions. Community input about the Harlem Park school complex was recorded in conjunction with the Ayers Saint Gross Harlem Park Masterplan.

On July 25, 2020, over 70 residents came to Lafayette Square Park to share their thoughts on the neighborhood. Some of the chief complaints were about the school complex at the center of the neighborhood, including “fix the AC in the school” and “reinvestment needed in public schools”³³. Residents also mentioned that the school needed more space and equipment for “arts and music”, “more computers”, and services/accessibility in the school “for

³¹ Baltimore City Public Schools. Harlem Park Elementary/Middle School. 2020. <https://www.baltimorecityschools.org/schools/35>.

³² Jacobs Project Management. 21st Century Buildings for Our Kids: Baltimore City Public Schools' 10-Year Plan. Baltimore: Baltimore City Board of School Commissioners, 2013, 11.

³³ Quintanilla, Melonee. "HPMP Community Meeting 1 Comments." July 27, 2020

[students] with disabilities”³⁴. Higher aspirations revolved around community programs within the school, such as “job training”, a “rec center” providing after-school childcare, and “summer camps”³⁵. Conversation with the residents revealed that they ultimately believed the school was unsafe for their children due to HVAC and pest issues, and that these issues greatly impact both the health and the academic success of their children.

On September 26, 2020, a virtual steering committee gathered written comments from about 20 members of the community. Comments about the school included “[need] first rate schools”, “[integrate] adult trade/learning/career opportunities”, “[be] sustainable/eco-friendly”, “connect to [nearby] universities”, and “[improve the] poor school outcomes”³⁶. Great emphasis was put on the school as a “community-centered place” that is “more than just a 9-3 operation”³⁷. The existing residents see a beautiful and functional new school as incentive for more young families to stay in the neighborhood instead of moving out once their children reach school age.

³⁴ Quintanilla, Melonee. “HPMP Community Meeting 1 Comments.” July 27, 2020

³⁵ Ibid.

³⁶ Wendland, Amber. Steering Committee Meeting 1. September 26, 2020.

<https://app.mural.co/t/ayerssaintgross5567/m/ayerssaintgross5567/1600791840296/79411bf5c30ffdf4155167d6d08cc936676cc2d>

³⁷ Ibid.

Chapter 3: Connecting the Issues

Racism affects the built environment. As discussed in Chapter 1, the factors leading to low investment in the Harlem Park school complex and the deterioration of the urban fabric have roots in the discriminatory practices of redlining, segregation, and urban renewal. These factors leading to lower investment in the education of Harlem Park's youth then lead to less high paying jobs among community members and even less investment in the school – perpetuating cyclical poverty along racial divides. Intervention to prevent this cycle will be largely social, but these changes must be supported by the design of the built environment. Educational architecture in particular has a long history of addressing 'social ills' and shaping the future of our country. Although the 'ills' have not historically been systemic racism, the question is not *whether* educational architecture can intervene in this cycle, but *how*.

Educational Architecture in the USA

Since the transition away from the one-room schoolhouse, educational architecture has actively shaped our priorities as a society. Progressive school architecture generally began in the 1930s with the Crow Island school. The design by Eero Saarinen introduced new ideas about separate spaces

for teachers and students, organization by grade level, proper ventilation, daylight, and outdoor space ³⁸.



Fig. 17. An outdoor classroom at the Crow Island School, 1940, <https://www.bloomberg.com/news/articles/2015-10-09/crow-island-school-why-don-t-all-schools-look-like-this> Copyright 2020 by Chicago History Museum

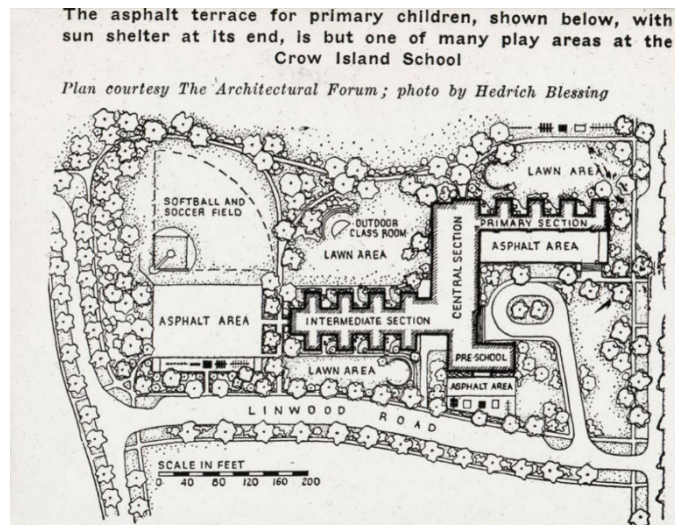


Fig. 18. The plan of the school was organized so that every classroom also had an outdoor space. 1940, <https://digital-libraries.artic.edu/digital/collection/mqc/id/64535/Museum>

³⁸ Sullivan, Kevin. School Design and Student Learning in the 21st Century. Washington, DC: American Architectural Foundation, 2007, 9.

In the 1940s through 50s, school design experienced standardization and size increase because of the rapid growth of student population, particularly in the suburbs, and a renewed interest to “professionalize” American education in the face of global competition³⁹. President Johnson’s “War on Poverty” in the 1960s introduced free hot meals and the necessity of cafeterias and food preparation spaces in our nation’s schools⁴⁰. The energy crisis of 1973 and new experimental teaching methods eventually led to public schools with few windows, little natural light, and larger open-plan spaces through the 1980s⁴¹.

Educational design priorities today have been repairing the outbreak of portable classrooms in the ‘80s-‘90s and creating sustainable school designs through the new millennium – with the hopes of shaping a new generation of ecologically-conscious adults⁴². Today, the response to COVID-19 has been a surge in virtual schooling at home and concern about ventilation and overcrowding in school buildings. There is also a greater need for community-serving program in schools such as food distribution and internet access; one in five American workers have claimed unemployment insurance and emergency Pandemic Unemployment Assistance⁴³.

³⁹ Sullivan, Kevin. *School Design and Student Learning in the 21st Century*. Washington, DC: American Architectural Foundation, 2007, 10.

⁴⁰ *Ibid*, 11.

⁴¹ Nelson, Bryn. *School Design through the Decades*. November 4, 2014. <https://mosaicscience.com/story/school-design-through-decades/> (accessed November 7, 2020).

⁴² *Ibid*.

⁴³ Cohen, Patricia. "About 30 Million Workers are Collecting Jobless Benefits." *New York Times*, June 24, 2020. <https://www.nytimes.com/live/2020/07/23/business/stock-market-today-coronavirus>

In this brief history, there has only been one coordinated effort to address racial disparities in educational architecture. During Reconstruction in the early 1900s, Sears-Roebuck tycoon Julius Rosenwald collaborated with Booker T. Washington to partially fund hundreds of Black rural schools in the South⁴⁴. By 1930, over 1/3 of all African American children in the Southern US attended a Rosenwald school - and most of the schools remained active though the 1960s. The buildings were simple and traditional to secure low

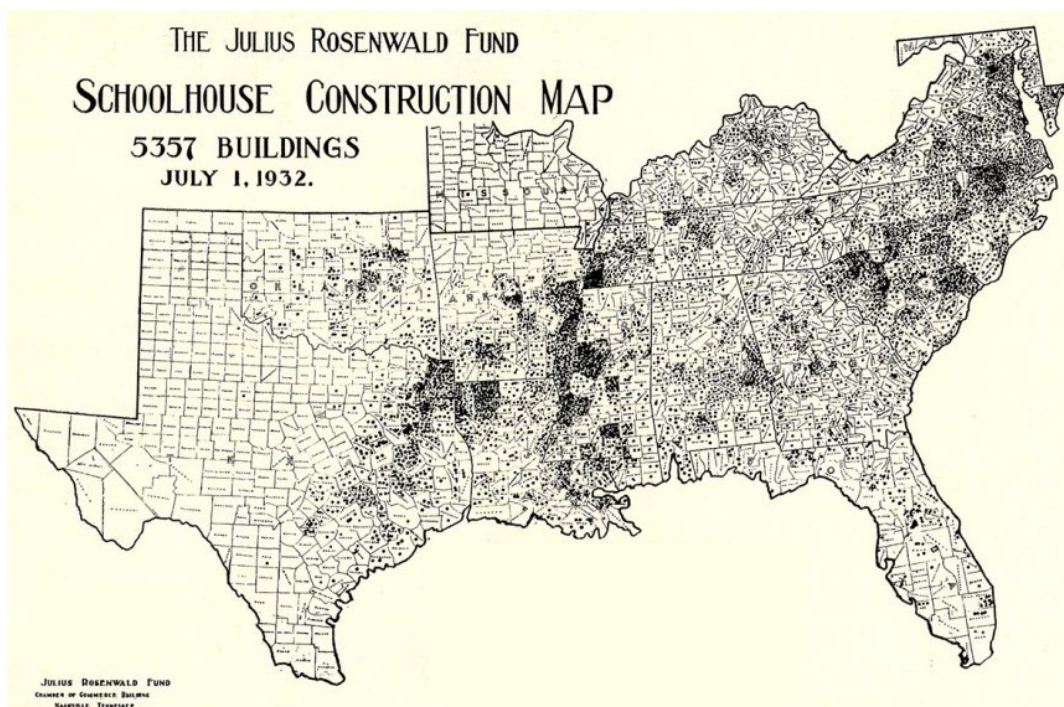


Fig. 19. The widespread reach of the Rosenwald schools illustrated the program's success. 1932, Courtesy of the Julius Rosenwald Fund

cost and easy construction by community members. Despite the traditional exteriors, interior innovations by architects such as Robert Robinson Taylor (first Black graduate of MIT) included moveable partitions between

⁴⁴ Rybczynski, Witold. Remembering the Rosenwald Schools. September 16, 2015. https://www.architectmagazine.com/design/culture/remembering-the-rosenwald-schools_o (accessed November 7, 2020).

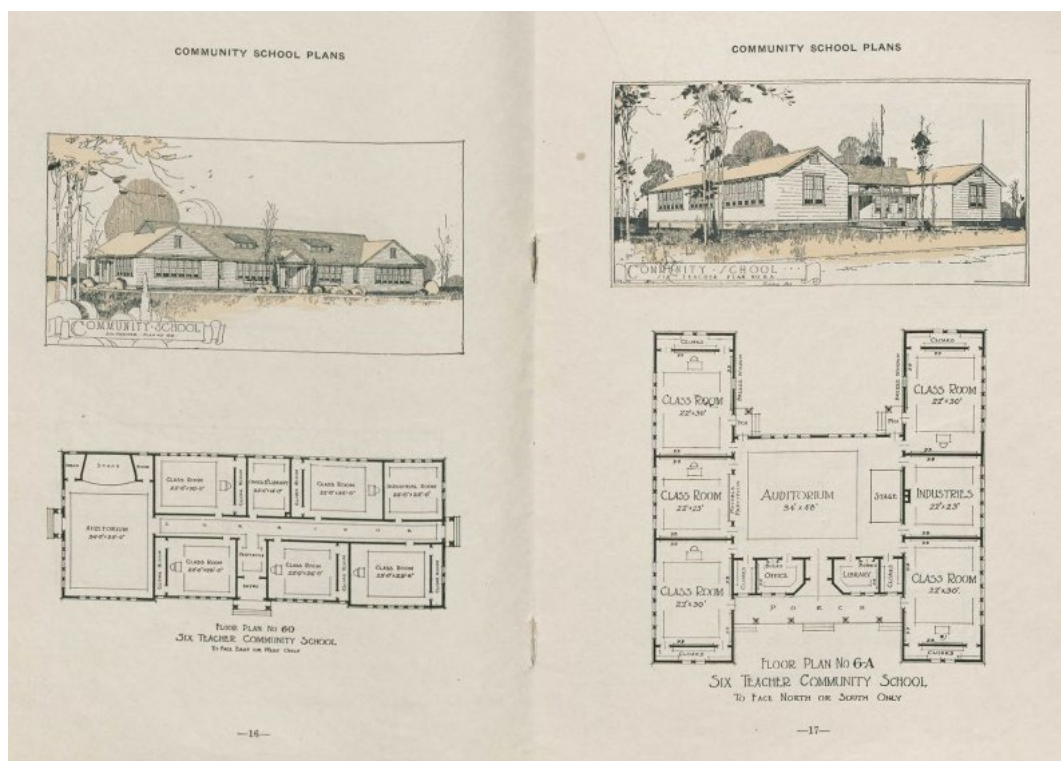


Fig. 20. Tuskegee University prepared a technical handbook with different school designs. These community schools were radical in this era of one- or two-room schools. From *Rosenwald Fund Bulletin* by Julius Rosenwald Fund, 1924, 16-17.

classrooms, an “industrial room” to learn trades and cooking, and some schools even included a community room/auditorium and library⁴⁵. These inclusions were radical in the time of the standard one-room schoolhouses. However, the success of the Rosenwald intervention against racism in education was ultimately due to both innovative architecture *and* the community collaboration detailed in the design handbook for the schools⁴⁶.

⁴⁵ Rybczynski, Witold. Remembering the Rosenwald Schools. September 16, 2015. https://www.architectmagazine.com/design/culture/remembering-the-rosenwald-schools_o (accessed November 7, 2020).

⁴⁶ Ibid.

Intents of the Harlem Park School Complex

In contrast, the existing Harlem Park school complex lacked support from the community at every phase. The Harlem Park neighborhood was designated as an urban renewal area in 1954⁴⁷. This designation allowed the State Planning Commission to slice the East-West expressway (Route 40) through the southern edge of the neighborhood and clear the center of the community for the school complex all in one urban plan. The Harlem Park Urban Renewal Plan document described the community forming “strong opposition” against the school complex to move the site to less inhabited blocks⁴⁸. However, the Department of Education, the Baltimore Urban Renewal and Housing Agency (BURHA), and the Citizen Planning Housing Association (CPHA) all preferred the site because the construction would be “more economical” within the urban renewal area boundaries since “Federal funds would be available”⁴⁹.

Press coverage of the Harlem Park school complex project focused on the NAACP and Harlem Park Homeowner’s Association’s 1958 court case against the placement of the school. These community stakeholders argued that the use of Harlem Square Park for educational purposes “violated the use for which the land had been deeded to the city” in hopes of preserving the picturesque recreational space and canceling the entire project⁵⁰. However,

⁴⁷ Baltimore Urban Renewal and Housing Agency. Harlem Park Urban Renewal Plan. Master Plan Report, Baltimore: The Mayor and City Council of Baltimore, 1960, 43.

⁴⁸ Baltimore Urban Renewal and Housing Agency. Harlem Park Urban Renewal Plan. Master Plan Report, Baltimore: The Mayor and City Council of Baltimore, 1960, 43.

⁴⁹ Ibid.

⁵⁰ Ibid, 44.

the Department of Education and Bureau of Recreation received the ruling that the park could be used for either recreation or education. The urban planners were free to raze the historic park to create a “modern playground” complete with chain link fencing ⁵¹.

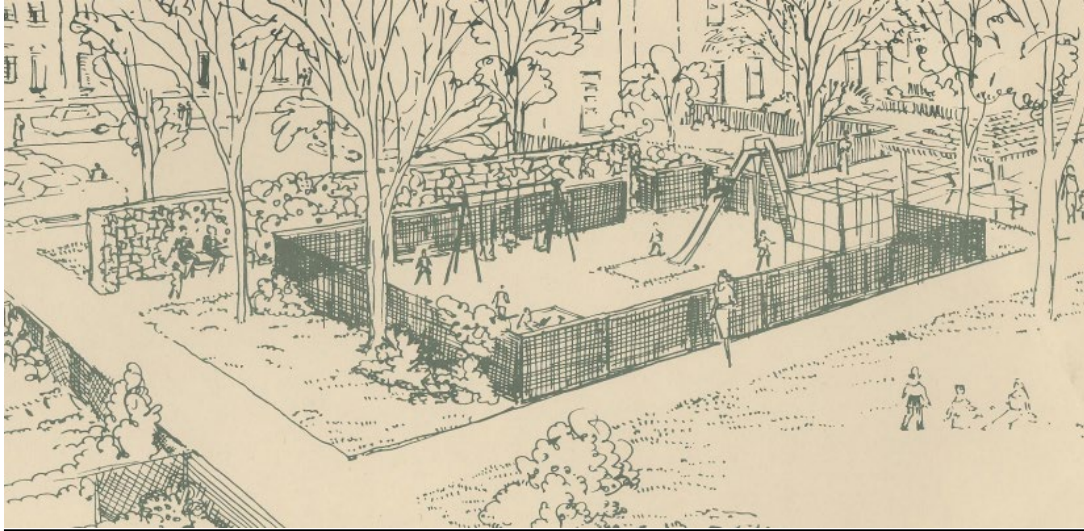


Fig. 21. A sketch of the proposed playground that would replace half of Harlem Square Park. From *Urban Renewal in Harlem Park*, by the Baltimore Urban Renewal and Housing Agency, 1958, 23. Used with permission of the University of Baltimore.

The design brief written by the architects communicated positive intent and progressive concepts in the program of the school complex⁵². According to the Harlem Park Urban Renewal Plan document, educators of the time advocated for smaller class sizes and close-knit student ‘communities’ for more effective learning⁵³. This led the architecture firm Taylor & Fisher to the concept of schools within a school. The elementary/middle school was designed to teach 800-900 kids and the high school was organized into four 500-person ‘schools’ with separate administrators for each group. Amenities

⁵¹ Baltimore Urban Renewal and Housing Agency. Harlem Park Urban Renewal Plan. Master Plan Report, Baltimore: The Mayor and City Council of Baltimore, 1960, 44.

⁵² See Chapter 5 for the detailed program breakdown of the existing school complex.

⁵³ Baltimore Urban Renewal and Housing Agency. Harlem Park Urban Renewal Plan. Master Plan Report, Baltimore: The Mayor and City Council of Baltimore, 1960, 44.

like the music room, library, gym, auditorium, cafeteria, and boiler room were shared. A community center in the school also had access to the auditorium and gym in the high school to form a “hub for community interests and activities”⁵⁴.

Given the thoughtful response to the programmatic challenge of the complex, it is confusing that the actual ‘look’ of the building and the outdoor experience does not visually signal the idea of a community-centered school within its context. The stated intent may not have been to signal a lack of connection to the culture and lack of trust towards inhabitants, but the ‘fortified complex’ massing and scale, hiding of social courtyards away from the street, and lack of transparency at the street level communicate this to the residents. These moves may have been cost efficient and desirable in suburban environments that treat the street as a danger and distraction to children, but they do not take into account the necessity of ‘eyes on the street’ and open public space in urban neighborhoods like Harlem Park. The effort to change the culture to fit the ideas of the building rather than fit the building to the culture resulted in a space that is, as one of the residents called it, “unusable”⁵⁵.

⁵⁴ Baltimore Urban Renewal and Housing Agency. Harlem Park Urban Renewal Plan. Master Plan Report, Baltimore: The Mayor and City Council of Baltimore, 1960, 44.

⁵⁵ Quintanilla, Melonee. "HPMP Community Meeting 1 Comments." July 27, 2020

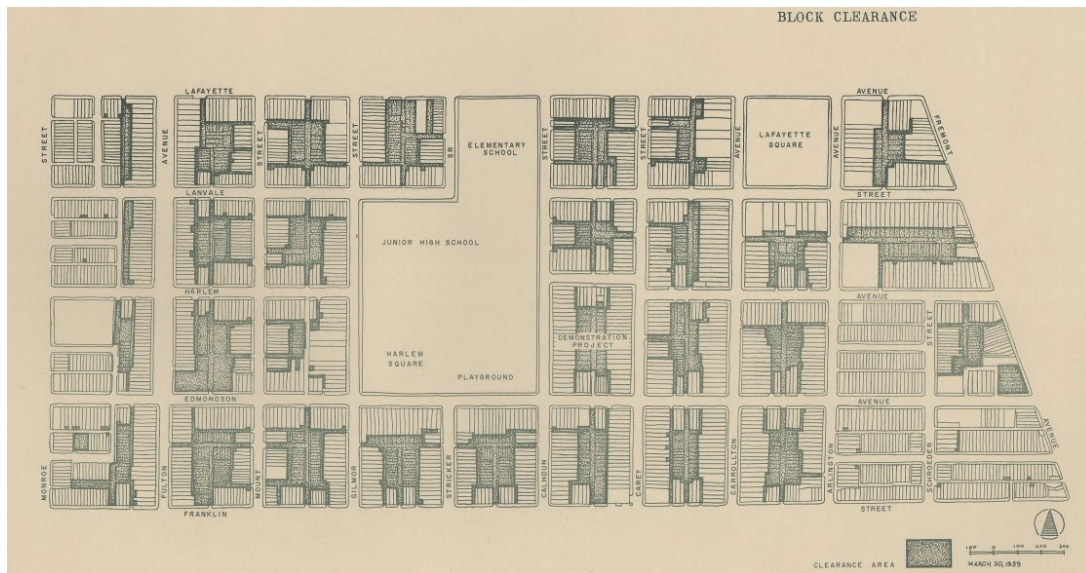


Fig. 22. The homes in the darker zones were demolished, displacing over a thousand people. From *Urban Renewal in Harlem Park*, by the Baltimore Urban Renewal and Housing Agency, 1958, 11. Used with permission of the University of Baltimore.

Community-facing program also seemed like a small concession in the face of the siting controversy and number of displaced people. A tabulation of the displacement lists 436 structures demolished, 325 of which were dwelling units⁵⁶. 415 families were removed from their homes and 1140 people total were dislocated⁵⁷. The designers had no solution for this decision. A single dismissive comment under the tabulation states, “There is no plan for new housing for displaced Harlem Park Residents. Relocation in Harlem Park relates primarily to negro housing.”⁵⁸ This sentiment reveals the general trend of urban renewal: short-term improvement of the city optics with little concern for the Black Americans that live in it.

⁵⁶ Baltimore Urban Renewal and Housing Agency. Harlem Park Urban Renewal Plan. Master Plan Report, Baltimore: The Mayor and City Council of Baltimore, 1960, 51.

⁵⁷ Ibid.

⁵⁸ Ibid.

Looking Forward

Architectural and urban design solutions shaping the future of Harlem Park must intentionally confront its history with systemic racism. This fact is especially salient in the design of the neighborhood's teaching space, as educational architecture has historically been a statement of optimistic progress and a platform to provide solutions for national concerns.

The redesign of the Harlem Park school complex will be a case study asking how educational architecture can address racial disparities and past discriminatory design in this neighborhood of West Baltimore. This is an opportunity to tailor the school to the community that uses it, giving the people agency, ownership, and respect in the face of a past that denied this.

Chapter 4: Harlem Park's Future

To tailor the school to the community, there must be coordination between the entities that are trying to rebuild Harlem Park. As mentioned in Chapter 2, Baltimore's 21st Century Schools Building Program (21CSBP) is still in progress despite being behind schedule and over budget. A recent report by UMD professor Ariel Bierbaum reveals that the plan also "struggled to...design schools that offer community resources and galvanize further neighborhood investment and development"⁵⁹. In short, public agencies like Baltimore City Schools are not effectively connecting with other agencies, private organizations, or philanthropic efforts within the communities – despite the need for schools that do more than just teach. The future of the Harlem Park school complex is inextricably linked with the school's urban context, making an exploration of Harlem Park's future a necessary factor in design decisions. Besides the 21st Century Schools Plan, there are four main developments affecting the Harlem Park neighborhood. These efforts include redevelopment of vacant lots, a possible community center proposed by the neighborhood development commission, the Red Line light rail, and a new masterplan.

⁵⁹ Haslam, Maggie. UMD Report: Baltimore's School Construction Program a Win for Students, but Less So for Neighborhoods. December 4, 2020. <https://arch.umd.edu/news-events/umd-report-baltimores-school-construction-program-win-students-less-so-neighborhoods>.

Efforts

The Baltimore City Department of Housing and Community Development has two guerilla-style campaigns attempting to improve individual homes and lots. The Vacant to Value program provides city funding for individual homeowners and small developers to renovate vacant homes in Baltimore⁶⁰. Considering that over 30% of Harlem Park's lots are vacant, this program has mass potential in the Harlem Park neighborhood (see Figure 3 for the vacancy diagram). The similar Adopt-A-Lot program funds businesses, residents, or neighborhood coalitions who want to convert vacant lots into public green space⁶¹. The outcome could be a recreational park with amenities, a community garden to grow food, or a simple lawn with flower beds. Harlem Park already has a few of these resident-maintained spaces, ranging from a vegetable garden to a grassy area with a bench. These two efforts by the city government are small in scale but illustrate the priorities of community members in Harlem Park – well-maintained recreational green space, healthy foods at a low cost, and increased home ownership.

The Harlem Park Community Development Commission (HPCDC) is a non-profit organization created by neighborhood residents. Its initiatives include expanding the access to technology in the community, promoting health and nutrition, advocating for diverse housing options, and providing

⁶⁰ Baltimore City Department of Housing & Community Development. Vacants to Value. 2018. <https://dhcd.baltimorecity.gov/nd/vacants-value>

⁶¹ Baltimore City Department of Housing & Community Development. Adopt-A-Lot Program. 2018. <https://dhcd.baltimorecity.gov/nd/adopt-lot-program>

information and education⁶². The HPCDC addresses youth education specifically by promoting the 4H club for students in the current school complex. Through this opportunity, students can learn how to grow crops in community gardens to include healthy, low-cost foods in their family meals. The commission also works with the Maryland Food Bank, American Red Cross, and the University of Maryland in Baltimore to coordinate food drives, vaccinations, and pop-up clinics within the neighborhood. In terms of the urban fabric, the HPCDC is considering purchasing 34 city-owned vacant lots

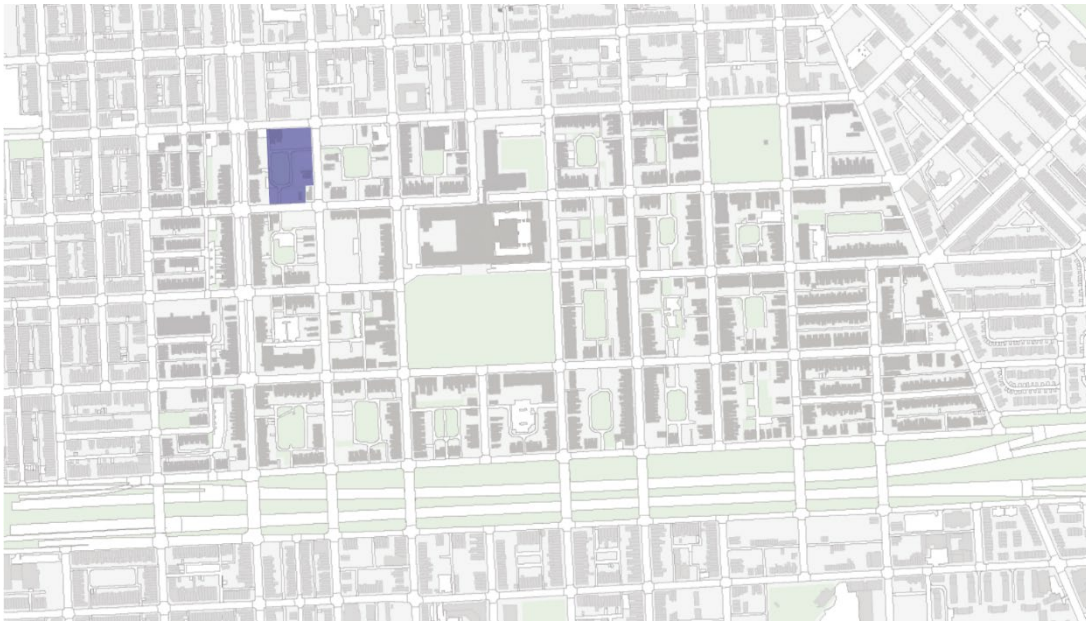


Fig. 23. The potential site for the HPCDC development is highlighted in blue. By Author, 2020.

along W. Lafayette Avenue and W. Lanvale street⁶³. This development would potentially include mid-rise apartments, rowhome duplexes, and a community

⁶² Harlem Park Community Development Corporation. Harlem Park CDC. 2020. <https://www.harlemparkcdc.org/>.

⁶³ Baltimore City Department of Housing & Community Development. Harlem Park Bundle. 2018. <https://dhcd.baltimorecity.gov/nd/harlem-park-bundle>

center with basketball courts. The HPCDC is also the client of the upcoming Harlem Park Master Plan by Ayers Saint Gross.

The upcoming Harlem Park Master Plan is currently in the schematic design phase. The plan is expected to be completed in Spring 2021 and will provide suggestions for the growth of the neighborhood in the next century. Main design moves include pulling inner block parks out to the street front, creating two commercial corridors along Carey and Edmonson roads, and knitting the street grid to route 40 by moving the entry/exit ramp⁶⁴. Fulton Avenue would be a grand residential avenue with higher density buildings⁶⁵.

BLOCK OPPORTUNITY TYPOLOGIES

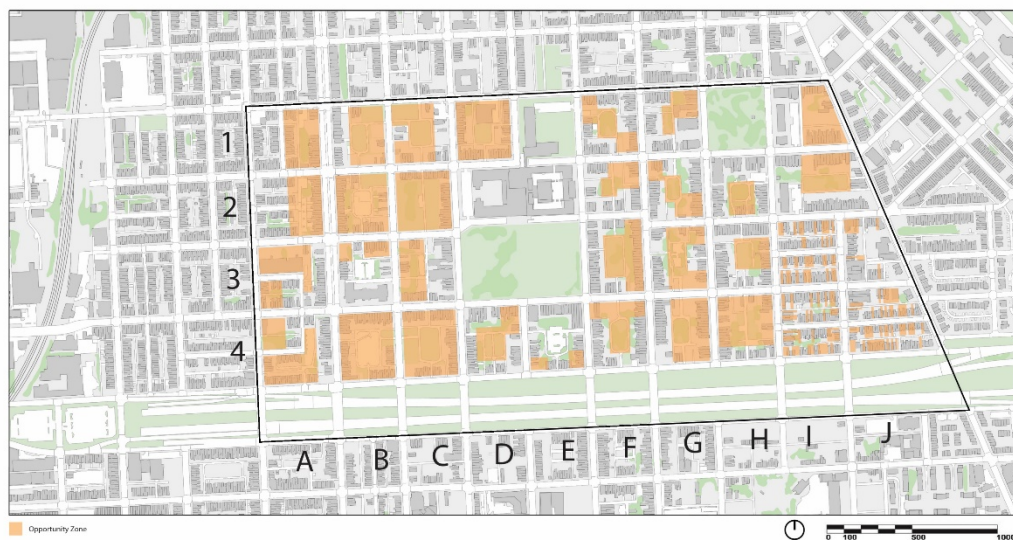
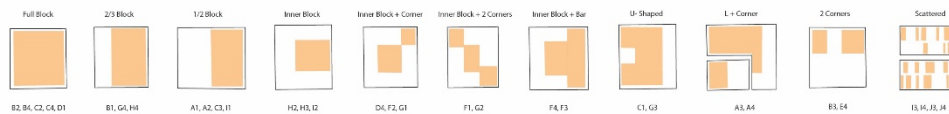


Fig. 24. Possible development areas in the masterplan are highlighted in orange. A key part of the urban design development is a “menu” of block tactics. By Author, 2020.

⁶⁴ King, Matthew, Amber Wendland, Valencia McDowell, Gintas Civinskas, interview by Melonee Quintanilla. Meeting with HPCDC President and Ayers Saint Gross HPMP Team (October 28, 2020).

⁶⁵ Ibid.

Current design thinking also includes mixed-use development and more diverse housing options. Another priority is building up the frontages of existing main parks – Harlem Square Park and Lafayette Square Park⁶⁶. School development will not be addressed in the master plan; it is assumed that the city would address the school⁶⁷.

The Red Line and its accompanying transit-oriented development was intended to repair the rift caused by Route 40 and the destruction of the original streetcar network⁶⁸. The plan was vetoed by Governor Hogan in 2015 in favor of the Purple Line (which serves wealthier Montgomery County). If approved in the future, Harlem Park would become a prime neighborhood for professionals who work in the Inner Harbor. The Red Line would connect to the West MARC station on the border of the neighborhood, which would be easily accessible by future bike/pedestrian paths or a short bus ride.

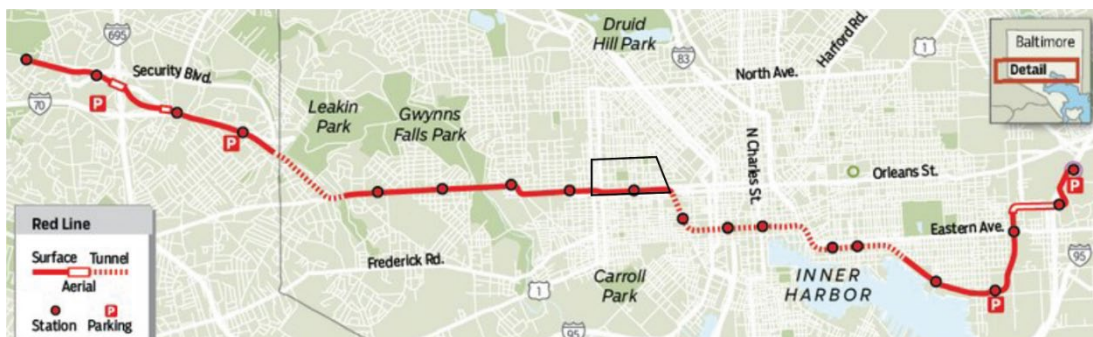


Fig. 25. The Red Line would connect Harlem Park to the Inner Harbor and suburban communities to the west of the city. by Campbell, 2019, edited by Author, <https://www.baltimoresun.com/politics/bs-md-pol-red-line-five-years-20200911-b2d3knvbpngdrirbc44fd55pti-story.html>. Copyright 2020 by The Baltimore Sun

⁶⁶ King, Matthew, Amber Wendland, Valencia McDowell, Gintas Civinskas, interview by Melonee Quintanilla. Meeting with HPCDC President and Ayers Saint Gross HPMP Team (October 28, 2020).

⁶⁷ Ibid.

⁶⁸ Campbell, Colin. "Five Years Later, Many Across Baltimore Bitterly Lament Gov. Hogan's Decision to Kill the Red Line Light Rail." The Baltimore Sun, September 11, 2020, <https://www.baltimoresun.com/politics/bs-md-pol-red-line-five-years-20200911-b2d3knvbpngdrirbc44fd55pti-story.html>.

Impact on the School

The Harlem Park School will be an extension of the community – so the future of the urban context must be accounted for in the final design. Increased population from renovated vacant houses and potential transit-oriented development means that the school must welcome new community members while respecting and rooting the existing inhabitants in the neighborhood. A push for fresh food production in the neighborhood and through the 4H club in the current school should be continued in the new design. The school may also act as a staging ground for food distribution, disaster relief, voting, or other community activities. New mixed-use development may be reflected in a mixed-use school site. The Harlem Park Community Development Commission's push for a new community center could also lead to a partnership for the new school's construction. Neighborhood organizations like the HPCDC are official connectors between philanthropic outside stakeholders and the residents of Harlem Park – and both are critical to determine the future of the heart of their community.

Chapter 5: Precedents

The redesign of the Harlem Park school complex will be inspired by both neighborhood planning efforts and architectural precedents. Modern, aspirational precedents will build on the historic precedents discussed previously in Chapter 3. The existing school complex will also shape the goals for the future design. Altogether, these built and conceptual precedents can be divided into three major groups: thematic, typological, and baseline.

Thematic

The main thematic precedents are examples of cultural architecture specifically designed to acknowledge Black history in the United States. The first is the National Museum of African American History and Culture.



Fig. 26. The National Museum of African American History and Culture in Washington, DC, 2019, <https://www.aia.org/showcases/6094129-smithsonian-national-museum-of-african-ame>, Copyright 2020 by Smithsonian Institute.

The grand “porch” approach defines the main entry and transitions seamlessly into the ground level atrium – promoting street-facing interaction that relates to Black history and culture. The rippling water feature under the porch is also thoughtful passive cooling for the visitors to enjoy during DC’s summer days⁶⁹.



Fig. 27. On a hot day in DC, the shade and passive cooling offer protection for the crowds. by Murine Blake, September 2017, Copyright 2020 Google.

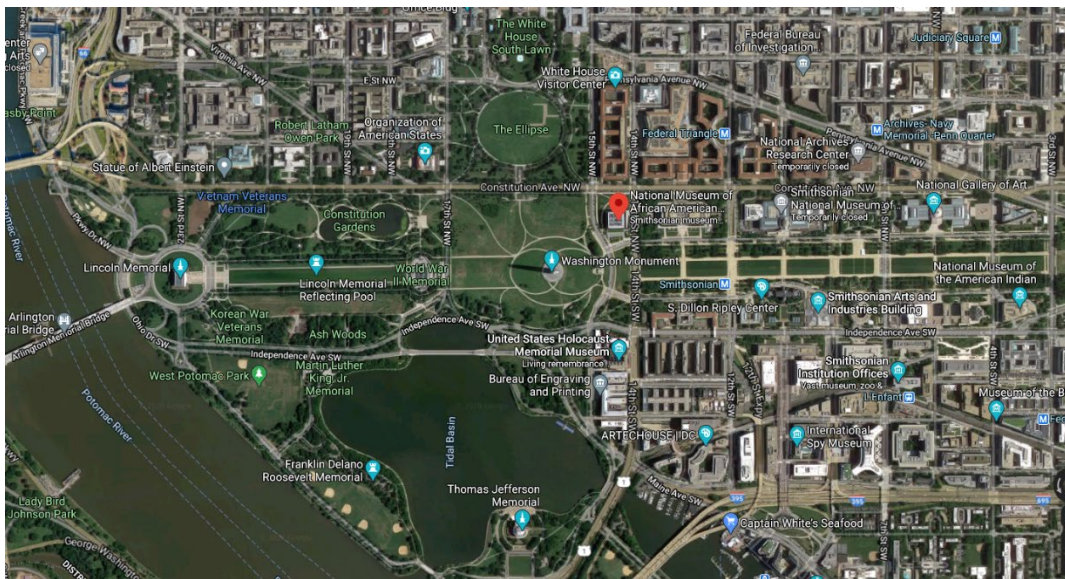


Fig. 28. The museum is placed along the datum line created by the other museums of the National Mall. Copyright 2020 Google.

⁶⁹ Smithsonian Institution. National Museum of African American History & Culture: The Building. 2017. <https://nmaahc.si.edu/explore/building> (accessed November 7, 2020).

The museum's thoughtful relation to its context is also worth emulating. The building is sited on axis with the other museums on the National Mall, extending the datum line towards the Washington monument.



Fig. 29. The angle of the bronze lattice matches that of the Washington Monument. by Alyssa Bradac, January 2020, Copyright 2020 Google.

Even the angles of the crown-like bronze lattice reflect its placement near the Washington monument.

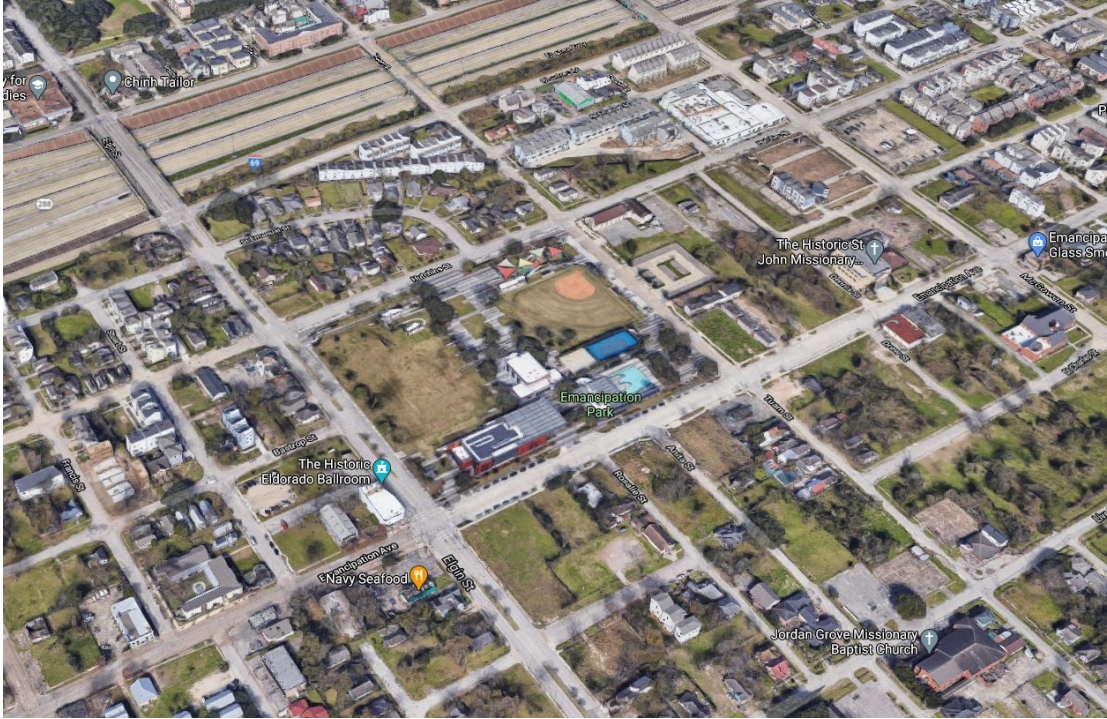


Fig. 30. The pathway through the park links to the existing street grid. I-69 can be seen in the upper left corner, slicing through the neighborhood. Copyright 2020 Google, CNES/Airbus, Houston-Galveston Area Council, Maxar Technologies, Texas General Land Office, U.S. Geological Survey, USDA Farm Service Agency

Emancipation Park in South Central Houston, designed by Perkins and Will, is a thematic precedent due to the neighborhood it is in. South central Houston is a majority-Black neighborhood similarly affected by redlining and urban renewal. The park is a few blocks south of I-69, which sliced through the neighborhood. Emancipation Park is organized around a linear “tapestry” of buildings and outdoor amenities that connects to the existing street grid⁷⁰. The community center on the southern corner also features a large overhang that engages that datum line, creating a shaded outdoor room with benches for the community.

⁷⁰ Perkins&Will. Historic Emancipation Park. 2017.
<https://perkinswill.com/project/emancipation-park/> (accessed November 12, 2020).



Fig. 31. The welcoming covered entry of Emancipation Park's recreation center, by Perkins & Will, 2017, <https://perkinswill.com/project/emancipation-park/>, Copyright 2020 by Perkins & Will

Typological

Modern educational architecture is pushing the boundaries of what a school can be and how a school building can fit into the urban context.



Fig. 32. Taby Park School creates an entry from the street to the park despite the grade change, 2018, <https://www.cfmoller.com/p/Taby-Park-School-i3520>, Copyright 2020 C.F. Moller Architects

The Täby Park School by C.F. Moller Architects is a combined high school community center within a broader masterplan for Täby, a suburb of Stockholm⁷¹.

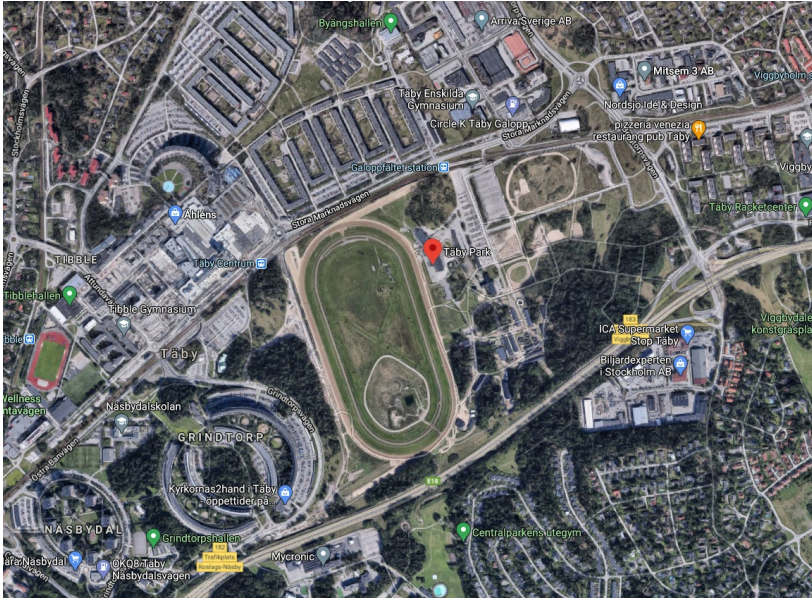


Fig. 33. The existing site in Täby, Sweden. Copyright 2020 Google.

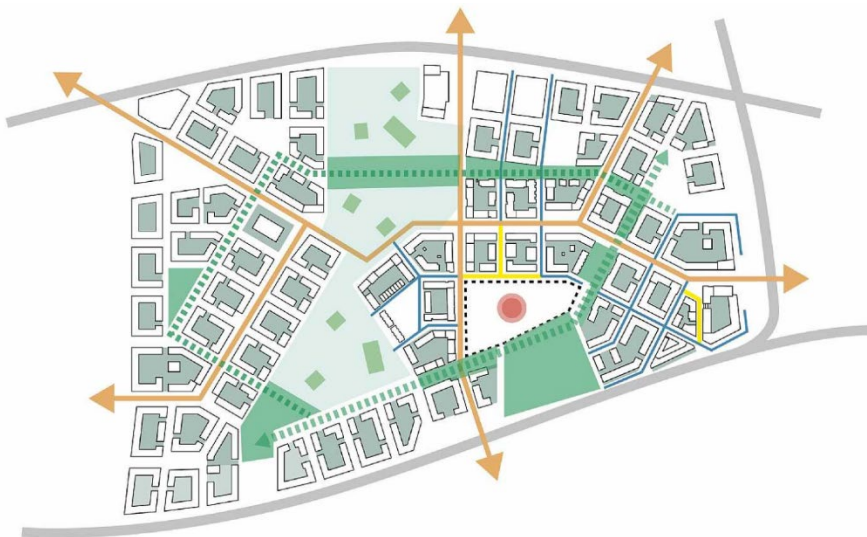


Fig. 34. The neighborhood masterplan with a red dot indicating the school. by C.F. Moller Architects, 2018, <https://www.cfmoller.com/p/Taby-Park-School-i3520>, Copyright 2020 C.F. Moller Architects

⁷¹ C.F. Moller Architects. Täby Park School. 2018. <https://www.cfmoller.com/p/Taby-Park-School-i3520.html> (accessed November 12, 2020).

The school ties into its context by placing the ground floor community center in the northwest corner of the site to interface with a mixed-use corridor. The athletic fields in the southeast corner of the site also transitions seamlessly into an open park – the school acts as a community gateway at its open corner.

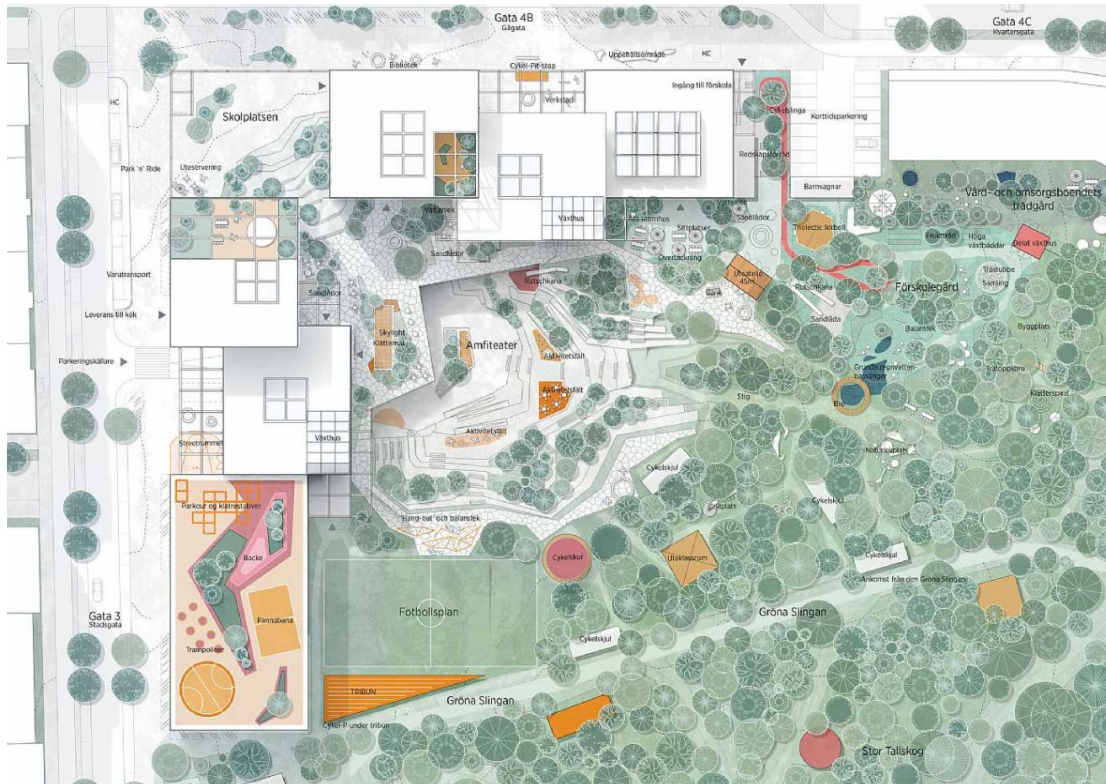


Fig. 35. A corner entry terraces down to the park level, by C.F. Moller Architects, 2018, <https://www.cfmoller.com/p/Taby-Park-School-i3520>, Copyright 2020 C.F. Moller Architects

The Henderson-Hopkins K-8 School in East Baltimore by Rogers

Partners breaks down a school complex into human-scale volumes that relate to the rowhomes around them⁷².



Fig. 36. The “main street” of the school connects to the existing grid. Copyright 2020 Google.



Fig. 37. Community-facing program like the auditorium and gym (brown zones) face the main street. Rogers Partners, 2014, <https://www.archdaily.com/488203/henderson-hopkins-school-rogers-partners>, Copyright 2020 Rogers Partners

⁷² Rogers Partners. Henderson-Hopkins School. 2014. <https://www.archdaily.com/488203/henderson-hopkins-school-rogers-partners> (accessed November 11, 2020)

Classroom 'houses' are organized by grade level, with central amenities like the auditorium and gym in buildings that front the street.



Fig. 38. “Main Street”, by Rogers Partners, 2014, <https://www.aia.org/showcases/16636-henderson-hopkins-school>, Copyright 2020 Rogers Partners

The outdoor space in between these 'houses' is an extension of the street complete with stoops, benches, and vegetation.

In contrast, Monio High School and Community Center in Tuusula, Finland, designed by AOR Architects, has an internal ‘street’ linking to the existing roads with clear entries under deep overhangs⁷³.



Fig. 39. Monio High School’s entry overhang leads visitors to the internal “Main Street”, by AOR Architects, 2018, <https://www.archdaily.com/889345/high-school-and-community-centre-project-tests-the-limits-of-timber-log-construction>, Copyright 2020 AOR Architects

⁷³ Shen, Yiling. High School and Community Centre Project Tests the Limits of Timber Log Construction. February 23, 2018.

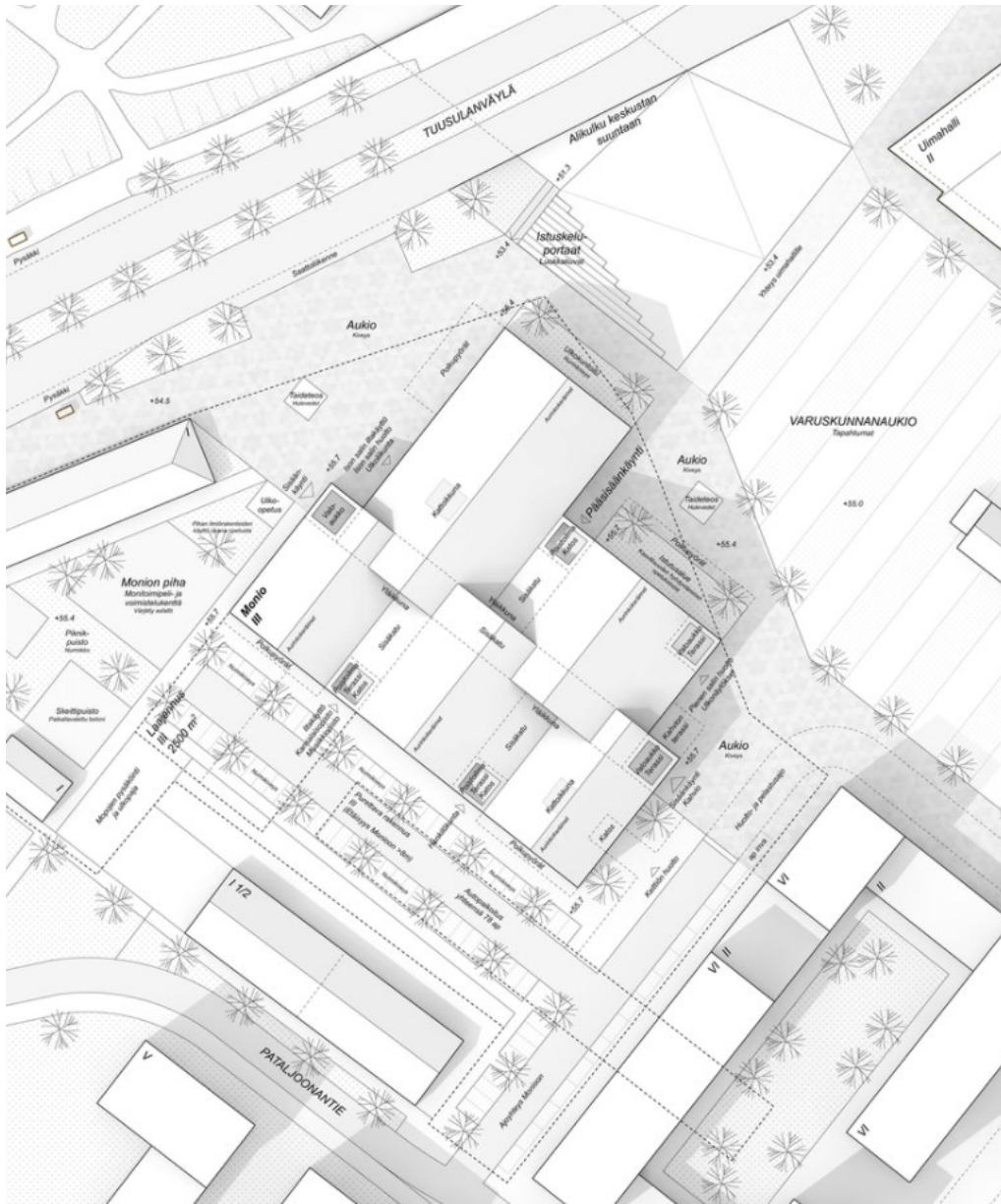


Fig. 40. The site plan reveals the main street to the northeast intersecting the main entry, by AOR Architects, 2018, <https://www.archdaily.com/889345/high-school-and-community-centre-project-tests-the-limits-of-timber-log-construction>, Copyright 2020 AOR Architects

The programmatic organization around the circulation space rather than a particular room creates an activated public corridor through all levels of the building. This type of lively, informal gathering space is rare in the current Harlem Park school complex but critical to creating a vibrant public building.

Baseline

The current program of the existing Harlem Park school complex will

PROGRAM REVERSE ENGINEERING:
MONIO HIGH SCHOOL AND COMMUNITY CENTER IN TUUSULA, FINLAND
121,227 TOTAL GROSS SF

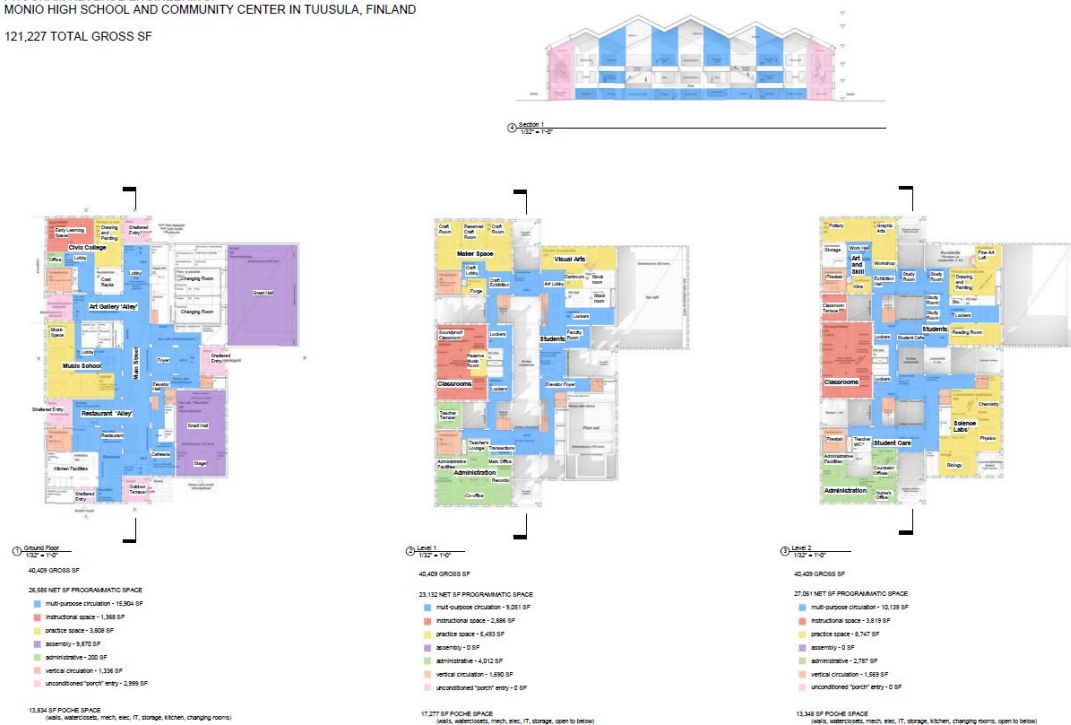


Fig. 41. The program reverse engineering of Monio High School and Community Center. By Author, 2020.

be used as a baseline (and a warning) for the future building. As discussed in Chapter 2, the school complex currently holds the Harlem Park Elementary/Middle School at sufficient capacity and Augusta Fells High School at low capacity. The Harlem Park Recreation Center and the Umoja Head Start Academy, an early learning center, were included in the high school area to serve the community and fill out the building area. However, the physical massing and closed-off nature of the complex contribute to the perception that the school complex is not public space. This trend continues

inside the building with the proportion of space dedicated to contained classrooms/offices (red and green zones) versus informal circulation/gathering space (blue zones). Compare the following program breakdown to the previous exploration of Monio High School and Community Center, and you can see the stark differences.

The placement of practice space (yellow zone including laboratories, workshops, music rooms, and studios) are also pushed to the top floor in the existing school complex. The gymnasium space is placed near street level, but specialized practice space like art studios and computer labs are out of reach on the third floor.

PROGRAM REVERSE ENGINEERING:
HARLEM PARK SCHOOL COMPLEX
521,472 TOTAL GROSS SF

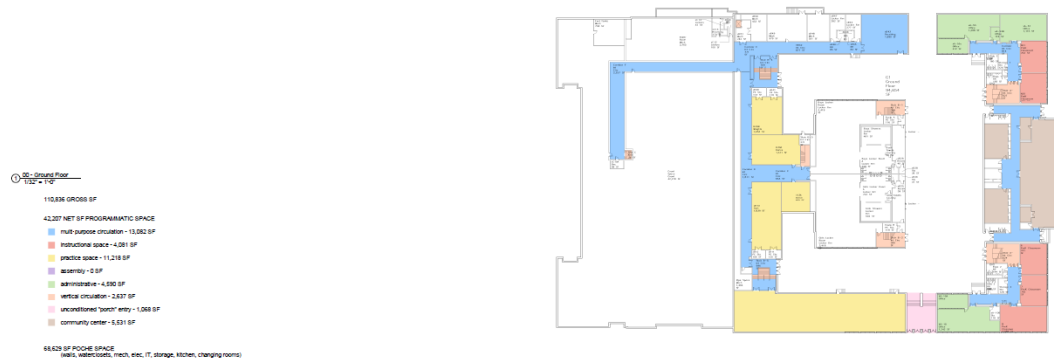


Fig. 42. The ground floor program reverse engineering of the Harlem Park School Complex. By Author, 2020.

PROGRAM REVERSE ENGINEERING:
HARLEM PARK SCHOOL COMPLEX
521,472 TOTAL GROSS SF

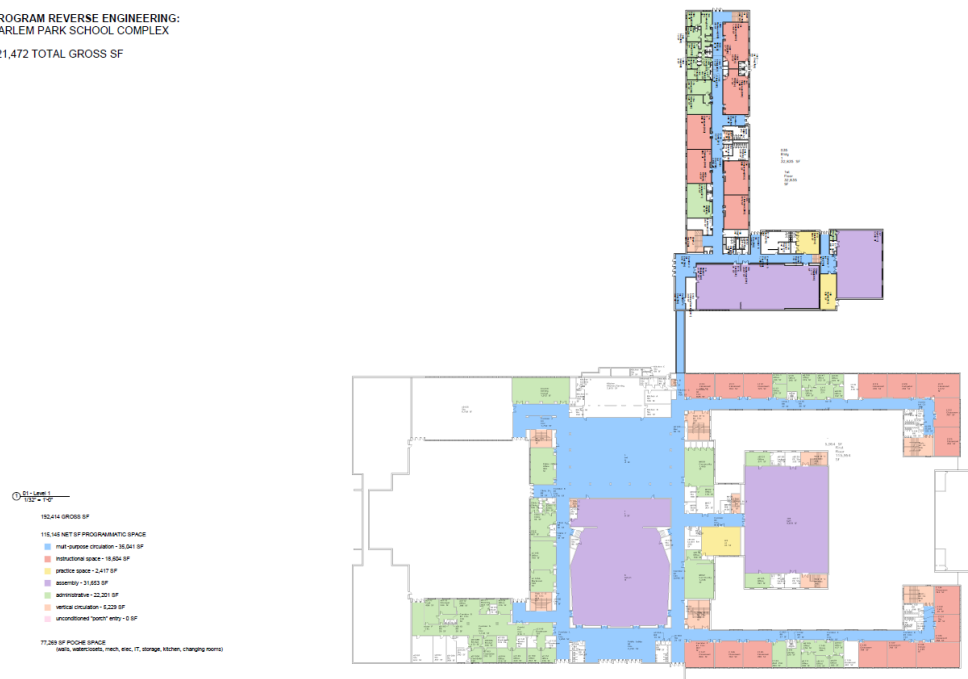


Fig. 43. The first floor program reverse engineering of the Harlem Park School Complex. By Author, 2020.

PROGRAM REVERSE ENGINEERING:
HARLEM PARK SCHOOL COMPLEX
521,472 TOTAL GROSS SF



Fig. 44. The second floor program reverse engineering of the Harlem Park School Complex. By Author, 2020.

PROGRAM REVERSE ENGINEERING:
HARLEM PARK SCHOOL COMPLEX
521,472 TOTAL GROSS SF

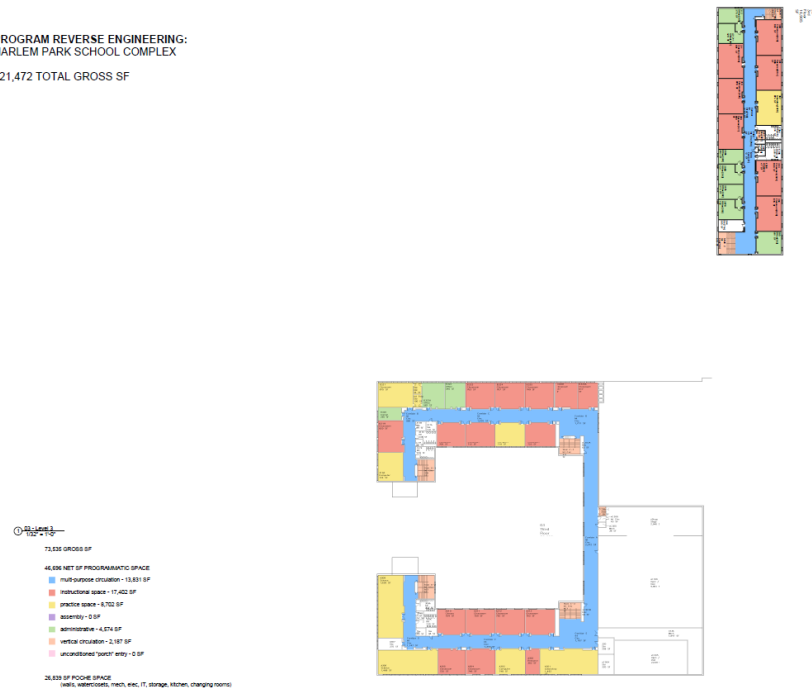


Fig. 45. The third floor program reverse engineering of the Harlem Park School Complex. By Author, 2020.

The current use of the school as more than simply a teaching space is, however, a laudable effort that I plan to expand on. The school can become a necessary ‘third place’ for the community before and after class hours.

The comparison between the program of the Harlem Park School Complex and that of Monio High School and Community center has also led to the following program breakdown for the new school design:

73% Tare	(as opposed to 30% Tare limit in the MD State Standards)
	29% multipurpose circulation
	4% vertical circulation
	3% unconditioned porch entry (like cultural precedents)
	37% other (mech, wall thicknesses, IT, restrooms, etc.)
37% Programmatic Space	
	9% instructional space
	14% practice space
	8% assembly
	6% administrative

Table 1. Program breakdown derived from the program reverse engineering of Monio High School and Community Center. By Author, 2020.

Lessons Learned

Overall, the analysis of the thematic, typological, and baseline precedents shape the intentions for the future of the Harlem Park School complex. Thematic precedents such as the National Museum of African American Culture and History and Emancipation Park are examples of

intentional design moves that relate to their cultural and urban context.

Defined entrances with atrium space that promotes street-facing interaction will be a critical program component, especially considering that the existing school does not include it.

Typological precedents such as the Taby Park School and Monio High School and Community Center push the assumptions of educational architecture by weaving commercial and public space in one building. In Monio High school in particular, circulation becomes a place rather than simply a vehicle from one space to another (as seen in the existing complex).

The scale of the 176,000 SF existing school complex footprint is also massive compared to the nearly 1,000 SF footprint of the rowhomes that surround it. As seen in the Henderson-Hopkins school, breaking down the complex into relatable human-scale places that allow for the continuity of the street grid will be a programmatic priority.

Ultimately, the discriminatory design decisions of the past and the key ideas drawn from the precedents shaped three main goals for the future of the neighborhood school complex – reconnecting Harlem Park’s built environment to:

1. History: reversing the effects of urban renewal by repairing the inner block structure, preserving and memorializing the collective memory of the neighborhood

2. Green Space: reopening access to well-maintained, healing green space and water features - challenging historic segregation of these spaces
3. Humanity: confronting racist policies by shaping neighborhood self-sufficiency, celebrating Black culture, and promoting trust and respect of Harlem Park residents

Chapter 6: Design Parameters

Program

The Harlem Park School complex consolidated the historic schools that had been dispersed in its urban fabric. This move reduced the



Fig. 46. No. 138 Elementary School (blue), Francis M. Wood Elementary School 'for Colored Handicapped Children'(red), George Washington Carver Vocational High School (purple) were combined into one school complex. By Author, 2020.

connectivity at the heart of the neighborhood just as the scar of Route 40 does to its southern border. Before tabulating the new school program, it is necessary to question whether a high school, middle school, and elementary

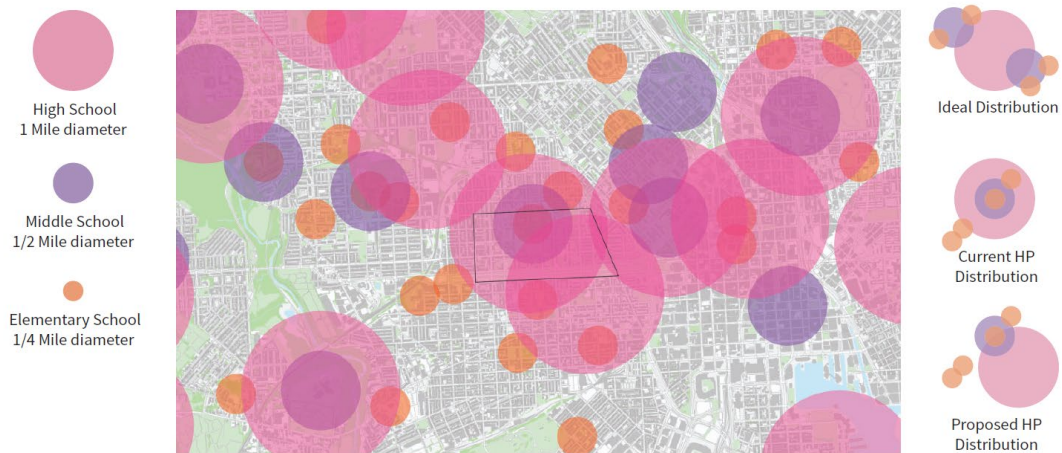


Fig. 47. The diagram above shows that a high school is not be needed in Harlem Park. The future Harlem Park school complex will be a smaller K-8 school. By Author, 2020.

school are all needed on the same site. As discussed in Chapter 2, the population in the Augusta Fells high school is critically low (419 students, only 11% capacity for its size)⁷⁴. These students could be moved to Francis M. Wood high school a few blocks South, which also has a low student population at 574 students⁷⁵. This would eliminate the need for large athletic fields to intrude on the historic bounds of Harlem Square park. Regardless, high school students in Baltimore city schools are not assigned a high school based on their home address. Instead, a “school choice” lottery system is in

⁷⁴ Baltimore City Public Schools. Augusta Fells Savage Institute of Visual Arts. 2020. <https://www.baltimorecityschools.org/schools/430>

⁷⁵ Baltimore City Public Schools. Excel Academy at Francis M. Wood High School. 2020. <https://www.baltimorecityschools.org/schools/178>

place – so the students at Augusta Fells High School are not exclusively neighborhood residents⁷⁶.

In contrast, Harlem Park Elementary/Middle (306 students) is at 61% capacity, near the 65% capacity for future growth as outlined in the 21st Century Schools plan⁷⁷. The students of Harlem Park elementary/middle are also assigned by home address – so all K-8 students are residents of the neighborhood. For these reasons, the three block Harlem Park school complex, currently serving 725 K-12 students, could be reduced to a K-8 school serving 425 students (with a 119 student buffer for increased development as determined by the 65% capacity goal). The instructional space would be about 42 SF/child estimate according to Elementary and Secondary Schools, the Perkins and Will school design guide⁷⁸. This would result in a 198,333 SF building total when sized according to the program chart (Table 1) discussed in the previous chapter.

⁷⁶ Baltimore City Public Schools. High School Choice. 2020.
<https://www.baltimorecityschools.org/high-school-choice>.

⁷⁷ Baltimore City Public Schools. Harlem Park Elementary/Middle School. 2020.
<https://www.baltimorecityschools.org/schools/35>.

⁷⁸ Perkins, L.B., Bordwell, R. Elementary and Secondary Schools. Edited by Stephen A. Kliment. John Wiley & Sons, 2010.

HARLEM PARK K-8 SCHOOL (425 STUDENTS)	
85,283 SF Tare	
	7,933 SF vertical circulation
	5,950 SF unconditioned porch entry
	71,400 SF other (mech, wall thicknesses, IT, restrooms, etc.)
113,050 SF Programmatic Space	
	39,666 SF multipurpose circulation
	17,852 SF instructional space
	27,766 SF practice space
	15,866 SF assembly
	11,900 SF administrative

Table 2. Program breakdown of the new Harlem Park K-8 School. Based on Table 1 in the previous Chapter. By Author, 2020.

This is a stark difference from the current 521,472 GSF complex. This reduction in school size could also open the site to mixed-use development, an Urban Renewal Museum, and the restoration of the historic street grid to activate the center of the neighborhood.

Community-Requested Program

As discussed in Chapter 2, the existing residents of Harlem Park have specific requests for the future of their school. Community-accessible program such as computer labs, art and music studios, job training space, and gym space for recreational activities were named by residents. These spaces would be included in the practice space category of Table 2, which explains why the size is significantly greater than the instructional space.

A key element of the program will be to create a school that is “more than just a 9-3 operation”, as one resident said⁷⁹. The school must be usable by adults after school hours, children and educators in the summer, and churches and youth clubs on the weekends. At the larger building scale, residents had strong beliefs in the sustainability of the new school and greater accessibility for students with physical disabilities.

Environmental Conditions

The new school design should not only address socio-economic conditions, history, and urban context as previously described - but also environmental site conditions. As discussed, this was specifically requested by the community members and will improve the experience in the building and the accessibility of sustainable architecture in low-income communities.

The most impactful site condition is the steep topography. The current building struggles to relate to the surrounding neighborhood due to this slope. East to West, the topography on the school site slopes down about 18 feet. Runoff will similarly travel across the site following the topography from northwest to southeast on its way towards the Inner Harbor.

⁷⁹ Wendland, Amber. Steering Committee Meeting 1. September 26, 2020.
<https://app.mural.co/t/ayerssaintgross5567/m/ayerssaintgross5567/1600791840296/79411bf5c30ffdf4155167d6d08cc936676cc2d>



Fig. 48. The sunken highway of Route 40 and the sunken ceremonial pathway into the existing school complex are both visible in this neighborhood topography map. The steep contours of the neighborhood represent a design challenge. By Author, 2020.



Fig. 49. Blue arrows mark the direction of water flow on the site. There is an 18-foot elevation difference from the west to the east side of the school site. By Author, 2020.

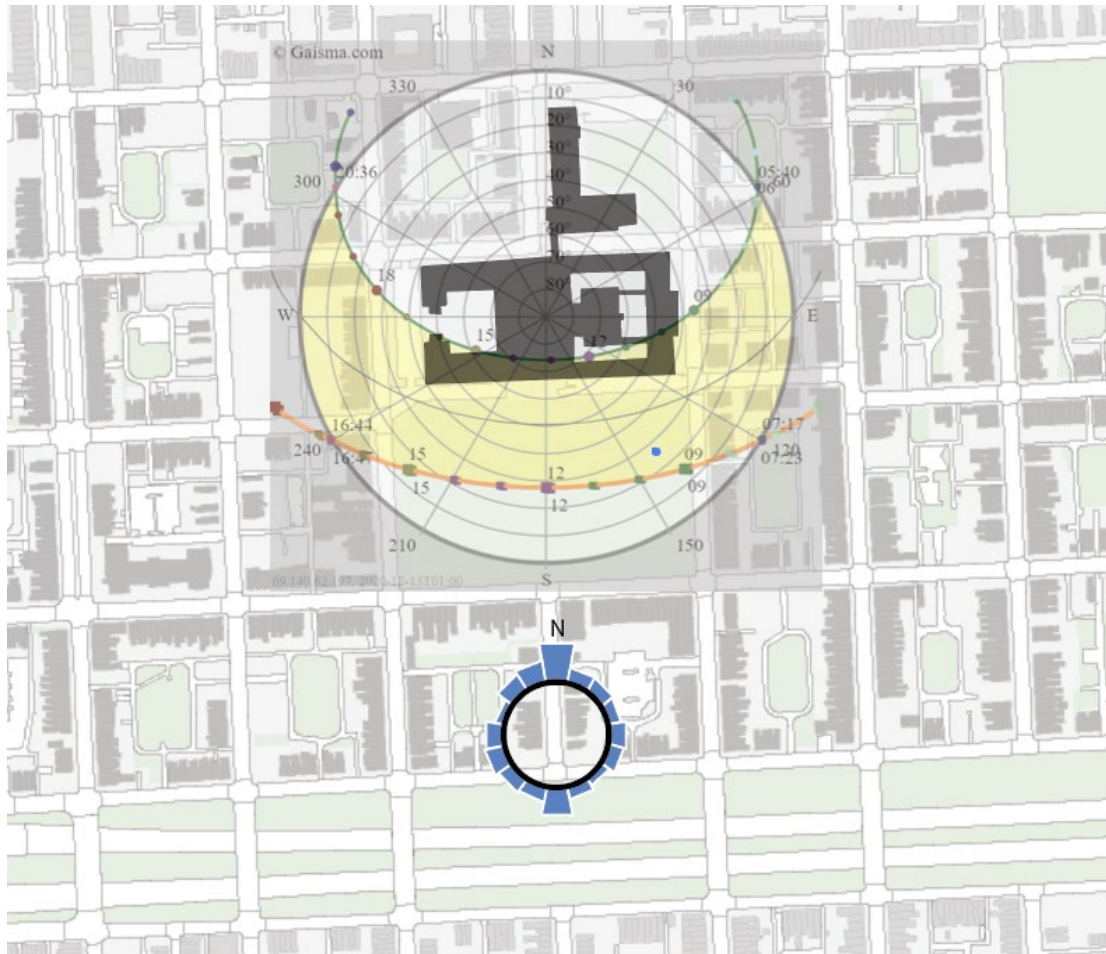


Fig. 50. The south side of the existing school site will be a critical facade shaping the edge of Harlem Square Park. Development on the school site could also shelter the park from northern winter winds. By Author, 2020. Sun path adapted from <https://www.gaisma.com/en/location/baltimore-maryland.html>, Wind rose adapted from https://www.windfinder.com/windstatistics/baltimore_inner_harbor

Wind and solar path are two other main ecological considerations.

Although winds are generally mild under 10mph, the new school building could potentially shelter Harlem Square Park from the northern winter winds, while allowing summer breezes from the SE⁸⁰.

The south-facing elevation of the current school complex is an advantageous solar orientation with potential scenic views to Harlem Square

⁸⁰ Windfinder. Wind and Weather Statistics - Baltimore Inner Harbor. 2020. https://www.windfinder.com/windstatistics/baltimore_inner_harbor.

Park. Any development on the school site should take advantage of this opportunity.

Chapter 7: Design Solutions

Considering the information gathered thus far and the design parameters set by student population, community requirements, and environmental conditions – the three-block school site can be converted to a two-block neighborhood core, Harlem Square Park can be extended to its historic two block extent, and the existing “L” wing of the school complex can be transformed. With this reduction of the school complex, my goals of reconnection will be possible at the community, school, and resident scales.

Community Reconnection

At the community scale, the new Harlem Park neighborhood core will reconnect to history by restoring the broken street grid and reintroducing the smaller more affordable inner block housing in a new form with side yards inspired by Charleston homes. The site transformation will also restore the

HISTORY

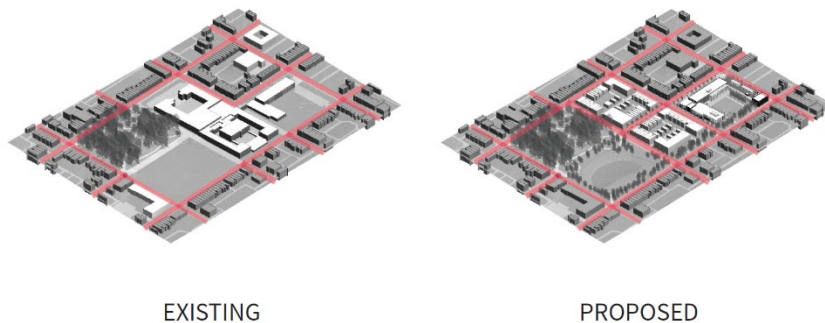


Fig. 51. The street grid is repaired. By Author, 2021.

original bounds of Harlem Square Park by converting the trench of school entrance path to a pond.

HISTORY

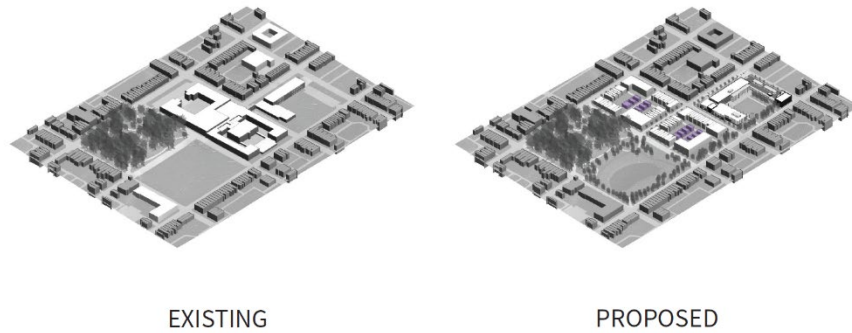


Fig. 52. The inner block infrastructure is rebuilt. By Author, 2021.

Green space will be woven through the site by establishing a street-accessible linear park linking Harlem Square Park and the neighborhood school. New water features (the lake in Harlem square park and the small reflecting pool near the school) will capture and filter runoff as well as encourage contemplation and healing.

HISTORY

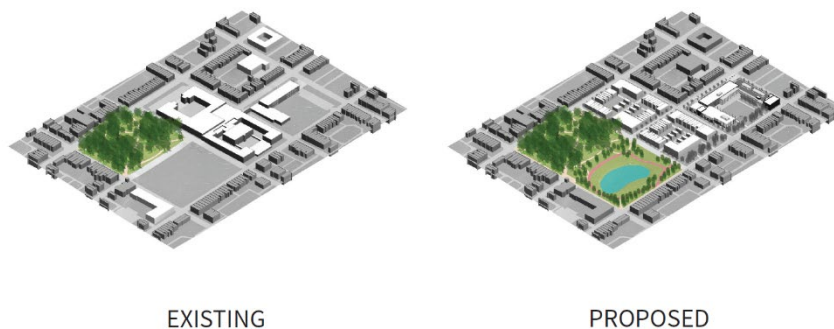


Fig. 53. Harlem Square Park is expanded to its original extents. By Author, 2021.

GREEN SPACE

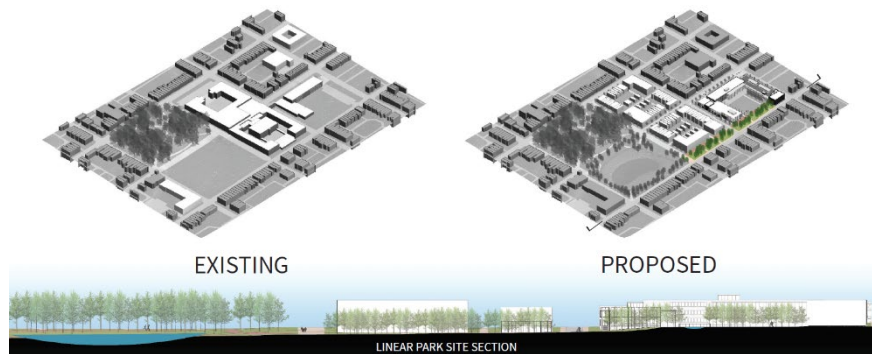


Fig. 54. A linear park connects the new development to the school. By Author, 2021.

Removing residential-only zoning established in 1950s to target Black small businesses would also allow the neighborhood to address the needs of the community and become self-sufficient. A new grocery store, a pharmacy, and space for small businesses and restaurants were specifically requested by Harlem Park residents I spoke to last summer⁸¹.

HUMANITY

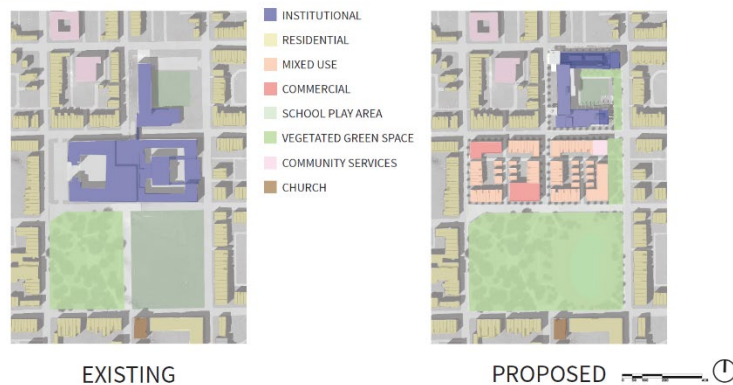


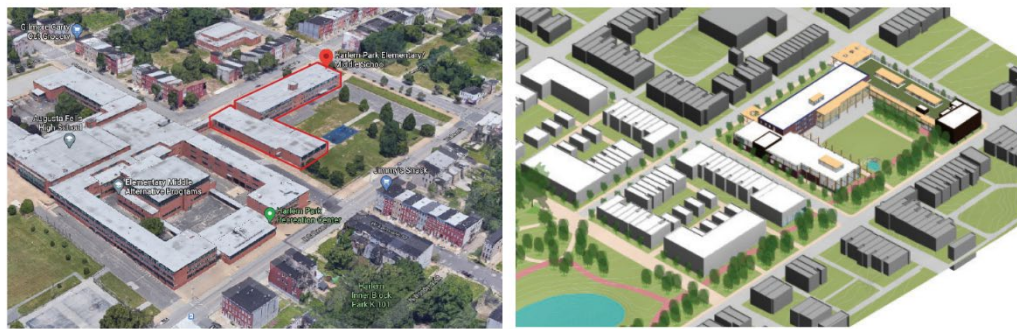
Fig. 55. New zoning allows businesses in Harlem Park. By Author, 2021.

⁸¹ Wendland, Amber. Steering Committee Meeting 1. September 26, 2020.
<https://app.mural.co/t/ayerssaintgross5567/m/ayerssaintgross5567/1600791840296/79411bf5c30ffdf4155167d6d08cc936676cc2d>

Building Reconnection

At the building scale, the existing complex - for all its negative association to urban renewal - is still a physical link to the past. Keeping the northern “L” of the complex and literally connecting to this past runs counter

HISTORY



EXISTING

PROPOSED

Fig. 56. The northern L wing of the complex is retained. By Author, 2021.

to the harmful blank slate philosophy of urban renewal, and reminds me of one of the things I love most about Black culture - our ability to transform what



Fig. 57. A cultural collage. By Author, 2021.

is considered undesirable (or make something out of nothing). Many of our cultural practices, from soul food to collage art to quilting - started with scraps and leftovers. So, a transformation of this portion of the school complex is an opportunity to reclaim the built heritage of Harlem Park.

The core technique to transform the existing L is a reversal of the traditional frame and shell of Harlem Park's rowhomes. Instead of building the frame first and surrounding it with the brick shell, working out from the existing

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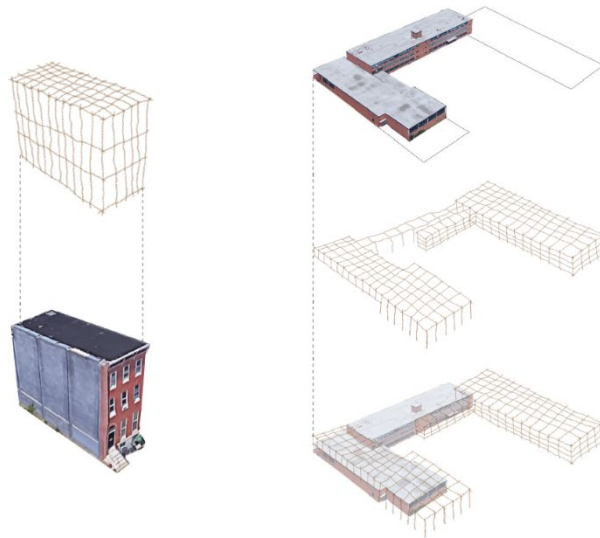


Fig. 58. The building transformation tactic. By Author, 2021.

brick shell of the old portion of the school complex is a new framework that weaves into the existing structure and adds light, transparency, and flexibility.

Besides the ecological benefits of adaptive reuse, the new wing of the school connects to green space by framing the centerpiece of the new K-8 school - the Mitchell memorial courtyard. This green play area honors Clarence and Parren Mitchell - two Harlem Park residents that advocated

against urban renewal in their roles as NAACP activist and a congressman,

GREEN SPACE

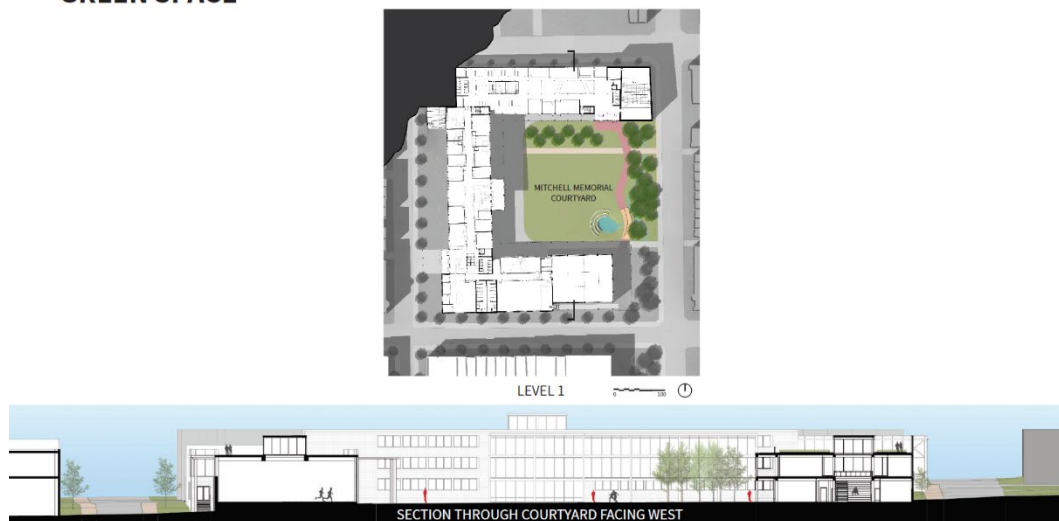


Fig. 59. The Mitchell Memorial Courtyard. By Author, 2021.

respectively⁸². Students can learn about urban farming in the courtyard orchard that hosts apple and peach trees or look out onto the courtyard from the circulation space of the upper levels. On the cultivated green roof, students can attend 4H Club and grow greens, corn, sweet potatoes, and

GREEN SPACE

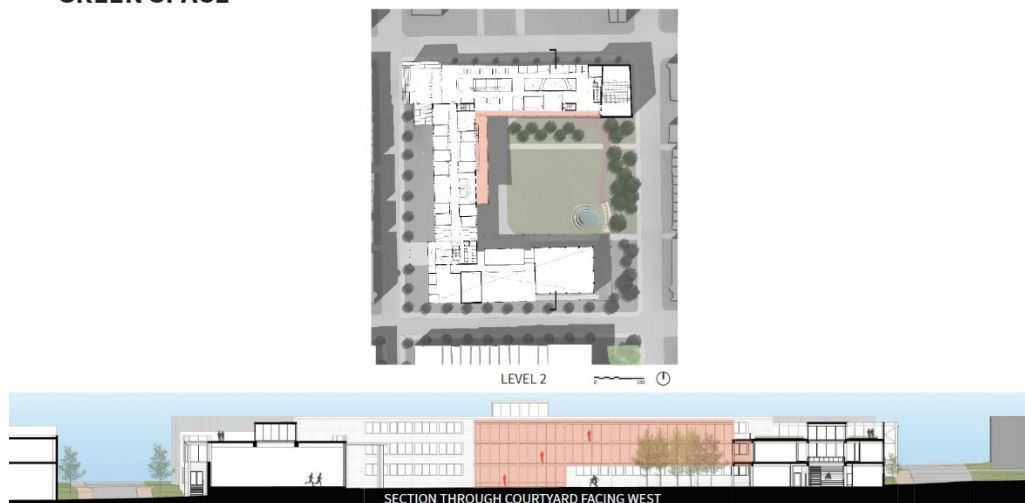


Fig. 60. The circulation space of the upper levels is in red. By Author, 2021.

⁸² Harlem Park. Baltimore Heritage, Inc. Last Modified 2020. <https://baltimoreheritage.org/programs/harlem-park/>.

beans on the northern wing. Above the southern wing, students can learn about solar panels with the accessible rooftop array.

GREEN SPACE

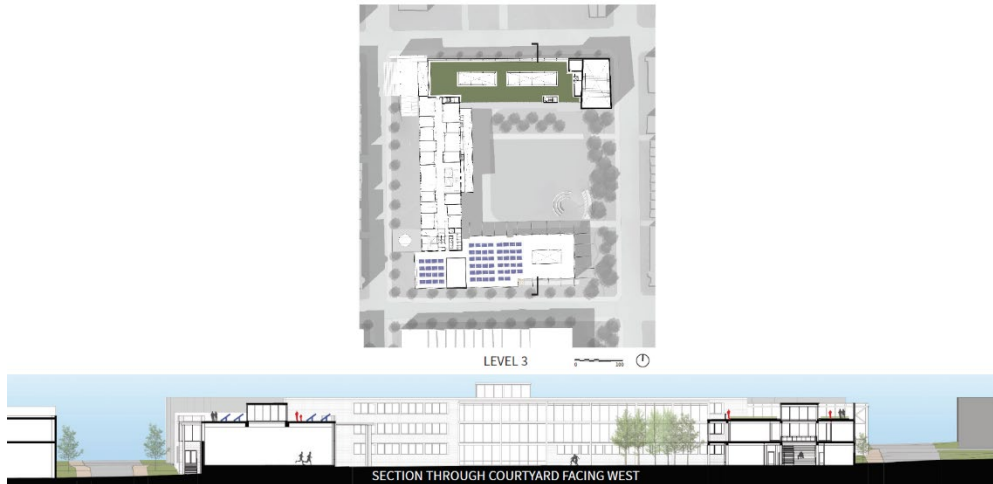
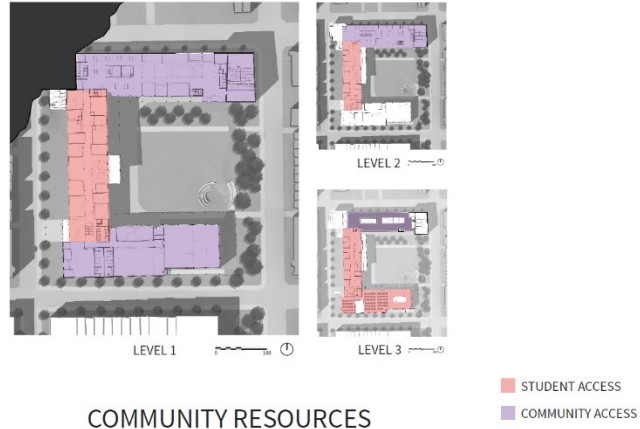


Fig. 61. The cultivated green roof and the solar array are accessible on the third floor. By Author, 2021.

The school building reconnects to humanity programmatically by serving as a community resource. The existing “L” recently had its HVAC and electrical systems updated, so saving the building is also saving the investment already made by the community and freeing up funds to go towards the school’s community-serving programs. There is public program in the new north wing and the expanded south wing that can be opened independently from the school.

HUMANITY

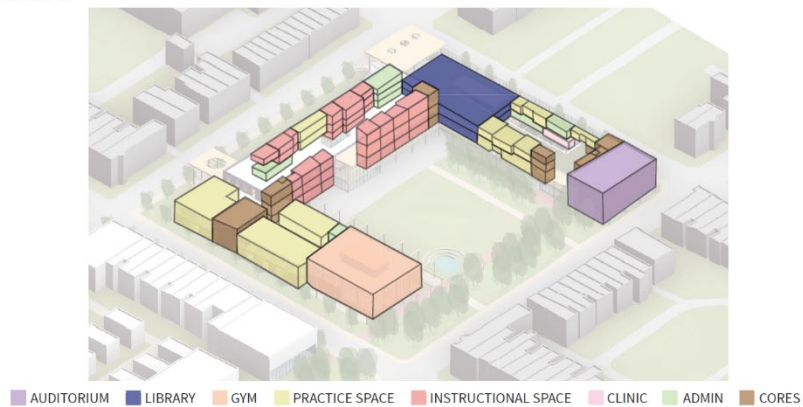


COMMUNITY RESOURCES

Fig. 62. Program with community access can be opened independently from student access areas. By Author, 2021.

Three major community gathering spaces anchor the corners of the building and activate the internal main street that runs through the school: the auditorium in purple, the library in blue, and the gymnasium in orange in the diagram below (Fig. 63).

HUMANITY



EXPANDED PROGRAM

Fig. 63. Programmatic Axon. By Author, 2021.

New program - located mostly in this new north wing - include the library, a kitchen/food pantry, the main street space (that also acts as a gallery, cafeteria, and informal presentation space), and maker spaces for art and manufacturing that open to the courtyard (Fig. 64).



Fig. 64. Level 1 North Wing Program. By Author, 2021.

On the second floor, there are teacher and student workrooms - some of which could be rented out to community members outside of school hours. There are also new computer labs/job training space, and an auditorium for student and community theater or concerts (Fig. 65). As requested by



Fig. 65. Level 2 North Wing Program. By Author, 2021.

residents, this new program allows the school to not just be a 9am-3pm space. It would remain active outside of school hours and in the summer.

The transformation tactic for the existing building also manipulates the prescriptive double loaded corridor layout, and shapes internal “streets”,

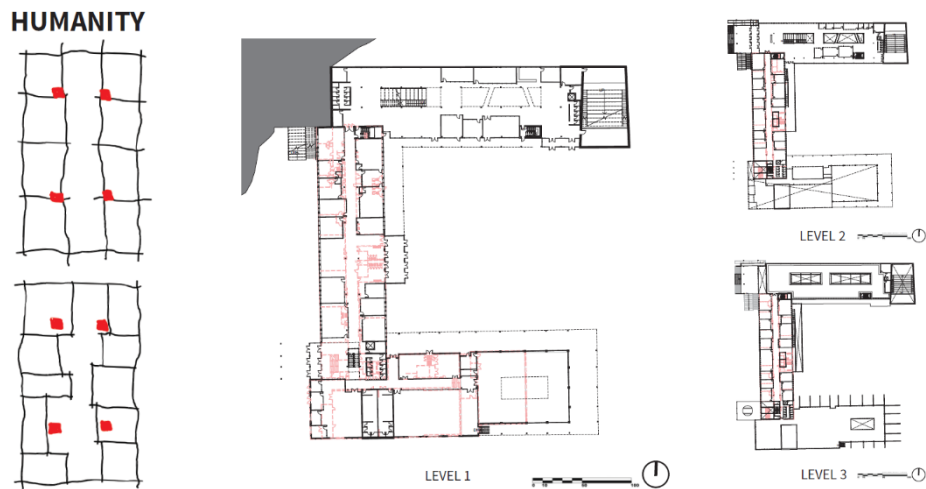


Fig. 66. Room transformation tactic. By Author, 2021.

“stoops”, and collaborative gathering spaces for students and the entire community to just be.



Fig. 67. Hallway “street” and “stoops”. By Author, 2021.

Human Scale Reconnection

Looking at the human scale of the new linear park, as you walk from the Harlem Square Park pond to the school bricks from demolished high school portion of the complex will form the path underfoot. Bronze lanterns representing the 1,140 people displaced by urban renewal will light the entire length of the path at night - including in front of the new urban renewal museum. The top floor of the museum would host the Harlem Park Community Development Corporation: an organization that currently links designers and developers to neighborhood residents and issues RFPs for community projects in Harlem Park.

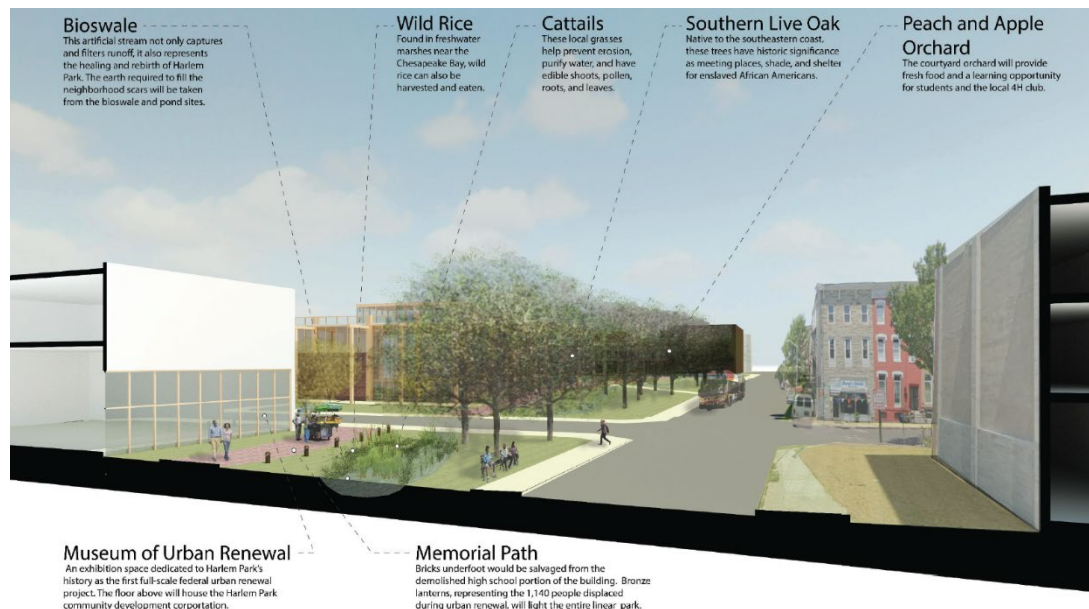


Fig. 68. Section perspective of the new Linear Park. By Author, 2021.

The plants chosen for this linear park also have historic connections, like the Southern Live Oak, which provided shelter and were symbols of resilience for former slaves; or a local variety of wild rice, which provided them sustenance and can be harvested and eaten (Fig. 68).

In the building itself, the infrastructure of the past and the new framework weave together to provide a spectrum between old and new. Students traveling between the existing wings and the new northern wing can literally touch the walls of the old school building (Fig. 69).



In the Mitchell memorial courtyard, trees and a new glulam framework come together to shape a safe space for kids to explore and learn about natural features without needing expensive field trips. A shallow reflecting pool near the school would link to the linear park stream and the larger pond of Harlem Square Park to the south of the site when it rains, but in the dryer months it could serve as a storytelling space where the younger generations can hear from neighborhood elders (Fig. 70).

GREEN SPACE



Fig. 70. The Mitchell Memorial courtyard before and after. By Author, 2021.

Regrading and new entrances restore the school's connection to the street, eliminate the moat, and form both the new community stoop and the school porch. These additions embrace both stoop and porch as important cultural symbols for Baltimore's Black community.

HUMANITY



Fig. 71. The Harlem Park K-8 "stoop" main entrance before and after. By Author, 2021.

HUMANITY



Fig. 72. The Harlem Park K-8 “porch” main entrance before and after. By Author, 2021.

Inside the school is now welcoming, honest, trusting - prioritizing light and air, comfort, collaborative gathering space, and playfulness - all characteristics of school buildings that are proven to raise student attendance and success and inspire a lifelong love of learning⁸³.

HUMANITY



Fig. 73. Harlem Park K-8 “main street”. By Author, 2021.

⁸³ Jacobs Project Management. 21st Century Buildings for Our Kids: Baltimore City Public Schools' 10-Year Plan. Baltimore: Baltimore City Board of School Commissioners, 2013.

Conclusion

Together, the multi-scaled series of design decisions previously mentioned would restore the connection between Harlem Park, West Baltimore's built context and its rich history, accessible green space, and the humanity of its predominantly Black residents. Thus, the site and school transformation would begin to reverse the arc of urban renewal, heal the heart of a community harmed by discriminatory design, and lessen racial disparities in education.

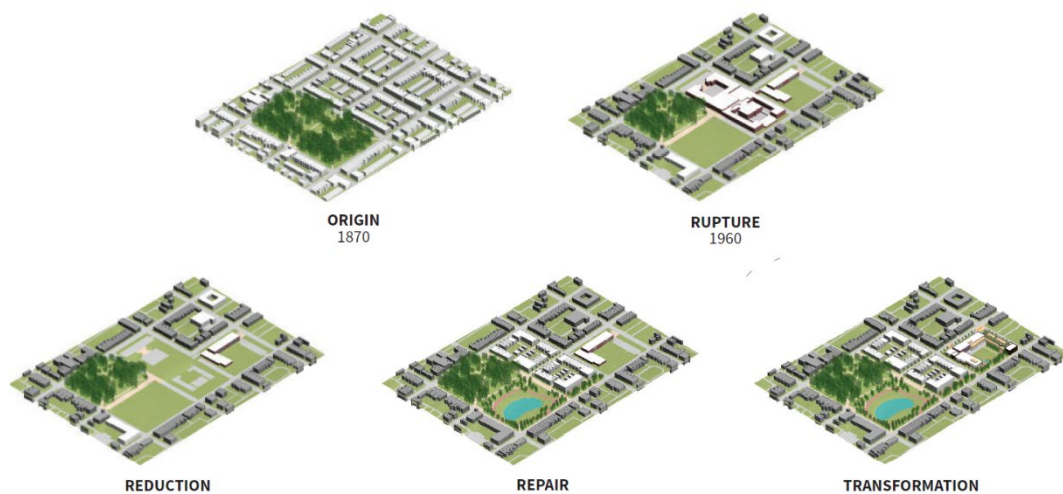


Fig. 74. Harlem Park transformation axons. By Author, 2021.

The transformation of the school site is only one intervention meant to fit into the larger arc of change happening in Harlem Park. This is not a one-size-fits-all solution, and there are flaws in this proposal – but we cannot move forward as designers, as Americans, or as humans if we never confront our past and propose solutions.

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