

Architectural Agency in Digital Documentation: Realizing Alabama's Rosenwald Schools

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Architecture, as a cultural and social construction, realizes both the priorities and oppositions of society: what they're for, as well as what they're against. Through close observation and analysis, the architecture of the segregated American South reveals these attitudes. Presented here is the impact of the Julius Rosenwald Schools across the Black Belt region of Alabama, shedding light on the past by analyzing four extant schools, documenting their adaptations over time, and giving agency to current generations to preserve these schools with the aid of digital documentation technology. The Rosenwald Schools embody the resilience and self-determination of African American communities across the South that overcame institutional inequities of Jim Crow to empower future generations.

BACKGROUND

Realized across the rural Jim Crow South, nearly 5,000 Rosenwald Schools were built to advance the education of African American children from 1914-1932 and functioned as segregated schools until integration in the late 1960's. The first schools were designed and built in Alabama through the partnership of Booker T. Washington, architecture faculty at Tuskegee Institute, and Julius Rosenwald, CEO of Sears and Roebuck. The architecture of the schools is a tangible statement for the equality of all children and the programming of the schools made them a focal point of community identity and aspirations for decades after their construction. These are the places where the education of a generation of African American thinkers occurred who would lay the groundwork for the Civil Rights movement, including alumni such as poet Maya Angelou and Civil Rights Leader/Congressman John Lewis. For Lewis, the architecture of the schools embody:

the passion of teachers who taught multiple grades and dozens of students in a single classroom. The passion of parents and neighbors who helped to raise the money to build our schools and then each year continued to reach deep to purchase school supplies. The passions of students like me who craved learning, worked hard, and read as many books as we could put our hands on.¹

During decades of racial segregation and rampant public underfunding for African American education, the Rosenwald Schools

afforded educational opportunity to children throughout Alabama and across the South. By 1928, one-third of the South's rural black school children were served by Rosenwald Schools, making it the most important initiative to advance black education in the early 20th century.²

Despite the impact of the Rosenwald School program on rural education, paradoxically, many Rosenwald Schools fell into disrepair following the landmark Supreme Court decision in *Brown v. Board of Education* and the reluctant integration of public schools in Alabama. This paper will identify the community impact of the Rosenwald Schools in Alabama, the pursuit to identify, document, and preserve remaining schools, and the empowering of communities to sustain the legacy of their heritage.

SCHOOL DESIGN

In 1914, the very first of what would later be known as Rosenwald Schools were built in Alabama. Six schools were built in Lee, Macon, and Montgomery counties.³ The schools were designed by Tuskegee Institute faculty members, Robert R. Taylor and W.A. Hazel, and published in *The Negro Rural School and Its Relation to the Community* in 1915.⁴ Following the success of the initial pilot schools, in 1917 Julius Rosenwald created the Rosenwald Fund to oversee the establishment of new rural schools, as shown in Figure 1. From 1920 on, management of new schools shifted to an independent Rosenwald Fund office in Nashville. Here the design and construction of the schools was led by white architect and longtime field supervisor Samuel L. Smith, responsible for the publication of the redesigned *Community School Plans* in 1924.⁵

Prior to the Rosenwald Schools, the existing rural schools consisted primarily of the one room school and teaching focused on the "three r's": reading, writing, and arithmetic. Within a single, dimly lit room with a single instructor, it is clear the effectiveness of the pedagogy was limited. Additionally, many rural schools that didn't have a formal schoolhouse utilized churches to educate the children of the community. Because of this, many Rosenwald Schools were built near a community church.

The design of the Rosenwald Schools was innovative for its time, incorporating what would be known today as passive design strategies. Robert R. Taylor and W.A. Hazel, architecture faculty at Tuskegee, lead the design of the pilot and first phases of

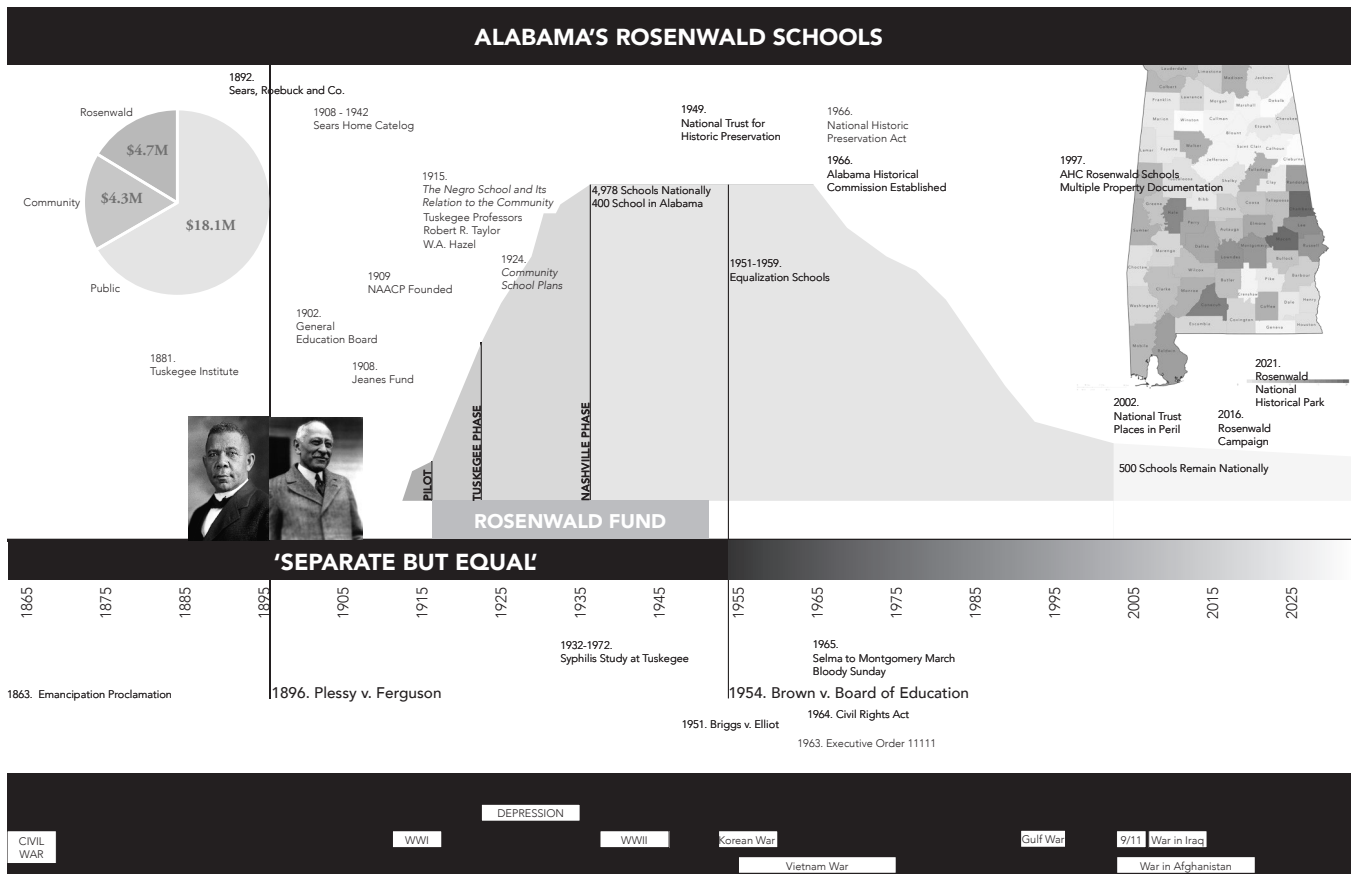


Figure 1. Graphic timeline contextualizing political and social history with the growth / decline of the Rosenwald School Program and the Historic Preservation movement. (Image provided by author).

the Rosenwald School program. Taylor was the first accredited African American architect, as well as the first black student to be educated at MIT. Architectural decisions in these schools were deeply intentional focusing on the highest impact of the quality of light for students. Schools varied by type: one, two, and three teacher schools were the most common of the 18 types. This variety of types gave each community agency to meet their individual needs. The architecture of the schools improved education by enabling new ways of teaching while simultaneously improving learning. In all the school designs, the plans call for individual classroom(s) as well as a separate industrial room, as shown in Figure 2. The industrial room was intended to train students in the trades; sewing and farming techniques were developed in these spaces. Between classrooms and or industrial rooms, moveable doors/partitions were utilized to provide greater flexibility in the classroom, enabling the teacher to open multiple classrooms for a larger assembly.

Given the uncertainty about electricity in rural areas, the school designs maximize natural daylighting through windows placed strategically within the classrooms. The directionality of the buildings takes advantage of solar orientation. According to the plans, “the building should always be set with the points of the compass, and the plan so designed that every classroom will receive east or west light.”⁵ The roof includes deep overhangs

to shade the windows in the warmer seasons. The buildings on the site were located and raised about the ground with elevated foundations to maximize natural ventilation, and high ceilings stratified the humid air. The schools utilized tall double-hung windows and some with transom windows over classroom doors to increase cross ventilation through the building, as shown in Figure 3.

Disparities from white schools remained as a single classroom would be used for first, second, third, and fourth grades, instead of a dedicated classroom intending to teach a single grade, as would be the expectation today. In the foreword for *A Better Life for our Children*, Congressman John Lewis writes about his experience growing up in a Rosenwald School:

Our school had two teachers for all seventy students. One teacher taught grades one through three in one of the rooms; the other taught grades four through six in the other room. Both teachers, like each of us, were black. (...) The teacher’s salaries were paid by the county, the only government money that came in support of our school. Everything else that we needed, we—or, more accurately, our families—provided.⁶



Figure 2. Original design drawings of One and Two Teacher Schools, including historic photographs. (Images courtesy of Alabama Archives).

Schools were often built by members of the community and the ones who also gave financially. These designs were made free and public; anybody could use them. The construction systems utilized in the school designs included basic masonry piers, wood timber framing and standardized window units and doors, allowing for unskilled labor to build them. While the Rosenwald fund only provided grants for schools to black communities, white southerners benefited from the building program as well, in the form of state-of-the-art building plans, which some states would adopt for rural white schools. This forced many white racists to acknowledge the presence and humanity of their black neighbors, making the building program an architectural challenge to Jim Crow and white supremacy.

FUNDING

The success of the school program came in part from Rosenwald’s matching-grant program, which put responsibility and ownership in the hands of the community. Prior to the start of the program, the educational funding disparities in the Deep South were significant, particularly in areas where blacks outnumbered whites in hundreds of rural counties. In 1909, in Lowndes County, Alabama, white schools received \$20 per student while segregated black schools only received \$0.67 per student.⁷ Washington and Rosenwald sought to address this inequity. The

Rosenwald Fund provided seed money to fund a portion of construction costs, communities raised a portion of funding and white school boards funded the remainder. Rosenwald believed this matching-grant program would encourage cooperation between African American and white communities. The Rosenwald program constituted an important but limited avenue for the advancement of black education during much of the first half of the twentieth century. By 1932, over 5,000 schools and buildings were built for a total of \$28.4 million. The Rosenwald Fund’s donation of some \$4.3 million had sparked \$4.7 million in black contributions. Local governments had in turn contributed \$18.1 million or 64 percent of the total with private local white contributions making up the remaining 4 percent⁸ (as shown in Figure 1).

While Julius Rosenwald played an instrumental role in the Rosenwald school program, he was not solely, or even predominantly, responsible for the success of the schools. In the state of Alabama, Rosenwald’s contributions made up approximately 20% of the total amount used to fund the schools. While the African American community made most of the additional contributions to the school, and also supplied the school’s construction labor and staff. The creation and maintenance of Rosenwald Schools were community endeavors, and money and



Figure 3. Point cloud of Tankersley Rosenwald School, showing the passive design strategies (top), and the digital documentation technology including LiDAR Scanners, Photogrammetry Cameras, Immersive Digital Environment, and iPhone 13 Pro equipped with LiDAR (bottom, respectively). (Images provided by author).

resources continued to be invested in the schools long after their initial construction, a testament to the value that they brought to those they served. While the Rosenwald School Building Fund did improve rural school facilities, it fell short in obtaining the far-reaching reconciliation Washington and Rosenwald envisioned. The attitudes of southern whites were little changed by Rosenwald's grants and few whites were induced to contribute to the building fund. School boards continued to let public investment in black education lag even further behind than in white schools.⁹

CRITICAL CONSERVATION

Following the struggle to desegregate schools in Alabama, many Rosenwald Schools were abandoned when black students were integrated into the previously all white public schools. Throughout the 1960s and 1970s, many Rosenwald Schools across the American South fell dormant and many abandoned as the desegregation of public school facilities was implemented in the wake of the 1954 *Brown v. Board of Education* Supreme Court ruling. Some facilities continued to fulfill their community and educational roles as schools, community centers, historical societies, and religious facilities, while others were sold to private ownership, converted to commercial use, or lost to time.

In 2002, the National Trust for Historic Preservation added the Rosenwald Schools on its list of historic places in peril, "America's 11 Most Endangered Historic Places."¹⁰ The exact number of remaining Rosenwald Schools in Alabama is unknown; however,

the National Trust estimates that between 10-12 percent remain across the South.¹¹ Today, preservation efforts of the Rosenwald Schools in Alabama have been primarily reactive, rather than proactively seeking out sites across the state. Only seven schools in Alabama have been listed on the National Register of Historic Places. Given the age of the buildings and the materials for construction, many of the remaining schools are under significant risk of substantial structural deterioration.

Given the risks, the Rosenwald Schools have become the object of study for a seminar developed at Auburn University entitled "Critical Conservation: Representing the Underrepresented." This course calls into question the traditional practice of historic preservation. Students explore the past by contextualizing historical events, documenting and assessing the current condition of a Rosenwald School, and consider the potential future of how these places can be utilized again. The course applies the latest preservation and digital documentation technology including LiDAR scanners (including the iPhone LiDAR Camera), photogrammetry cameras, and drone photography to create precise as-built digital records, as shown in Figure 3. By documenting the Tankersley Rosenwald School in Hope Hull, Alabama, students understand first-hand that just designating a property on the National Register of Historic Places does not guarantee its survival. Students understand the role of the architect as activist; advocating with our expertise for preservation on behalf of local communities. This activism, at its root, is the empowerment of underrepresented or marginalized communities.

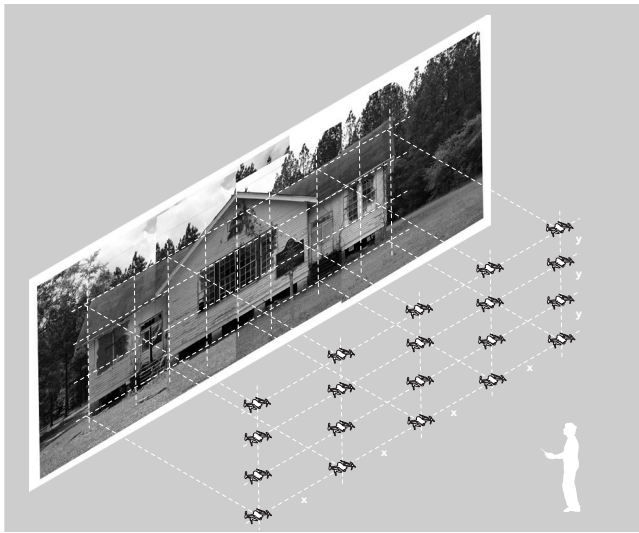


Figure 4. Rectified Elevation image developed from a series of drone photographs taken at equal vertical and horizontal intervals. (Image provided by author).

DOCUMENTATION

Working with the State Historic Preservation Office (SHPO), four Rosenwald Schools in Alabama have been identified for the initial documentation. The selected four schools are geographically diverse, differ in building typology, and are in varying current condition. The following list includes sites for documentation: the New Hope School, a “One Teacher School”, in Chambers County built in 1915 and three “Two-Teacher Schools”: the Mount Sinai School in Autauga County built in 1919, the Tankersley School in Montgomery County built in 1922 and the Oak Grove School in Hale County built in 1925.

Documentation of the schools uses the digital tools to produce analog Historic American Building Survey (HABS) standard measured drawings to ensure long-term permanence. The documentation methodology is expedient, detailed, and accurate. The workflow allows for a greater number of Rosenwald Schools to be digitally documented in a shorter period with a higher degree of accuracy. All field data is documented with notes on the process, existing materials, and construction; observations about changes in historic fabric; site conditions; and personnel involved. LiDAR scanners, used to develop a dense point cloud, is the main source of data, assisted by 360-degree photogrammetry, and UAV imagery. The use of the drone enables photography to generate a rectified elevation image, assisted by the drone’s XYZ maneuverability. The drone is used to take photos following a horizontal and vertical grid, resulting in images that are orthogonal to the picture plane, as shown in Figure 4. Using the measured drawings and point cloud, the schools are digitally recreated in three dimensions using a Building Information Modeling (BIM) platform. The digital BIM models are used to generate 3D printed physical models of the school buildings. The models are a transformation of the abstract digital data and translation into a physical re-presentation. An online platform presents the digital record of the school, archives, and

interpretive materials in a virtual environment. This approach for public engagement uses a digital virtual environment to promote both off-site interaction with the Rosenwald Schools and inspires curiosity for on-site exploration. These digital tools reveal a new way of understanding the layers of time embedded in the architecture.

ARCHITECTURAL AGENCY

The adaptations found in each of the documented schools represent the agency of each community and their ability to modify the architecture in response to changing needs and circumstances. Some of the designs of the school plans anticipate adaptation, by including an addition as a construction option. Particularly, the One Teacher School indicates the expansion of an additional classroom to the north of the plan, anticipating the flexibility for when and if the community school needed to respond to changing needs. Alternatively, studying how the schools changed organically from a vernacular or undesigned perspective reveals the agency of the communities embedded in the architecture, as shown in Figure 5.

The New Hope School, c. 1915, follows the Tuskegee Design #11 - a One Teacher School, as found in Booker T. Washington’s *The Negro Rural School*. The New Hope building closely follows the architectural plans and specifications that ensures the construction of a quality school. The total cost of construction for the school was \$1,200.00 with the Julius Rosenwald Fund providing \$400 of seed money. The local African American community raised \$400 and the local white community contributed \$400, closely following Rosenwald’s one-third cost sharing model. The school was in use for approximately 50 years before students integrated with the Five Points School in 1964. The building became a private home for an elderly couple affiliated with the nearby church from 1969-1978. To meet the changing needs, the school building was altered by partitioning the classroom into two rooms. Additionally, and more of a challenge for reversibility, the exterior walls and windows along the southern front elevation were removed to create a recessed screened porch, occupying the former entry and cloak rooms. The New Hope Foundation was established to raise funds in support of a faithful restoration of the school. The organization successfully restored the school by removing the most recent alterations and restoring the exterior walls and windows. The New Hope school remains Alabama’s oldest remaining Rosenwald Schools, as well as one in the most preserved condition.

The Mount Sinai School, c. 1919, follows the Design No. 20 from the *Community School Plans* with two classrooms and an industrial room. The original school cost \$1,325 to build. Of this amount, the Rosenwald Fund provided \$500, while the state contributed \$300 and the local African American community raised the remaining \$525. The original school traces its origins to 1891, when a one room school was instituted in the nearby Mount Sinai Church. When the new Mount Sinai building opened in 1919, the teaching staff increased to three. In

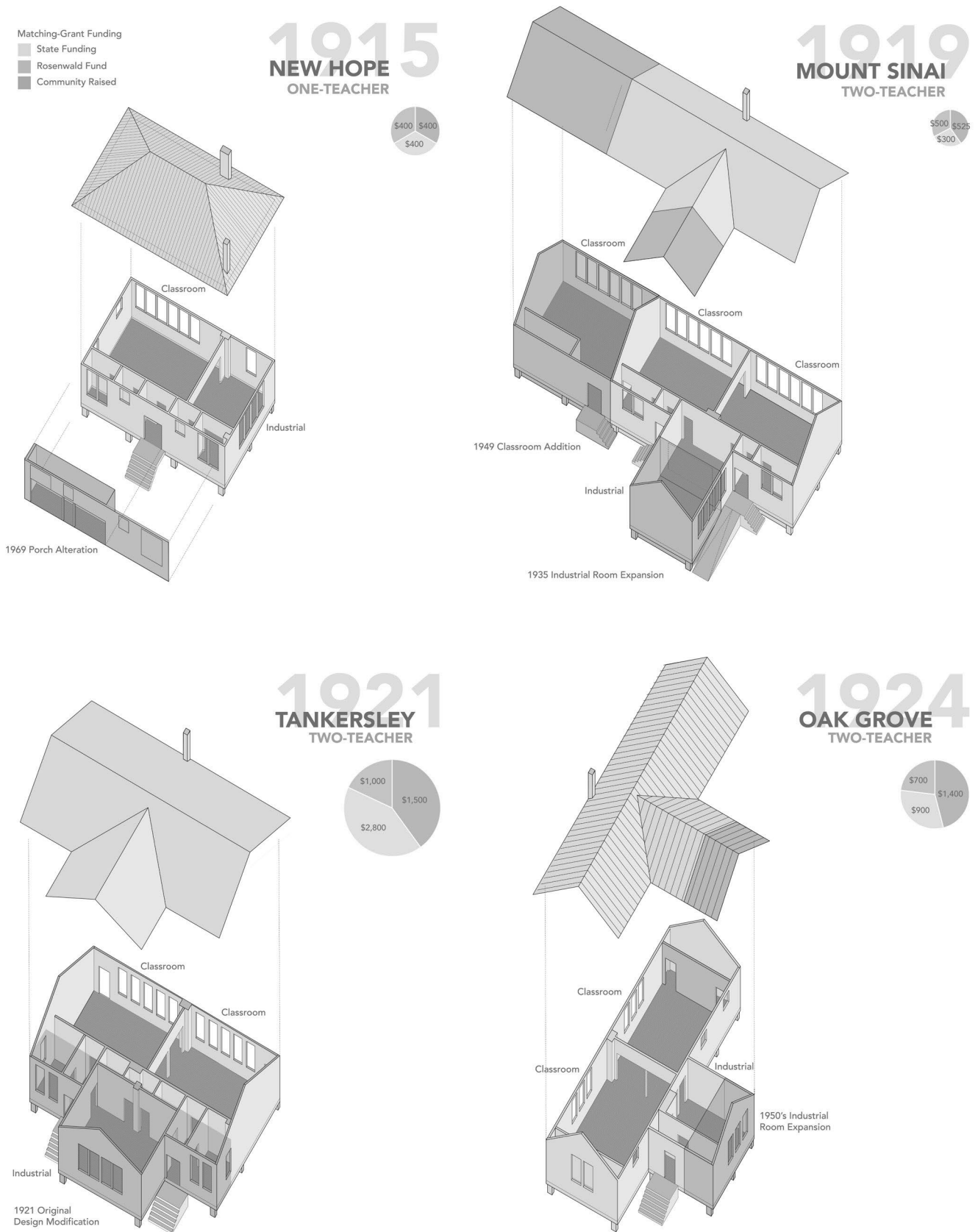


Figure 5. Alteration Axonometric representing the additions and changes of the Rosenwald Schools. (Image provided by author).

1935, the industrial room was extended to the west by 14 feet, providing three equally sized classrooms. This change included the removal of the original front, east facing windows that were reused on the south elevation of the industrial room addition. By 1949, a fourth teacher was added, and the following year the Parent-Teachers Association raised \$500 to match county funds to complete the construction of a new classroom addition to the north, measuring 24' x 32'. At some point in the history of the school, the former cloak rooms were converted into restrooms. With the school consolidation of the late 1960s, Mount Sinai was shut down in 1967 when the students were integrated to the Autauga County Training School. Incorporated in 1973, the Mount Sinai Community organization continues to actively maintain ownership of the building, with annual summer reunions, hosted inside the former school, which currently serves as a community center.

Prior to the Rosenwald program, the Tankersley community was served by a one room schoolhouse. The Tankersley School, completed in 1922, is a two teacher Rosenwald School similar but distinct from the Design No.20 plan. The school includes design modifications from the original that include expanded entry vestibules and libraries. This expansion alters the spatial sequence into these rooms, allowing the industrial room to function more as a third classroom adjacent to the entry. The Rosenwald Fund records refer to the Tankersley School as a 'three teacher school'; however, the overall form more closely resembles the two teacher plan than the three teacher plans. The Tankersley school includes transom windows over the classroom doors with operable hardware designed to promote cross ventilation and borrow natural daylighting from the vestibule. The Tankersley school cost \$5,300 to construct, of which Rosenwald contributed \$1,000, the community raised \$1,500 and the public provided \$2,800. Within the last year, extensive water intrusion through a large opening in the roof has degraded the roof trusses as well as the wood flooring and floor joist. Today, Tankersley remains the school most at risk of structural failure in the state.

The Oak Grove School, c. 1925, is a two teacher school building constructed according to Design No. 20-A, with a varied 'side' orientation to that of Design No.20. The Oak Grove School was built for \$3,000; of that sum, African Americans raised \$1,400 while the State of Alabama contributed \$900 and the Julius Rosenwald Fund contributed \$700. An addition to the building was added in the mid 1950s, creating a larger industrial room. At some point in the history of the school, the industrial room was converted to a community room for the preparation of meals. This alteration of the existing conditions is still visible from the interior as the original window framing of the exterior walls remain. Additionally, the rear cloakrooms were converted into restrooms. The Oak Grove Schools is a part of the Oak Grove Church campus and serves as local community center and museum.

The ownership of the remaining Rosenwald Schools is often uncertain, but typically is in the form of an informal organization of

caretakers, alumni, and their families. Their association ranges from established non-profit restoration organizations to informal groups of caretakers. Often these less organized groups have the greatest challenges with accessing the funding for the preservation of their school. Additionally, these rural communities lack the expertise to maintain, repair, and restore the buildings, especially after major water intrusion and structural damage has occurred, as with the Tankersley School.

IMPACT

The values and ideals of this school movement and the communities that endeavored for their creation are embodied in the architecture of the Rosenwald Schools. The Rosenwald Schools created opportunities for black students to improve literacy rates "at twice the rate in counties where there was at least one Rosenwald school" and increase the "return to a year of additional schooling" by a rate of about "18 percent." Rosenwald Schools also increased "the wages of blacks that remained in the South relative to Southern whites by about 35 percent."¹² These buildings are what remain of one of the most ambitious school building programs ever instigated, as well as the most significant philanthropic efforts for African-American education. By 1928, at the height of the matching-grant program, at least one in every five rural schools for black students in the South was a Rosenwald School. About 40 percent of black children in the South attended a Rosenwald School at the height of the program's popularity.¹²

By revealing the Rosenwald Schools and their origins, the impact of segregated education in the South is documented, highlighting the values embodied in the architecture. These schools are considered by economists to have created the African American middle class.¹³ As these schools fall into disrepair and ruin, the cultural artifacts of the architecture are lost. The building of Rosenwald Schools demonstrated the capacity for community action, grassroots development, and brought forth a material challenge to the looming specter of Jim Crow, one school and student at a time.

The Rosenwald Schools serve as artifacts of the struggle for equality in education in Alabama and across the South and existed to support a system of racial segregation and discrimination. The communities that physically worked to build them and dug deep to fund them sought a better life for their children. Despite the inequities that existed in the Jim Crow South, the Rosenwald Schools serve as a testament to the self-determination and resilience of the community that worked to build them. By connecting the people who originally planned, designed, financed, and constructed these schools with the people who now seek to document and preserve them, this effort empowers members of rural communities by advocating for the preservation of the school buildings and their enduring legacy.

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