

CRAFTING SPACE

Architectural Strategies for Education in Appalachia

CHLOE WEAN

Miami University M.Arch, 2025

THESIS CHAIR

John Blake

READER

Gülen Çevik

READER

Gerardo Brown-Manrique

READER

Katherine Setser

ACKNOWLEDGEMENTS

I want to thank my committee, John Blake, Gerardo Brown-Manrique, Gulen Cevik, and Katherine Setser, and my studio professors, Terry Welker and Jeff Kruth, for their wisdom and guidance throughout this process. Their support was integral to the success of this thesis and it would not have been possible without them.

I would also like to thank my family, who supported me throughout this thesis: my mother, Pam Wean, always my favorite architect, my father, Dave Wean, who has always encouraged my curiosity, and my brothers, David and Jordan Wean, the smartest and coolest people I know.

I also dedicate this thesis to my home state of West Virginia, in all its beauty and imperfection.

Lastly, I thank my studio friends here at Miami University, who inspired me and helped me along the way. Their friendship means everything to me.

CONTENTS

	ABSTRACT	07
01	EDUCATIONAL ARCHITECTURE	08
02	CULTURE, CRAFT, LEARNING	18
03	CONTEXT	22
04	ANALYSIS	28
05	DESIGN	34
	APPENDIX	48

ABSTRACT

Broadly, Appalachia is a culturally diverse and historically rich place, often portrayed in popular media through lenses of negativity associated with economic decline, ecological devastation, and cultural stagnation. While the region is often neglected by both government and market forces, a more rich cultural investigation is warranted.

For example, the state of West Virginia consistently falls below the national average for educational attainment, according to the U.S. Census. It also has a history of underfunded educational programs. Additionally, there has been a decline in the education of skilled workers. My interests are in thinking about education beyond traditional institutional structures to promote Appalachian arts and culture through architectural design.

The lack of education, loss of culture, and decline of trades can be remedied by providing effective educational spaces which facilitate experience-based immersive learning. Architecture has the power to make focusing, calming, and inspiring educational facilities through connections to nature and the design of comfortable, flexible environments.

This design aims to provide immersive and experiential environments for the purpose of teaching underrepresented traditional Appalachian craft and arts. Educational programs offered include woodworking, art glass, visual arts, fiber/textile arts, folk music, stone carving, ceramics, Appalachian cooking, and foraging. Students have access to workshops, nature trails, culinary facilities, classrooms, outdoor educational spaces, performance spaces, and studios. There is a focus on community within the campus. Programs are interrelated to provide a well-rounded and comprehensive educational experience. The campus's location in the Appalachian mountains provides a peaceful and beautiful environment with opportunities to learn from nature. The facility is designed to accommodate hands-on learning and apprenticeship-based programs, as opposed to traditional lecture-based programs.

THESIS QUESTION

How can architectural design create a place to teach Appalachian cultural craft effectively?

01

EDUCATIONAL ARCHITECTURE

Using Architectural Design to Support Evolving Educational Environments

RESEARCH ON EDUCATIONAL ARCHITECTURE

ABSTRACT

Educational environments are not merely places where we go to expand our knowledge. They are also places where people can form communities and connections with each other.

All students deserve the opportunity to explore, learn, and discover in an inclusive and supportive learning environment. Exploration, community, and inclusion are some of the most important factors for establishing positive learning environments. By designing learning spaces which prioritize these principles, we can instill a more communicative and inclusive mindset in future generations. This paper compares traditional education models with nontraditional trends in education and speculates upon how these factors can influence typology in architecture. This thesis mainly focuses on school typology, as it is the most universally experienced form of educational architecture, but informal learning environments like libraries are also briefly studied.

INTRODUCTION

As a society, educational spaces are places where communities consistently come together. Institutions like schools, museums, and libraries have one common goal: to educate the public. We know that through education, empowerment is even more achievable, so it is imperative that we make educational spaces accessible and inclusive to all users. The quality of the spaces in which humans are educated also influences the effectiveness of education. Creating an environment conducive to learning is one of the most important goals of educational architecture.

The design of an educational space has a substantial impact on the effectiveness and quality of education received in that space. The design of the learning space is just as important as the evolving teaching methods being enacted within that space. Thus, changing educational architecture is a multidisciplinary endeavor. As designers, we have the power to design educational spaces that simultaneously benefit education and foster a sense of community and inclusion, thus allowing a more equitable and fulfilling experience for future generations.

Most contemporary educational designs include several key factors that differentiate them from traditional forms. Factors affecting the design of educational institutions are exploration, community, and inclusivity. Additionally, current educational buildings tend to include collaboration spaces, flexible/convertible spaces, and biophilic design.

MAIN OBSERVATIONS, ARGUMENTS, RELEVANCE, THEORETICAL PRACTITIONERS AND OPPOSING VIEWPOINTS

BACKGROUND

For centuries, the industrial model of education has been implemented in schools. This entails the traditional model of a school: uniform rows of desks in an enclosed classroom, with an instructor at the front. This model typically relies on memorization of prescribed material, to be measured by testing ¹.

This kind of educational model operates like an assembly line, treating each student like identical, mass-produced products instead of individuals with unique needs, interests, and personalities. We know that every person is unique and has specific needs, so it is unfair to assume that all students can learn the same way. In architecture, this traditional model manifests in the typical school typology, with rigid, enclosed, and inflexible spaces, double-loaded corridors with identical enclosed classrooms, and students confined to desks in uniform rows. Nontraditional educational models aim to change this rigid, ineffective way of education, and this change can be facilitated by architectural interventions.

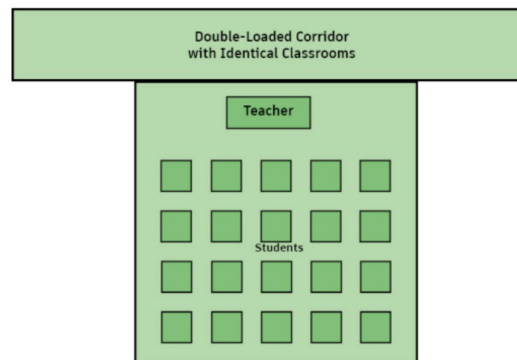


Figure 1: Diagram showing traditional model for schools.

EXPLORATION AS EDUCATION

For effective, personalized learning experiences, one of the most important factors is the freedom to explore. Humans have a natural enthusiasm for discovery, which should be accommodated. If students can feel free to explore their environments and find what is interesting to them, they will feel more enthusiastic about learning in general. Architecturally, this can be

accomplished by creating flexible spaces that encourage movement and discovery.

One way to examine the way humans interact with educational spaces is through the study of Montessori schools. These schools encourage total independence of students to explore their learning environments and understand the world around them on their own terms. Montessori schools place high value on learning environments as they are used as an integral part of the learning experience. This can be aided by designing spaces that are interesting to explore, have opportunities to yield discovery, and most importantly, are accessible to varying physical and neurological needs. Along with the freedom to explore independently, there is a requirement for students to be observed by an educator², so learning spaces should be designed accordingly, with clear sight lines.

Montessori schools typically provide students with a connection to the natural environment with outdoor learning spaces or gardens. This is another design consideration that makes for a pleasant learning environment. Spaces should be designed so that students and educators have access to the outdoors. This both creates a calming learning environment through design, but also provides opportunities to learn from the environment.

While the Montessori concept is mainly aimed at young children, aged 3 to 12 years, these design considerations can still be applied for a wider range of ages, both in school environments and in informal learning environments like libraries and museums.



Figure 2: Fuji Kindergarten, Tezuka Architects, 2007

Fuji Kindergarten in Tokyo, Japan translates Montessori principles to architecture (See Figure 2). The school was designed by Tezuka

Architects and was built in 2007 to accommodate 600 students. Following Montessori principles, the classrooms are open spaces with natural materials. Classrooms are arranged in an oval shape, surrounding a central open courtyard with large trees. The roof is also accessible to students from the courtyard. This design facilitates the students' freedom to explore their learning environment and the natural environment safely within the school³.

Another framework through which to examine educational spaces is the concept of Waldorf education. Waldorf education, also called Steiner education, after Austrian architect and educator Rudolf Steiner, shares some principles with Montessori education, but differs in some areas. Under Waldorf education, students are meant to take the initiative to guide their own educational experience.⁴

It is partially the responsibility of the educators to create an educational environment. Another principle of Waldorf education is the mental and emotional development of students, facilitated through addressing students' feelings and creating warm, inviting, and comforting learning environments. Steiner believed that building forms and colors can be highly influential to the way students learn. Steiner even recommended the use of red- and yellow-colored walls to create a warm atmosphere.

Learning environments are also intended to be home-like, to help students feel comfortable.

While Waldorf education prioritizes self-guided learning, education is more group- focused than Montessori education. Arts and handicrafts are also priorities in the Waldorf curriculum, given as much importance as cognitive pursuits. This contributes to the students' creative and sensory well-being.

Connection to nature is also important in the curriculum. Nature is studied at different levels for the different age groups: younger students learn about how plants and animals interact with each other. As students age, they learn about the human connection to nature. Like Montessori schools, learning experiences in nature can be architecturally manifested by providing safe outdoor spaces like gardens for students to explore.

COMMUNITIES AND COMMUNICATION

An example of an educational building including all stakeholders in its design is Evangelische Gesamtschule Gelsenkirchen, designed by Peter Hübner, built in 2004. The school was the winner of a school design competition in Gelsenkirchen Bismarck, Germany. According to the project description: "This project came into being as the result of a participation process involving almost 1,000 people, long before demands for a different type of school intended not just for teaching but as a complete habitat for children..." (Hübner, 2005)⁵

The design and construction of this school involved its future students in every step of the process, including preliminary design, modeling, and visualization. By including students in the design of their own school, Hübner created even more successful and personalized learning environments as each space addresses the students' specific needs and interests.

Hübner also took care to accommodate the diverse community surrounding the school. According to the competition's guidelines: "The high proportion of foreigners in the Bismarck district of Gelsenkirchen is to be taken into particular consideration in terms of the educational patterns of the normal school day. The aim is to keep pupils with different national, religious, and cultural backgrounds together. Tolerance and mutual acceptance are possible only when positive experiences emerge from interacting with each other." The school itself was designed like a small city with shared community spaces and classroom "houses". This simulates actual community life and gives students roles as community members. This kind of design helps students to function in society by simulating it on a small scale. The classroom houses, which create a home-like environment, reflect the ideas of Waldorf education mentioned previously.

By designing a school which promotes tolerance and communication in a diverse community and including students in the design and construction of their school, Hübner created a personalized educational institution which reflects and responds to the needs of its community. The school's encouragement from diverse backgrounds to interact promotes tolerance, inclusion, and understanding.

The sentiment for the importance of school communities is also shared by Dutch architect Herman Hertzberger. In a 2017 interview with

Architecture & Education, Hertzberger shared his ideals regarding educational spaces. On architecture and social connection, he remarked “Architecture and social life have a very strong connection. Most people take architecture as a sort of formal thing, something with styles and I am inclined to consider it more like a utensil, a tool, a tool for social life mostly” (Wood, 2017).⁶ This illustrates the necessity for spaces where people can communicate - a concept which is especially important in schools. Humans need spaces where we can collaborate, coexist, and learn from each other, and this is an opportunity for architects to provide those spaces effectively.

Reflecting Hübner’s design ideals, Hertzberger also believes that schools should function as a small city. In a 2016 interview, he remarked: “I think a school should be like a small city. In a city you have small places, large places, all sorts of secluded and semi-secluded places, you have vistas and you have all sorts of activities. In effect, these pupils are not yet of an age to go into the city and explore the life of the city but they should explore life through the school, so you must create as many conditions as possible in the school so that they experience the world through the school building.” (Dyer, 2016)⁷

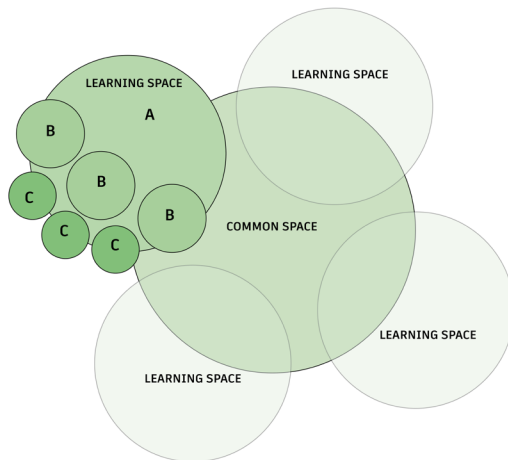


Figure 1: Diagram showing organic model for school layouts, inspired by Hertzberger.

Additionally, Hertzberger remarked on the inflexibility of traditional education and the ways in which architecture can aid nontraditional learning models like the Montessori method.

INCLUSION AND ACCESSIBILITY

Inclusivity is particularly important in educational spaces because all students, regardless of demographic, deserve a valuable and equitable learning experience. How can architecture

address inclusion and equality? What methods do architects use to make sure occupants feel supported to learn in the spaces they have designed?

When looking at the prioritization of inclusivity in schools, the Finland model is an excellent example. Finland’s educational system is widely known as a notably successful model for education. This is due to its heavy emphasis on inclusion and equality in learning environments. In the book *Learning from Finland: guidelines for the development of inclusive schools*, author and researcher Christopher Mihajlovic explores what makes Finland’s educational system so inclusive and what comprises inclusive school practices. Through his research of several case study schools throughout Finland, Mihajlovic came to several conclusions about Finnish education, some including:

- “The Finnish core curriculum takes into account gender, cultural identity and linguistic background” (Mihajlovic, 2023.)

- “The national core curriculum in Finland is fundamentally aimed at enabling all students to participate fully in a free society with unequal conditions... this implies equal access to quality education in mainstream schools regardless of individual conditions.” (Mihajlovic, 2023)⁸

Günter Behnisch has designed a multitude of educational buildings with a focus on how architecture enhances learning environments. One example is Behnisch’s entry for a 2001 school complex competition in Chicago. The main requirement for this competition was to design a school that would be inclusive to disabled and disadvantaged students in the community. Behnisch accomplished this goal by designing low-lying buildings surrounded by gardens. This creates an accessible environment, establishes a connection to nature, and encourages students to explore the space.⁹

A comprehensive source on contemporary educational design is *Linking Architecture and Education: Sustainable Design for Learning Environments* by Dr. Anne Taylor with Katherine Enggass. Throughout this book, Dr. Taylor provides many guidelines and examples of the design of educational environments, both in schools and in museums. Dr. Taylor introduces the concept of a “3D Textbook”, referring to the physical space itself as a tool for learning. She also connects

psychology and philosophy to the design of ideal learning environments.

INFORMAL LEARNING SPACES

Informal educational institutions can be just as influential as schools because they serve entire communities regardless of age group. Libraries can serve as centers for community interaction and connection. Thus, they should also be as inclusive as possible. The Library of Birmingham in Birmingham, United Kingdom is a good example of a building which engages a whole community and brings them together through their desire for knowledge. This library was designed by Dutch architectural firm, Mecanoo and was completed between 2008 and 2009. The building features several communal spaces which allow community members to learn together in different settings, such as performance spaces, balconies, a discovery garden, an exhibition space, and several other communal areas.¹⁰

OPPOSING VIEWPOINTS

OPEN-CONCEPT SCHOOLS: A FAILED EXPERIMENT

It could be argued that the architecture of educational spaces might not have a measurable impact on the effectiveness of education. A space could meet all of the previously mentioned requirements of inclusivity, accessibility, flexibility, collaboration, and nature, but still not produce a positive change in learning. This could be because while the physical learning environment may have changed to a nontraditional form, the pedagogy still follows traditional methods.

This can be proven by the ambitious open- concept school designs of the mid-20th century. These schools - usually elementary schools - were designed without classrooms, instead, setting up learning spaces like workshops where students could work together in groups or explore different interest centers throughout the space.¹¹

While this concept could have been beneficial in theory, very few of these schools ultimately achieved the intended goal of personalized learning. This is likely due to the fact that educators were not trained to educate in the nontraditional methods that the spaces required. This resulted in makeshift traditional classrooms within the open space, effectively reverting the entire concept back to traditional pedagogy. I learned firsthand that this concept is not conducive to inclusive learning, or even learning in general. The elementary school which I attended was an

open-concept school, built in the 1970s. By the time I attended the school in the mid-2000s, all educational practices in the school had long since reverted to traditional methods. Classes were held in large open bays, holding three classes of about thirty students each. The three “classrooms” were separated by makeshift walls made up of rows of filing cabinets, bookshelves, and chalkboards. Predictably, with ninety students in the space, and three teachers teaching different lessons simultaneously to their respective classes, this situation was very distracting.

While this concept was ultimately a failure, it wasn't completely the fault of the architecture of the schools. Non-traditional learning spaces require non-traditional educational methods to fully make the spaces effective. Therefore, these ambitious movements in educational architecture can work as long as they work together with educational practice. This means including and considering educators, students, and all other stakeholders in the design process. The stakeholders' interaction with the educational space should be the highest priority for the design of educational institutions.

DESIGN PROCESS TACTICS

The previously outlined examples appear to share some common traits and principles:

- Individuality
- Independence and Autonomy
- Exploration
- Freedom and Ownership
- Openness and Communication
- Universality and Accessibility
- Equality

Each of these principles can be aided architecturally. Openness and communication can be fostered through architecture by including the community in the design of its school, as Hübner did with the Gelsenkirchen school. Individuality, equality, and accessibility are all addressed in different ways among the previously mentioned case studies, especially in Behnisch's Chicago school design, which can be used as an example.

CONCLUSION

Through education, we are able to achieve community, discovery, and empowerment. Therefore, education is an incredibly important factor in our progress as a society. It is evidenced that the design of educational spaces is just as important as the methods in which people are educated within those spaces. Architecture cannot change education on its own. It needs to work

alongside changes in educational methods. Educational architectural typology is informed by the needs of particular educational spaces. Therefore, different methods and needs inform different typologies. By designing spaces which facilitate inclusion, exploration, and community, architects can influence how people learn and interact in educational spaces for the better.

NOTES

- ¹ Taylor, Anne. Linking Architecture and Education: Sustainable Design for Learning Environments. (China: Everbest Printing Company, 2009). 3-12.
- ² Isaacs, Barbara. Understanding the Montessori Approach: Early Years Education in Practice. (London: Taylor & Francis Group, 2018) 48-61.
- ³ Design Like You Give A Damn. (New York: Abrams, 2012) 190-193.
- ⁴ Dahlin, Bo. Rudolf Steiner: The Relevance of Waldorf Education. (Cham: Springer, 2007) 83-107.
- ⁵ Hübner, Peter. Children make their school. (Sungnam: Daehan Printing & Publishing, 2005) 13-51
- ⁶ Wood, Alan. "Interview with Herman Hertzberger (2017): architecture as visual and social connection." Architecture and Education. August 29, 2017.
- ⁷ Dyer, Emma. "Interview with Herman Hertzberger, 2016." Architecture and Education. February 3, 2016.
- ⁸ Mihajlovic, Christopher. Learning from Finland: Guidelines for the Development of Inclusive Schools. (Wiesbaden: Springer, 2023) 81-187.
- ⁹ Behnisch, Günter, Stefan Behnisch, and Günther Schaller. Behnisch, Behnisch & Partner : Buildings and Designs. (Boston: Birkhäuser. 2003) 127-131
- ¹⁰ Houben, Francine. Mecanoo Architecten: People Place Purpose. (London: Artifice Books on Architecture, 2015.) 197-245
- ¹¹ Cuban, Larry. "The Open Classroom." Education Next. July 6, 2006. Cuban, Larry. "The Open Classroom." Education Next. July 6, 2006.

IMAGE CREDITS

1. Industrial Model Diagram – Chloe Wean
2. Fuji Kindergarten, Tezuka Architects, 2007 - Katsuhisa Kida
3. Organic model Diagram – Chloe Wean

ANNOTATED BIBLIOGRAPHY

Cuban, Larry. "The Open Classroom." Education Next. July 6, 2006. Cuban, Larry. "The Open Classroom." Education Next. July 6, 2006. <https://www.educationnext.org/theopenclassroom/>.

This journal article outlines the history of open-concept classrooms, the intention behind them, and the reasons why they failed. I am using this source as reasoning for my opposing views section.

Behnisch, Günter, Stefan Behnisch, and Günther Schaller. Behnisch, Behnisch & Partner : Buildings and Designs. Boston: Birkhäuser. 2003. *This book provides information about Günter Behnisch's projects, including his 2001 Chicago school design case study.*

Dahlin, Bo. Rudolf Steiner. The Relevance of Waldorf Education. Springer, 2017. <https://ebooks-ohiolink-edu.proxy.lib.miamioh.edu/content/a11672fe-c3c9-11ea-875d-0ae0aa0d175d>.

This book provides information about the history of Steiner education and its key principles and curriculum. There is also a section about the architecture of learning environments.

Design Like You Give A Damn. New York: Abrams, 2012. *This book provides information about several projects that employ sustainable design and community-focused tactics. There is a section about educational buildings, including information about Fuji Kindergarten by Tezuka Architects.*

Dyer, Emma. "Interview with Herman Hertzberger, 2016." Architecture and Education. February 3, 2016. <https://architectureandeducation.org/2016/02/03interview-with-herman-hertzberger/> *This interview provides Herman Hertzberger's perspectives on educational architecture.*

Houben, Francine. Mecanoo Architecten : People Place Purpose. London: Artifice Books on Architecture, 2015. *This book provides information about Mecanoo's designs for community emphasis.*

Hübner, Peter. Children make their school. Sunnam: Daehan Printing & Publishing, 2005.

This book describes the design process and construction of Peter Hübner's Gelsenkirchen school.

Isaacs, Barbara. Understanding the Montessori Approach: Early Years Education in Practice. London: Taylor and Francis, 2018. <https://ebooks-ohiolink-edu.proxy.lib.miamioh.edu/content/8b77f2f4-acd4-11ed-86520a9b31268bf5> *This book outlines various aspects of Montessori schooling and provides guidelines for effective Montessori learning environments.*

Mihajlovic, Christopher. Learning from Finland: Guidelines for the Development of Inclusive Schools. Wiesbaden: Springer, 2023. <https://ebooks-ohiolink-edu.proxy.lib.miamioh.edu/content/8b77f2f4-acd4-11ed-8652-0a9b31268bf5> *This book outlines the Finland education model and provides information on the most important educational priorities in Finland.*

Taylor, Anne. Linking Architecture and Education: Sustainable Design for Learning Environments. China: Everbest Printing Company, 2009. *This book provides a comprehensive guide to the design of sustainable learning environments, including psychological and philosophical factors.*

Wood, Alan. "Interview with Herman Hertzberger (2017): architecture as visual and social connection." Architecture and Education. August 29, 2017. <https://architectureandeducation.org/2017/08/29/interview-with-herman-hertzberger-2017-architecture-as-visual-and-social-connection/> *In this interview, Dutch architect Herman Hertzberger goes over his approach to school design.*

ADDENDUM:

Progression of Theory and Topic

This thesis began as an exploration into educational typology in architecture and how we as architects can design better educational environments. However, over time, my interest in educational process changed from schooling to craft as a form of education. I became curious about the way knowledge is shared, especially in the Appalachian region of the United States, a place which is commonly associated with poor educational attainment. This topic is personal to me as I was raised and educated in West Virginia, a state at the center of the Appalachian region. It inspired an examination on how people learn there. It is less formal than a traditional school, and even different from the experimental schooling methods which were presented in the previous research. What remains the same is learning through experience. The end product of this thesis

became a manifestation of social and material culture of West Virginia. It became a place to learn from ourselves and the world around us.

With that change, the theoretical framework of this thesis was altered slightly. While the Finnish model of education and Montessori and Steiner/Waldorf schools do offer useful strategies for education, they are not as useful in the following project. Instead, the theoretical writings of John Dewey guided this thesis, with his ideas on learning as experience influencing the spaces provided. In addition, the concept of an experiential craft program was explored, with precedents such as the Bauhaus, Yestermorrow Design Build School, and Berea College. The remainder of this thesis is informed by these concepts.

02

CULTURE, CRAFT, LEARNING



Students Working in
Berea College wood
carving workshop
Courtesy of Berea
College Berea, KY

CULTURE, CRAFT, LEARNING

INTRODUCTION

The Appalachian region is often associated with economic downturn and low rates of education. This generalization overlooks the rich culture that this region has.

At the same time, Appalachia has a wealth of traditional crafts, which should be taught to new generations and kept alive through innovation.

To an outsider, the instinct may be to save Appalachia from itself. However, that may not be what the region really needs.

According to the U.S. Census, West Virginia consistently ranks lower than the national average for educational attainment¹. But, what does education really mean? How can we design valuable and effective educational spaces in architecture?

The aim of this thesis is not to overlook the imperfections of Appalachia. The goal here is to celebrate the culture through the learning of craft.

**“Appalachia doesn’t
need saving.
It needs respect.”**

-Kat Kinsman, Food & Wine Magazine

With this thesis, I aim to study architectural interventions for educational spaces, while also considering the needs and conditions of the landscape of West Virginia, its cultural practices, and its communities.

My proposal is an educational campus located in the mountains of southern West Virginia. The facility will provide programs specifically for traditional regional arts, crafts, and skills, which are seeing a decline. This campus not only aims to revive these arts, but to bring them into the future.

WHAT DOES EDUCATION MEAN?

Every experience in life is a learning experience. So, what is learning? What is teaching? In this case, I am viewing education as the sharing of culture and art through experience.

Learning skills through experience has been a practice for millenia. It is a practice that more formal types of education do not implement.

My intention in this project is to design what is essentially a modern-day craft guild. I want to create environments where students can learn through apprenticeship and workshop-based curriculum.

To me, education means freedom. There is a liberation that comes from learning new things and from expressing yourself with creativity. My goal with this campus is that students will feel free to explore with their learning. To express their creativity in radical ways.

There is a sense of freedom that comes from being out in nature. The natural environment provides a wealth of learning opportunities, which I want students to feel free to explore.

WHAT IS THE VALUE OF CRAFT?

In this age of mass-production and optimization, skilled craft is exceedingly rare. Handmade art and objects, crafted with care, precision, and expertise are more valuable than ever. Continuing to teach these lost crafts and practices not only keeps these traditions alive, but gives a new generation opportunities to experiment with them in new ways. It also lets new generations connect with their culture and heritage. The act of making art by hand is both an effective way to learn, but is also a way to gain appreciation for the work that goes into creation.

1. Educational attainment by state - census bureau tables, accessed Nov. 1, 2024, <https://data.census.gov/table?q=educational%20attainment%20by%20state>.

CONTEMPORARY EXAMPLES

These artists and makers perpetuate Appalachian culture in radical ways.



Set Up by Jeana Eve Klein, digital printing and acrylic paint on recycled fabric, hand quilted.



Appalachian cooking by chef Travis Milton
Photo by Matthew Chambers, Courtesy of Food & Wine Magazine



Collection of art glass water bottles by Blenko Glass

Courtesy of Blenko Glass



Folk revival musician Sierra Ferrell

Photo by Bobbi Rich



Kinship Quilt by Aaron McIntosh



Afro-Appalachian Genre Musician, Mon Rovia

Photo by Caity Krone, Courtesy of Teen Vogue

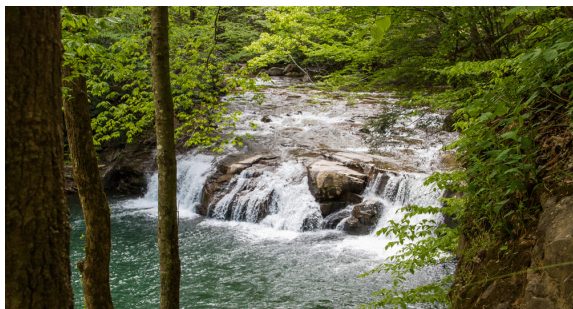
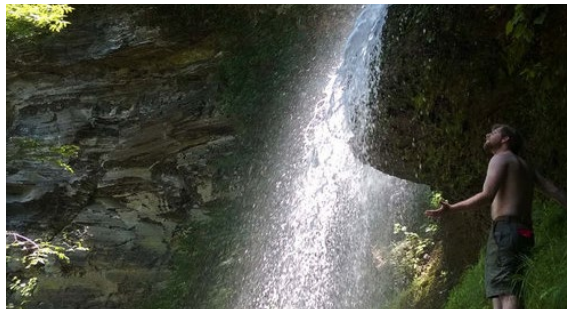
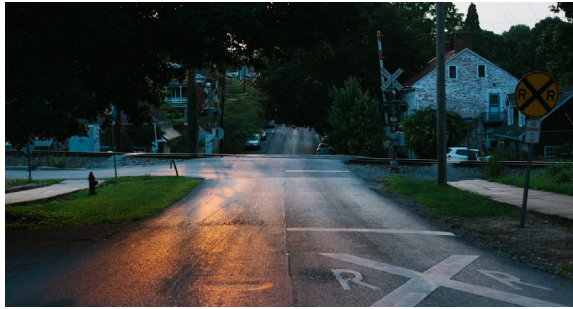
03

CONTEXT



Photos by Garnet Bruell, Kristian Thacker, Roger May, Pang Tubhirun, Jan Dodgins, George Etheridge, Craig Hudson, Justin Murphy

Courtesy of Looking at Appalachia Project



Photos courtesy of National Parks Service

SETTING

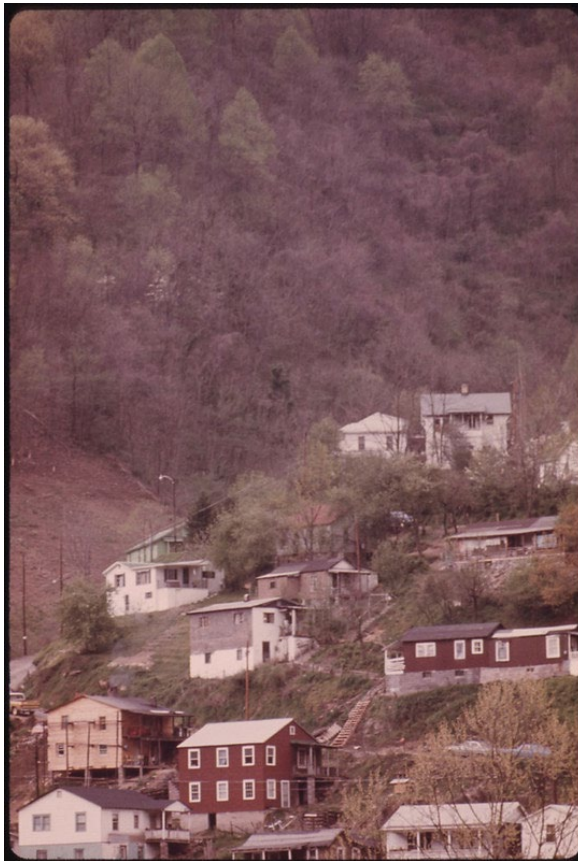
In any story about Appalachia, the landscape is a character in its own right, and the narrative of this thesis is no different. The hills and woods are an inextricable part of the cultural and regional experience, and this is evident in the arts, crafts, foods, and music that come from Appalachia. We are all connected to the land.

We all have something to learn from nature, and this remote site has a lot to offer in terms of inspiration, resources, and knowledge. For example, students can explore on-site hiking trails to get inspired by views, light, and sound for their arts and music projects. The woods are intentionally kept accessible for the campus and for the community to enjoy and explore.

Bluefield, West Virginia,
1979. Photo by Alain Le
Garsmeur



Houses in Logan, West
Virginia, 1974.
Photo by Jack Corn
Courtesy of U.S.
National Archives



THE HILLS

ARCHITECTURAL ADAPTATIONS

There are almost no naturally flat lands in the Appalachian mountains. Because of this, it is common to see layered, terraced architecture climbing up the hillsides. It is not only a common practice, but exemplifies the architectural character of the region.

Additionally, this shows respect to the land and natural resources by adapting to the landscape instead of altering it.

LOCATION

BECKLEY, WEST VIRGINIA

The location I've chosen is between the city of Beckley, West Virginia, and New River Gorge National Park. Beckley is a medium-sized town in southern West Virginia. It has a population of about 17,000. It is surrounded by mountains and heavily forested land. It was established in 1838 and has a long history of coal mining, similar to the rest of West Virginia. Nearby New River Gorge National Park is a major tourism draw for the region. It is the only national park in West Virginia and offers hiking trails, white water rafting, and scenic views like the New River Gorge Bridge.

The site I have chosen is about 10 minutes away from one of the park entrances and has access to views and hiking trails. Locating the site here offers students opportunities to learn from the wilderness during their educational experiences. The park also offers recreational opportunities for students.



Top Left: Rafters on the New River, under the New River Gorge Bridge. Courtesy of the National Parks Service

Top Right: Sandstone Falls scenic view. Courtesy of WV Toursim.

Bottom: White water rafting on the New River. Photo by Jay Young. Courtesy of National Geographic

The Bauhaus,
Photo by Nate Robert



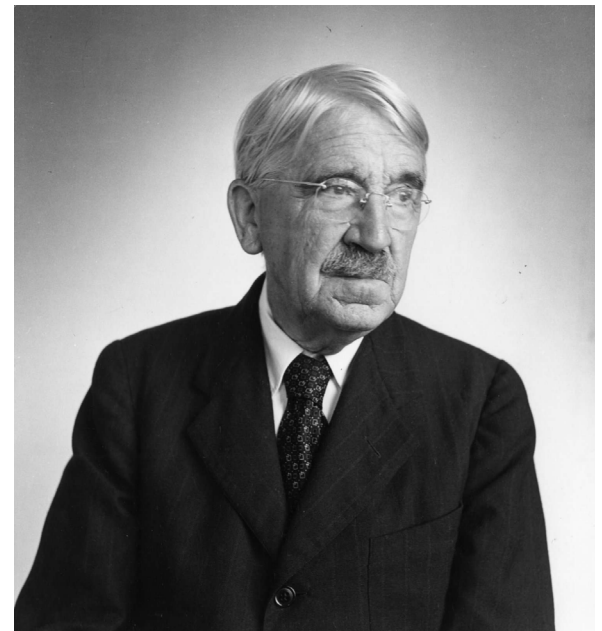
THEORY

EDUCATIONAL THEORY AND STRUCTURE

The most important part of any learning environment is the use of hands-on experience. The most influential philosophical framework for experiential learning is the writing of John Dewey. Dewey asserted the importance of experiences in education and emphasized individuality in education, meaning that education is not a one size fits all process. He also encouraged educators to be even more involved and invested in the students' learning process.

The educational structure of this facility is similar to that of the Bauhaus, which taught crafts and design through workshop and apprenticeship-based learning environments.

Both of these influences contribute to the top priorities in the design of this campus: to provide environments where students can learn from hands-on experience.



John Dewey
Courtesy of Encyclopedia Britannica



Student working in Berea College's weaving workshop. Courtesy of Berea College

EXPERIENTIAL LEARNING

CURRENT PROGRAMS AND PRECEDENTS

There are several programs which teach traditional arts and crafts through hands-on experiential methods. Some prominent programs are Berea College in Berea, Kentucky, Yestermorrow Design Build School in Waitsfield, Vermont, and

The Folk School in Cherokee County, North Carolina. Each of these programs teaches traditional skills in workshop-based environments, almost like a modern craft guild.



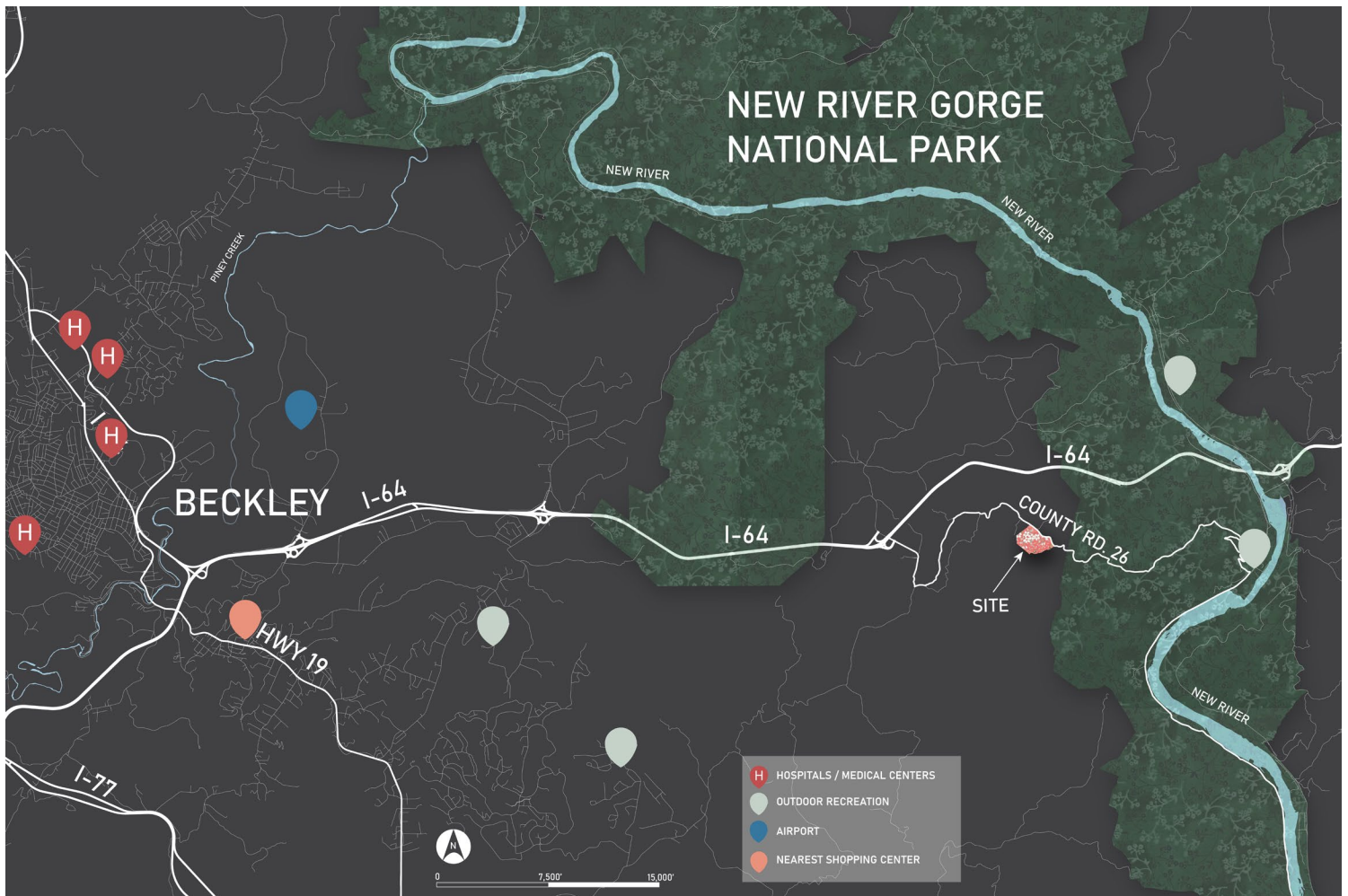
Left: Quilt made by students at the Folk School. Courtesy of The Folk School



Right: Student working on the Berea College farm. Courtesy of Berea College

04

ANALYSIS



THE SITE

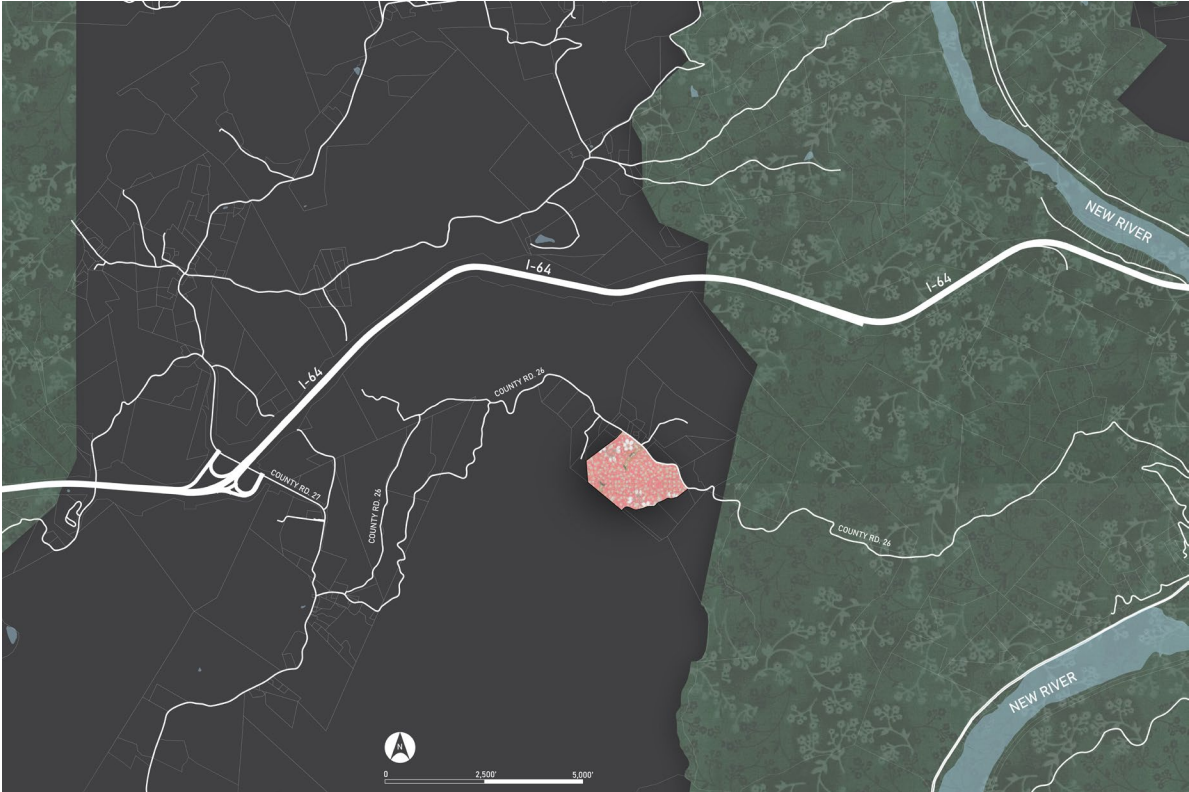
The chosen site is a 70-acre plot of land on Irish Mountain Road in Shady Spring, West Virginia, a small community in the Beckley metropolitan area. It is a ten-minute drive from I-64, a major interstate, which brings tourism traffic through the area.

Irish Mountain Road leads from the interstate to Sandstone Falls hiking trail, so would likely see a decent amount of tourist traffic through the area.

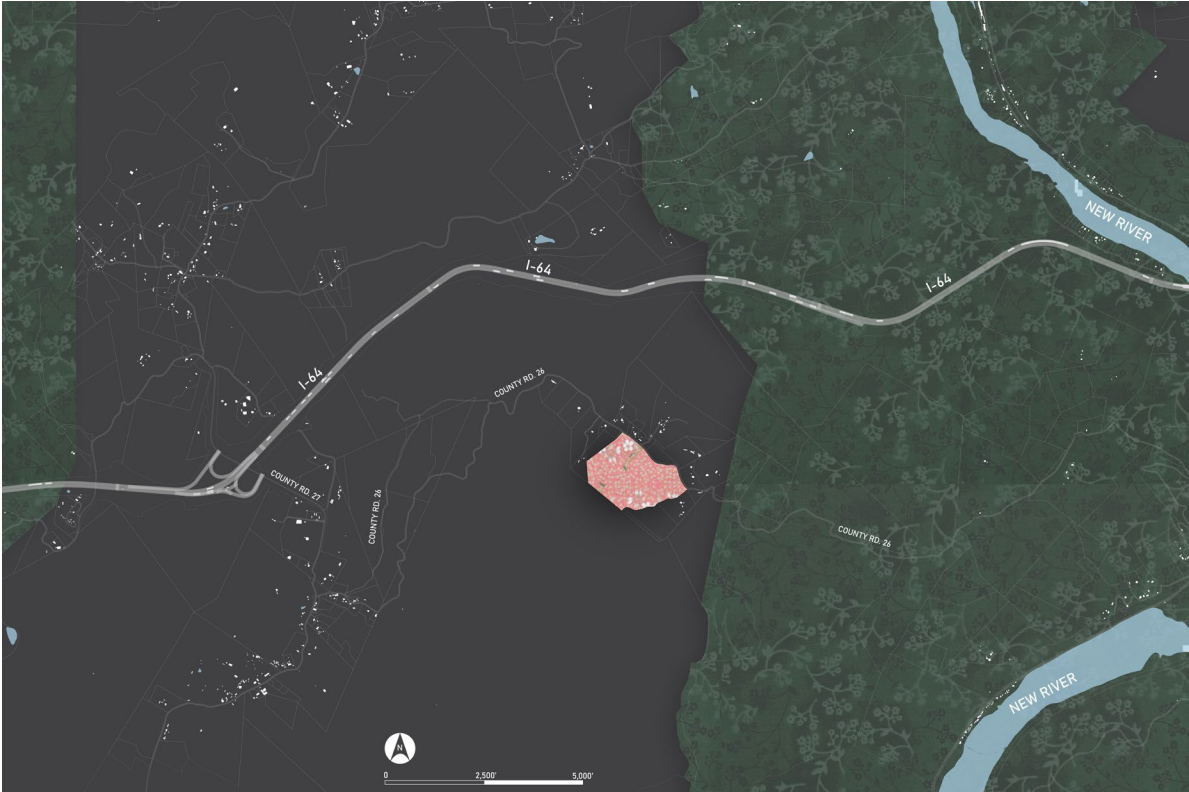
The site is about twenty-five minutes away from the center of Beckley. The nearest shopping center is about twenty minutes away. There are several recreational destinations nearby, including Little Beaver State Park, Sandstone Falls Boardwalk trail, Sandstone Falls Visitor Center, and various trailheads.

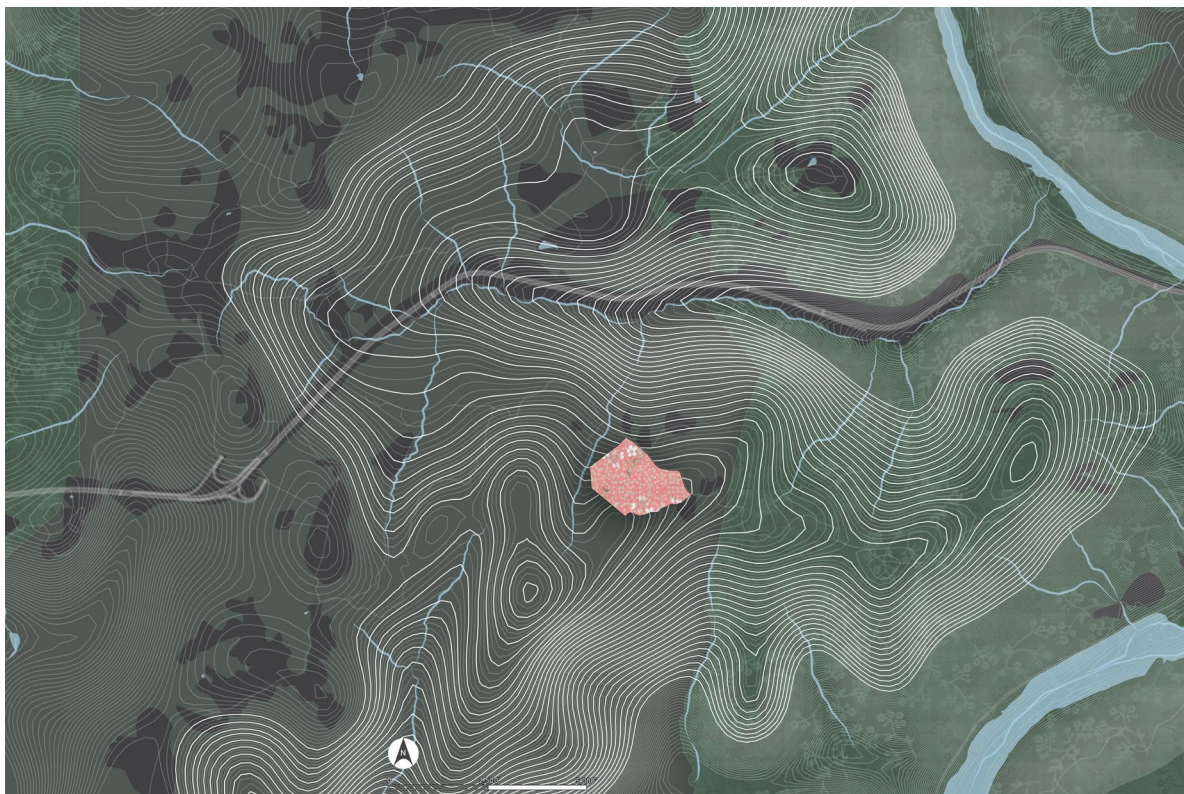
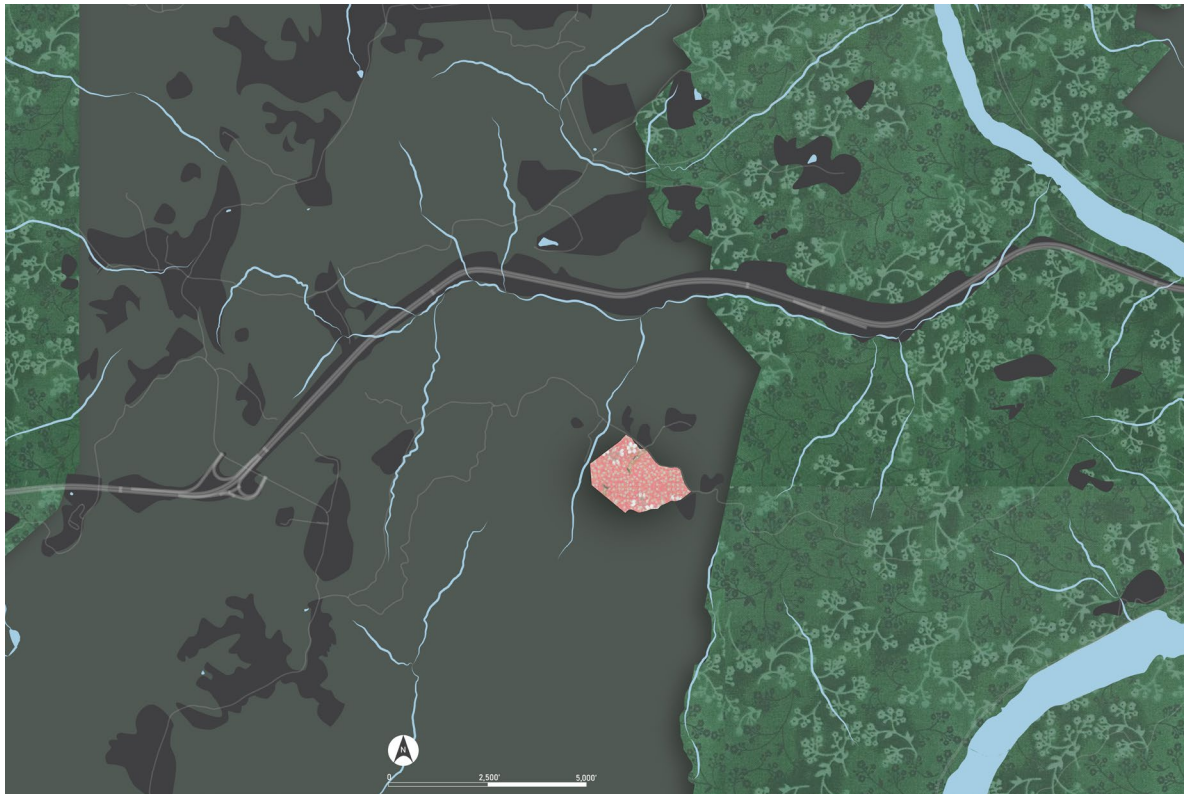
The site is in the foothills of Irish Mountain, and has a gradual slope, rising about 160 feet from the road at the north to the highest point at the southern end. The location is fairly remote, with about nine neighboring occupied plots, which are mostly residential. The majority of the site is heavily forested. There is a small, three-acre clearing at the north side, near the road, but otherwise, the site is covered.

Major roads and circulation - I-64, County road 27, and County Road 21 (Irish Mountain Road)



Adjacent structures and properties

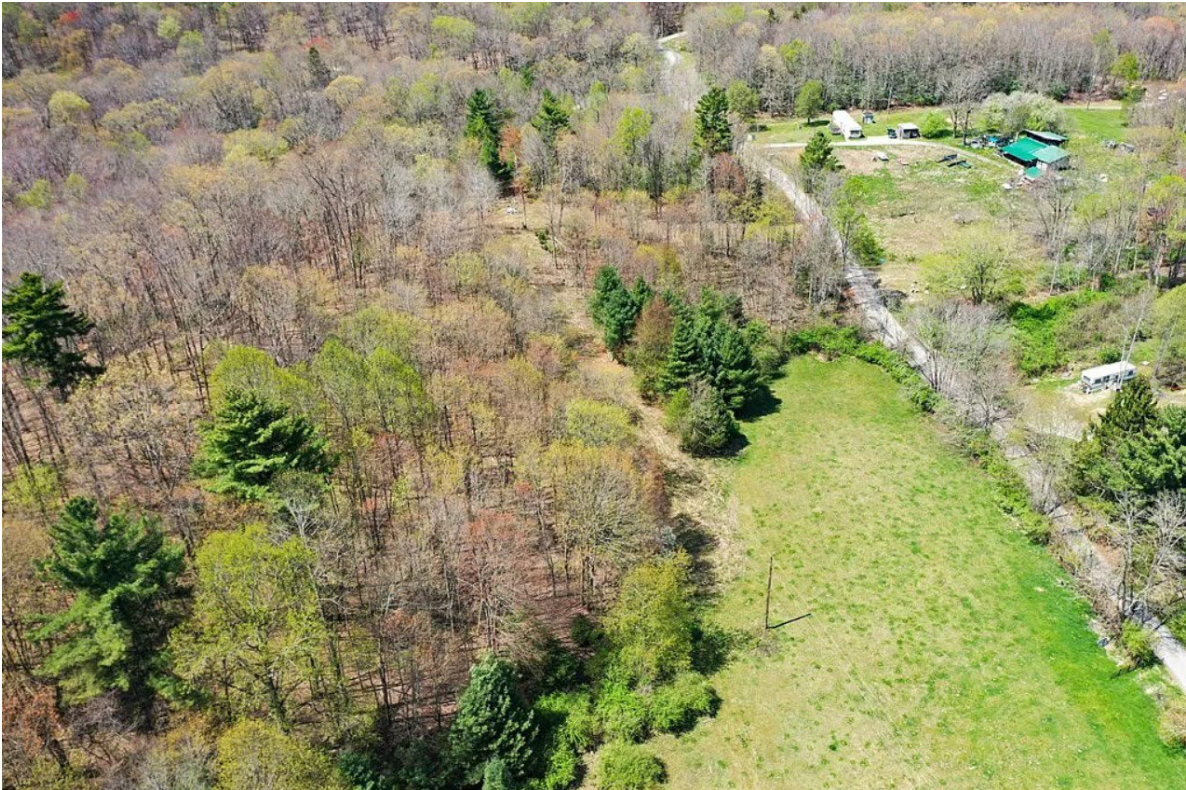




Site Boundary



Cleared area, north end of site



Site photos courtesy of Bass Sinko Real Estate,
Beckley, West Virginia.



View of cleared area,
facing west



View of cleared area,
facing northwest.

05

DESIGN



PROGRAM & SPACES

Program is structured based around which classes are taught at the school. Some crafts require permanent residence due to equipment usage, and, thus, have permanent dedicated spaces within the campus. Other crafts can be taught through temporary artist-in-residence programs, which would not continue throughout the full academic year (March - November). Temporary/visiting crafts would take place in flexible classrooms and galleries placed throughout the campus. The following programs are offered by this campus:

PERMANENT

WOODWORKING

GLASS

STONE CARVING

COOKING

FIBER/TEXTILE ARTS

CERAMICS/POTTERY

TEMPORARY/VISITING

FOLKLORE/STORYTELLING

FORAGING

VISUAL ARTS

Visual arts like painting, printmaking, and drawing have a dedicated workshop, but the media changes throughout the year.

MUSIC

The music program has its own dedicated building and performance space, with visiting musicians teaching there temporarily.

SPACES INCLUDED:

WORKSHOP BUILDINGS

Permanent workshops with dedicated space for equipment are provided for Woodworking, Glass, Stone Carving, Fiber/Textile Arts, Visual Arts, and Ceramics/Pottery.

ADMINISTRATION

An administration building houses the administrative offices required for running the campus.

MUSIC/PERFORMANCE SPACES

A building holding a classroom space for group music instruction and practice spaces.

DINING HALL

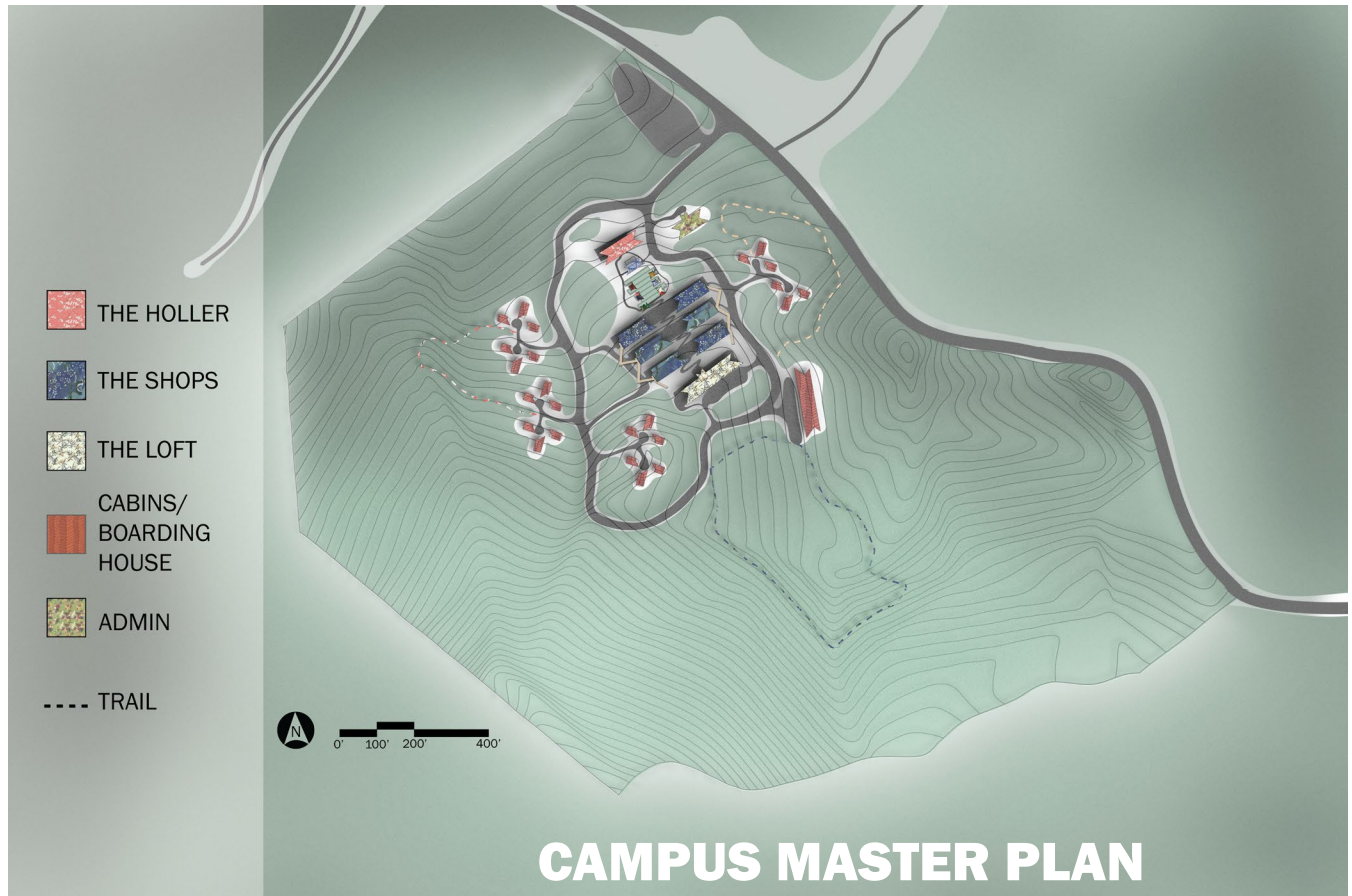
The dining hall serves all students and craftspeople on campus.

FLEXIBLE CLASSROOMS

Flexible classrooms are used for visiting programs.

LODGING

Students and instructors are housed on campus. There are 24 cabins, housing up to 32 people, and a boarding house, which can support up to 80 people.



SITE DESIGN STRATEGY

For the layout of the campus, the most important factor was creating a low-impact design which fit subtly into the site.

To achieve this effect, buildings were oriented following the natural contours of the site, creating a terraced effect leading up from the entrance at the north of the site, to the top of the hill at the south end.

The sequence begins with parking near the roadside, making use of the existing cleared space on the site. The first building encountered is the administration building, which new students would visit before joining the campus community.

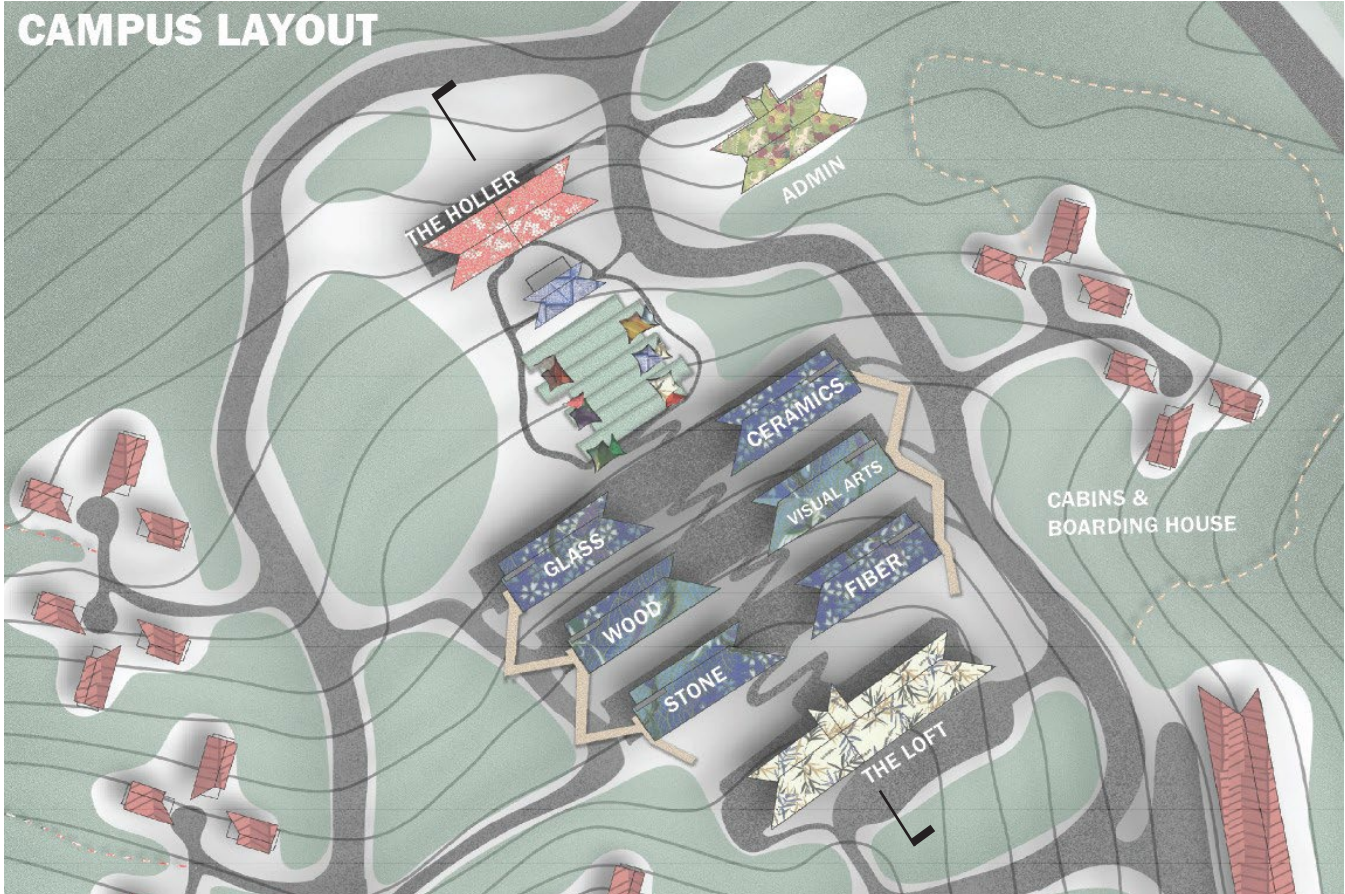
The next step in the sequence is The Holler, comprised of the music building, stage, and stepped amphitheater.

Above the amphitheater are The Shops. This is the terraced area containing the six craft workshops, all opening out onto the stepped courtyard.

At the top of the hill, The Loft overlooks the campus. The Loft contains the culinary instruction kitchen, dining hall, and classrooms.

Surrounding the main buildings is a road, looping throughout the campus. The cabins, boarding house, and hiking trails are placed on the edges of this loop for privacy and access to nature.

CAMPUS LAYOUT





View of terraced courtyard surrounded by workshops

BUILDING DESIGN INSPIRATION

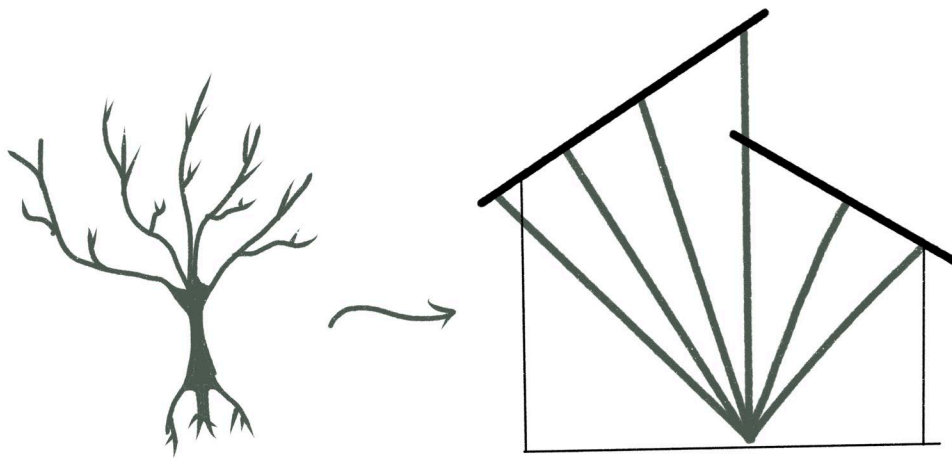
Each of the buildings on campus follow a similar design strategy in terms of form, motif, and materiality.

A branching column and slanted/offset roof design is applied to all buildings on the campus. The design is inspired by tree branches and overlapping leaves. This is intended to mimic the many tree canopies throughout the wooded site. The columns also provide an opportunity for hanging installations outside of the workshops.

Dogtrot houses, a common vernacular housing type in Appalachia, were another inspiration

for the design. Dogtrot houses are made up of two enclosed volumes, separated by a covered breezeway through the middle. This concept was implemented in the design of The Holler and The Loft, as a way to pass through the buildings during the progression throughout the campus.

All campus buildings use the same material palette of wood siding, exterior glazing, stacked stone, and corten steel roofs. These materials were chosen because of their ability to age and patina over time. As the buildings age, they will evolve and be changed by the environment.

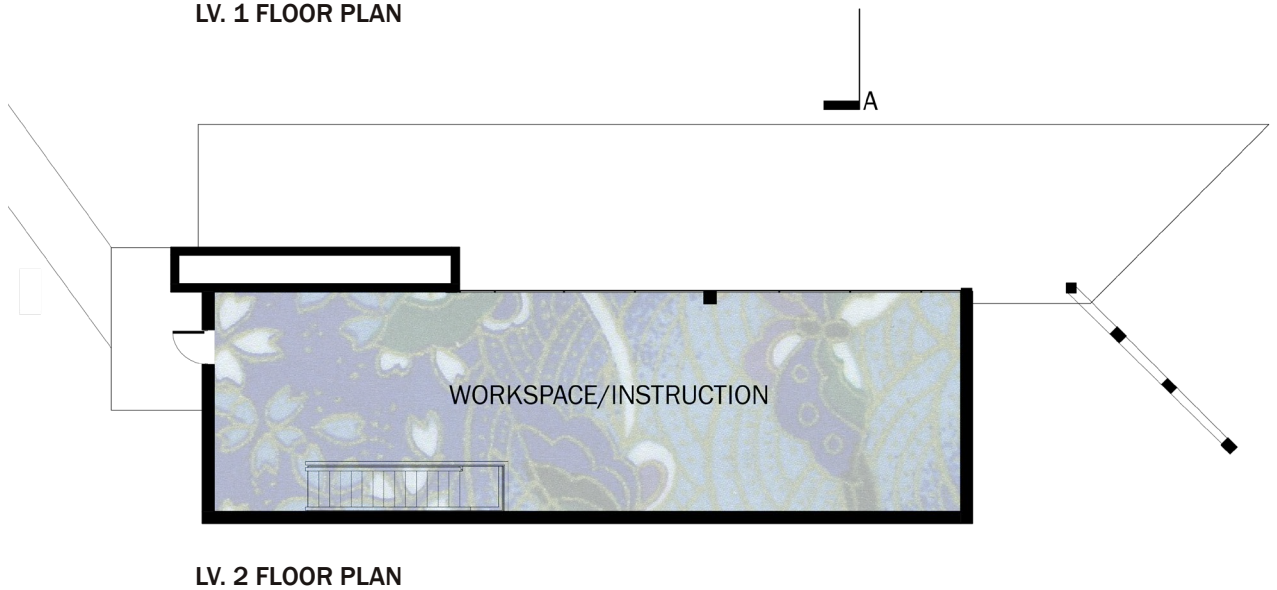
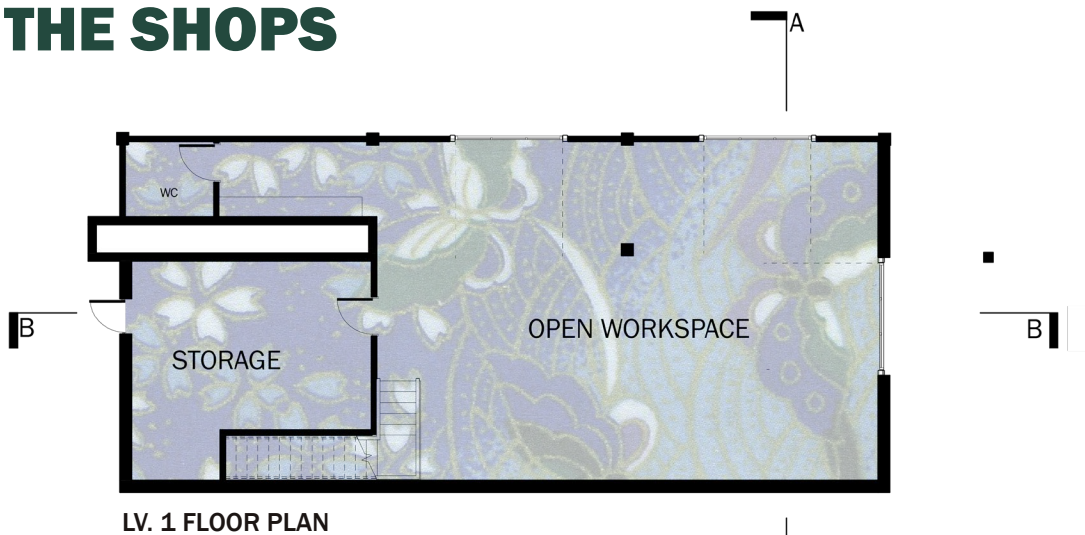


Design inspiration
diagram

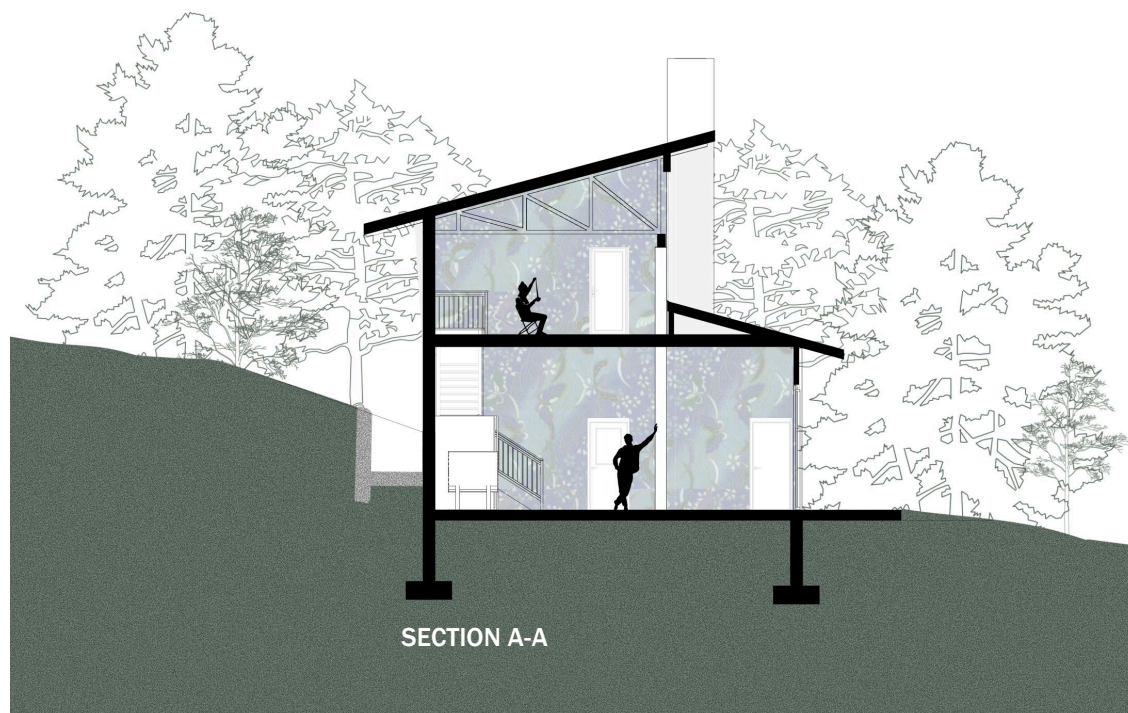


Dogtrot house. Photo
by Irina Moss

THE SHOPS



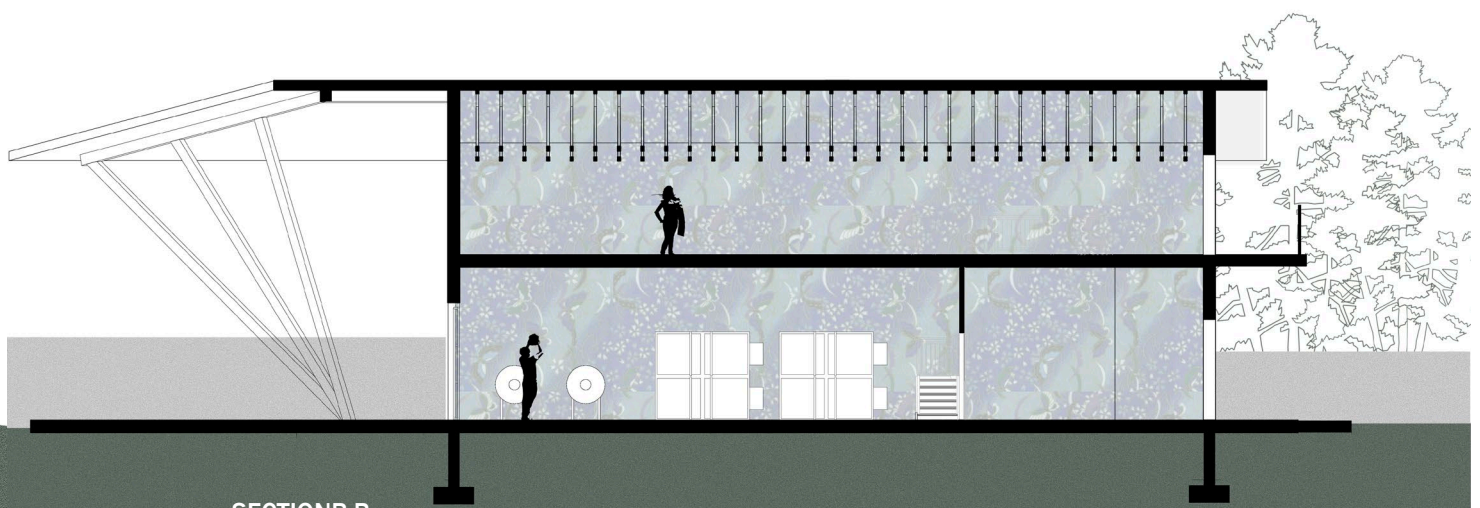
0' 4' 8' 16'





The shops are designed with the same 66' by 30' footprint, with two stories. The ground floor contains any heavy equipment and machinery, a restroom, storage, and open workspace. The second floor contains an open workspace which can be used for group instruction or individual work stations. The second floor of each workshop is connected to the adjacent shop via elevated exterior catwalks. The ground floor workspaces are open to the courtyard via garage doors.

This concept is intended to open communication between the artisans and disciplines. This creates a community in which different crafts can work together, and learn from each other. The openness of the buildings also reflects aspects of Appalachian culture and architecture, where nature is an integral part of all aspects of life. This connection creates an informal and casual feel, which makes the workshops more comfortable and approachable.



SECTION B-B

ALTERNATE LAYOUTS AND EQUIPMENT

While the shops each have the same footprint, they each have different requirements in terms of permanent equipment and arrangement of spaces. Equipment requirements includes kilns, pottery wheels, woodworking tools, stone carving tools, mechanical lifts for heavy stone, art supplies, glass blowing equipment, weaving looms, and sewing machines.



FIBER/TEXTILE SHOP

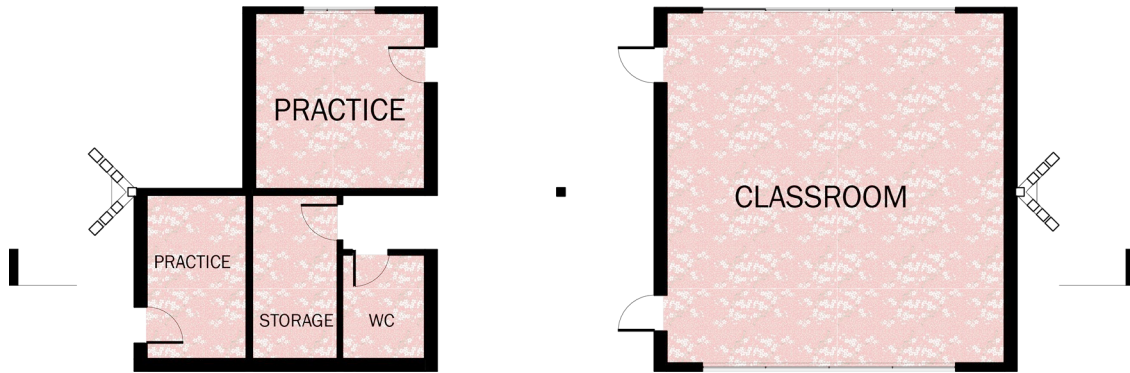
The fiber shop requires special equipment like weaving looms and sewing equipment shown above, as well as work tables, display space and laundry facilities.



HOT SHOP (GLASS)

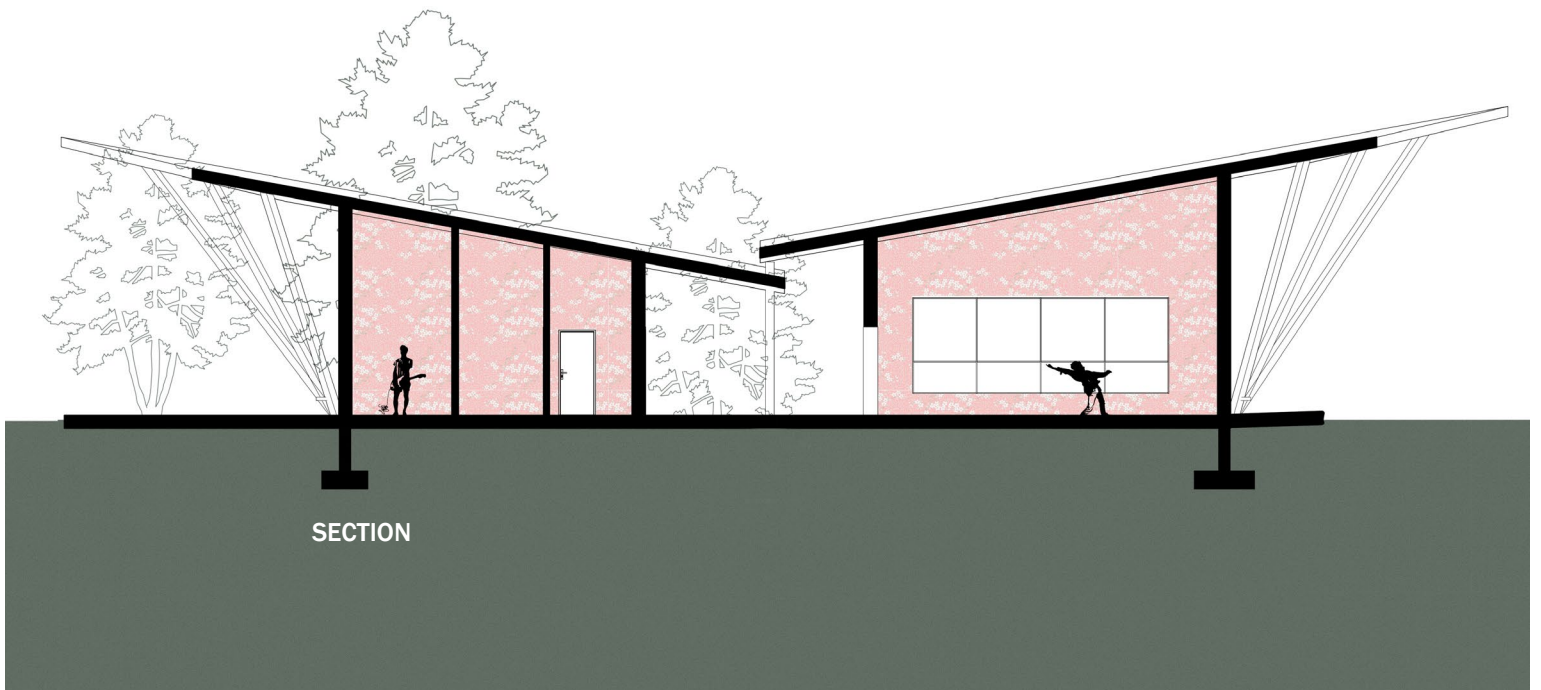
The hot shop requires equipment for glass blowing and art glass production. This includes glass furnaces shown here, work tables, annealing ovens, storage, and display space.

THE HOLLER



FLOOR PLAN

0' 4' 8' 16'



SECTION



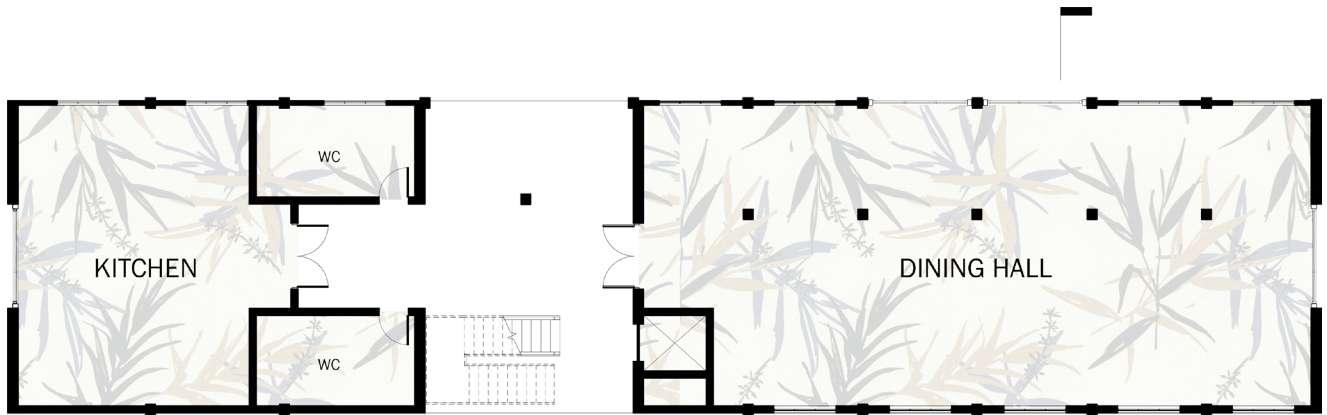
The name of The Holler comes from Appalachian slang. Originally, the word comes from “hollow”, which refers to a small, remote valley.

The design of The Holler is meant to mimic the shape of a valley, with the volume being lower at the center and higher at the sides. The Holler contains a classroom for larger groups and performances, and two smaller practice rooms, with an exterior patio for playing music in the outdoors.

This building was designed following the example of dogtrot houses. The breezeway through the building acts as a gateway to the rest of the campus.

Behind the music building is a stage, which faces a stepped amphitheater, which acts as both a place for viewing performances, and a place of relaxation and communication for the campus.

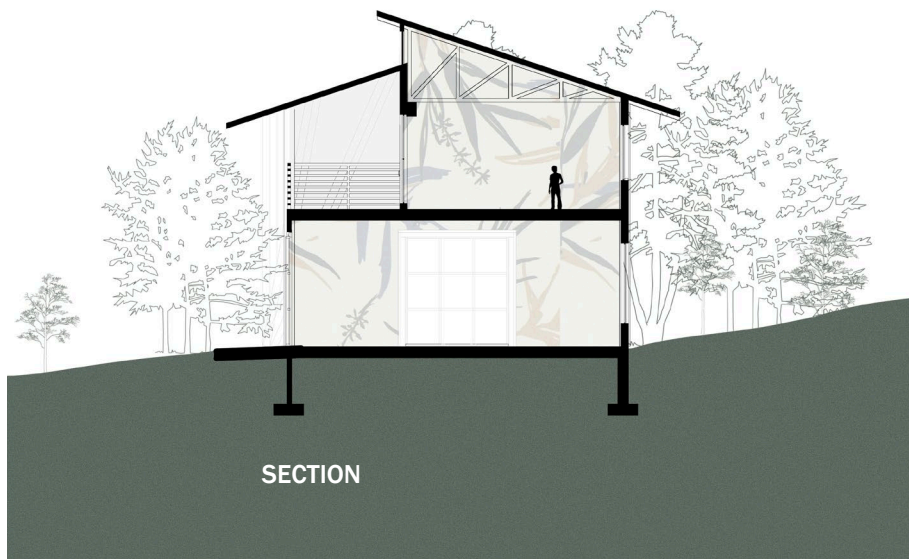
THE LOFT



LV. 1 FLOOR PLAN



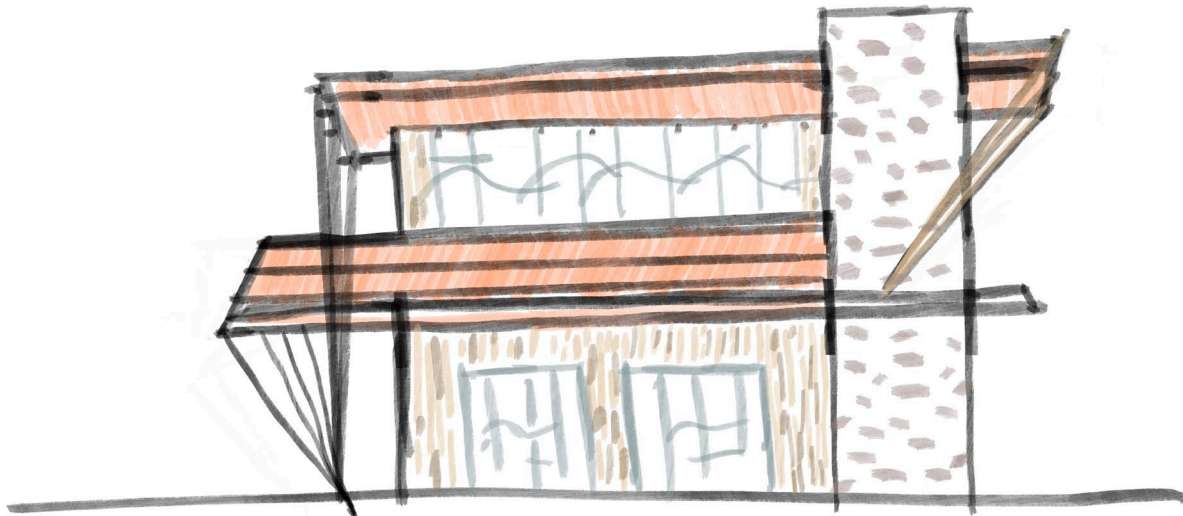
LV. 2 FLOOR PLAN



The Loft is home to the cooking program, where students learn Appalachian recipes. The building contains a kitchen, in which the cooking program is held, and where food is cooked for the dining hall, which serves the entire campus. Upstairs are two general classrooms, which are used for visiting and temporary classes such as foraging and storytelling. There is also a large gallery space on the second level, which can be used for larger group instruction or display space. The building's circulation is entirely outdoors, emphasizing connection to the natural world, unobstructed views of nature, and an informal atmosphere.



APPENDIX



PROCESS SKETCH, MARCH 2025



STUDY MODEL SHOWING COLUMN MOTIF,
APRIL 2025



FINAL SITE MODEL, APRIL 2025

**“Education is not the
filling of a vessel, but
the lighting of a fire.”**

-bell hooks, Teaching to Transgress

Montani Semper Liberi

