ABSTRACT

Title of Thesis: CREATING SPACE FOR NATURE RX AT HISTORICALLY BLACK COLLEGES AND UNIVERSITIES

Marci-Ann Smith, Master of Landscape Architecture, 2023

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With the rising trend of mental health issues among young adults, many colleges are trying to establish an approach to combat those issues for the well-being of their students. One such approach is Nature Rx. Nature Rx is a program that encourages people, sometimes with an actual prescription, to spend time in nature in order to relieve stress and improve overall health.

Nature Rx is a holistic way of addressing mental issues such as stress, anxiety, and depression that are prevalent among college students. The evidence is strong that time spent in and engaging with nature can improve mental and physical health. Colleges like Cornell University and University of Maryland College Park are taking advantage of their existing beautiful landscape as part of their Nature Rx program to help their students. Other schools are implementing this program and providing spaces for their students to find reprieve from the stresses of studies.

However, there is a gap in the presence of Nature Rx programs at Historically Black Colleges and Universities (HBCUs). To date, no HBCU has a nature Rx program.

This project seeks to fill that gap by using the University of Maryland Eastern Shore, an HBCU, as a case study to answer the following thesis question: “How could a Nature Rx design at the University of Maryland Eastern Shore, a Historically Black College and University, benefit the health and well-being of its students?”

CREATING SPACE FOR NATURE RX AT HISTORICALLY BLACK COLLEGES AND UNIVERSITIES

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

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Preface

I grew up in Jamaica and was always surrounded by nature. The sights of nature; the sun rising in the east, the lush green cane fields and the dew drops on the grass in the early mornings gave me a connection to nature. Nature was always a safe place to be in. It comforted me. It was peaceful. The sounds of nature; I loved hearing the leaves rustling in the wind, the birds chirping, and the roar of the river after a heavy downpour of rain. The scents of nature; petrichor after the rain, the fragrances of flowers, and the whiffs of salt water emanating from the Caribbean Sea made me become bonded to nature.

It is my connection to and love for nature that influenced the conception of this thesis project. I first found out about Nature Rx when I started the UMD LARC program. I became inspired by the purpose of the Nature Rx program and wished I had, had a special “Nature Rx” space while I was attending the University of Maryland Eastern Shore (UMES). And so, this project proposes two beautiful, safe nature spaces for the students of UMES.

Acknowledgment

This journey has been fraught with many challenges and I could not have done it without the input of a group of persons who prodded, encouraged, and inspired me.
First and foremost I am thanking God for spiritual guidance.
To my parents Collin Smith and Marcia Parr-Smith for supporting me.
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List of Terms and Definitions

Nature: Any organic material found outdoor world, including tree-lined streets, gardens, parks, streams/rivers, and forested and agricultural lands (Kuo, 2015).

Nature Rx: A program that promotes mental and physical by encouraging engagement with nature and the outdoors (Rakow, 2019).

HBCUs: Historically Black Colleges and Universities (US Dept. of Education, 2023).

People/Students of color: All/any people of African, Latino/Hispanic, Native American, Asian, or Pacific Island descent (Malesky, 2014). The majority of this paper will focus mostly on African Americans/Black Americans.

African American/Black American: Americans consisting of heritage and ethnicity of African descent (Malesky, 2014).

European American/white: A person having origins in any of the original peoples of Europe, the Middle East, or most Spanish-speaking countries (United States Census Bureau, 2011).

Chapter 1: Literature Review

The literature review for this thesis will discuss the topics that supported the thesis project. It will support and influence the approach to the design of the proposed spaces on the campus.

1.1 Nature Rx History

The practice of encouraging people to spend time in 'nature' and participate in outdoor activities is not new. However, organizations and practitioners have adopted the term "Nature Rx," meaning a prescription for nature, as a kind of short-hand for using nature as a holistic healing tool for promoting passive and active nature engagement. Nature Rx is a culmination of practices and organizations that are increasingly incorporating the use of nature as a catalyst for positive mental and physical well-being. For the Japanese, *Shinrin-yoku*, translated as "forest bathing," is exploring a forested environment in order to reduce stress (Hansen, 2017). In the Scandinavian culture, a philosophy called *Friluftsliv* is the spiritual connectedness with the landscape (James, 2015). The Oromo people from Ethiopia have fostered a responsible attitude towards nature, plants, and animals through a practice called *Saffuu* or *ceeraa fokko*, which is respect among each other and other living things. *Saffuu* dictates a response for respect between humans and nature and regulates people's activities. The use of natural resources is governed by *saffuu* (Kelbessa, 2006).

The earliest influence of Nature Rx within the US was in the late 19th and early 20th centuries (Crnic & Kondo, 2019). A series of nature-based therapeutic practices were built on the focus of children's health programs as a response to industrialization (Crnic & Kondo, 2019). An influx of 'Fresh Air' institutions provided children in cities and difficult housing conditions with 'country weeks'-short stays in the country (Crnic & Kondo, 2019, p. 1372).

The earliest known influence of a specific "Nature Rx" program was from the 1980s when the Japanese government designated the Akasawa Forest as the first National Recreational Forest and used the term Shinrin-yoku to encourage the use of forests for stress reduction and health promotion (Li, 2018). From that time, various versions of Nature Rx-related programs were established, starting with Healthy Parks Healthy People in Australia, Walk with a Doc in the United States, and Park Rx America, also in the United States.

Today's Nature Rx-related programs are a contemporary take on old practices. They have the same mission to promote outdoor activity and exposure to nature as a measure to combat health issues that are highly due to sedentary lifestyles and levels of stress (Kondo, 2020). More importantly, there is a

movement with Nature Rx that recognizes mental health, the stigmas attached to mental health, and the need for holistic solutions. Recent research published in the book, *Nature Rx: Improving College-Student Mental Health*, revealed that a number of colleges and universities had turned to the ancient practice of 'time spent in nature' to help student mental health and well-being (Rakow & Eels, 2019, p. 9). Beginning in 2019, college campuses began conversations to implement Nature Rx programs as a non-pharmaceutical way to address mental and physical health issues. The Campus Nature Rx Network was created in 2019 to fulfill such purpose and act as a platform for institutions with similar intentions. The programs at colleges or universities are based on the premise that time spent in nature is therapeutic and contributes to personal contentment. Since then, over 50 campuses have had a Nature Rx program of some kind. The Campus Nature Rx Network has provided a space to galvanize the movement. However, to date there are no Nature Rx program at any Historically Black Colleges and Universities (HBCUs).

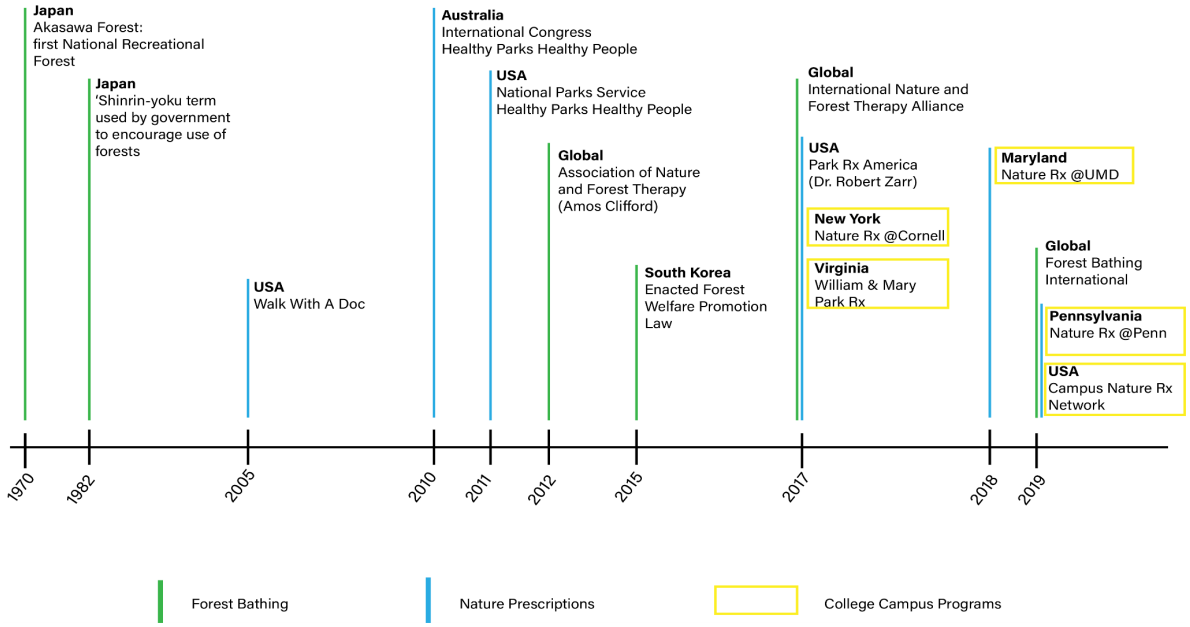

Figure 1.1 Timeline of Nature Rx-related practices and organizations (Wallace, 2020, with updates by Smith, 2023)

1.2 Nature Benefits

1.2a Nature Exposure - Being Near Nature

Access to nature is important for the health of both children and adults (Blanck, 2012). Nearby green spaces have been shown to enhance physical and psychological health (Wells & Evans, 2003). Greenspaces provide daily

opportunities for physical exercise and stress relief (Daiz, 2022). Elements of nature such as trees and water reduce exposure to harmful noise, reduce high temperatures and humidity, and filter the air (James, 2015). With surrounding nature (tree-lined streets, gardens, parks, and forested and agricultural lands), there is an increase in beneficial chemical and biological agents for one's health as well as environmental biodiversity (Kuo, 2015).

The distance of such amenities plays a crucial role. Some studies indicate that a 5 to 10-minute walking distance to a greenspace is the standard indicator of good health (Browning, 2017; Blanck, 2012). Shorter walk distances are associated with better health and the standard distance accepted by planners is ten minutes (Grow & Saelens, 2008; Layton, 2017). Local parks are making efforts to improve access and increase park use by proximity, providing safer and more affordable public transportation options, reducing environmental safety concerns, and actively maintaining facilities (Blanck, 2012).

1.2b Nature Exposure - Being "In Nature"

Spending time in nature has been linked to several health benefits, including a reduction in attentional fatigue; running or walking in a park fostered more psychological restoration than in an urban environment (Blanck, 2012). Exposure to nature not only makes people feel better emotionally, it also contributes to physical well-being, improving blood pressure, heart rate, muscle tension, and the production of stress hormones (Delagran, 2016).

A systematic literature review found that as little as 10 minutes of sitting or walking in nature, as opposed to the same activities in urban settings, positively impacted a person's mental health (Meredith, 2020). Other studies recommend that a longer duration, between 20 and 30 minutes, in nature may yield the most health benefits (Hunter, 2019), and getting 120 minutes a week in nature will significantly help one's overall well-being (White et al., 2019).

Studies have found that direct engagement with nature, including the act of gardening, is a catalyst for enhancing social engagement, positive behaviors, and a healthier lifestyle (Daiz, 2022). Other nature-based activities, including kayaking, hiking, camping, and stargazing, can help with mental health and also serve an educational role (Diaz, 2022).

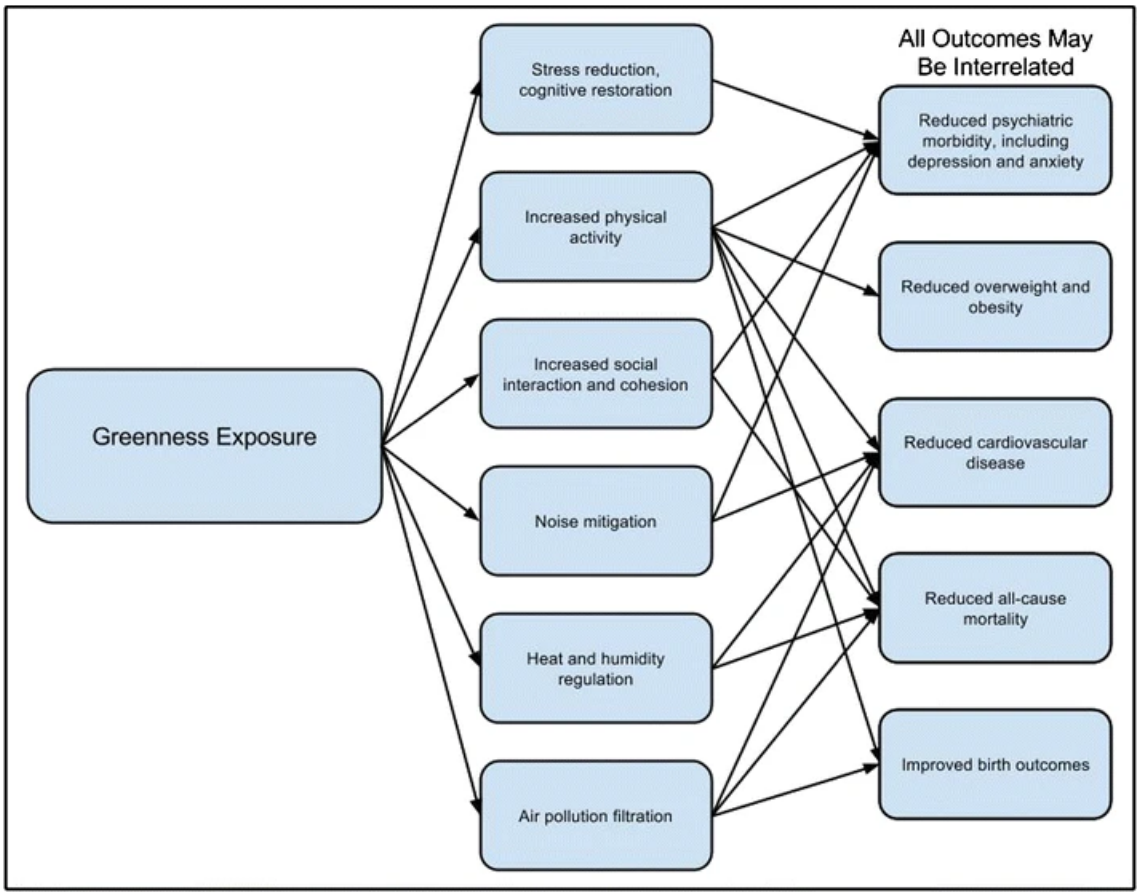

Figure 1.2 Image of pathways through which greenness may affect health (James, 2015).

Two theories that represent the beneficial effect of nature connection on human beings are Attention Restoration Theory (ART) and Stress Reduction Theory (SRT). Both theories are important to consider when designing a space for relaxation and rejuvenation. ART, developed by Rachel and Stephen Kaplan in the 1980s, explores the possibility that experiences in nature allow the brain's directed attention to rest and recover from a task or problem-solving activity (Kaplan, 1995). Roger Ulrich's SRT states that time spent in nature, or viewing natural scenes, can result in positive changes in physiological levels through a reduction in stress (Meredith, 2020).

Attention Restoration Theory homes in on the ability that natural environments have the potential to restore this capacity through involuntary attention, effortlessly directed toward an object of interest (Kaplan, 1995). According to a paper by Stephen Kaplan, the environment that generates the most restoration is one that evokes "soft fascination," holding one's attention but in an "undramatic fashion" (Kaplan, 1995, p. 174). Examples of soft fascination are landscapes that consist of sunsets, sunrises, moving clouds, rustling leaves, and running water.

For Stress Reduction Theory, Ulrich elaborates on the human response to nature as a "preference or like-dislike effect in relation to pleasurable feelings and neurophysiological activity evoked by a visual encounter with a natural setting" (Ulrich, 1983, p. 87). Evolution has adapted humans to respond emotionally to their environments as a way of identifying the desirable and undesirable characteristics of an environment. Emotions also serve to bodily prepare the individual for the appropriate adaptive response such as fight or flight (Ulrich, 1983). When people first experience a new environment such as a forest, their responses are shaped by their current emotional state which then influences what elements of the forest they focus on. Depending on what they observe, a "like, dislike, or fear" response occurs which dictates "approach-avoidance" behaviors (Ulrich, 1983, p. 89). For example, someone in a fearful state of mind might notice dense, impenetrable thickets blocking a path, which elicits dislike, motivating an avoidance response (Ulrich, 1983).

1.3 College Students' Mental Health

Every student has dealt with some level of stress during their college years. Each academic year poses a new set of challenges for a student, including financial strain, academic workload, learning disorder, family or personal life struggles, and being employed while studying. These stressors all factor into a student's mental (and physical) health (UMD Counseling Center, 2023). The peak onset of most mental health disorders occurs during young adulthood (Binkley & Fenn, 2019). In some cases, 75% of those who will have a mental health disorder have had their first onset by the age of 24 or 25 (Pedrelli, 2015; Lipson, 2022).

The mental health of college students across the United States has been on a consistent decline. A study by Sarah Lipson of Boston University analyzed eight years of survey data to find out the overall mental health of students in the United States (Lipson, 2022). The research found an overall 135 percent increase in depression and 110 percent increase in anxiety from 2013 to 2021 (Lipson, 2022). The number of students who met the criteria for one or more mental health problems in 2021 had doubled from 2013 (Colarossi, 2022).

The most common mental health issues that affect the average college student are anxiety, low self-esteem, and depression (Binkley & Fenn, 2019). According to the National Institute of Mental Health (NIMH), the symptoms of a generalized anxiety disorder include restlessness, fatigue, difficulty concentrating, insomnia, and feelings of worry. Other anxiety-related disorders such as panic disorder, social anxiety disorder, and various phobia-related disorders are related to depression. Depression has similar symptoms to anxiety and may take the form of persistent depressive disorder, postpartum depression, psychotic depression, seasonal affective disorder, and bipolar disorder (NIMH, 2023).

1.4 Mental Health in Students of Color

There is a gap in mental health studies among college students of color (Goodwill, 2020; Lipson, 2022). Studies have shown that counseling services are underutilized by people of color, especially by students (Lipson, 2018). The current knowledge regarding the extent to which university or college counseling centers meet the needs of racial/ethnic minority students, both in terms of service utilization and treatment effectiveness, is built on studies that tend to have small, local samples which make the findings difficult to generalize (Hayes, 2011). A recent study by Sarah Lipson found that American Indian/Alaskan Native college students had the largest increases in depression, anxiety, suicidal ideation, and other mental health problems (Lipson, 2022). In 2016, about a third of American Indian/Alaskan Native students screened positive for depression, similar to other racial and ethnic groups. By the years 2019 and 2020, half of the respondents screened positive for depression (Lipson, 2022). For white students, the prevalence of non-suicidal self-injury and symptoms of eating disorders increased significantly compared to other groups. However, in all other categories pertaining to mental health problems, increases were seen the most among non-white students (Lipson, 2022).

From 2013 to 2021, the highest annual rate of Asian, Black, and Latinx students receiving and seeking help for mental health issues was at or below the lowest rate for white students (Lipson, 2022). The COVID-19 pandemic was another factor that contributed to students' mental health struggles and further hindered students from getting treatment (Colarossi, 2022). Treatment declined the most in 2020 among Asian, Pacific Islander and Desi (South Asian) American (APIDA), and Black students. Although researchers tracked significant increases in anxiety and depression during the height of the COVID-19 pandemic, the overall trend in mental health issues continues to rise (Colarossi, 2022).

The stigma of mental health and seeking treatment presents another challenge for students of color (Goodwill, 2020). Racial/ethnic minority students prefer to seek treatment from other racial/ethnic minority providers, who are often in short supply (Hayes, 2011). Some minority students may be hesitant to seek treatment from European American (white) providers because of factors such as cultural mistrust, peer norms related to the "double stigma" associated with racism and mental illness, and doubts about the availability of culturally sensitive services (Hayes, 2011). Other factors are self-reliance and family norms pertaining to privacy.

1.5 African American Relationship With Nature

Spending time in and being connected to nature is deeply rooted in Black culture and history, long before slavery. Yet, the relationship between African Americans and nature is complex. It has layers of love, violence, stereotypes, discrimination, hope, and joy. For generations, African Americans have been cultivators of plants and soil, from having to tend to crops on plantations as enslaved people to gardening and farming as a means of livelihood, as well as seeking nature as a place of solace and joy (Tolliver-Jackson, 2020; Peterman, 2019). However, the ruling layer of such a relationship often has to do with the traumatic reality and aftereffects of what African American ancestors had to endure during slavery. This reality has been passed down through generations and has overshadowed the layers of hope and joy Black Americans have for nature.

After slavery, which in and of itself was a forced relationship with nature via forced labor, US laws discriminated against and prevented African Americans and people of color from land ownership (Finney, 2014). President Johnson denied proposals under the Homestead Act of 1862 that would allow formerly enslaved people to acquire lands (Finney, 2014).

National Parks like Shenandoah and the Great Smoky Mountains National Park were also segregated (Engle, 2018; NPS, 2023). Black Americans (and other people of color as well) were denied the freedom and right to their own happiness to live, nurture, and be nurtured by a landscape of their own. When people are denied this basic right, their relationship with the natural world becomes distorted (Smith, 2004). Fear, mistrust, and stereotypes about nature begin to surface.

The "Great Migration" of African Americans to the North, for employment and escape from the Jim Crow South also contributed to the complex relationship with nature. More discrimination and exclusion to access of green or recreational spaces were accompanied with the Great Migration. It was also a matter of finding balance between the new urban setting and the past rural setting of the South, while navigating segregated spaces within urban areas (McCammack, 2017). In cities like Chicago, there were limited spaces for Black Americans to participate in outdoor recreational activities (Claborn, 2017). Few spaces such as Washington Park or Cook County Forest Preserves provided respite but there were still struggles in discrimination and gaining access (Claborn, 2017). However, the limited access to nature still played an important role. Nature in the North was a symbol for hope and leisure and not forced labor for African Americans even though, in most cases, they had to create spaces of their own like Idlewild Resort in Michigan (Williams, 2018).

The environmental narrative in the United States has been mostly dominated by European Americans (Finney, 2014). These non-Black narratives helped to shape the way society views who "belongs" in nature, and creates harmful stereotypes—stereotypes such as "Black people can't swim" and "Black

don't go camping." These narratives also affect how African Americans think about the environment and how they view themselves in the environment (Finney, 2014). African Americans have always sought healing, kinship, resources, escape, refuge, and salvation from the land (Glave, 2010). They have recognized and acknowledged communities and events within the landscape as well as added human characteristics to the landscape (Glave, 2012). There are and have been African American environmentalists, but their voices are rarely heard. The lack of representation in the media and organizations has resulted in a misconception amongst white and Black people alike that African Americans do not have a connection to nature (Goodrid, 2018). The tumultuous relationship that started with slavery, in addition to a narrative that was not inclusive, contributed to fear and negative stereotypes about the relationship African Americans have with nature.

From a societal and cultural standpoint, outdoor adventure and risk-taking activities have mostly been linked to the white community in the United States (Finney, 2014). Spaces that are believed to be inclusive often operate in social conditions that support the exclusion of people of color (Finney, 2014; Goodrid, 2018). The marginalization of people of color throughout history has influenced different ethnic and cultural values toward outdoor recreation and new conservations (Goodrid, 2018; Tolliver-Jackson, 2020). Exclusivity, stereotypes, and lack of access to nature all factor in an explanation for the absence of historically black colleges and universities (HBCUs) participation in Nature Rx programs.

The present-day nature gap for Black people, and other people of color, is greater than it should be; these groups are most likely to be deprived of the benefits that nature provides (The Nature Gap, 2020). Furthermore, these communities are three times more likely than white communities to live in nature deprived places. Seventy-four percent of communities of color in the United States live in nature-deprived areas, compared with just 23 percent of white communities (The Nature Gap, 2020). In addition, nature destruction has had the largest impact on low-income communities of color. More than 76 percent of people who live in low-income communities of color live in nature-deprived places (The Nature Gap, 2020).

According to a 2020 report by Conservation Science Partners (CSP) several gaps are still prevalent. Human settlement patterns like redlining, forced migration and economic segregation are still in effect and have historically disenfranchised several communities of color (The Nature Gap, 2020). People of color have been and continue to be the subject of violence, intimidation, and threats while in nature. For example, the case of Christian Cooper.

In the Spring of 2020, Christian Cooper, a Black American male, was involved in an incident in which the police were called on him while he was bird-watching in Central Park, New York City. This event sparked a conversation that made the world realize that people of color embrace and enjoy all the beauty nature has to offer. The conversation began to debunk myths about the relationship people of color have with nature. The event, along with many others, was a catalyst for people of color to be seen participating in outdoor activities and influence conservation organizations to make a larger effort for inclusivity. It has been reported that Mr. Cooper will be hosting a new television show called Extraordinary Birder which will air on National Geographic (Franklin, 2022).

Even before Christian Cooper, a new, enlightening narrative about nature and Black people was emerging. Influential writers such as Maya Angelou, Alice Walker, Zora Neal Hurston, Toni Morrison, and Lauret Savoy have made their stamp in literature. Other trailblazers like Rue Mapp, founder of Outdoor Afro; Audrey Peterman, advocate for inclusivity at National Parks; Camille T. Dungy, poet; and Carolynn Finney, author of *Black Faces, White Spaces* and cultural geographer, have contributed to a positive narrative of the relationship that African Americans have with nature. Nature was always a symbol of hope. Change makers like George Washington Carver, Ned Cobb, and Thomas Monroe Campbell were some of the first pioneers of Black environmentalism and preservation-conservation (Glave, 2012). Harriet Tubman who led the underground railroad, Booker T. Washington and W.E.B. DuBois have paved the way for trailblazers today. Social media platforms such as Instagram, Facebook, and TikTok have also increased awareness and visibility of African Americans' engagement in nature, from adventure sports to swimming to houseplants and home gardening.

1.6 The Importance of Historically Black Colleges and Universities

The acronym HBCU stands for Historically Black College and University. HBCUs are broadly defined as accredited institutions ''established prior to 1964, whose principal mission was, and is, the education of Black Americans'' who were prevented to pursue formal education due to racism and segregation (Higher Education Act 1965, sec. 1061; Bettez, 2012). HBCUs were established after the American Civil War. Any attempt by freed slaves to seek education was met with retaliation. HBCUs provided educational access and inclusion for African Americans when they were prohibited from enrolling in institutions that were predominantly white. The Freedmen's Bureau, as well as many churches, began opening colleges and universities to educate the Black population. For example, Atlanta's Spelman Seminary, which later became Spelman College, received early support from the Woman's American Baptist Home Mission Society (Albritton, 2012). Some of the first HBCUs to appear were Cheney University, founded in 1837, and Lincoln University in Pennsylvania, founded in 1854.

Wilberforce University followed suit in 1856 in Ohio (Albritton, 2012). Currently there are nineteen (19) HBCUs that are land-grant universities that were established under the Second Morrill Act of 1890 (USDA, 2023). Not every HBCU within the US is a land grant institution and vice versa (APLU, 2023).

Along with providing an education, early HBCUs functioned as sites of resistance, empowerment, and social uplift (Bettez, 2012). As more African Americans received a formal college education, they acquired new skills to use in their fight for equality and justice. Black students were not simply enrolled in school to get an education, many cared deeply about the circumstances of Black people, and they did much to ensure that their schools addressed issues of justice and equity (Bettez, 2012). The success of Black college students' activism can be seen in the efforts of members of the Student Nonviolent Coordinating Committee (SNCC), founded in April 1960 (Bettez, 2012). Education was not simply a tool to obtain a better job or to improve one's social positioning. It was used as a tool for liberation from a history of discrimination and oppression.

HBCUs have a legacy of providing access to higher education not only to Black Americans, but also to first-generation, low-income, and historically underrepresented populations from all racial and ethnic backgrounds (Bettez, 2012). Today, HBCUs continue to provide educational access and inclusion for African Americans and other historically marginalized populations, regardless of racial or ethnic origin.

HBCUs have been important cultural centers that contribute to the life and vibrancy of the Black community (Albritton, 2012). Major aspects such as Homecoming, the Drumline, and Greek life, soul food day, and step shows all reflect that culture. In some Black families, attending an HBCU is a legacy and families encourage their children to attend an HBCU because they believe that HBCUs offer foundational educational experiences to their students, which were necessary to build productive lives (Albritton, 2012). HBCUs provide a safe space for students of color to feel accepted among peers of similar race and backgrounds, getting an education that addresses the challenging topics of injustices and inequity while providing a direct link to ancestry and history (Williams, 2023).

1.7 Nature Rx at Historically Black Colleges and Universities

To date, none of the ninety-nine HBCUs in the United States has a Nature Rx program (NCES, 2023). HBCUs Outside, while not a Nature Rx program, is a new organization that encourages HBCU students and alumni to experience nature and participate in outdoor activities (HBCUs Outside, 2023). Some HBCUs are embracing urban gardening as a part of their community outreach programs. Though these programs do not focus solely on the mental and physical

benefits of nature and gardens, students of color are given opportunities to experience nature. The following are four schools bringing food and delight to the communities around them (Carter, 2014):

Tennessee State University - Tennessee State accepts gardeners from its campus borders and throughout Nashville to work in the campus community garden. The garden leases plots to gardeners of varying levels of expertise, with the goals of spurring healthy eating and entrepreneurship for budding produce sellers (Carter, 2014). Tennessee State University also has a new program in partnership with HBCUs Outside and the National Park Trust that encourages students to build a relationship with the outdoors (Marshall, 2023).

Fort Valley State University (FVSU) - Concerned with the growing obesity epidemic in rural areas across the south, faculty and students at FVSU launched their community garden project in the summer of 2012. With support from regional health organizations, FVSU invited community members to plant and harvest fresh food while promoting the benefits of healthy eating, exercise, and neighborhood beautification (Carter, 2014).

University of the District of Columbia (UDC) - In 2013, UDC faculty and students created a unique community garden. Where most gardens provide fruits and vegetables, UDC's garden introduced residents to a variety of exotic plants in three separate gardens, with each designed to stimulate the senses of touch, smell, and sight (Carter, 2014).

West Virginia State University (WVSU) - WVSU partnered with the city of Huntington, WV to develop several community gardens for children to encourage entrepreneurship and business development at an early age. The gardens spurred the launch of the university's CARES Day, a day of volunteerism for all West Virginia State faculty, staff, and students (Carter, 2014).

Chapter 2: Methods

The presence of nature for people is critical, especially for young people in their formative years who are on a journey of self-discovery and are, at the same time, under a great deal of stress. The case study for this design thesis is the University of Maryland, Eastern Shore (UMES), an HBCU. This chapter will cover the methods that were used to inform the final Nature Rx design for the UMES campus. The three methods include: First, site inventory and analysis based on the book, *Site Analysis, 2008 version* by James LaGro. This includes the campus physical, biological, and cultural inventory and student body demographics. Second, conversations with campus students, faculty and staff. And third, interviews with Black women nature leaders.

2.1 Site Inventory- Campus Context

2.1a Campus Location

The UMES campus consists of 745 acres and is adjacent to the town of Princess Anne, Maryland. UMES is approximately twenty (20) miles south of Salisbury and twenty (20) miles north of Pocomoke City. It is accessible to three major metropolitan areas (Washington DC, Baltimore, and Annapolis) via State Highway Thirteen (13) (UMES &BBB, 2016). The campus is bordered by two branches of the Manokin River, which empty into the Chesapeake Bay. To the north, is the Loretto Branch, and to the south, the Manokin Branch. The east it is bordered by Forestation Reserves and to the west of the campus is an active freight railway line (UMES &BBB, 2016).

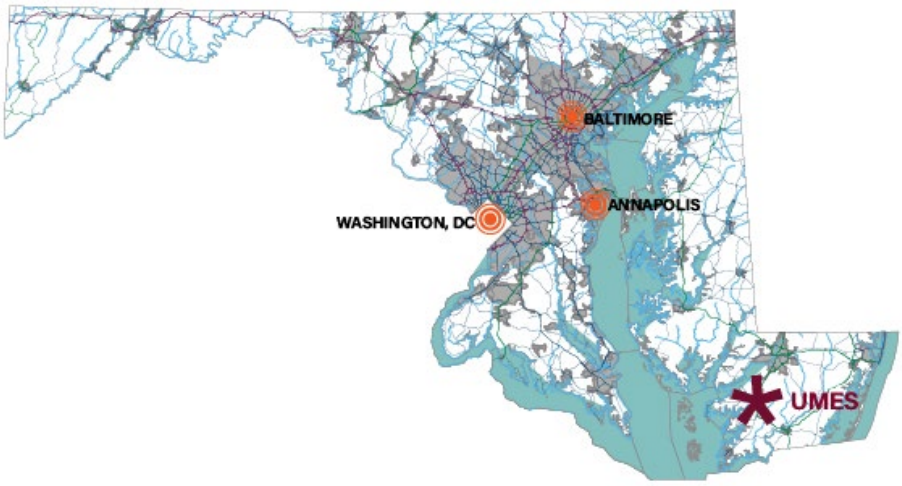

Figure 2.1 Location Map of Maryland.

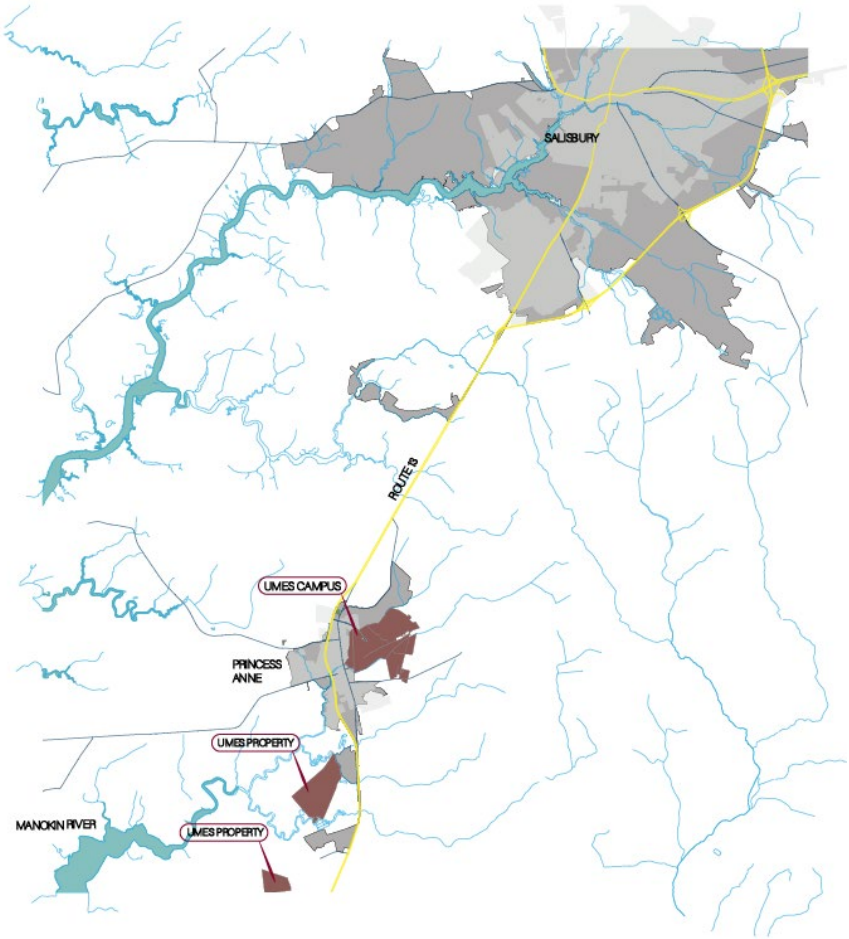

Figure 2.2 Location Map of Salisbury and Princess Anne.

2.1 b Topography

The regional topography of the Eastern Shore area of Maryland is relatively flat and is populated with rivers as well as wetlands and swamps due to its proximity to the Chesapeake Bay. The highest elevation on the Lower Eastern Shore is 65 feet above sea level. The land use is 25% agriculture, 40% forest, 32% water/wetland, and 3% developed (UMES & BBB, 2016). The topography of the UMES campus reflects the regional environment. It is along the banks of the Loretta and Manokin branches that the most change in elevation occurs throughout the campus. Otherwise, the topography varies by only a few feet over the entire 700 acres (UMES & BBB, 2016).

2.2 Campus History

The University of Maryland Eastern Shore (UMES) opened on September 13, 1886. It was initially called the Delaware Conference Academy when under the guidance of the Methodist Episcopal Church. The student body started with a total of nine students who were taught by Benjamin and Portia Bird. The school was a branch of Morgan College that offered studies in agriculture and related fields. UMES started receiving funding from the state of Maryland due to the Second Morrill Act of 1890 and was renamed Princess Anne Academy. The federal source of money created a relationship with the University of Maryland College Park, then the Maryland Agricultural College (UMES History, 2023).

College level curriculum was added in 1927 and it served as a junior college for the next ten years. The state of Maryland acquired the Princess Anne campus outright from Morgan in 1935 for $100,000 and a year later the newly renamed Princess Anne College was placed under the jurisdiction of the University of Maryland in College Park. In 1948, the name was changed to Maryland State College; it was again renamed the University of Maryland Eastern Shore in 1970 (UMES History, 2023).

Today, UMES is a Doctoral University (Moderate Research Activity), according to the Carnegie Classification of Institutions of Higher Education. Instruction, research, and service are provided through major academic clusters. They include liberal arts and sciences, agriculture, business, engineering and technology, education, marine and environmental sciences, allied health, hospitality, and special academic services. Degrees are offered in 38 Bachelors, 14 Masters, and eight doctoral programs (UMES History, 2023).

As for the previous settlers, on the land where the campus now sits was the Manokin Tribe (Maryland Manual, 2023). The Manokin Tribe was a small group of Indigenous Americans, who were a sub-group of the Nanticoke ‘Water

Tribe' (Maryland Manual, 2023; Nanticoke Assoc., 2023). The Manokin River that runs adjacent to the campus was named after the Manokin Tribe.

2.3 Site Selection

When looking for a site or sites on the UMES campus to design for a proposed Nature Rx space, several aspects were considered. The most important aspect was who the design would serve, namely the UMES student body along with faculty, staff, and potential visitors. The ideal space(s) would be: visible to and from surrounding spaces, easily accessible and already have foot traffic, near the Counseling Center, near a body of water, have existing abundant vegetation or the opportunity to have vegetation, and be open for additional programming.

Figure 2.3 Image of the majority of campus activity.

2.3a The Sites

Two sites were selected for this thesis design. The first site is between the Student Services building and a retention pond on the northern side of the campus. The second site is on the southern side of the campus, an open space positioned in front of the Ella Fitzgerald Performing Arts Center and adjacent to the Student Development Center that houses the counseling center.

Figure 2.4 Site 1 Aerial photo. This site is fully accessible from the Student Services building to the south and to the North a Retention pond.

Figure 2.5 Site 2 Aerial photo. The Ella Fitzgerald Performing Arts Center is west of the site and the Student Development Center that houses the counseling center is to the north.

2.4 Site Inventory and Analysis

2.4a UMES Demographics

The majority of the UMES student population is from Maryland, Pennsylvania, New York, New Jersey and Virginia, with most from Maryland. Within Maryland, Prince George's County has the most admissions. The design will be for a student body that is majority Black (55.4%). This high number of Black students informs the design in that the selected sites need to be easily accessible, visible to the surrounding area, open, and easily navigable. The design should also incorporate elements that invite students while also creating a sense of belonging and representation. Elements should also trigger positive psychological effects and encourage relaxation, for example, the sound of water and the color of plants.

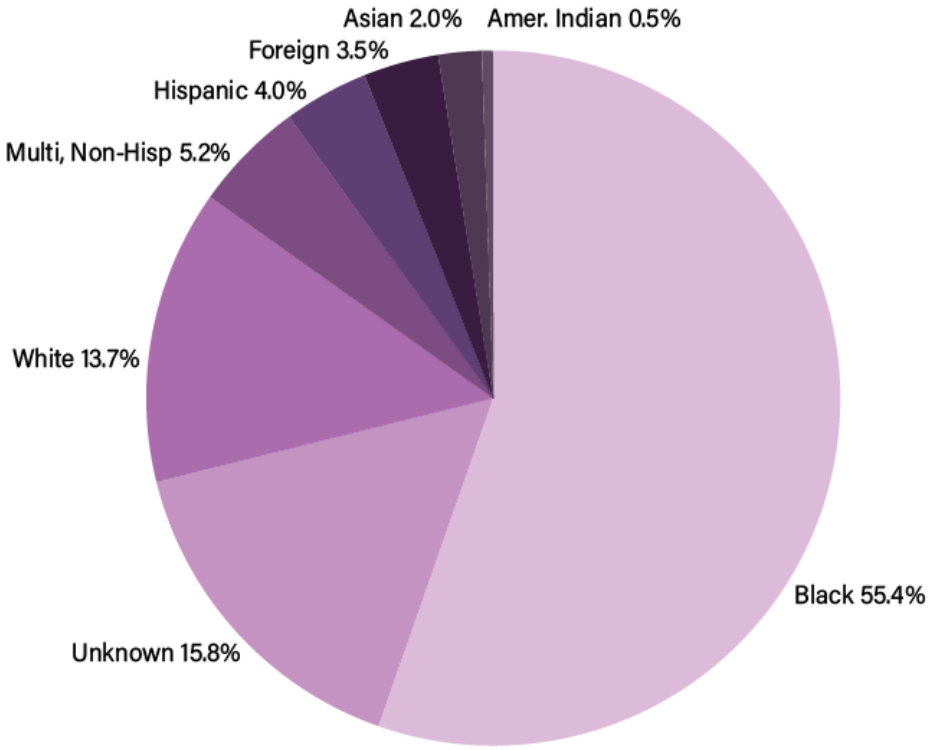

Figure 2.6 Image of enrolled ethnicities of fall 2022 (USM Institutional Research Information System, 2023).

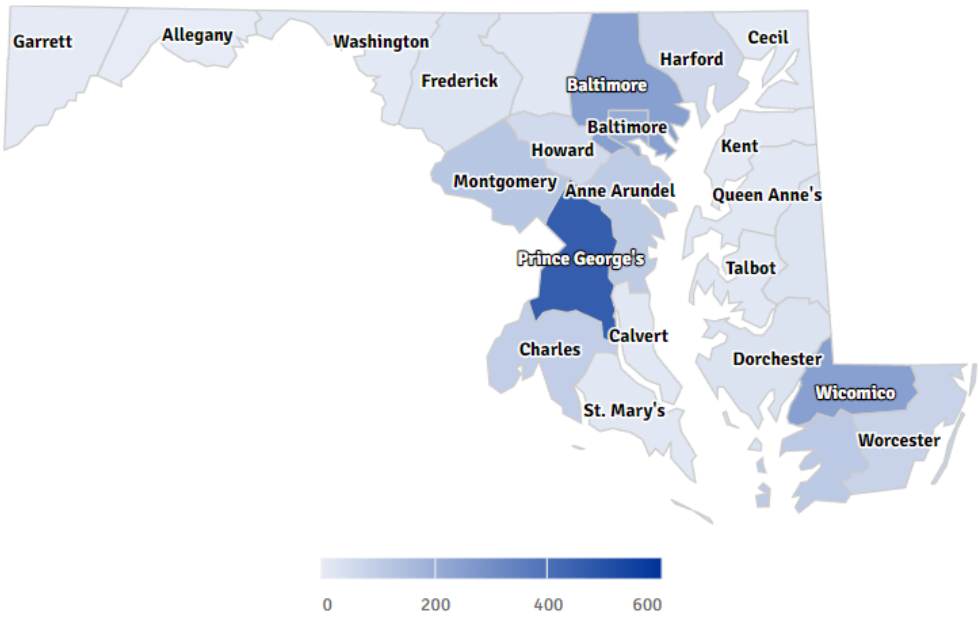

Figure 2.7 Map of enrolled in-state students (USM Institutional Research Information System, 2023).

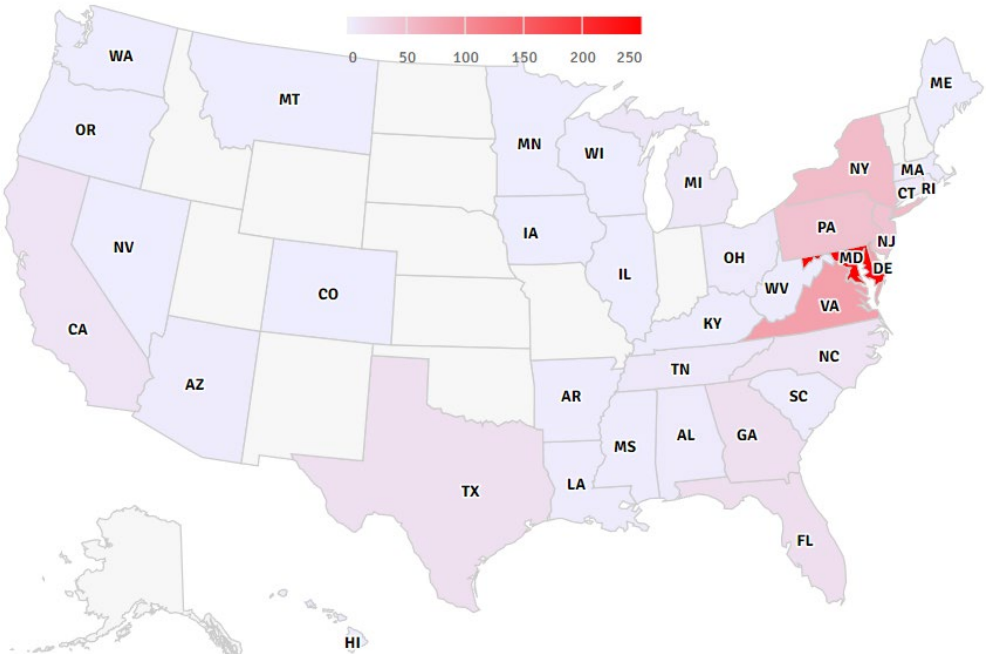

Figure 2.8 Map of enrolled students throughout the US (USM Institutional Research Information System, 2023).

2.4b Campus Soils

The majority of campus, including the two sites, is classed as soil group D. Soil group D is generally considered an undesirable soil for organisms and vegetation. For the proposed sites, some soil engineering may be necessary to support plant growth.

Figure 2.9 Map of Hydrologic soil groups.

Hydric soils are soils that contain a high level of water. The soil in the area of the campus that is developed and contains both sites is not hydric, which means that a design such as a garden can be implemented in both spaces. Plants of many varieties can be introduced and will not be threatened by water. There is the potential to attract beneficial organisms such as birds, bees and worms. It also signifies that there might be an existing healthy ecosystem/biodiversity/subgrade system. People will not be inconvenienced and the sites are not prone to flooding. The surrounding areas contain hydric soils due to the neighboring Loretta and Manokin Branches of the Manokin River, as well as swales and retention ponds for the campus stormwater management system.

Figure 2.10 Map of hydric soils.

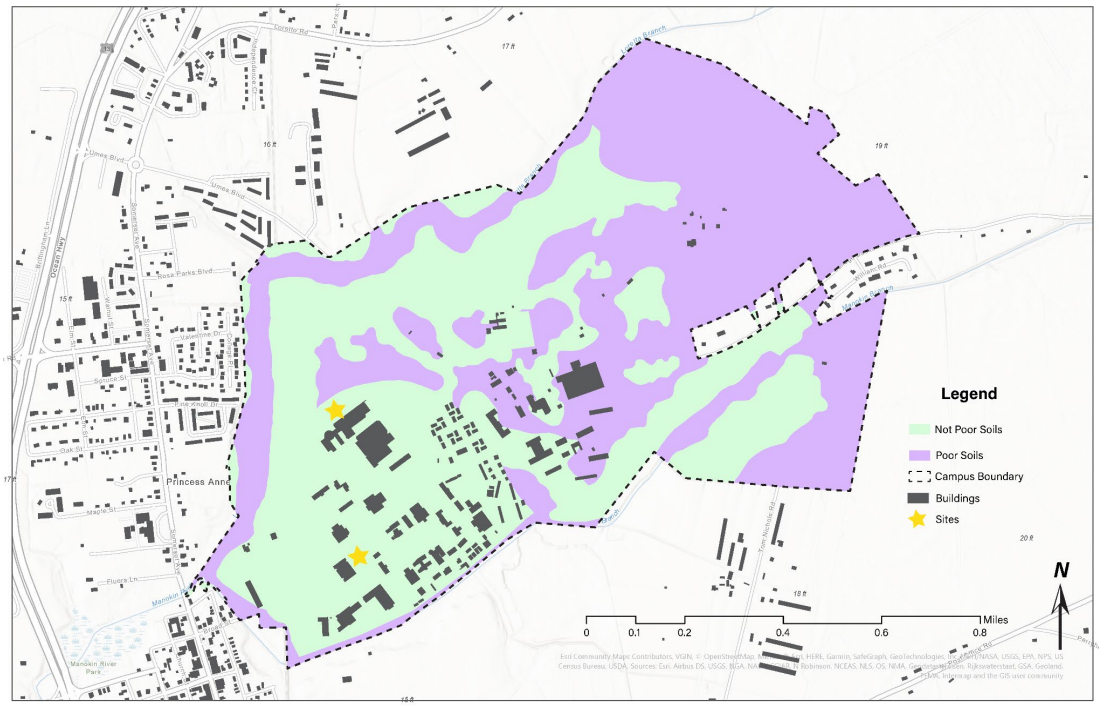

Figure 2.11 Map of Soil Quality.

The heart of the campus consists of a specific soil Urban land-Udorthents Complex. The Udorthents-Urban land Complex soil type “consists of moderately well-drained to excessively well-drained soils that have been disturbed by cuffing or filling, and areas that are covered by buildings and pavement” (USDA Soil Survey, 2023). This means that the land surface is covered with buildings, other structures, and pavement. Therefore, the proposed sites do not contain poor soils and will be suitable for plant life.

Figure 2.12 Map of Specific Soils.

2.4c Hydrology

The campus is in the Zone X flood zone. Zone X means there is a 0.2% annual chance of flood or a chance of flood in 500 years (FEMA. 2023), indicating that this is not a flood zone. However, where the Loretta Branch and Manokin Branch of the Manokin River are located, is Zone AE. There is a 1% or a chance of flood in 100 years (FEMA. 2023). The two sites for the design of this project are located in the Zone X and it is not prone to flooding. Plants that are drought tolerant and low maintenance will survive in the selected sites.

Figure 2.13 Map of Floodplain..

Figure 2.14 Map of neighboring Manokin River Branches. Loretta branch (orange) to the north and Manokin branch (blue) to the south.

2.4d Climate

The hottest months are from June to September with temperatures in the 80s. The other months range from low 60s to 50s and sometimes high 40s. The hottest months correspond with the months that have longest daylight. The campus experiences a range of rainfall from 2.5 inches to 4.8 inches, with the month of August containing the highest. Snowfall typically occurs in the months of December to March with January having the highest amount of snowfall, which usually is two (2) to three (3) inches. The prevailing winds are from the northwest direction and typically last from October to June. Summer winds are from the southwest direction and are from July to September. This information influences the design in that there needs to be ample shading for people and including vegetation that can tolerate rain and snowfall as well as protecting the soil from scorching or soil erosion.

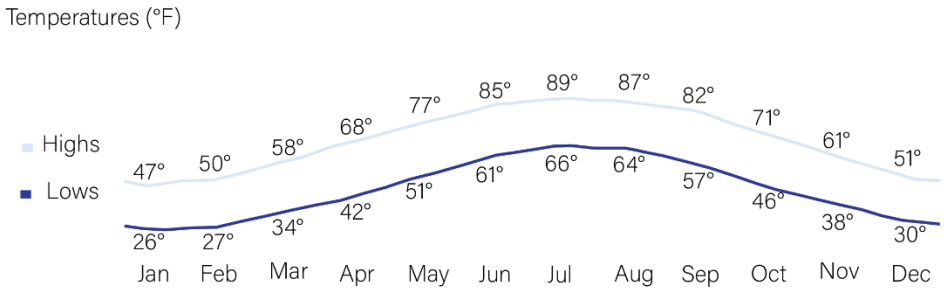

Figure 2.15 Graph of Princess Anne yearly Temperature in Degrees Fahrenheit (National Oceanic and Atmospheric Administration, 2023).

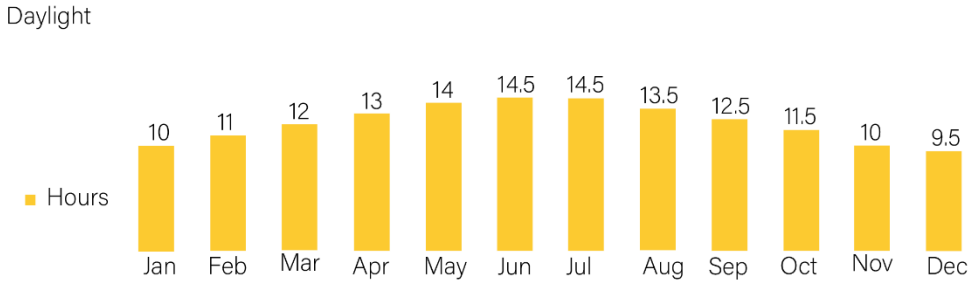

Figure 2.16 Graph of Princess Anne yearly length of Daylight in hours (National Oceanic and Atmospheric Administration, 2023).

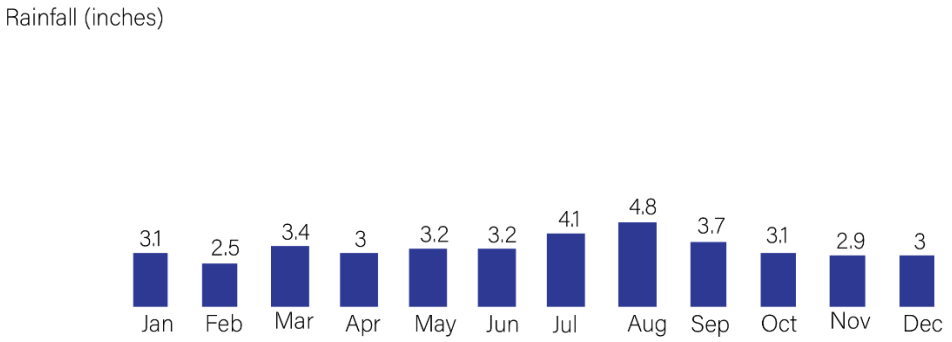

Figure 2.17 Graph of Princess Anne yearly Rainfall in inches (National Oceanic and Atmospheric Administration, 2023.

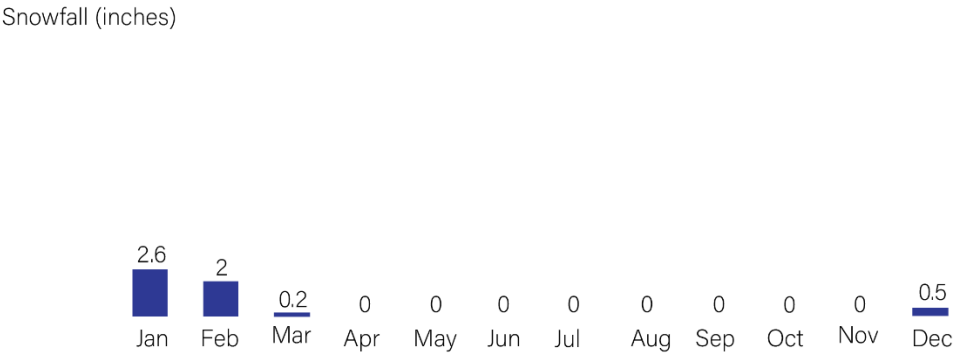

Figure 2.18 Graph of Princess Anne yearly Snowfall in inches (National Oceanic and Atmospheric Administration, 2023).

2.4e Hardiness Zone

The hardiness map helps to determine what plants are likely to survive in a location. The map is based on the average annual minimum winter temperature divided into 10-degree F zones and further divided into 5-degree F half-zones (USDA, 2023). As in the case of the UMES campus, it is currently located in zone 7b, and as the effects of warming continue to rise to due climate change, the zones are likely to change also. This information plays a significant role in the selection of the plant palette for this project.

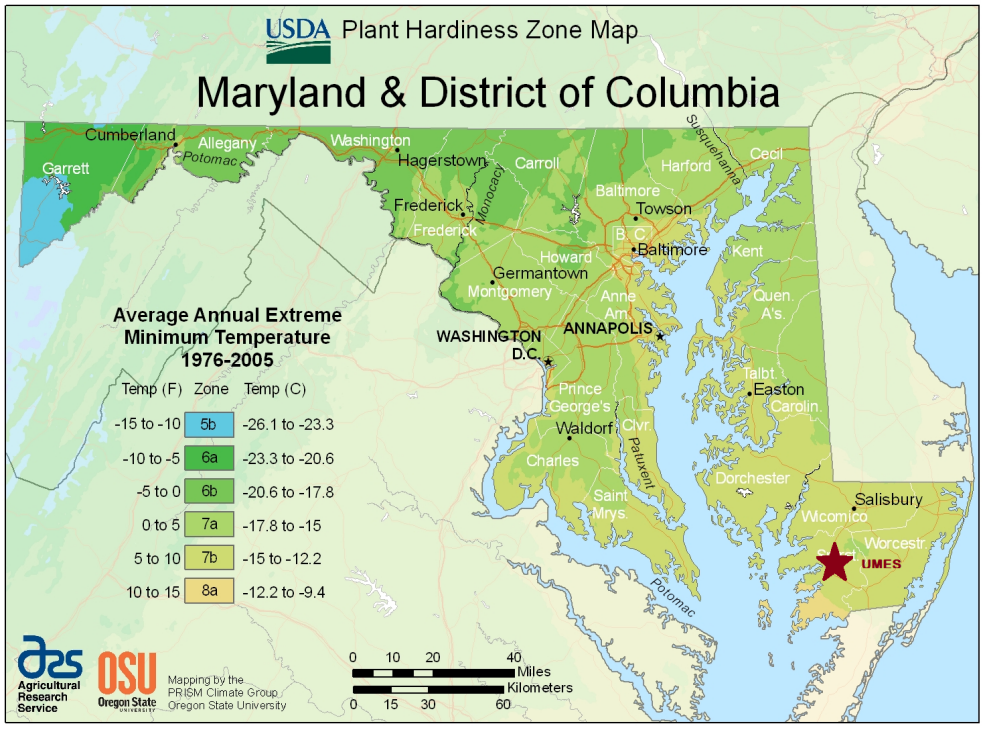

Figure 2.19 Map of Maryland Hardiness Zones.

2.4f Slope

The campus in general is relatively flat and has little change in elevation. The elevation change occurs closer to each building on the campus. The highest elevation is 24 feet. The majority of the campus including paths, roads, and open surfaces range from 12 to 18 feet. Site 1 slopes gently away from the Student Services Center building dropping down 4 feet in total towards the retention pond. While on the opposite end of the pond, there is a two foot change in elevation. Site 2 is much more flat, and drainage can actually be a problem, causing puddles along the adjacent pathways.

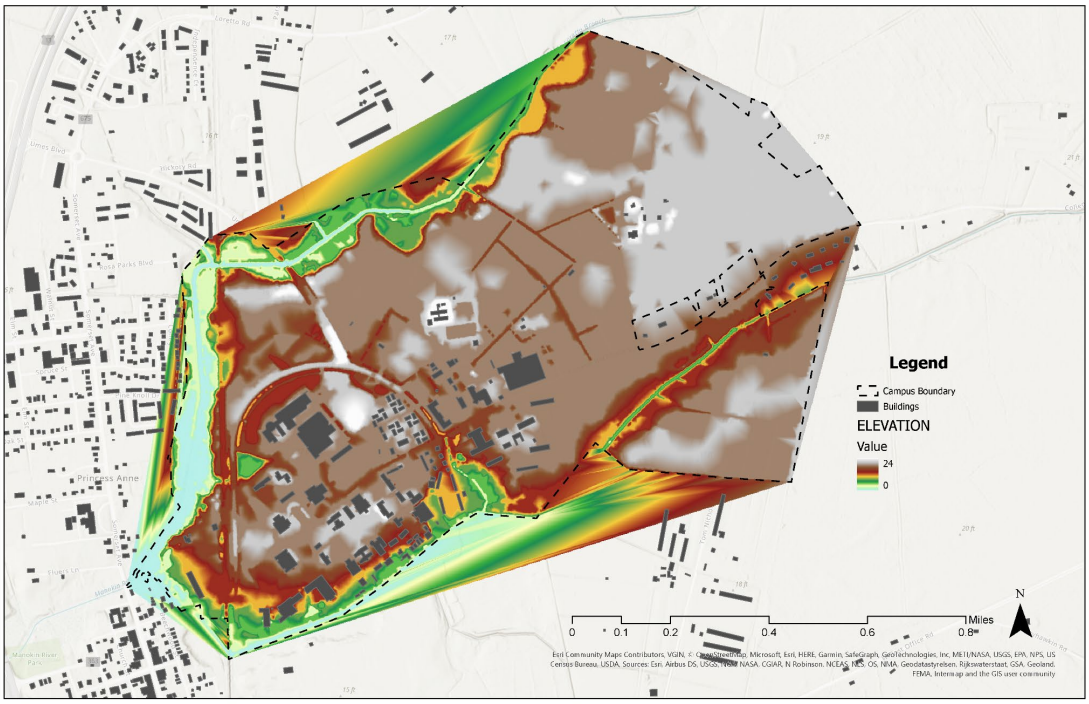

Figure 2.20 Map of Campus Elevation.

2.4g Site 1: Student Services Center (SSC)

The Student Services Center site is the first place one sees when arriving at the campus. The SSC building that borders the southern edge of the site is the heart of on-campus student activities. The building houses a cafe, the campus cafeteria, the campus book store, ballroom, movie theater, campus chapel, bowling alley, and commuter lounge, along with other offices and rooms for student resources and general meetings. Several events take place in the building and though there is access to the existing outdoor areas outside of the cinema and café, they are not very well used. The outdoor area of the cinema currently has seating but no shading and the pathway along the building does not have seating or shade. The site is mostly a backdrop for graduation pictures, taken from the south of students on the bridge, and the face of the University as a marketing or recruitment tool. Students also sometimes go fishing in the pond. The site is located on the north edge of campus and faces south. It has an irregular, naturalistic shape which makes it ideal for an informal, nature-rich design.

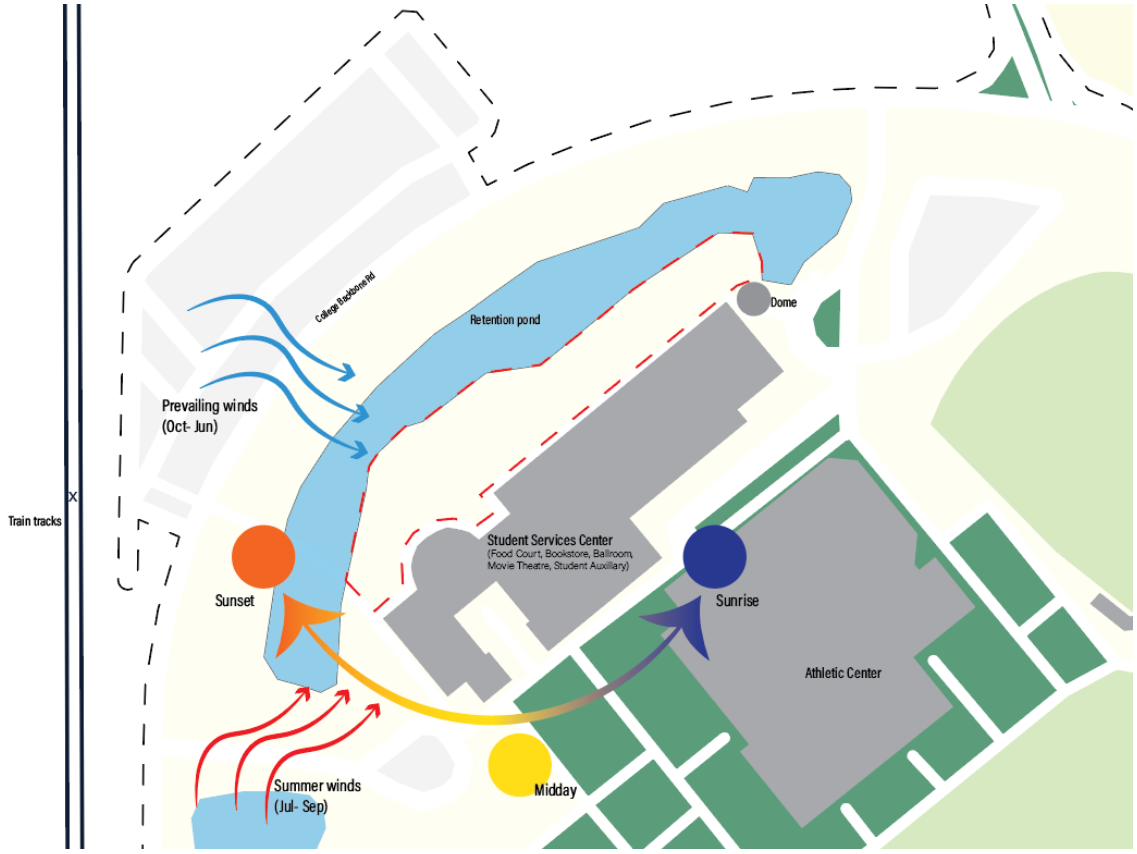

Figure 2.21 Image of site 1 (red dashed line), sun path with prevailing (light blue) and summer winds (red).

A total of 34 existing trees stand on this site, a mixture of Eastern redbuds, river birches, crepe myrtles, a black willow, and various maple species. All of the trees provide shade during the spring to fall seasons. Seasonal Canada geese are the most frequent occupants of the site. It will be important to introducing a prevention or management plan so as not to cause an inconvenience for people who will use the space. Other wildlife that is occasionally present includes turtles and other waterfowl.

Figure 2.22 Image of site 1 existing vegetation.

Neighboring parking lots to the north and east provide ample parking opportunities. The site experiences noise from vehicular and pedestrian traffic. Most of the noise is from the main road, College Backbone Road, just north of the site. Some noise also comes from the parking lots and foot traffic from the bridge to the west. An existing path along the building can be used to access the site from west or east of the building, but it is not used frequently. The building itself has three main doors and three smaller doors that directly face the site, but none are regularly used. Large windows along the entire western side of the building allow for complete visibility of the site from the building. There is also an existing open court with tables and chairs along the building. This space is rarely used. There are six existing storm drains and one large drain outlet that deposits into the retention pond.

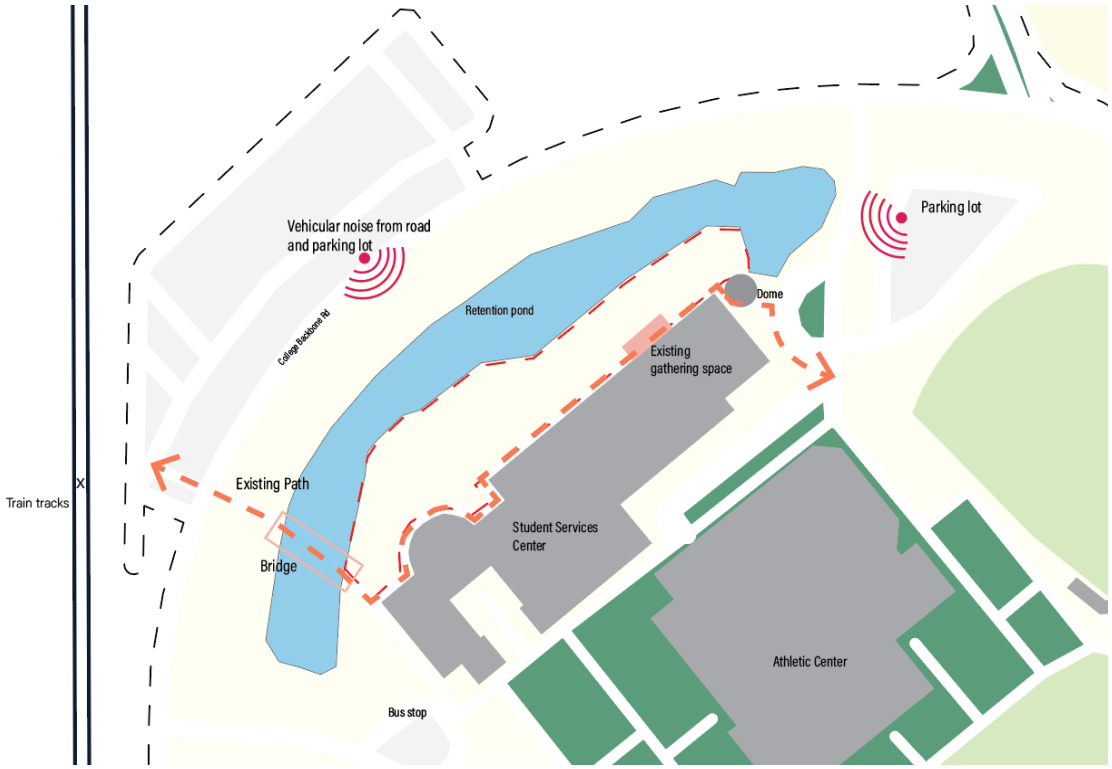

Figure 2.23 Image of existing path and outdoor area of the cinema. Vehicular noise is often present due to neighboring parking lot and main roadway.

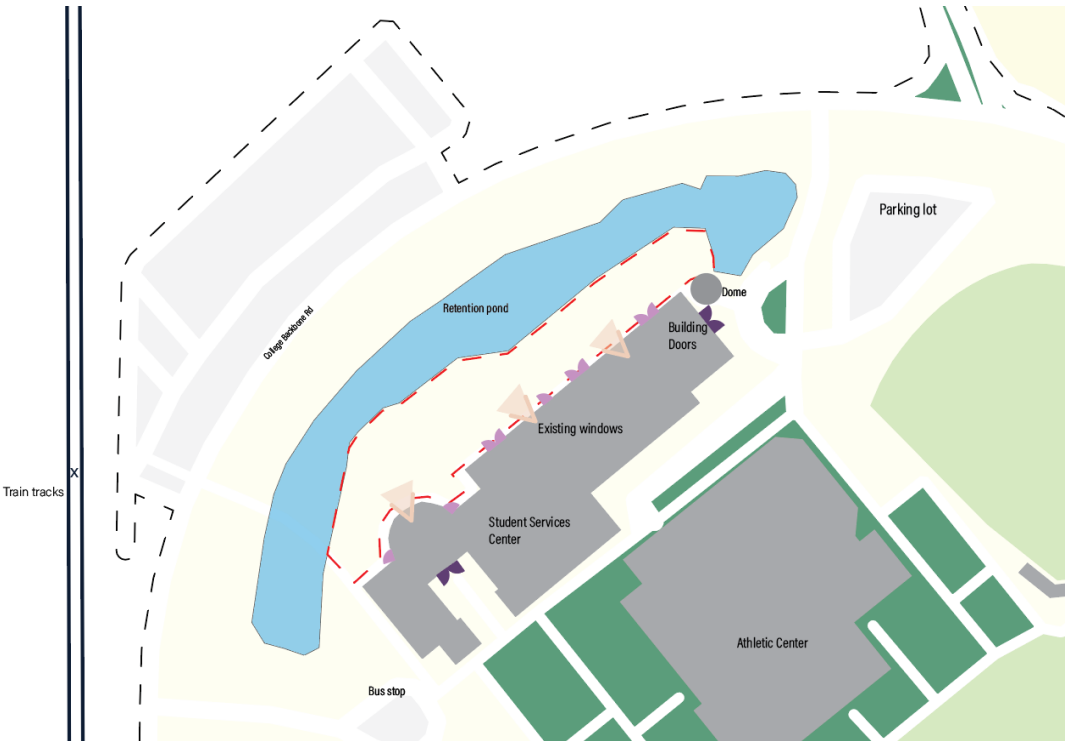

Figure 2.24 Image of existing doors and windows of the SSC building. Doors of darker shades are frequently used.

Figure 2.25 Image of site 1 existing storm drains (black circles) and lights (orange X's).

Site 1 Photos

Figure 2.26 Doors from SSC Cinema.

Figure 2.27 Hallway of SSC.

Figure 2.28 View of site from west looking east, with Student Services on the left and the pond on the right.

Figure 2.29 View of pond.

Figure 2.30 View from bridge.

Figure 2.31 View from College Backbone Road.

2.4h Site 2: Ella Fitzgerald Performing Arts Center (EFPAC) and Student Development Center (SDC)

The Ella Fitzgerald Performing Arts Center (EFPAC) is the hub for everything theatrical on campus. The building contains the main auditorium that is used for school events from orientation to hosting inspirational guest speakers and holding concerts. Surrounding the auditorium are smaller rooms for music and theater classes. Adjacent to the Ella Fitzgerald Performing Arts Center, in the northwestern direction, is the Student Development Center which houses the Counseling Center and other offices like financial aid, recruitment/enrollment, and academic life. A large parking lot positioned to the west serves both buildings. That parking lot receives a large amount of traffic as it is one of the larger parking lots on campus. The site is rectangular shaped and is a suitable place for a formal garden.

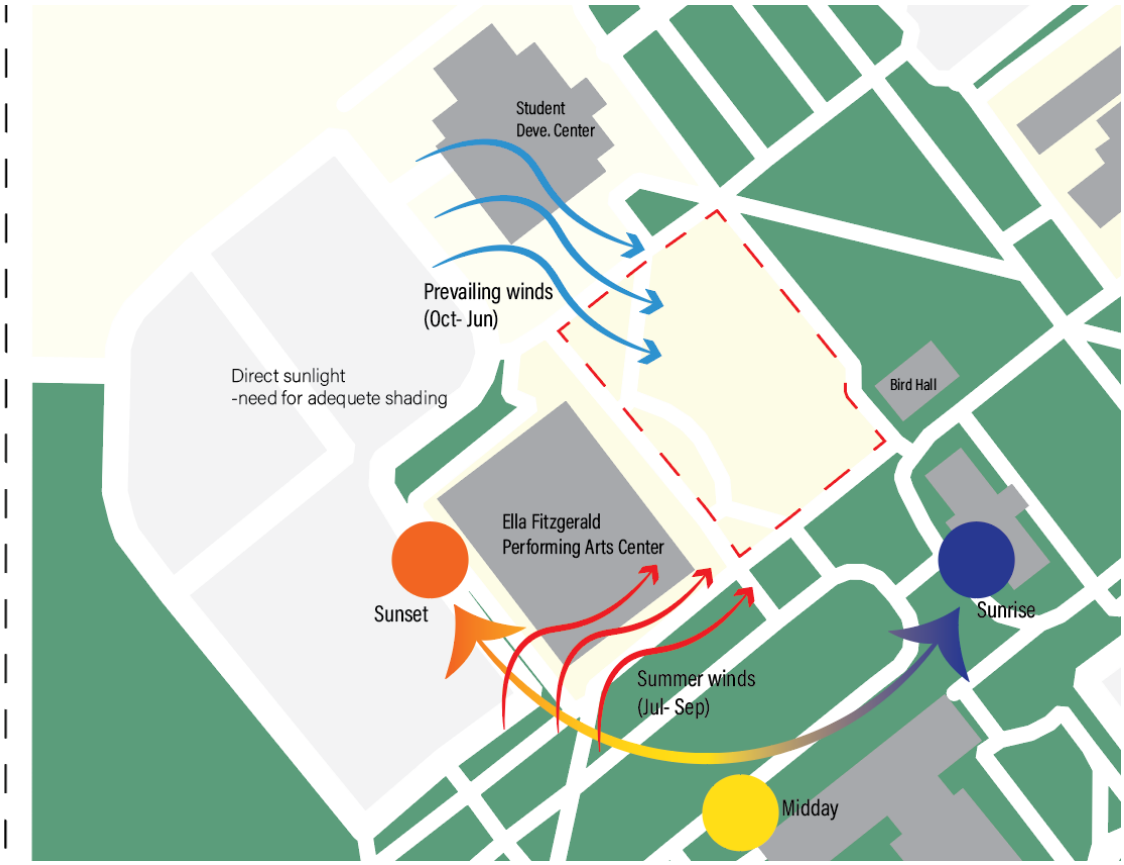

Figure 2.32 Image of site 2 (red dashed line), sun path with prevailing (light blue) and summer winds (red).

The site has a total of 18 existing trees, including oaks, American hollies, crepe myrtles, a camphor tree, and a cherry blossom. Additional trees can be added to provide adequate shading.

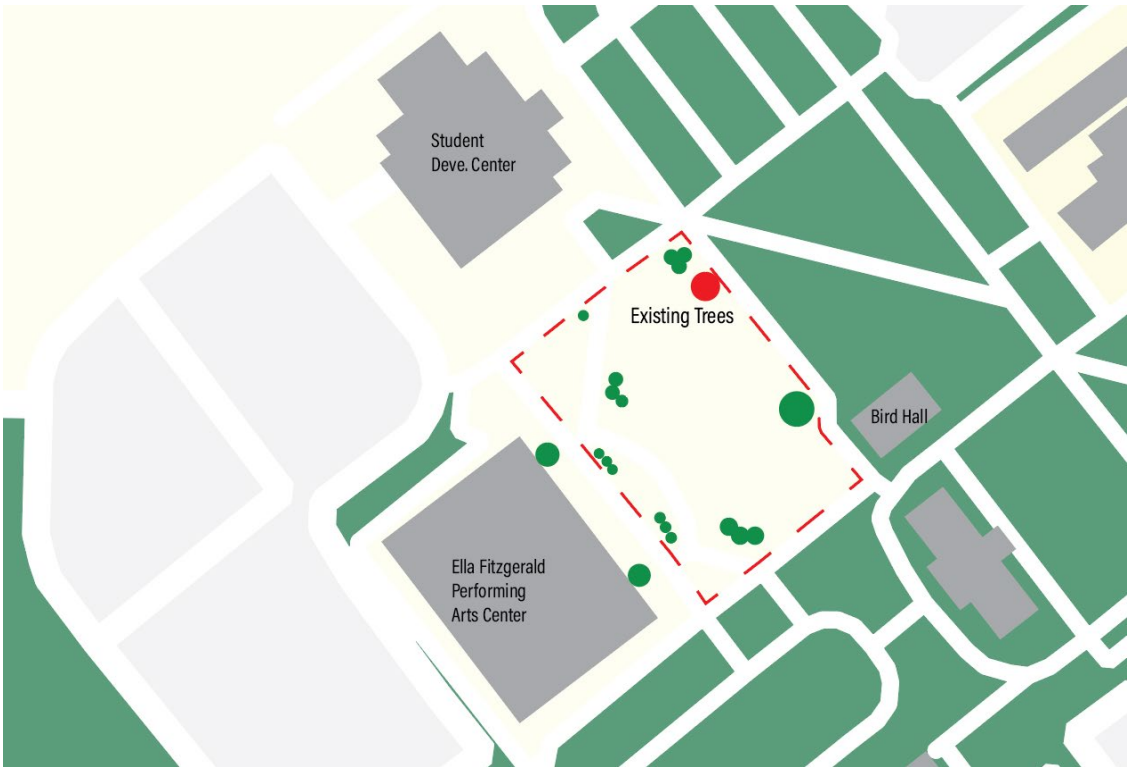

Figure 2.33 Image of site 2 existing vegetation. Oak tree in red no longer exists.

Existing windows on the SDC provide a direct line of visibility to the site. The design could take advantage of that by having a healing garden setting that will appeal to the counseling center and provide an aesthetic benefit. The EFPAC building has main stairs leading to the front. A direct paved pathway to the building can be proposed in the design. Noise comes from heavy foot traffic on the pathways surrounding the site and vehicular traffic from the neighboring parking lot. There are smaller paths on the site and an existing court with benches that do not experience frequent foot traffic. There are two existing storm drains and only one, on the northwestern side of the site, is functional.

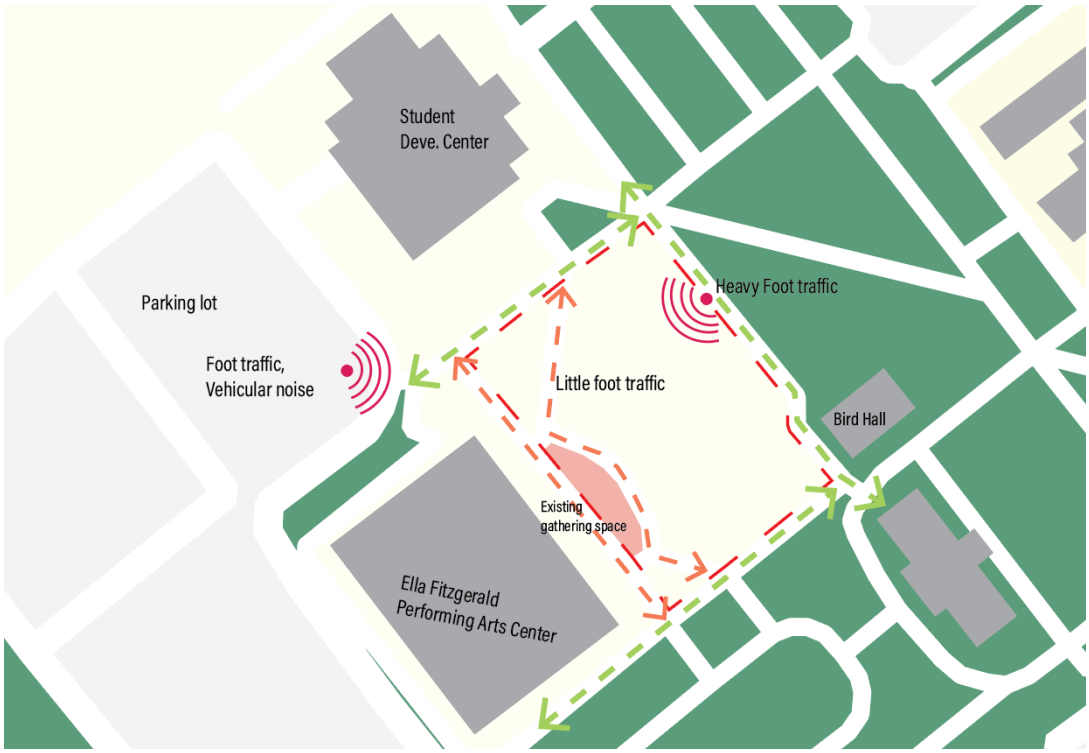

Figure 2.34 Image of site 2 existing paths and outdoor area. Noise occurs due to foot traffic from the outer pathways of the site (light green dashed line) and vehicular traffic.

Figure 2.35 Image of site 2 existing frequently used building doors. The SDC building has existing windows directly facing the site. The EFPAC Building is equipped with both stairs and ADA access.

Figure 2.36 Image of site 2 existing lights and storm drains.

Site 2 Photos

Figure 2.37 Front view of EFPAC Building.

Figure 2.38 View from the West facing SDC Building.

Figure 2.39 View from SDC Building.

Figure 2.40 Western view of EFPAC Building.

Figure 2.41 View from stairs of EFPAC Building.

Figure 2.42 Eastern view of EFPAC Building.

2.5 Semi- Structured Interviews with Black Women Nature Leaders

For this project a series of interviews were held to gain an understanding of the complexities of the relationship between African Americans and nature. Complexities such as how to design a space that reflects a certain demographic and find inspiration for the design of a Nature Rx space at UMES. The interviewees were Black women nature leaders who are changing the narrative about the dynamic between nature and people of color; they are seeding the way for upcoming generations who have a love for nature.

The women interviewed were:

- ***Stephanie K. Dunning***, Professor at Miami University and Author of *Black to Nature: Pastoral Return and African American Culture* (2021)
- ***Carolyn Finney***, Author of *Black Faces, White Spaces* (2014) and Cultural Geographer
- ***Dianne D. Glave***, Pastor, Activist, and Author of *Rooted in the Earth: Reclaiming the African American Heritage* (2010)
- ***Abra Lee***, Public Horticulturist, Historian and, Author
- ***Kendra Hyson***, Urban Designer and Landscape Architect of The Urban Studio
- ***Nicole R. Jackson***, Life and Nature Coach for Black women and Environmental Educator
- ***Audrey Peterman***, Author of *From My Jamaican Gully To World* (2019), Advocate for inclusivity at National Parks and President, and Co-founder of Earthwise Productions, Inc.
- ***Jennifer D. Roberts***, Associate Professor in the Department of Kinesiology at the University of Maryland School of Public Health; Co-Founder and Co-Director of NatureRx@UMD
    - Honorable Mentions
        - ***Andre Dexter Nottingham Sr***, UMD Nyumburu Cultural Center Assistant Director
        - ***Dr. Douglas A. Williams***, Professor and Fulbright Scholar in Africa and the US National Park Service

2.5a Interview description

A list of questions was formulated for the interviewees. Each conversation started with an introduction and goal of the project and was then guided by the questions. The interviewees had the freedom to divert and touch on other related topics but were ultimately re-focused on the questions at hand. The questions were asked in a specific order depending on the interviewee and the direction of the

interview. Some questions were answered without being asked because of the flow of the interview.

The list of questions is as follows:

- What advice would you give to a designer looking to create a nature space for Black students at the University of Maryland Eastern Shore, a Historically Black College and University (HBCU)?

- What thoughts, issues, or implications should I consider before, during, and after designing a landscape for UMES?

- What questions should I ask myself as a person of color before designing a landscape for UMES?

- What stereotypes about Black people and their relationship to nature, natural environments, or the outdoors, in general, have you heard?
  -If yes, where do you think they came from?
  -If no, what do you think about these stereotypes “Black people can’t swim or Black people don’t camp.”

- How could I represent a positive bond that people of color share with the environment through design?

- Can a design heal generational trauma?/ start conversations about race and land?/ debunk the stigma against therapy?

- What are some life lessons related to Black people and nature and land that others could benefit from?

- Are there any related topics we should touch on?

2.5b Interviewee Recruitment

A total of seven women were recruited, primarily via email, for the focus group interviews. Most of the participants were recommended by thesis committee chair Naomi Sachs and committee member Jennifer Roberts. A list was compiled of potential women and emails were sent asking the women to be interviewed. With each email, a survey was sent with times and dates for the women to choose when they will be available. After each email and survey were answered, the dates were compiled to group women with corresponding times and dates.

2.6 UMES Conversations

A few conversations took place with students, faculty, and staff from the UMES campus.

2.6a UMES Staff

The first crucial conversation was with the director of the campus counseling center. That conversation had the same semi-informal interview structure as the focus groups. With that conversation, some insight was gained about the UMES campus, student body, and the counseling center that could be used to influence the design of a Nature Rx space on campus.

The other conversation was with the UMES architect. This conversation was held over the phone. The goal of the conversation was to get as much information about the campus as possible. Information including the topographical data, land history, campus circulation, and biological /cultural/ physiological systems of the campus, and also to gain a professional opinion on suitable spaces to design a Nature Rx space.

2.6b UMES Students and Faculty

Conversations took place in person during campus visits. These conversations were informal and short. They were done to gain an idea about how students and faculty feel about having a Nature Rx space and what spaces on campus they think would be most suitable. The conversations were also held to get a sense of what features or elements students and faculty would want to have in a Nature Rx space.

2.7 Conclusion

In conclusion, due to the location and existing conditions both sites have made them ideal for a Nature Rx Design. However, there can be some proposed suggestions that will be more fitting for a Nature Rx space. Some suggestions include improving circulation and introducing elements that appeal to the senses along with intentional programming. A designed space will enhance both the sites and benefit the students of the UMES.

Chapter 3: Nature Rx @UMES (Results)

This chapter will delve into the process of the design. Results from the site inventory and analysis as well as the conversations will be shown how the designs were influenced. In this chapter, the process from conception will be broken down and shown how the end designs were achieved and what other inspirations were taken into consideration.

3.1 Interview Summaries

All the interviews were helpful and some were very insightful. They were able to inform the design of this project in a way that would be sensitive to history, the land, and culture.

3.1a Nature Women Leaders

"Nature is a place of worship or a spiritual place, a place to share stories and ideas"- Dianne Glave

"Specificity has the potential to become universal" -Dr. Douglas A. Williams

"Make friends with the nature outside of ourselves equals implications of how we treat each other and ourselves" -Dr. Carolyn Finney

"Black people use nature as a tool of beauty and appreciation but on their own terms." -Abra Lee

The main takeaway from all the interviews was that Black Americans and people of color have always had a relationship with nature. Nature was never the cause of fear, mistrust, and trauma that Black people and people of color may have had; but unfortunately, in most cases, it is the place a traumatic event occurs. When designing for a people with a complicated relationship with nature, an essential component of the design is history. History of the land, people, culture, and current institutions and organizations. Understanding history is important to make informed, unbiased decisions. It is also important to note that the Black American style of gardening has no rules but is filled with vibrancy, from the color palette and symbology from ornamental objects on display. Nature in Black culture has many representations. It is a place of worship, memory, freedom, beauty, and hope.

The conversations brought up questions that challenged what the outcome of the designs should be. Questions such as "What experience should students have in nature?" and "How can the design be unique to the history of UMES, the history of

the land and cultures present at UMES?" Other factors or programming included what tools were needed to achieve a space for students.

Most of the themes that came from the interviews were physical and social themes. Physical in terms of the design of a Nature Rx space. Social themes were aimed at how students would and should feel within the spaces. The design should be a place of encouragement and should acknowledge the history of the place or space. The design should be a space of joy, solace, belonging, and celebration. Most importantly, the design should be intentional and specific to people (UMES students) who the space is meant for. In being specific, the design should have the opportunity to evolve.

3.1b UMES Conversations

The concept for this thesis project was well received by students, faculty, and other representatives who were interviewed. Suggestions included having a common space to congregate, picnic tables, open space for stargazing, a rock garden, and a visually pleasing peaceful space. One suggestion that was also stated was attracting more visitors to the campus.

3.2 Design Goals and Objectives

The main goal of this project is to design an outdoor space for the students of UMES to decompress and connect with nature in both an informal and formal setting (hence Nature Rx). In achieving the goal, the thesis question, 'How could a Nature Rx design at the University of Maryland Eastern Shore, a Historically Black College and University, benefit the health and well-being of its students?' is answered.

3.2a Objectives

The objectives for the design were:

- Engage the senses and encourage relaxation
- Promote nature engagement via the implementation of a variety of spaces and amenities
- Provide safe space for joy, pride, and fulfillment
- Incorporate elements that represent common themes in Black culture and acknowledge Indigenous Americans

3.2b Design Themes

Two types of themes were prominent throughout this process: Social and Physical. Each theme type contained a set of specific themes that were applied to the process and design of the Nature Rx space.

- Social Themes
    - Safe
    - Belonging
    - Comfort
    - Pride
    - Joy
    - Introspection
    - Therapeutic/Peaceful
    - Spiritual
    - Interaction (w/ peers and nature)
- Physical Themes
    - Common areas (congregation)
    - Intimate areas
    - Evolution
    - Invitation (access)
    - Acknowledgement
    - Vibrancy (plant palette)
    - Symbology

3.2c Design Inspirations and Influences

- Kente cloth pattern (West African- Ghanaian pattern)
- UMD Nyumburu Cultural Center (Swahili for "Freedom"- origin from East Africa)
- Native American circular communal settings
- Portrait of Resilience by Sharon Kerry-Harlan
- Flow of water (curvilinear)
- Sand stones
- Black American garden styles (symbology, own rules, vibrancy, spirituality)
- Existing UMES campus outline
- Informality of park trials
- African labyrinth symbols (Adinkra)

3.3 Site 1 Concept and Program: The Manokin Walk

The design for this site will be an informal design. The idea behind the informal design is to have a natural setting resembling a park. There will be minimal Disturbance to the land will be minimal. Programming will entice students to the space. The design will be a dedication to the Indigenous Americans, the Manokin Tribe, who once inhabited the land the University now stands. The Manokin Tribe was also considered a water tribe.

The concept suggests moving the existing path to the center of the site to mimic a park trail. This new proposed path, the main feature of the design, will be

curvilinear to reflect the movement of water. The path will be paved with embedded glass beads that represent the lives of the Manokin Tribe and the current lives on the land. Surrounding the path will be spaces with different functions and programming. Closer to the water line are three space: Two intimate seating spaces that are positioned at either end of the site, and an open deck. Of the two intimate spaces, only one will be a sheltered space such as a gazebo and the other will be open to the sky and shaded by trees. These spaces, along with the deck, will contain modular seating. The water line bordering the site will have additional vegetation and a short stone wall to act as a buffer.

The two spaces closer to the building will be communal spaces. One will contain circular picnic tables and stationary hammocks for students to gather and relax. The other communal space will contain circular stone seating. At either entrance of the site, there will be informative signs.

Some other suggestions for a Nature Rx design space could be to replant some of the trees to accommodate for a design as well as add additional vegetation along the water line to act as a buffer. A buffer can be an indication of the water line for people exploring the site, and at the same time a defense against flooding.

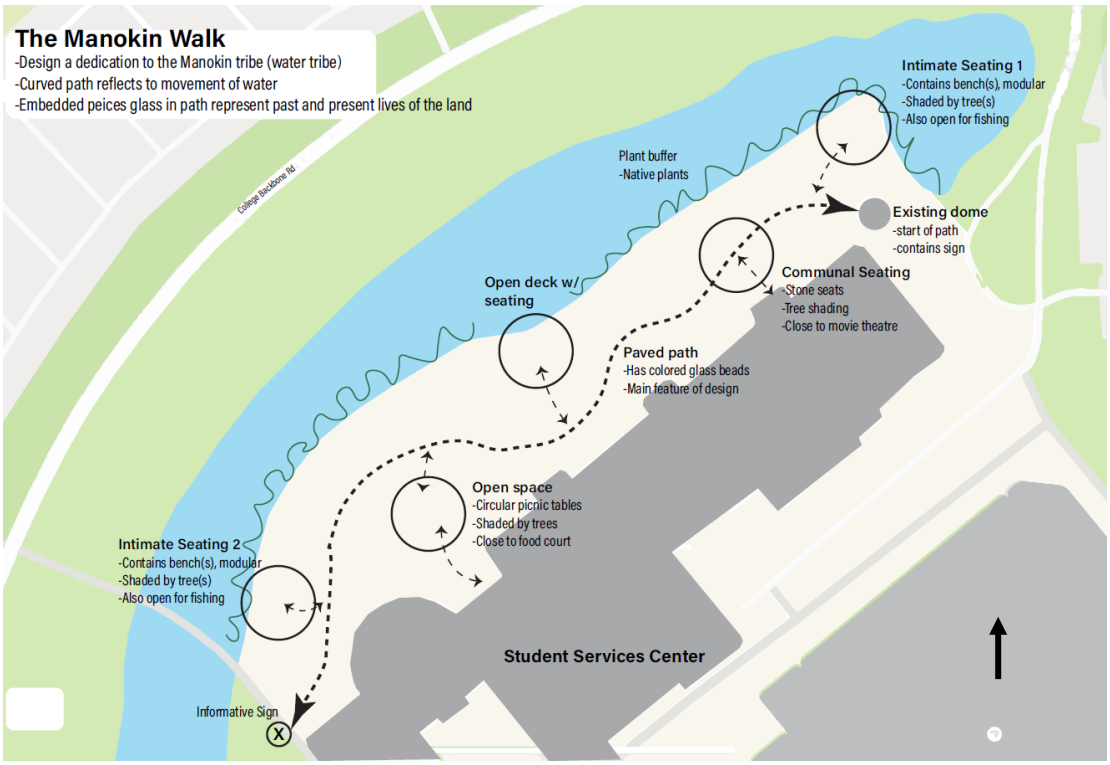

Illustration 3.1 Concept design for Site 1 entitled The Manokin Walk.

3.3a Final Site Design

For this design, students have the opportunity to be immersed in a naturalistic setting. The Kaplans' Attention Restoration Theory and Ulrich's Stress Reduction Theory both apply to this design. Students and visitors will be able to choose from different programming within the design. This design acknowledges history and encourages engagement with nature. There are opportunities to reflect, relax and interact with peers. The design also adds to the significance of the site while providing people with the benefits of nature.

Illustration 3.2 Final Design for the Manokin Walk.

3.3b Design Perspectives and Sections

Illustration 3.3 Section showing the Manokin Walk main path with seating, deck for the pond and College Backbone Rd.

Illustration 3.4 Perspective of Manokin Walk path with glass embedded paving and communal seating for the cinema entrance.

Illustration 3.5 Perspective of Manokin Walk with seating, stationary hammocks and gazebo.

3.3c Precedent Images of specific amenities

Figure 3.1 Circular stone seating.

Figure 3.2 Circular picnic table.

Figure 3.3 Stationary hammocks.

Figure 3.4 Adirondack chair(s).

Figure 3.5 Glass-embedded paving.

Figure 3.6 Checkered outdoor paving.

3.4 Site 2 Concept and Program: The Freedom Garden

The inspiration behind the name of this design came from the UMD College Park Nyumburu Cultural Center. The word *Nyumburu* is Swahili for freedom. The word 'freedom' also encapsulates what the purpose of the design for this space is trying to achieve.

The site is divided into four spaces, with each two opposite spaces having similar functions. The first two opposite spaces in line with the Student Development Center, which houses the Counseling Center, are proposed to be garden spaces designed in a way that is therapeutic and healing and can be utilized by the counseling center. The one closest to the Student Development Center will contain a labyrinth and a central water fountain. This is envisioned to be a space for reflection and introspection. It will also include other elements that appeal to the senses such as a textured pathway to connect both spaces, and vibrant colored plants. The other space will be a semi-open space to accommodate more active activities. It will also contain a central water feature and bench seating.

The second two opposite spaces in line with the Ella Fitzgerald Performing Arts Center are proposed to be open spaces meant to amplify the majesty of the building and balance the design. However, the space further away from the building is proposed to be a resting spot for students and will have picnic tables.

Separating all four spaces are axial primary pathways to access the site. At the center will be a plaza or stage that ties the design together and act as a symbol for invitation with surrounding stone seating. The design will also include signage to inform visitors of the intention of the design as well as several quotes by Black nature leaders to encourage students to form an appreciation for nature.

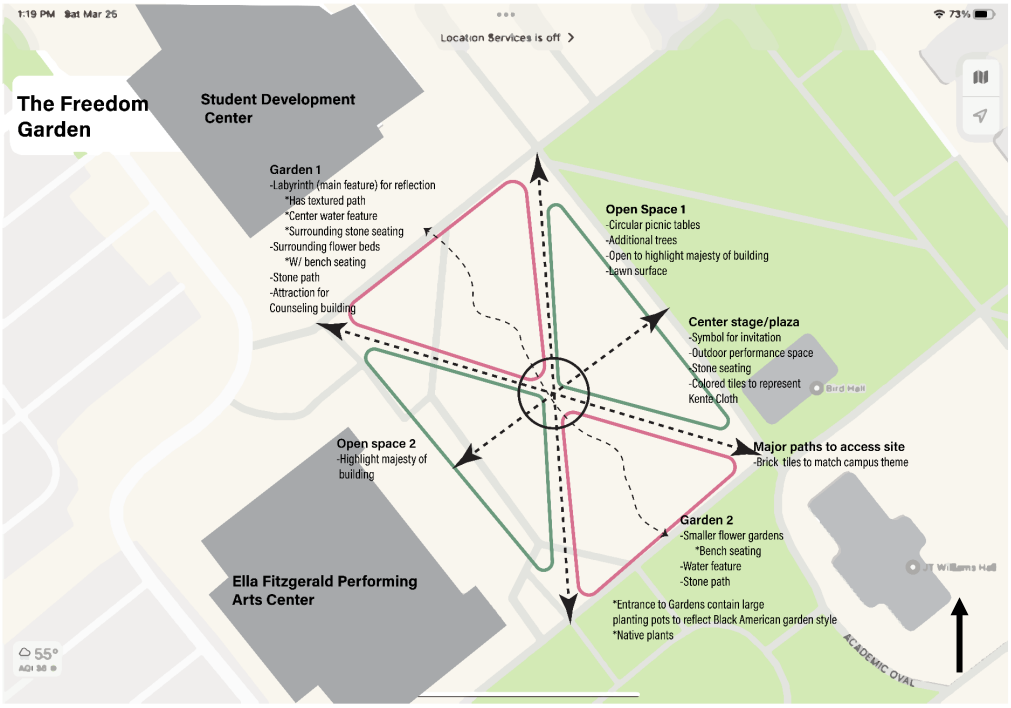

Illustration 3.6 Concept design for Site 2 entitled The Freedom Garden.

3.4a Final Site Design

This design is more formal. It lacks the naturalistic setting offered by the design of Site 1 (The Manokin Walk). However, this design contains properties that aim to achieve the same purpose as Site 1. The design is meant to appeal to students and the neighboring counseling center and to find balance among the built setting that surrounds this space. The intentional programming is meant to engage one's senses and reflect aspects of Black culture to encourage a sense of belonging.

Illustration 3.7 Final design for The Freedom Garden.

3.4b Design Perspectives and Sections

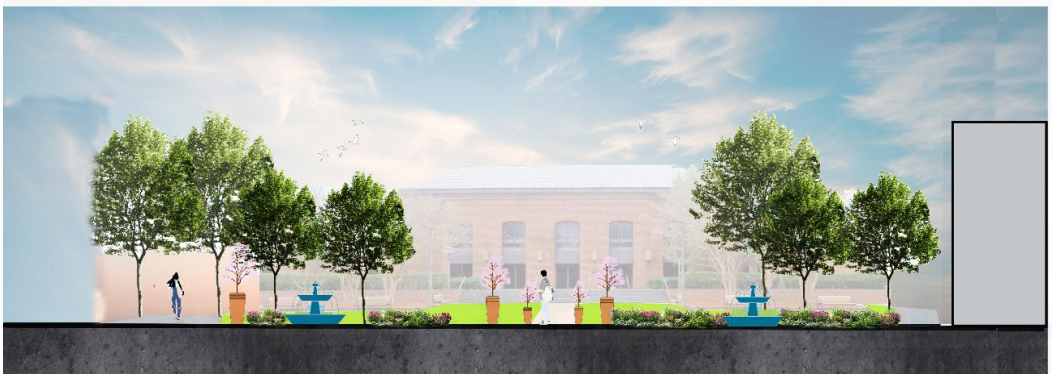

Illustration 3.8 Section facing the Ella Fitzgerald Performing Arts Center showing the main plaza/stage and both gardens with water features.

Illustration 3.9 Section of garden facing Student Development Center Building with labyrinth, water feature and surrounding garden and seating.

Illustration 3.10 Section of stairs from Performing Arts Center leading to center plaza/stage.

Illustration 3.11 Perspective of stone path leading to labyrinth and water feature with surrounding garden.

3.4c Precedent Images of Specific Amenities

Figure 3.7 Textured labyrinth path.

Figure 3.8 Stone paving.

Figure 3.9 Large potted plants.

Figure 3.10 Curved wooden bench(s).

Figure 3.11 Water fountain.

Figure 3.12 Stone tiles.

3.5 Suggested Plant Material

These plants were chosen for the benefits they will offer to both humans and the environment. All the plants will be native plants that are beneficial to the environment and wildlife. They will also add adequate shading and offer enrichment to students and visitors of the design. The symbol of vibrant colored plants will represent the diversity of the Black diaspora, and specific plants are a nod to Black American singer Ella Fitzgerald, who loved flowers and often wore one in her hair when she performed.

PLANT PALETTE	
Latin Name	**Common Name**
Summer Plants	
Spigelia marilandica	Indian pink
Hydrangea quercifolia	oakleaf hydrangea
Thermopsis villosa	blue ridge golden-banner
Vaccinium corymbosum	highbush blueberry
Pycnanthemum muticum	clustered mountain-mint
Spring Plants	
Trillium luteum	yellow trillium
Leucothoe fontanesiana	drooping leucothoe
Delphinium tricorne	dwarf larkspur
Halesia diptera var. magniflora	large-flowered two-wing silverbell
Stachys byzantina	lamb's ear
Fall Plants	
Lobelia siphilitica	great blue lobella
Franklinia alatamaha	franklinia
Hamamelisvirginiana	common witch-hazel
Acer rubrum	red maple

Vernonia noveboracensis	New York ironweed
Winter Plants	
Kalmia latifolia	mountain laurel
Morella cerifera	wax myrtle
Ilex glabra	inkberry
Rhododendron maximum	Great Rhododendron
Herbs	
Thymus vulgaris	thyme
Ocimum spp.	basil
Angelica archangelica	angelica
Matricaria recutita	chamomile
Geranium maculatum	cranesbill
Honarable Mentions	
Gardenia jasminoides	double blooming gardenia tree
Narcissus pseudonarcissus	wild daffodil
Rosa Carolina	Carolina rose

Table 3.1 Table of proposed plant palette.

Chapter 4: Discussion

The discussion will address the thesis question and highlight the limitations, personal gains, and future considerations of this project.

4.1 Thesis question: How could a Nature Rx design at the University of Maryland Eastern Shore, a Historically Black College and University, benefit the health and well-being of its students?

The students of UMES will benefit from this design in several ways:

- Relieve stress
- Seating for students to rest
- Form a respect/affection for nature
- In forming an appreciation for nature, form an appreciation for oneself and others
- De-myth stereotypes about Black people and nature
- Meet and interact with friends
- Give students a sense of control by providing spaces with differing functions
- Allow students to feel appreciated/accepted by the UMES campus
- Use nature as a tool to heal from trauma

The Campus will benefit as well by using the designs for:

- A healing or therapeutic tool by the counseling center
- Attracting visitors
- An event space(s)
- A recruiting tool
- Improving campus health among students, faculty, and staff
- Improving the physical health of campus: attracting beneficial animals and insects

4.2 Limitations

This project was faced with some limitations, including the COVID-19 pandemic which greatly affected student admission rate and staff retention. Due to the strain of the pandemic, it was difficult to contact representatives for UMES (student body, campus maintenance staff). A missed opportunity was for a formal UMES student focus group. It would have been beneficial to have a collaborative effort from students about the design of each site. Gathering public data for Somerset County also proved to be a challenging task. The distance of the UMES campus from College Park was significant, and thus travel to collect on-site inventory was limited. There were also a few technological challenges that contributed the limitations which included computer software glitches and delayed network connections.

4.3 Future Considerations

As for future recommendations that can be applied to this project to ensure its feasibility, some considerations are as follows:

- In-depth soil analysis and engineering plan of sites
- Detailed planting plans for the two sites
- Implementation plan
- Extend design to surrounding areas
- Maintenance Plan
- Stormwater management plan
- Development of a Nature Rx program

4.4 Personal Takeaways

Some personal gains from this project included the development of informed decision-making for the project designs, as well as acquiring basic skills for project management. The desire to research more about Black history and culture and the impacts on the landscape and how that relationship impacts or informs lives today is an interesting venture to be explored. And, finally, the invaluable experience from a thesis design project.

Chapter 5: Conclusion

Nature has always been and will continue to be an important part of human lives, including Black lives. There is research-based evidence that supports the healing effect nature has. HBUCs are also important because of the historical stance they represent which is inclusivity and equity. The overarching goal of this Master of Landscape Architecture thesis was to design a space for the students of the University of Maryland Eastern Shore (UMES), an HBCU, to engage with nature, and to use such a space as a tool to relieve stress as well as to benefit the overall well-being of each student. A designed site will encourage the UMES counseling center to recognize nature as a beneficial tool and spark a conversation as well as a movement to address the absence of a Nature Rx program at UMES and other Historically Black Colleges and Universities (HBCUs) within the United States.

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