



(Un)Cleanliness: Reclamation of Body and Site

Alyssa Renee Tope, 2017



Thesis Defense

(Un)Cleanliness: Reclamation of Body and Site

Alyssa Renee Tope

Thesis submitted to the faculty of the Virginia Polytechnic Institute and State University in partial fulfillment of the requirements for the degree of

Master of Architecture
In
Architecture

Paul Emmons
Susan Piedmont-Palladino
Paul Kelsch

May 25th, 2017
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Bookcase Collage

(Un)Cleanliness: Reclamation of Body and Site

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Abstract

For me, architecture is a service—a way of helping people and the environment—and I wanted my thesis to reflect this idea. This thesis combines human rehabilitation and environmental remediation in order to study how these two types of healing interact. Specifically, the program of the building is a rehabilitation center for Obsessive-Compulsive Disorder (OCD) patients (who stereotypically have an obsession with order and cleanliness). Both the patients and the site are going through the process of healing, but they are doing so in ways that juxtapose each other: while the dirt, plants, and water on the site are made cleaner, the patients are undergoing therapy that helps them understand that it is okay to be “dirtier.”

This brings into question what the terms “clean” and “dirty” really mean. Through my year-long research into OCD rehabilitation, environmental remediation, and the meaning of dirt, I came across a quotation that summed up this idea within my thesis. It came from the appropriately titled book, *Dirt*:

“A landscape architect’s understanding of dirt—as a fertile medium—overturns the term’s negative connotations to understand it as explicitly productive.” (Born 8)

Therefore, my thesis explores dirt’s productivity and challenges visitors’ and patients’ preconceptions of order and disorder. Overall, however, my goal was to create a project that allowed a forgotten, polluted site to be reclaimed by the city and for the patients, through therapy, to reclaim their lives.



Bookcase Rendering

(Un)Cleanliness: Reclamation of Body and Site

Alyssa Renee Tope

General Audience Abstract

For me, architecture is a service—a way of helping people and the environment—and I wanted my thesis to reflect this idea. This thesis combines human rehabilitation and environmental remediation in order to study how these two types of healing interact. Originally, the program of my building was going to be a rehabilitation clinic for drug addicts, located on a polluted site that needed to be remediated, because then the patients and the site would have the parallel experience of being cleansed of poison. But Dr. Paul Emmons suggested that I instead design a rehabilitation center for OCD patients (who stereotypically have an obsession with order and cleanliness). This was intriguing to me because while the patients and the site would still both be healing, they would be doing so in ways that juxtaposed each other: while the dirt, plants, and water on the site would be made cleaner, the patients would be undergoing therapy that helped them understand that it is okay to be “dirtier.”

This brought into question what the terms “clean” and “dirty” really mean. Through my year-long research into OCD rehabilitation, environmental remediation, and the meaning of dirt, I came across Mary Douglas’ book *Purity and Danger*, where she defines dirt as “matter out of place” and states: “As we know it, dirt is essentially disorder. There is no such thing as absolute dirt: it exists in the eye of the beholder” (Douglas 2). However, the most important and meaningful quote that summed up this idea within my thesis came from another book, appropriately titled *Dirt*:

“A landscape architect’s understanding of dirt—as a fertile medium—overturns the term’s negative connotations to understand it as explicitly productive.” (Born 8)

A simple example of redefining dirt that many of us already have in our homes is a pizza stone or cast iron pan, which are both seasoned with the leftover “dirt” of food. Neither of these items are ever meant to be cleaned with soap (they require only water) and the flavors of past foods help to enrich all future foods you make with it. Therefore, my thesis explores dirt’s productivity and challenges visitors’ and patients’ preconceptions of order and disorder. Overall, however, my goal was to create a project that allowed a forgotten, polluted site to be reclaimed by the city and for the patients, through therapy, to reclaim their lives.

Acknowledgements

To my sister, Emily,

Thank you for being my fearless proofreader throughout my many essays and helping me stay up to date on all the best tv shows.

To James,

Thank you for supporting me through my move across the country and my journey through grad school.



You all taught me what kind of designer I want to be.

Paul Emmons

I always try to push myself to make very meaningful design choices, but you taught me about the immense depth of thought that can be put into not just every design, but also how it is represented—I will never think of a dashed line the same way again.

Susan Piedmont-Palladino

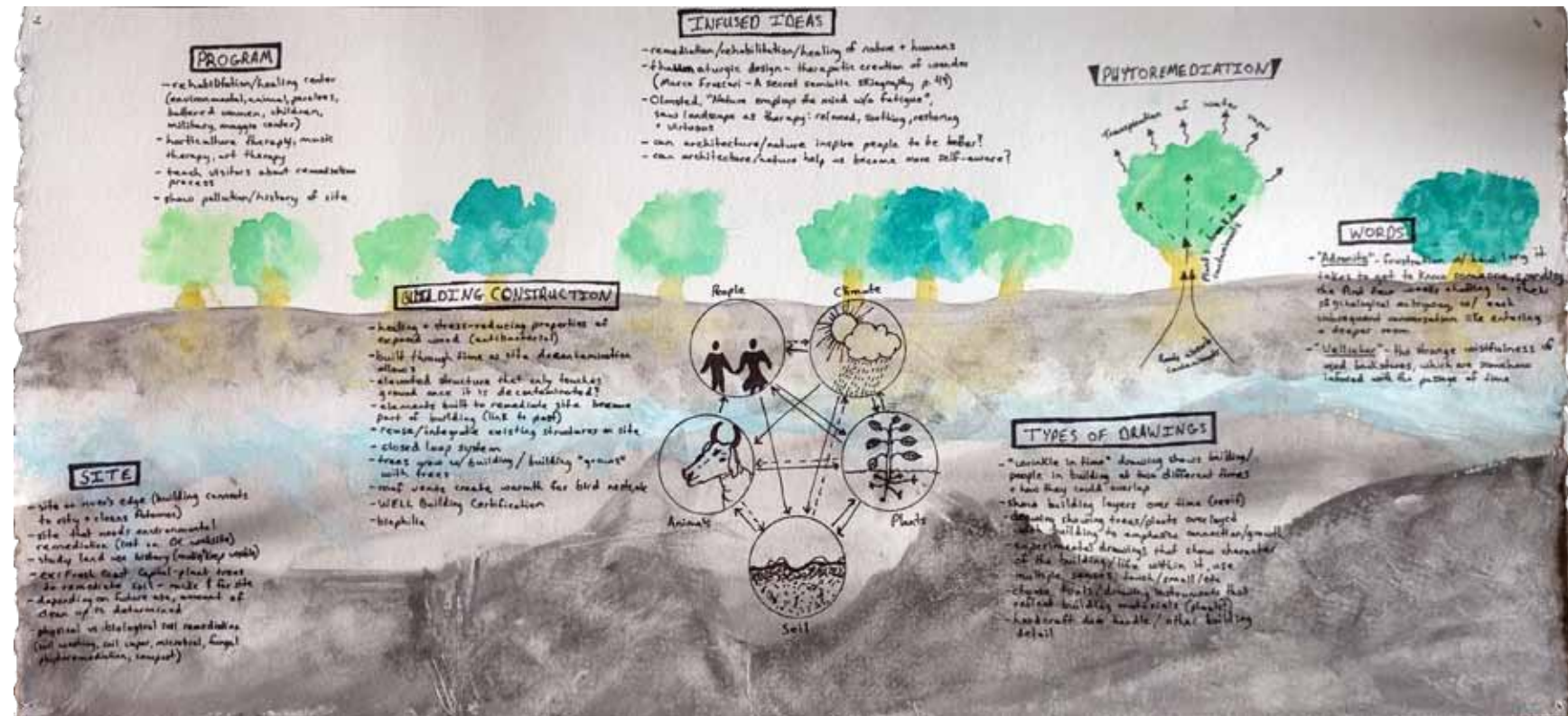
You not only ignited my newfound interest in urban design, but you also taught me how many different ways I can implement my design skills, from being a traditional architect, to teaching and directing at the WAAC, to curating at the museum. I hope that (when I finally leave school) I can have a career as multifaceted as yours.

Paul Kelsch

Your class this semester helped to confirm so many things that I intuitively felt about design. You re-introduced architecture to me through the lens of the landscape, and it has already affected the way I design. I now aspire to always design with nature's consent (like the Greeks and Palladio).

Ezgi Isbilen

I probably met with you more than anyone on my committee because you were always willing to help when I chased you down in the hallway. Thank you so much for all of your knowledge, insights, and advice.

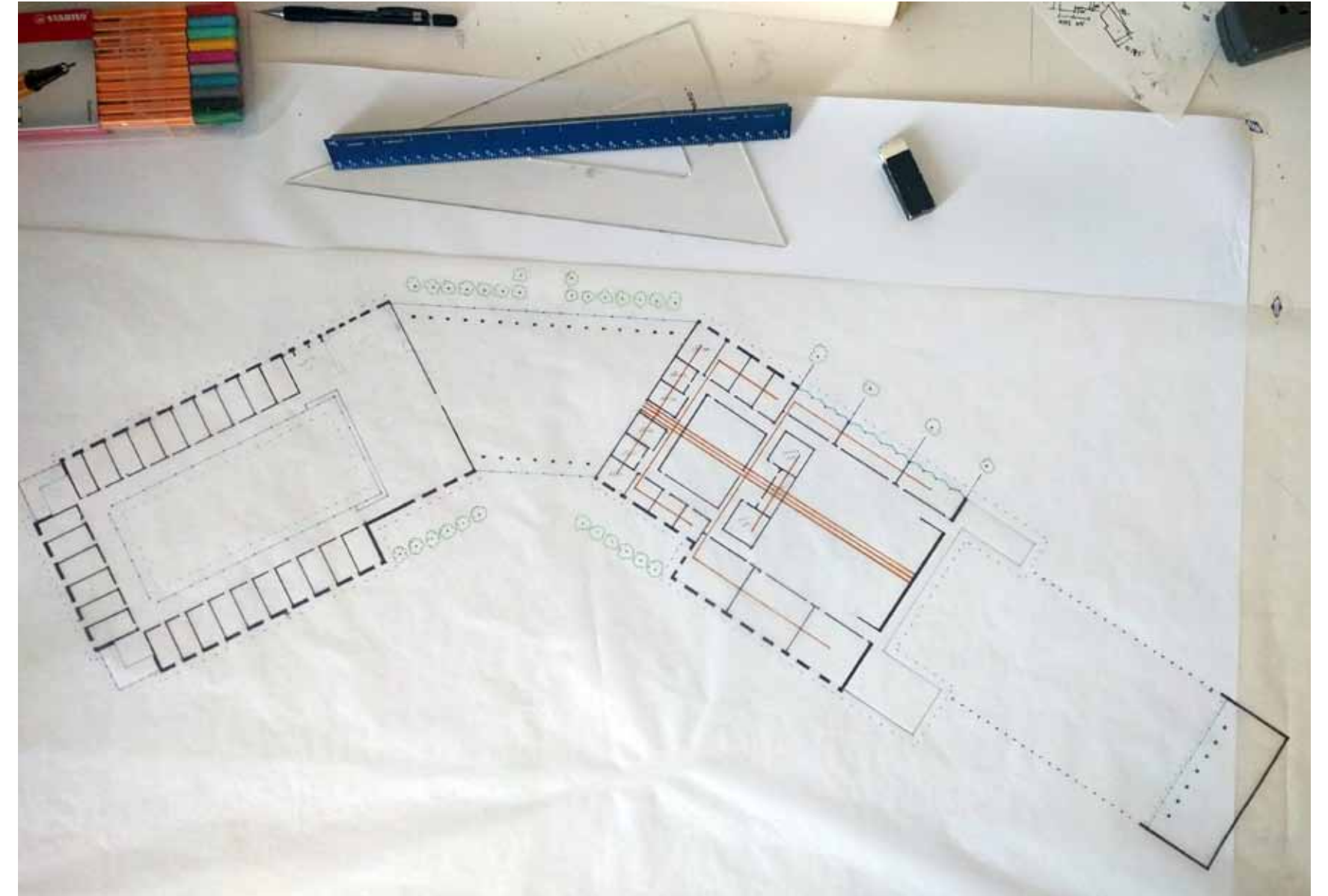


Thesis Proposal, September 2016

Table of Contents

Research	
Precedents.....	4
Site Selection.....	7
Site History.....	9
Current Conditions.....	11
Phytoremediation.....	15
OCD and Therapy.....	18
Process Work A Sampling.....	19
Final Design Overview.....	23
Patient	
Reveal.....	27
Redefine.....	29
Reclaim.....	31
Site	
Current State.....	35
Reveal.....	37
Redefine.....	39
Reclaim.....	41
Building	
Building Process.....	45
Reveal.....	47
Redefine.....	53
Reclaim.....	59
Elevations.....	65
Sections.....	67
Graduation Ritual.....	71
Model Photos.....	73
Bibliography.....	79
Image Citations.....	81

Research



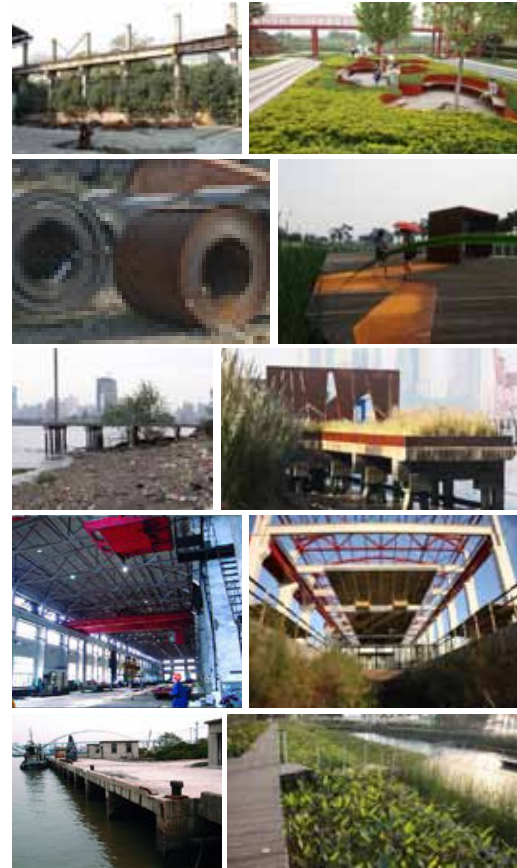
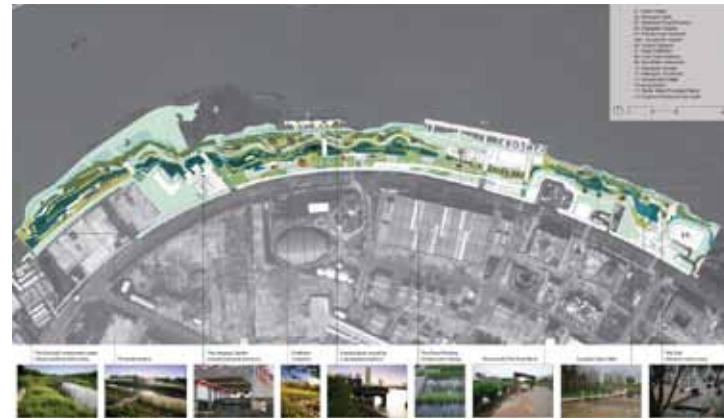
Hand Sketch of Draft Floor Plan



Gas Works Park
Before and After



Shanghai Houtan Park
Before and After



Precedents

When beginning my thesis, I wanted to have a focused approach to my treatment of the site, including both the building and the patients' therapy. Choosing to build on a polluted site wasn't an accident—it was a purposeful decision. As such, it was important to highlight and respond to the site's history and the cleansing process, rather than simply erasing it and starting anew. If we don't acknowledge mistakes we have made in the past, we don't have the opportunity to learn from them and move forward.

Two of the main precedents I studied were Richard Haag's Gas Works Park and Turenscape's Shanghai Houtan Park. Both projects faced similar struggles: how to tackle a polluted site and reclaim it as a usable and meaningful space in the city while maintaining a strong connection to the site's history. While both projects are extremely successful, they have differing attitudes about how to provide a link to the past.

In Gas Works Park, Haag made very minimal and delicate design interventions. He cleaned up the site and made it safe to inhabit, while leaving many of the existing structures as close to their original form as possible. By making such selective moves and leaving visible scars on the land, he redefined what landscape architecture can be: "site *interpretation* rather than design on the land" (Meyer 9). In her essay "Seized by Sublime Sentiments," Elizabeth Meyer goes on to argue that Gas Works Park is an example of a sublime landscape. These are traditionally defined as landscapes that are differentiated from beautiful or pastoral landscapes, which are easier to immediately digest. Sublime landscapes simultaneously create both a sense of fear and a sense of awe. "...[T]he industrial fragments at Gas Works have come to be associated with danger and trauma as much as regeneration and healing" (Meyer 7). This approach therefore successfully captures the site's complex past, present, and future because it encourages visitors to reflect on the design choices.

Turenscape had a different attitude towards the design of Shanghai Houtan Park. Instead of keeping many of the existing structures and leaving the site as untouched as possible, they took a slightly more heavy-handed approach. The designers maintained a link to the site's history in two main ways. First, they reused many of the found materials on the site, including converting scrap steel into steel pergolas that line the pathways. Second, they implemented numerous nature-based strategies to prevent further pollution of the site and the river it resides near, such as constructed wetlands and ecological flood control. Turenscape's end result is more closely associated with beautiful and pastoral landscapes, with its well-composed vistas that include bodies of water, flowing grasses, and background trees.

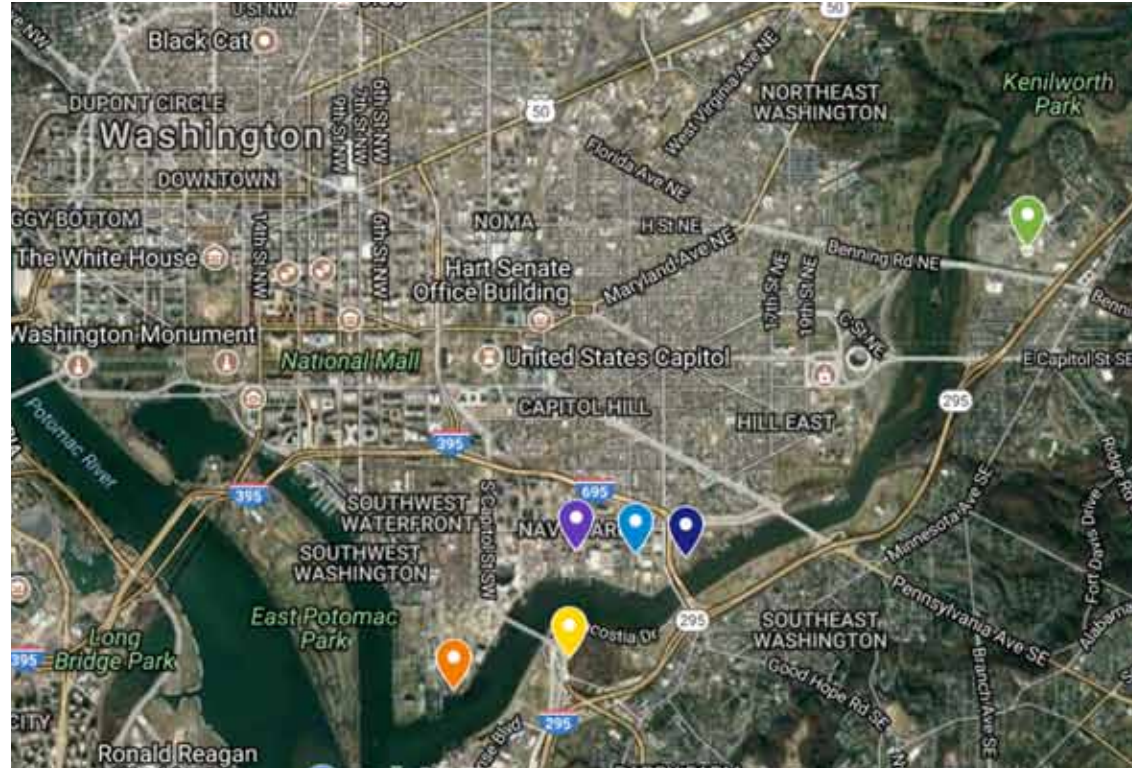
While Haag intentionally leaves his landscapes almost "as-is," Turenscape reuses and reorganizes industrial leftovers and transforms them into other site elements while also employing new methods of treating pollution on the site. Both of these approaches unquestionably colored my design decisions throughout my thesis and thus are present in my final design.

“Deep time—the ‘longue duree’, the thickness of time—is embedded into spaces and surfaces...The relationships between destruction, regeneration, creation, decay, and decline are intertwined and entangled. This project is a time keeper, a time capsule, a time bomb.”
(Meyer 20)



Sublime vs. Pastoral (left-right): Gas Works Park, 19th Century Paintings of Sublime Landscapes
Shanghai Houtan Park, 19th Century Paintings of Pastoral Landscapes

Site Selection



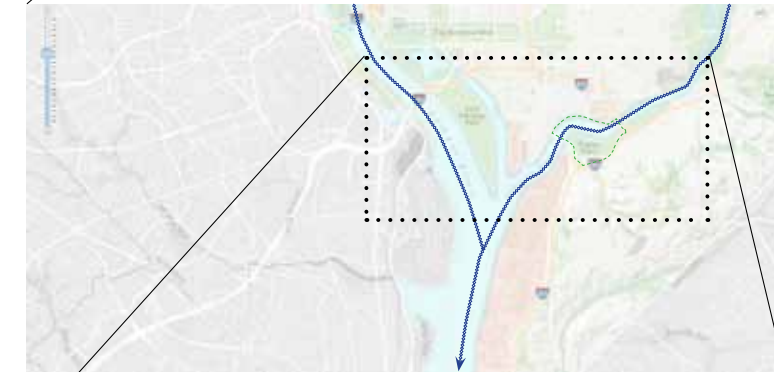
Toxic Sites Along Anacostia River

- Pepco Benning Road
- Poplar Point
- Kenilworth Landfill
- Washington Navy Yard
- The Yards
- Washington Gas and Light Company
- Buzzard Point

I began the site selection process by looking at sites listed on the DC government website as part of the Remediation and Site Response Program, which identifies contaminated District land. By studying how each of the sites fit the criteria I created, my choice was eventually narrowed down to Poplar Point, which is part of Anacostia Park in Southeast DC, one mile upstream from the confluence of the Anacostia and Potomac Rivers.



Washington DC



Southeast DC



Confluence of the Anacostia and Potomac Rivers

Criteria:

- a site in the DC area that needed to be remediated
- a site that is currently forgotten or unused and needs to be reclaimed by the city
- a site that has existing structures that can be reused to display the sublime beauty and history of the site
- a site located on a river so the water can be constantly cleaned (to continue the cleaning process after the site itself is remediated)



Poplar Point

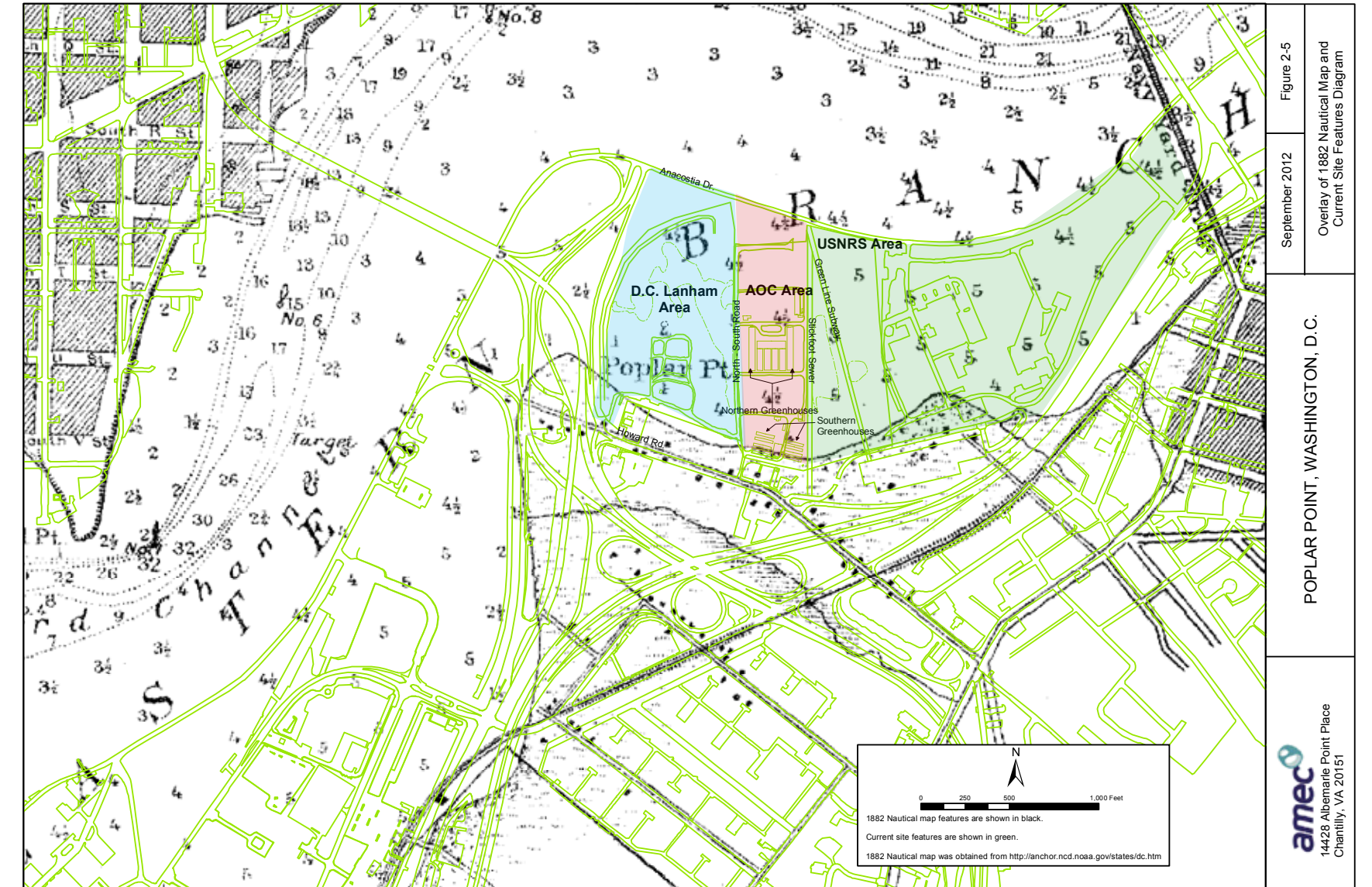
Site History

Nearly all of the land that currently makes up Poplar Point was originally part of the Anacostia River (as shown on the map to the right). The site was expanded between 1882 and 1927 by infilling the tidal marshes along the river with dredge material, creating the current 96 acre site. Although the purpose of the infill was originally to prevent mosquito breeding and to create a vehicle-accessible park, the site was quickly delegated for other uses.

Poplar Point has historically been divided into three separate parcels. The Western-most portion of the site was occupied by the DC Lanham Tree Nursery (DCL) from 1927 until 1993, from which many of DC's street trees were sourced. The middle portion of the site was occupied by the Architect of the Capitol (AOC) during the same time period. It housed pesticide storage structures as well as greenhouses used to grow tropical and subtropical plants. The Eastern parcel was occupied by the Navel Receiving Station (NRS) from the 1940s to 1960s and was then transferred to the National Park Service between the 1960s and 1980. The Green Line Metro tunnel, which cuts through the NRS site, was completed in 1990.

In 2006, Congress passed the DC Lands Act, which directed the United States to transfer federally-owned Poplar Point to the District of Columbia. This transfer has not yet taken place, but the Act includes three important stipulations:

1. 70 acres of the site must remain park land
2. Existing or replacement facilities for the National Park Service must be identified
3. At least two sites in Poplar Point must be designated for commemorative works



Poplar Point Map, Before and After Infill

DC Lanham Architect of the Capitol (AOC) Naval Receiving Station (NRS)

Current Conditions

Although the National Park Service still operates on the NRS portion of the site, both the DCL and AOC parcels have been abandoned since 1993. The former greenhouses and nursery buildings are now dilapidated and considered unfit for occupancy. The grounds have been largely reclaimed by nature as vegetation has been able to grow undisturbed for nearly 20 years. The site includes a variety of wetlands, meadows, scrub plants, and willow thickets that create a unique habitat for plants and animals.

Stickfoot Creek is another feature on Poplar Point that runs between the NRS and AOC parcels from the south end of the site to the north end, where it outfalls into the Anacostia River. The headwaters of the creek are unknown and the creek is often referred to as the “Stickfoot Sewer” because it is currently buried in a concrete pipe. The exact rerouting of the creek and construction date of the 10-foot-by-10-foot underground pipe is unknown, but it was likely before 1942 (Final Conceptual Remedial Investigation Scoping Document 113).

Environmental investigations that examine the site for potential pollution have been ongoing at Poplar Point since 1981. Pollutants and contaminants have been discovered across Poplar Point and in Stickfoot Creek. These contaminants are thought to be sourced primarily from the previous activities on the site, with potential additional contaminants from the dredge material that was used to fill the site. The pollutant types include:

- Petroleum, Hydrocarbon, and VOC
- PCB and Dioxin
- Chlorinated VOC and Solvent
- Metals Source Areas
- Munitions and Explosives of Concern
- Pesticides and Herbicides

The most recent soil and groundwater samples were taken from the site in 2001. Although at that time it appeared that most contaminants were only detected in the surface soil and not in the groundwater, nearly 20 years have passed, and the severity of contamination is now unknown. However, in order for Poplar Point to be safely developed and occupied in the future, it is necessary for the site to undergo remediation efforts.



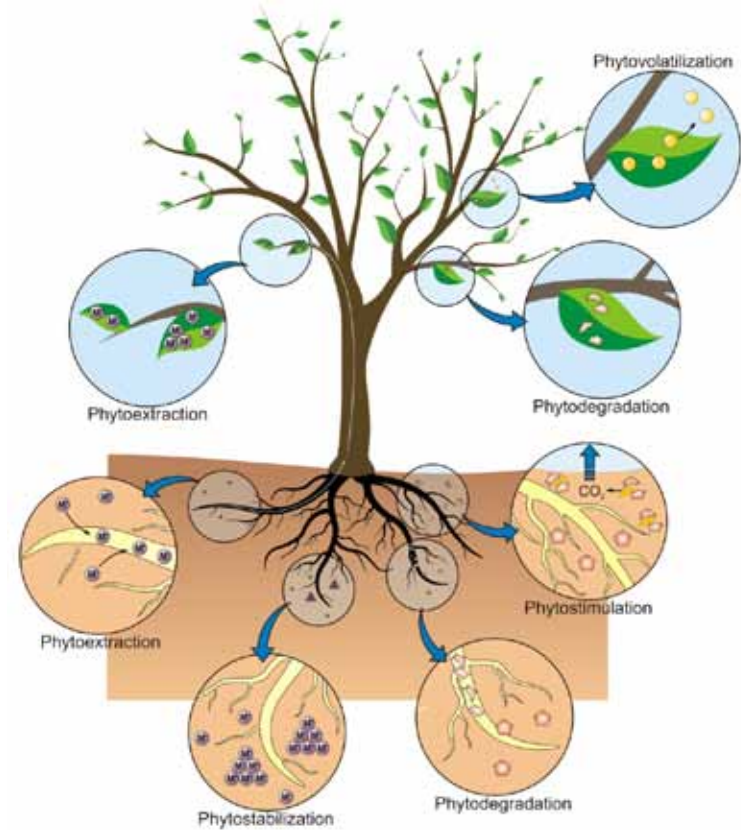
Poplar Point Current Conditions

Current Conditions



Photographs of Current Site Conditions

Phytoremediation



Phytoremediation Diagram

“I never fuss about dirt in its pure state and when I know what sort it is...”
(Douglas 8)

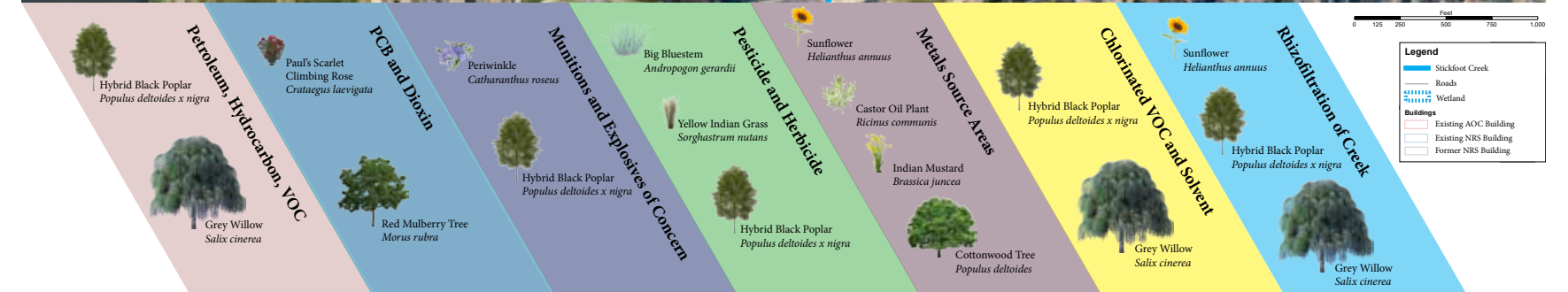
There are many ways to remediate a contaminated site. The two most common methods involve digging up the contaminated soil and either taking it to a separate location to clean it and then return it to the site, or taking the soil directly to a landfill. These options are typically selected due to time constraints, but both are extremely invasive.

Phytoremediation is another way to treat contaminated sites. It is often much cheaper than the aforementioned options, but requires a significantly longer time span to cleanse the soil. Depending on the size of the site and the severity of pollution, this process can take anywhere from 1-30 years. While many plants would die from being exposed to toxins in their soil, some varieties of plants are able to not only resist becoming contaminated, but can effectively clean the soil around them. Phytoremediation works by using these specialized plants to absorb or break down contaminants from the surrounding soil and groundwater.

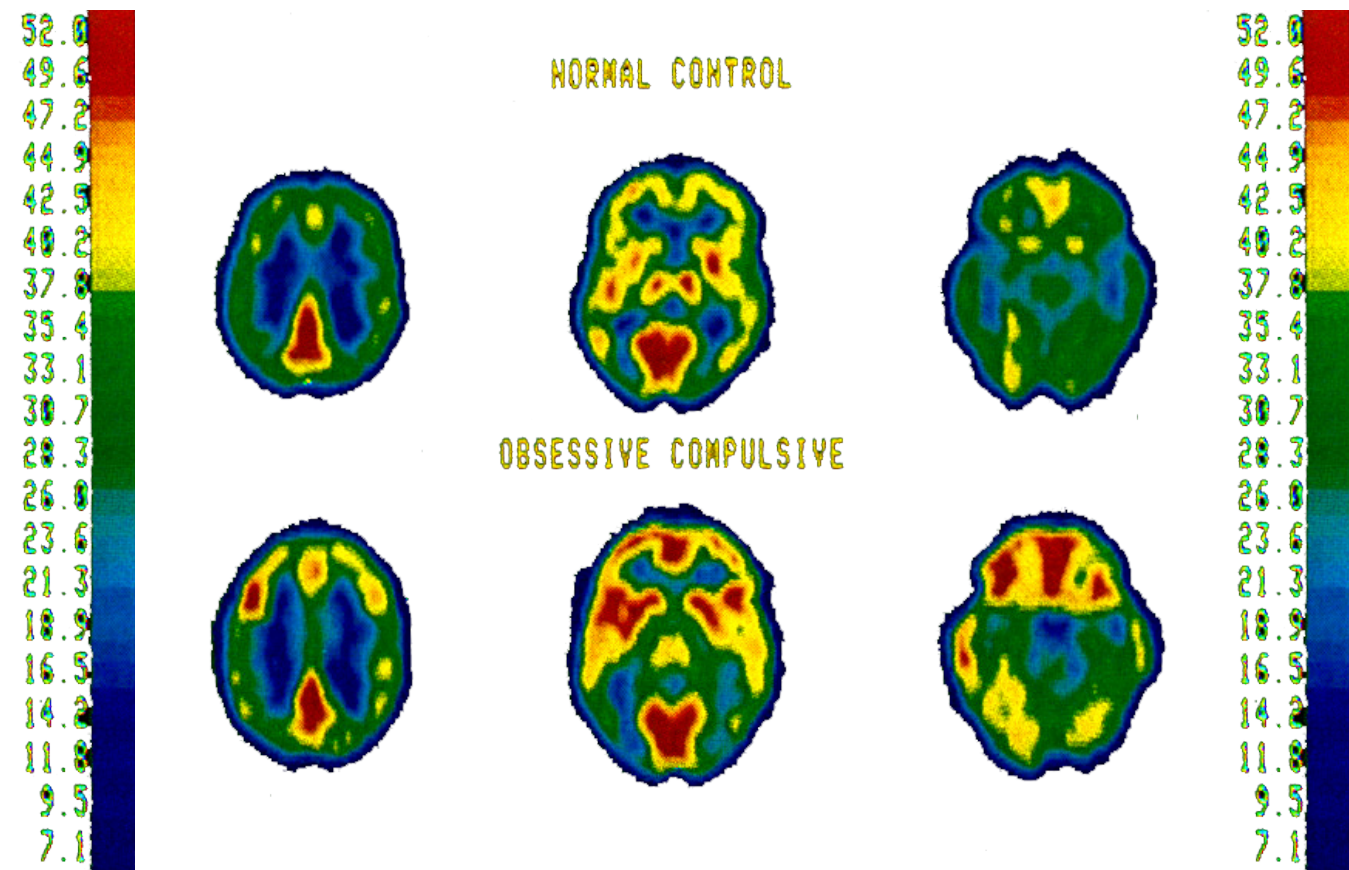
An additional type of phytoremediation, called rhizofiltration, is used specifically to treat water by naturally filtering it through a plant’s dense root system. Therefore, while phytoremediation is used to treat the site’s soil, rhizofiltration can be used to treat the water in Stickfoot Creek.

By researching the pollution on Poplar Point, I was able to identify the locations of each type of pollutant on the site, as well as the specific plants that are best-equipped to remove each pollutant (as seen in the image on the right). Based on the latest available data from 2001, this thesis assumes that the phytoremediation of Poplar Point would take approximately three to five years.

Phytoremediation



Poplar Point Phytoremediation Map



Positron Emission Tomography (PET) Scans

OCD and Therapy

Obsessive-Compulsive Disorder (OCD) is an anxiety disorder that affects 1 in 40 people in the United States. It equally affects men, women, and children of all races, ethnicities, and socioeconomic backgrounds (“Facts about Obsessive-Compulsive Disorder”). OCD is often stereotyped, belittled, exaggerated, or mistaken in popular culture and often (mis)used as a punch line. This even exists within the architectural profession, in that many architects joke that they have OCD because they are so perfectionistic and detail-oriented.

However, as people who actually have obsessive compulsive disorder know, it can be extremely debilitating. OCD is defined by a pattern of unreasonable thoughts and fears (obsessions) that leads one to do repetitive behaviors (compulsions). These obsessions and compulsions interfere substantially with daily activities and cause significant distress.

Examples of obsessions include:

- Constant, irrational worry about dirt, germs, or contamination.
- Excessive concern with order, arrangement, or symmetry.
- Preoccupation with losing or throwing away objects with little or no value.
- Excessive concern about accidentally or purposefully injuring another person.
- Distasteful religious and sexual thoughts or images.

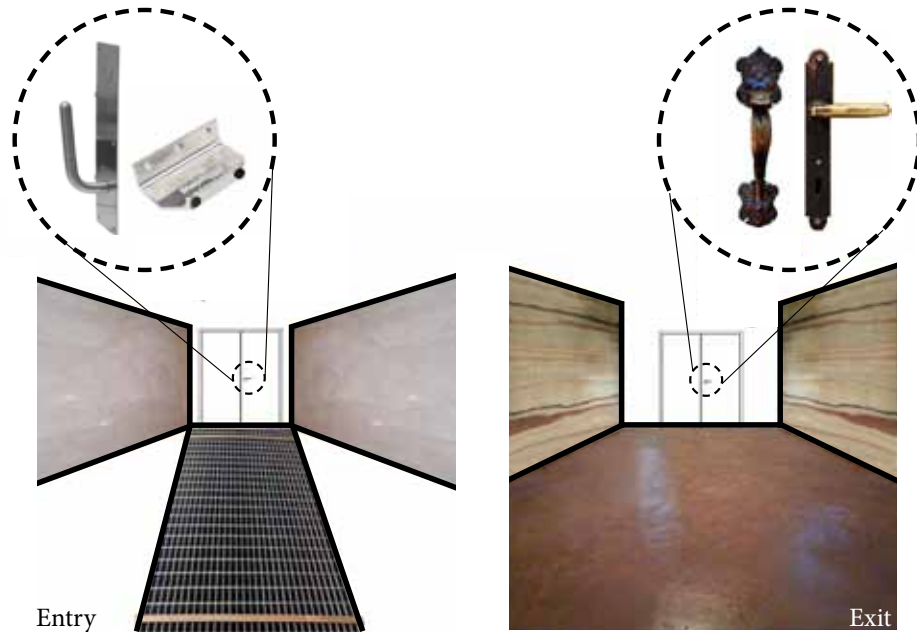
Examples of compulsions include:

- Cleaning — Repeatedly washing hands, bathing, or cleaning household items, often for hours at a time.
- Checking — Checking and re-checking several to hundreds of times a day that the doors are locked, the stove is turned off, etc.
- Repeating — Inability to stop repeating a name, phrase, or simple activity.
- Hoarding — Difficulty throwing away useless items such as old newspapers or magazines, bottle caps, or rubber bands.
- Mental rituals — Endless reviewing of conversations, counting, or excessive praying or use of special words.

(“Obsessive-Compulsive Disorder, OCD”)

The most effective treatment for OCD, according to experts, is a type of cognitive behavioral therapy known as Exposure Response Prevention. This type of therapy involves a process of exposing patients to their fear in a safe and comfortable way that begins mildly, and builds in difficulty over time. Exposure response therapy helps patients learn to prevent their compulsive response when it is triggered. Over time, repeated exposures can lower the patient’s anxiety and diminish the intensity of the fear.

Process Work | A Sampling



Digital Collages (left-right):
Building and Geothermal Sections, Entry and Exit Materials, Ramp Detail

OCD TREATMENT CLINIC
1900 Anacostia Dr,
Washington, DC 20020

Date of Exam: 5/18/2024
Time of Exam: 1:30 PM

Patient Name: **Dunning, Frank**
Patient Number: **1057201**

PROGRESS NOTE

History: Frank is one of our first patients at our recently completed **Inpatient Residential Treatment Program**. Although only 10% of OCD sufferers require 24 hour assistance, we are happy to be welcoming him and our other patients who are struggling at this most severe level. Like all patients, Frank will have his own room at the treatment center during his stay and will participate in both individual and group therapy sessions.

Mental Status: Currently, Frank is experiencing extreme obsessions regarding fear of contamination, morality, order, and losing control. He is exhibiting constant compulsions such as repetitive washing and cleaning, repetitive physical movements, repetitive checking, and repetitive praying and counting.

Level of Care Justification: Frank needs to be admitted to the Inpatient Residential Program because he is being plagued by so many obsessions and compulsions that he is not able to function at work or in his relationships.

Content of Therapy:

Morning	Afternoon	Evening
Vitals/Weights; Medications	Individual Therapy	Goal Review Group
Exposure Response Prevention	Horticulture/Music/Art Therapy	Supervised Assignment Work
Daily Living Skills Training	Community Outing	Community Integration Activity

In addition to the individual sessions with the psychiatrist and other treatment team members scheduled throughout the day and week, residential counselors will be available 24 hours a day on each unit. The residential counselors will provide assistance and one-on-one support for Frank on treatment compliance, setting daily goals, problem solving, feelings identification and other issues that are part of each Frank's treatment plan and outlook for recovery.

Therapeutic Intervention: Frank will live at the OCD Center and participate in structured programs 7 days a week for approximately 60 days or until his anxiety is reduced by at least 50%.

OCD TREATMENT CLINIC

1900 Anacostia Dr,
Washington, DC 20020

Date of Exam: 7/22/2024
Time of Exam: 3:50 PM

Patient Name: **Dunning, Frank**
Patient Number: **1057201**

PROGRESS NOTE

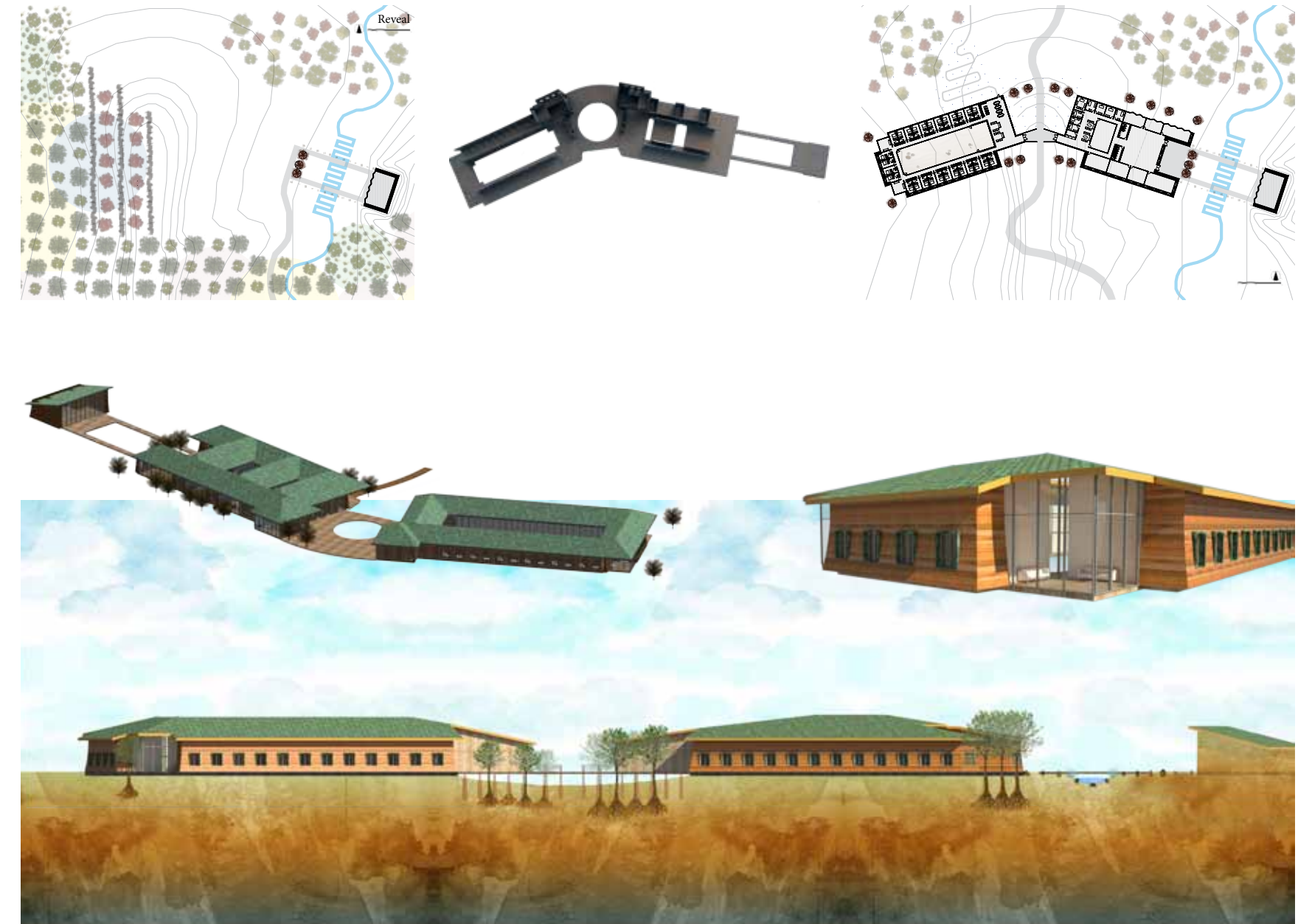
History: Frank has recently completed our intensive inpatient program and has now begun our transitional **Partial Hospitalization Program**. As he has progressed through his treatment, we have similarly progressed through our clinic construction and are happy to have opened this wing to help our patients' transition back to the challenges of life outside of the Center.

Mental Status: Frank's obsessions and compulsions have reduced drastically. However, he is still having trouble overcoming his obsessions regarding mortality and order. Several of his repetitive behaviors are still exhibited on an hourly basis.

Level of Care Justification: Although Frank has experienced a few setbacks, his anxiety is largely reduced and he no longer needs to be in the Inpatient Residential program. He is ready to shift to our Partial Hospitalization program in order to increase his independence and decrease the amount of assistance he receives.

Content of Therapy: Like many of our patients, Frank seems to have benefited most from Exposure Response Prevention therapy as well as our experimental therapies through horticulture, art, and music. These will be continued along with increased community outings and daily skills training to help with his upcoming transition.




Therapeutic Intervention: Frank will attend our treatment program five days per week, six hours a day, for approximately four to six weeks.



Hand Sketches, Physical Model, and Digital Collages (left-right):
Renditions of Building Floor Plans, Digital and Physical Process Models, Exterior Corner Rendering, Elevation-Section

Final Design Overview

After completing my semester of research and process work to develop the design of the site and building, I arrived at my final design. My thesis involves three intertwined scales: *patient*, *site*, and *building*. Because both therapy and site remediation are processes that occur over an extended period of time rather than all at once, this idea of “process” is embedded throughout my project. To that end, each scale is broken down into three categories, or steps of the process:

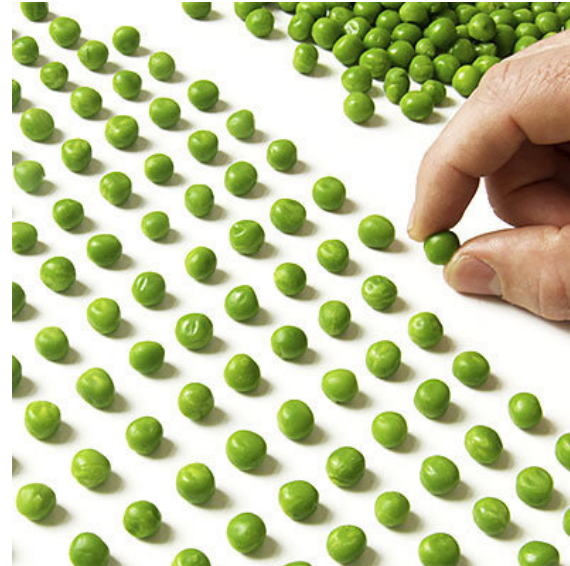
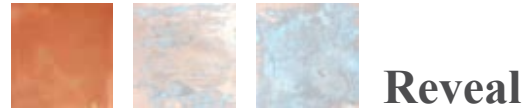
-  **Reveal**
-  **Redefine**
-  **Reclaim**

Patient



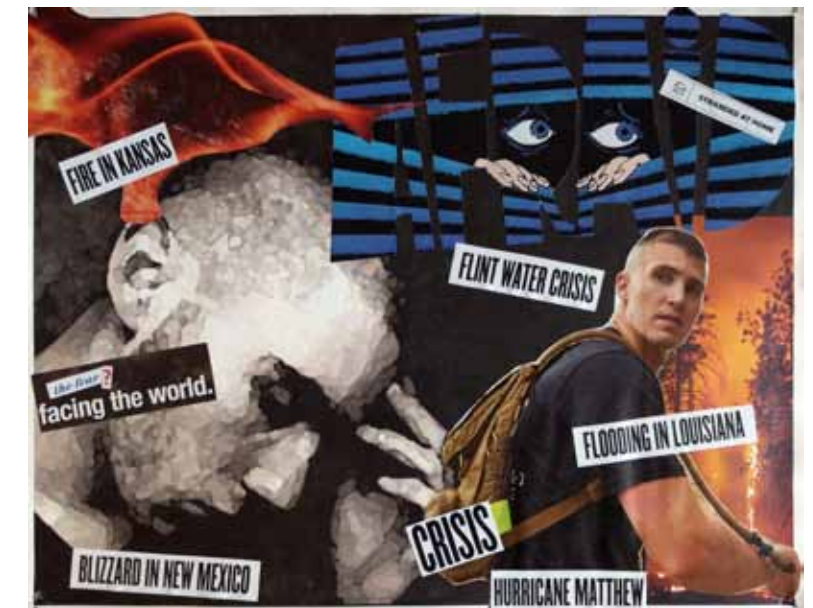
OCD is Indiscriminate of Age, Race, Gender, and Socioeconomic Status

Patient



What its like to have OCD (left-right):
Lost in the Crowd, Surrounded by Thoughts, Extreme Organization

Unlike physical ailments which are visible and more easily understood, mental disorders are often overlooked or ignored. This causes many people with OCD to suffer in silence, rather than pursue therapy. However, since this is a disorder that affects millions of people, we need to acknowledge it as a serious and treatable neurobiological problem. Only by revealing this truth can we empower patients to get the help they need.

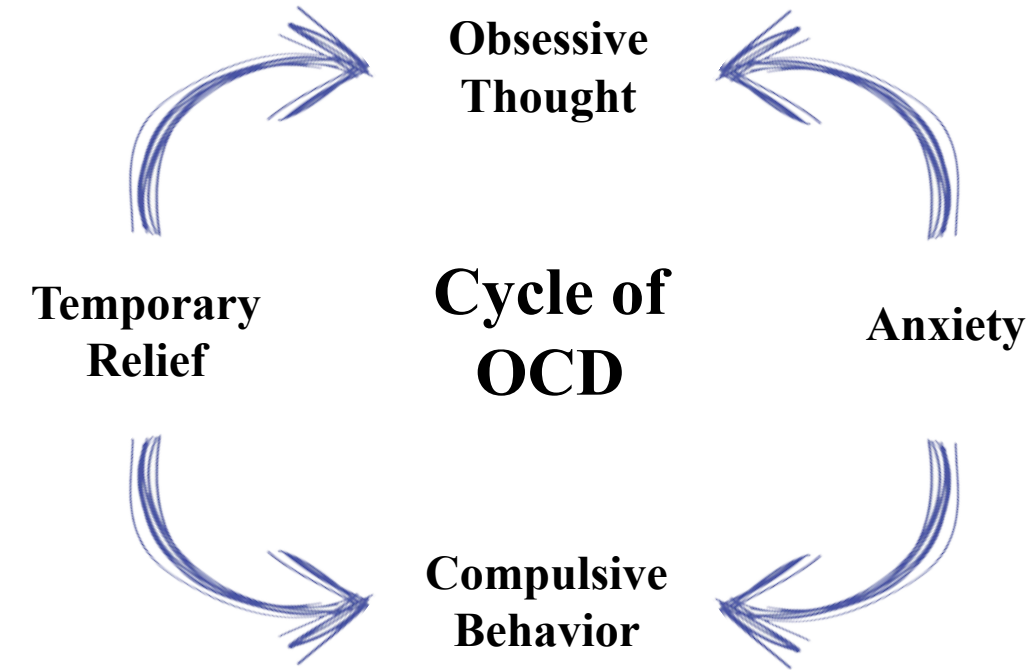


Multimedia Collages of OCD Symptoms (left-right):
Organization, Fear of Self Harm, Cleanliness, World Crises

Patient



Redefine



For patients who need to live at the rehabilitation center, we will provide structured programming seven days per week for an average stay of 60 days. Here is what a typical day of therapy looks like:

Morning

- Vitals/Weights; Medications
- Breakfast
- Exposure and Ritual Prevention

Afternoon

- Lunch
- Cognitive Restructuring
- Experiential Therapy
- Supervised Assignment Work

Evening

- Dinner
- Goal Review Group
- Supervised Assignment Work
- Daily Living Responsibilities or Community Integration Activity

Studies show that the most effective treatment for OCD by far is Exposure Response Prevention or ERP. ERP helps you progressively confront OCD through gradual and repetitive exposure to a feared situation while avoiding the impulse to use a compulsive behavior. Eventually, with enough practice, patients can learn how to redefine their fears and reduce their anxiety without performing compulsive actions.

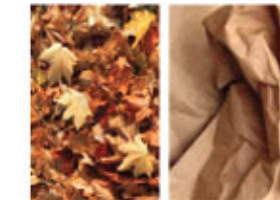
Because I want the patients to have the chance to interact with dirt, nature, and the site as much as possible, one other main component of their treatment will be horticulture therapy. In addition, vegetables grown in the gardens will be prepared in the kitchen, and then compost from the kitchen will be used as fertilizer for the gardens. The effectiveness of horticulture therapy is now being shown through the design profession's new focus on biophilia. But it is also reminiscent of Olmsted's vision of landscape as a kind of therapy because it "employs the mind without fatigue."



Kitchen



Green Material



Brown Material



Compost Drum



Garden Tools & Shredder

Compost



Garden

Closed Loop System

Patient



Reclaim

Two main types of patients will use the rehabilitation center. The vast majority of people with OCD are fairly high-functioning, meaning that they are able to manage their work and relationships well enough to get by without round-the-clock care. These patients will visit the rehabilitation center anywhere from once every other week to multiple times per week, depending on their specific needs. The other approximately 10% of people with OCD experience much more severe symptoms. “These are individuals whose lives have basically stopped. They are being plagued by so many obsessions and compulsions that they’re not able to function in school or at work or in relationships and really just need assistance 24 hours a day to function” (“OCD and Anxiety”). These patients will live at the center for 30-60 days at a time, undergoing inpatient care. But overall, the goal for both types of patients is the same: learn to cope with OCD more effectively so they can reclaim and enjoy their lives.



Multimedia Collage of Benefits of OCD Therapy

Site



Google Earth View of Poplar Point

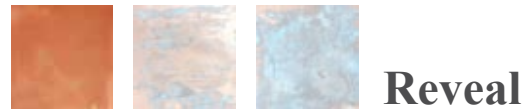
Current State

For the purposes of this thesis, my design will focus on the Southwest portion of Poplar Point, encompassing the former DC Lanham Nursery parcel and the former Architect of the Capitol parcel. These are the areas of Poplar Point that are currently unsafe to inhabit due to contamination and dilapidated structures, and can therefore benefit most from remediation and revitalization efforts.



Site Plan of Poplar Point Current Site Conditions

Site



Visiting the site today, it seems deceptively natural. Looking in from the edge of the site, it appears to be covered with trees and meadows. However, the soil is extremely polluted from past actions on the site. One of the only above-ground clues visible from the perimeter is the fence that surrounds the entire property, barring anyone from entering the contaminated area. As previously mentioned, historically, the Western portion was used as a tree nursery to grow the street trees of DC and the Eastern portion was used by the Architect of the Capitol to grow vegetation for the Capitol grounds. While neither of these sound like particularly nefarious activities, they left the soil polluted with numerous types of contaminants.



Multimedia Collage of Site Pollution

In order to reveal and then begin to treat the polluted site, several efforts will take place. First, the soil will be phytoremediated by introducing carefully selected plants that will remove the numerous types of pollutants on the site. Next, the wetlands around the site will be restored.

Finally, Stickfoot Creek will be revealed by removing the concrete tube and daylighting the creek. The creek bed will be designed with numerous remediation efforts such as a series of weirs to aerate the water, as well as deep pools to collect larger contaminants. The water will also be treated through rhizofiltration along the creek bed and in the wetlands. By slowing down the flow of the water through these multiple means, the goal is to cleanse the water along its path through the site so that it is clean before it enters the Anacostia river.



(Left-right): Reveal Phase: Site Plan of Poplar Point Changes, Weir Rendering

Near the south entrance of the site, visitors will walk along the creek until it splits into two, mimicking and acting as a miniature version of the confluence of the Anacostia and Potomac rivers, just a mile downstream.



Site



Redefine

Once Poplar Point's soil and water have been cleaned and the area is safe to inhabit, it will be necessary to address the leftover structures on the site. Learning from the earlier-mentioned precedent studies, I wanted to reuse and redefine the existing structures in order to display the "thickness of time" or the full history of the site. The greenhouses near the south entrance of the site would be cleaned to the point that they were safe (with no threat of collapse or sharp objects), but otherwise left to nature and converted into a ruin garden. Unlike most projects that simply level their sites, erasing the history and starting from scratch, walking through Poplar Point's ruin garden would immediately make visitors curious about the site's past.



Photographs (top-bottom): Current Site Photographs, Chanticleer Gravel & Ruin Gardens

The existing, albeit crumbling, road network on the site would also be partially restored and used as the main roadway during construction, in order to disturb the surrounding wetlands and phytoremediation process as little as possible.

Finally, the greenhouses in the center of the site would be rebuilt and restored, both for growing food and for aiding in the patients' horticulture therapy. Although other experiential therapies such as art therapy and music therapy would also be used at the center, the focus on horticulture therapy is especially important because it acts as another connection to the site's previous use as a nursery.

By using both the approach of restoring some of the greenhouses to their former glory and allowing others to celebrate their now ruinous state, the site's past, present, and future become intertwined.



(Left-right): Redefine Phase: Site Plan of Poplar Point Changes, Greenhouse Rendering

"The advantage of intentionally incorporating decomposition and weathering into design is that the building or landscape has an integrated flexibility to change over time...[This] provides a solution to the contemporary problem of making a building dynamic without actually making it move...[It] expresses temporal dynamism, both cyclical and accumulated."
(Hansen 208)



Site

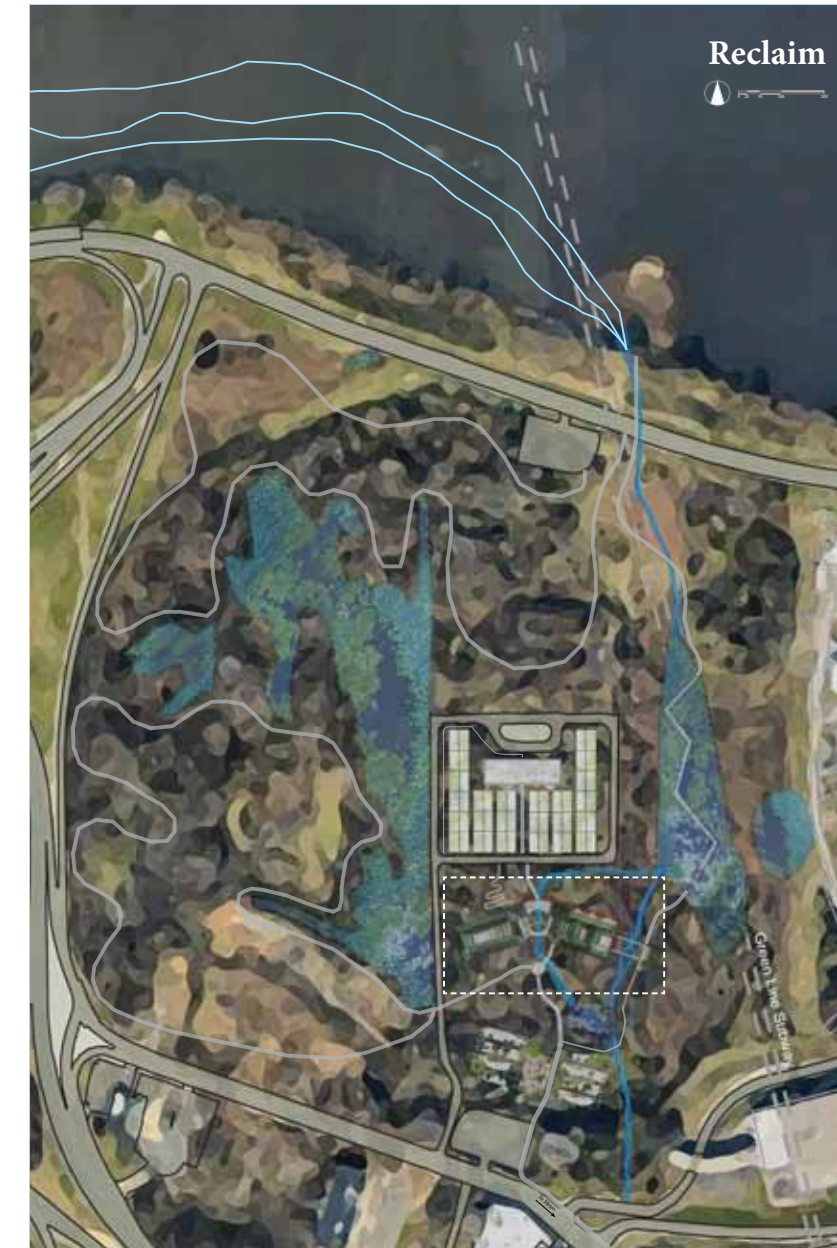


Reclaim

According to the park service and google maps, Poplar Point is presently considered part of Anacostia Park, which runs along the Anacostia waterfront. However, visitors who try to go to the site today will find this fact ironic, seeing as the entire Southwestern portion of the site is fenced off and inaccessible. Therefore, once the site is properly remediated, I feel a responsibility to make a large portion of the site accessible to the public once again so it can be reclaimed as part of Anacostia Park.

In this final phase of site design, a small parking lot would be added to the Northern edge of the site, as well as connections to existing pedestrian and bike paths along the Anacostia River. This would then be used as the main public entrance to the site, inviting visitors to explore the walking paths through the forested and wetland areas of the park. These paths would also connect to the visitor center (to be discussed in the upcoming “Building | Reveal” section) as well as the nearby Anacostia metro stop. These same paths could also be enjoyed by the patients at the rehabilitation center as a relaxing escape from the stresses of the city. The nearby metro stop would also be utilized by counselors to accompany patients into the city to test their stressors in real life situations.

The clean, accessible, well-connected land would then become infinitely more valuable and would be reclaimed as a part of the city by both visitors and patients.



(Left-right): Reclaim Phase: Site Plan of Poplar Point Changes, Visitor Center Rendering

Building



Physical Model Photograph
Materials used: 10 lbs of modelling clay, hand-patinated copper, copper tape, amaranth seeds, chipboard, basswood, foam core

Building Process

The building is arguably the most important part of my thesis because it is where the scale of the site and the scale of the patient connect. Since both OCD therapy and site remediation are processes that occur over a long period of time, I wanted to emphasize and mimic this by designing a rehabilitation center that not only embraces the building process itself, but is also constructed over many years, rather than all at once. This approach allows the building and site to be designed simultaneously. In many ways the building is not design *on* the site, but rather a reorganization of the materials *of* the site. By reusing dirt and trees from the site, the building and its site become one.



Step 1
Phytoremediation of soil
(3-5 years)



Step 2
Trees harvested for "crop rotation,"
non-toxic trees converted to
cross-laminated timber (CLT)
for columns and beams in building
(continual harvesting over 10 years)



Step 3
Daylighting of creek,
soil retained and
used as earth sheltering
for visitor center
(6 months)



Step 4
Digging for building foundation
and vertical loop geothermal pipes,
storage of dirt on-site to be used
for rammed earth walls
(1 month)



Step 5
Rammed earth walls mixed on-site
(with concrete from plant across river)
and set with temporary braces
(cure for up to 2 years)

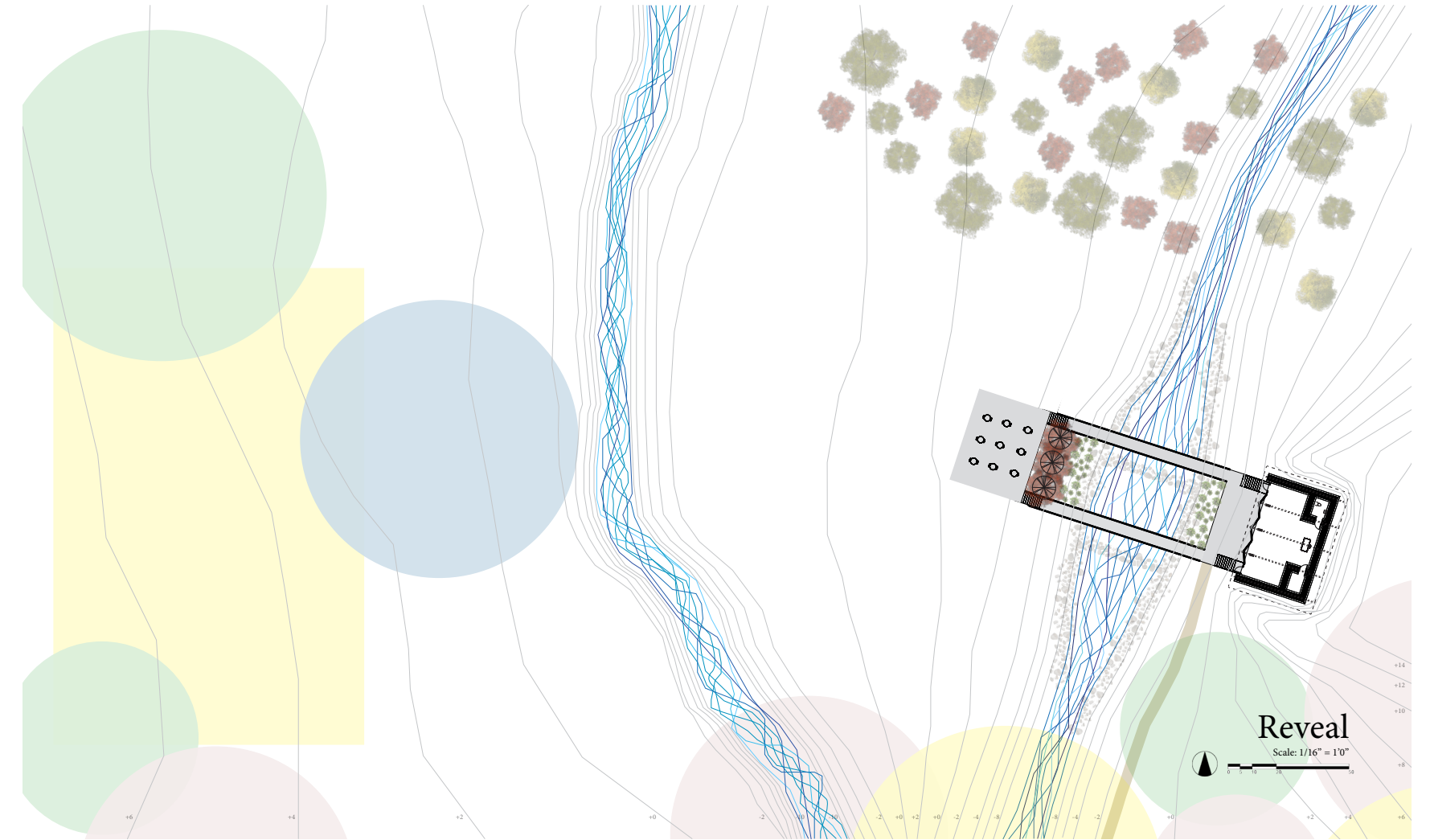
Building Process Timeline

Building



Reveal

Built first is a small visitor center. Its location on the site takes advantage of a small area of land next to the creek that does not need to be remediated. Designed as an earth-sheltered building, it demonstrates just one of the ways dirt can be thermally and economically productive. During the day, this space functions as a place visitors can explore while the site undergoes the remediation process. The center provides visitors with information about phytoremediation and the site's history. In the evenings, the space functions as a meeting place for OCD support groups (much like how AA meetings occur in churches or community centers). While the daytime function of the building reveals information about the health of the site, the nighttime function of the building reveals to OCD sufferers that by seeking support, they will discover that they are not alone.



Reveal Phase: Floor Plan of New Building Construction



Physical Model Photographs

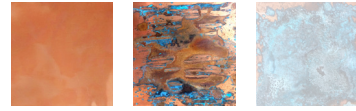


Weir Rendering



Visitor Center Rendering

Building

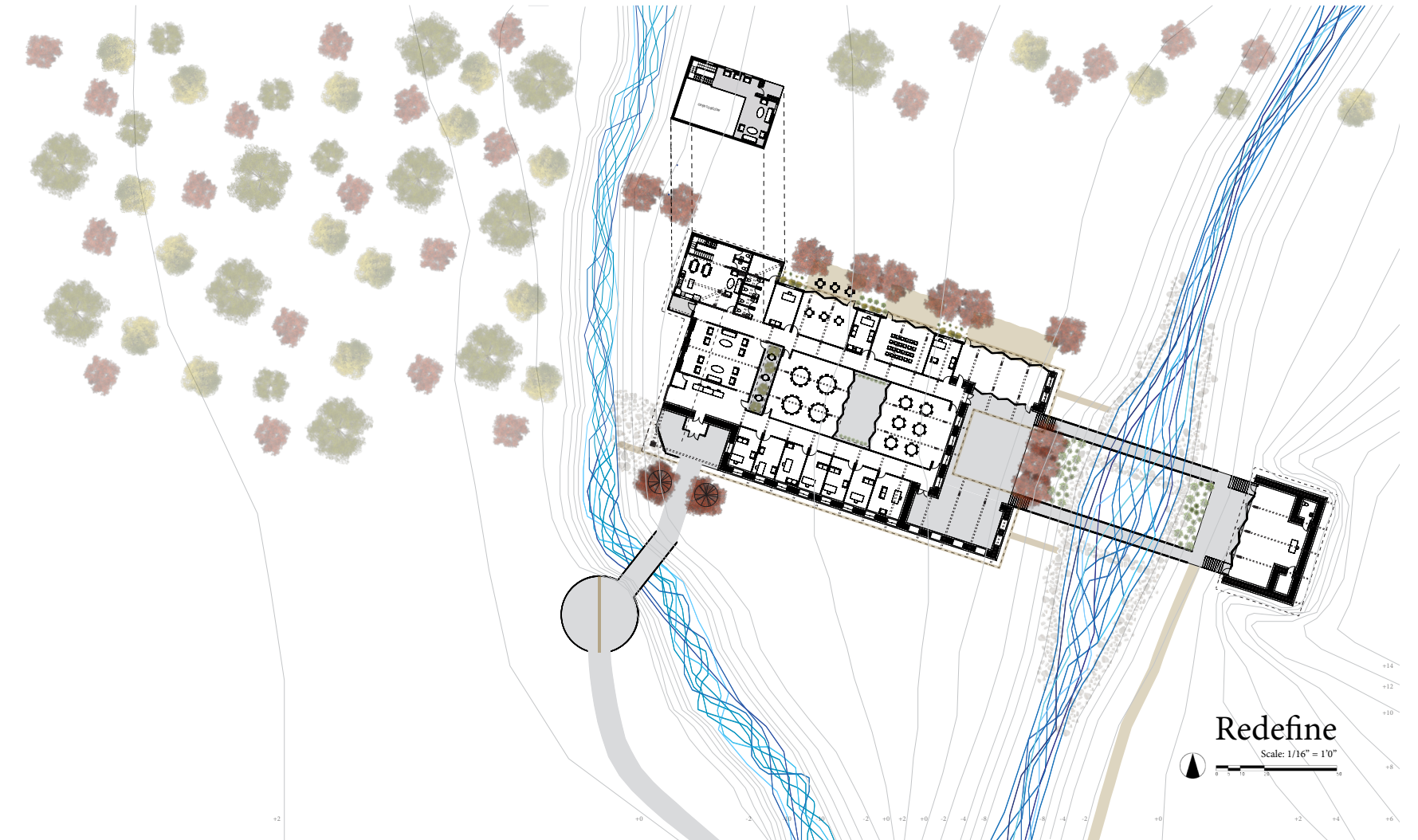


Redefine

The “therapy” wing of the rehabilitation center is constructed next in order to serve the majority of OCD patients who attend therapy biweekly (or more frequently). Upon entering the building, patients are greeted at the reception desk and directed to the waiting room. Depending on the type of therapy each patient is receiving, there are a variety of individual, small group, and large group therapy rooms. Several of the group therapy rooms on the northern face of the building also function as indoor/outdoor spaces due to the glass accordion walls that can be opened to reveal an exterior line of vegetation that creates new boundaries for the room.

On the northwest corner of the building, there is a break room for the counselors, along with a lounge space on the second level. Additionally, traveling from west to east in the therapy wing, patients see the three courtyards spread throughout the building; these courtyards increase proportionally in size to create a variety of uses and bring natural light into the center of the building. The first provides an intimate space where one feels as though he/she is standing inside a vegetated wall. The second can be used to expand two of the group therapy rooms into one large space in order to accommodate large events. The final and largest courtyard is an exterior space that is the same dimensions as the visitor center across the creek. In fact, when viewing the plan, the visitor center appears to be “pulled out” of the therapy building, slid along the paths, and set across the creek.

The southern-facing walls of the building are primarily three-to-four-foot-thick rammed earth walls, which act as thermal masses to keep the building cool in the summer and warm in the winter. Nearly every entrance or exit allows patients to cross through a thick rammed earth wall, making the presence of dirt palpable at each moment of transition. The immense thickness of the rammed earth walls also allow them to be “occupied” by sitting in the carved out benches at the entrance of the building. However, if a patient is just beginning his/her treatment and is uncomfortable with the thought of sitting on a dirt bench, the wooden walls along the west face of the building also have built-in benches where patients can seek a moment of comfort and refuge. These, as well as the northern-facing walls, are constructed out of weathered wood and their thinner profiles allow more natural daylight into the rooms.



Redefine Phase: Floor Plan of New Building Construction



Physical Model Photographs

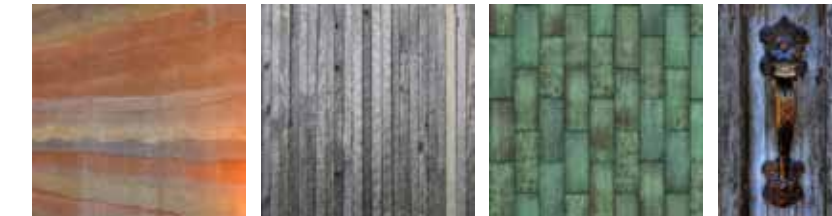
The rammed earth walls found throughout the building are slightly curved on both sides so as to be reminiscent of someone playing in the dirt and creating the wall with their hands.

HVAC systems in buildings (such as the ventilation duct shown in the image to the right) are normally hidden in floors or ceilings because they are thought of as “visual dirt” that should remain unseen. The HVAC systems at the rehabilitation center, however, will be made visible because they provide important information about the underlying order and inner-workings of the building.



The cross-laminated timber (CLT) columns (made from the trees on the site) as well as the wood siding, copper roof shingles, and brass door handles, will be purposely left to patina and weather. The weathering of a material emphasizes the passage of time by revealing its age. Weathering is also a process that occurs through physical or chemical changes that cause decay, deterioration, or discoloration. This will demonstrate that an aged, deteriorated, or weathered object can be more beautiful than the original.

“Weathering, as time and nature’s finishing touches to human works” (Matero 88)



(Top-bottom): Wall Section, Weathered Building Materials



Physical Model Photographs



Horticulture Therapy Greenhouse Rendering

Building

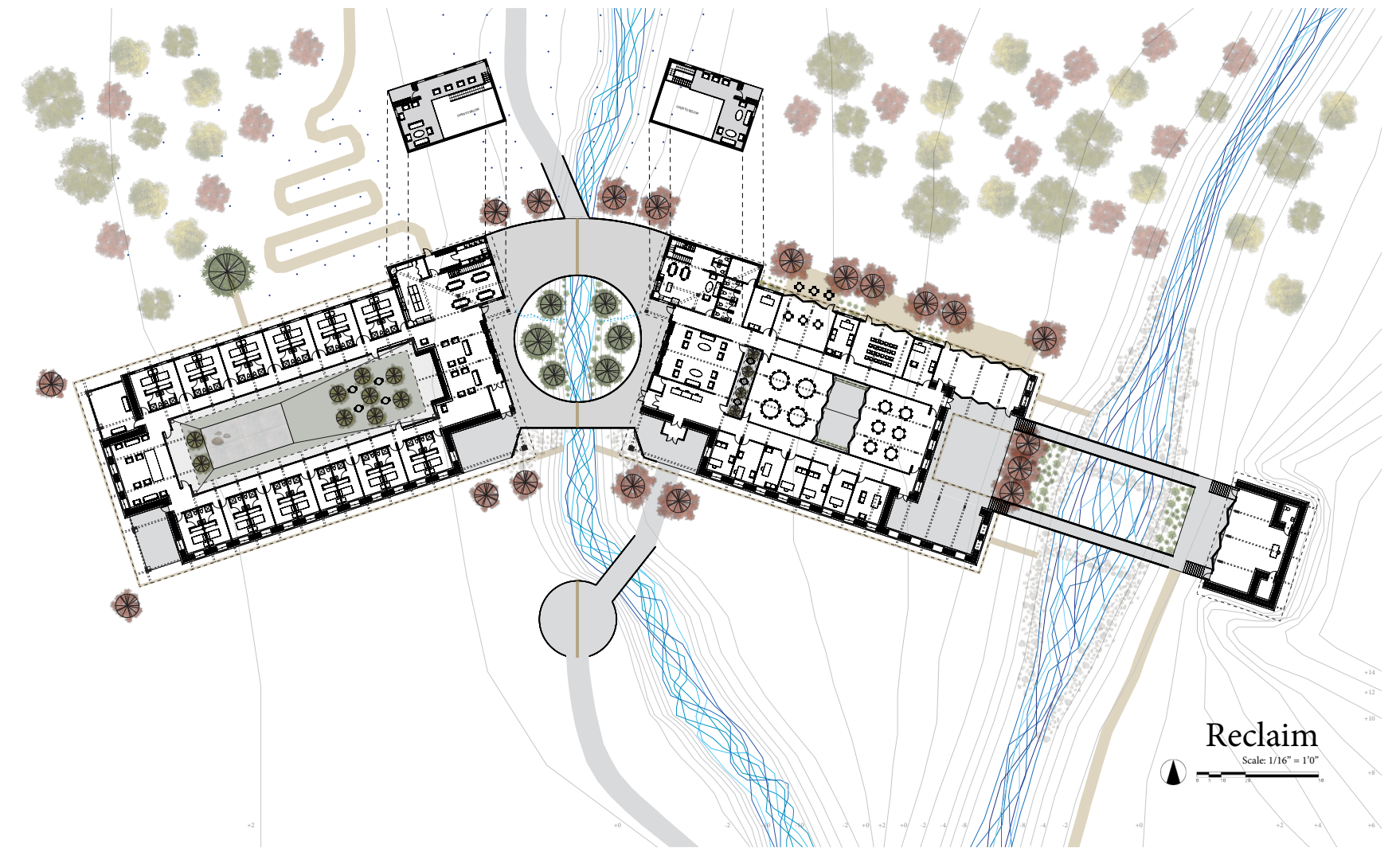


Reclaim

The final portion of the building is referred to as the “living” wing. This wing provides temporary living quarters for 20 OCD patients who need intensive round-the-clock therapy for a typical period of 30 to 60 days. To visitors entering the site for the first time, the living wing and the therapy wing of the rehabilitation center appear to be mirror images of each other. This creates an ordered environment that gives patients a feeling of calm and control because when things are in order, they know what to expect. The small round terrace along the entrance path is aligned with the central axis of the buildings and provides visitors a moment of pause to appreciate this order and symmetry. The central axis is marked not only by this specific view but also by a brass inlay in the decking of both the central courtyard and the round terrace.

However, upon spending more time in both buildings, the underlying disorder and differences will be revealed to the patients. For example, even though the front façade of both buildings appears to be identical, the easternmost part of the façade of the therapy wing is actually a covered exterior space rather than an interior room. The walls and window openings remain the same, but there is no glass, allowing fresh air to flow through. The trees associated with each building (such as those strategically placed at the entrance of the building, in the central courtyard, and marking the exterior corners of the therapy rooms) will also be planted upon the completion of each wing, further highlighting the differing ages of the buildings. This will lead an otherwise-ordered view to appear disordered, causing visitors to stop and ponder the noticeably different height of the trees.

Upon entering the living wing of the rehabilitation center, many patients will likely feel scared or apprehensive, so I designed their first view to be a unique bookcase that seems to reveal a secret garden behind it, distracting the patients through curiosity and wonder, even if only for a moment. The “secret” garden has areas for individuals or small groups to sit under trees or on the small lawn, walk around the covered perimeter while it is raining, and meditatively rake the Japanese dry garden. Facing both sides of the garden are the patient bedrooms that run along the northern and southern walls of the building. Patients in the southern rooms will have a rammed earth exterior wall with a built-in window seat. There are also gathering spaces of varying size throughout the building (including the secluded second floor above the kitchen) that allow patients the choice to be alone or among others.

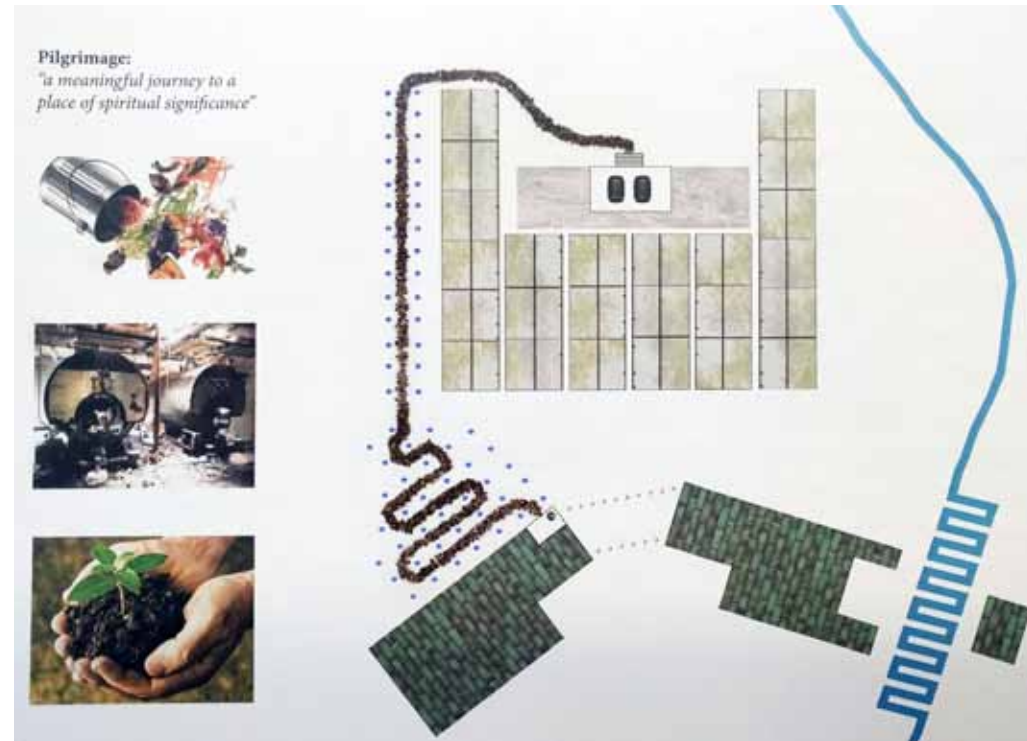


Reclaim Phase: Floor Plan of New Building Construction

The large kitchen is also a space used for cooking therapy that ties into the horticulture therapy in the greenhouses. Functioning as a closed-loop system, vegetables grown in the gardens are cooked in the kitchen, and then compost from the kitchen is used as fertilizer in the greenhouses. Compost is another great example of the productivity of dirt, because it uses worms and germs to transform something we consider to be waste into fertilizer. One other design element that highlights the value of dirt is the use of geothermal heating and cooling for the building. Since geothermal pipes are underground, they are often buried and forgotten about in day-to-day life. I wanted to make sure this didn't happen on my site. In each location where a vertical geothermal loop is buried, a blue light is placed on top, so each night the loops are highlighted in an artistic way. These lights are experienced each night when the compost is taken out along a path lit by the blue lights, becoming a ritual experience, or pilgrimage, for the patients.



“...it is the transformation of dirtiness that makes compost so interesting...‘germs’ make compost work. Their many tiny acts of consumption transform our waste into something cleaner... compost offers a different kind of cleanliness, one that makes the organic processes viable.”
(Braham 272-73)



(Left-right): Compost Process, Compost Pilgrimage



“Secret Garden” Bookcase Rendering

All of the water that falls on the site, whether on the ground, on the roof, or in the interior courtyards, is directed toward the creek due to the natural topography.

For both the interior-sloping roofs and the courtyard of the living wing of the building, all rainwater is guided toward the Japanese dry garden. The act of the water entering the garden will make it “messy,” giving the patients the occasion to rake straight lines into it once again.

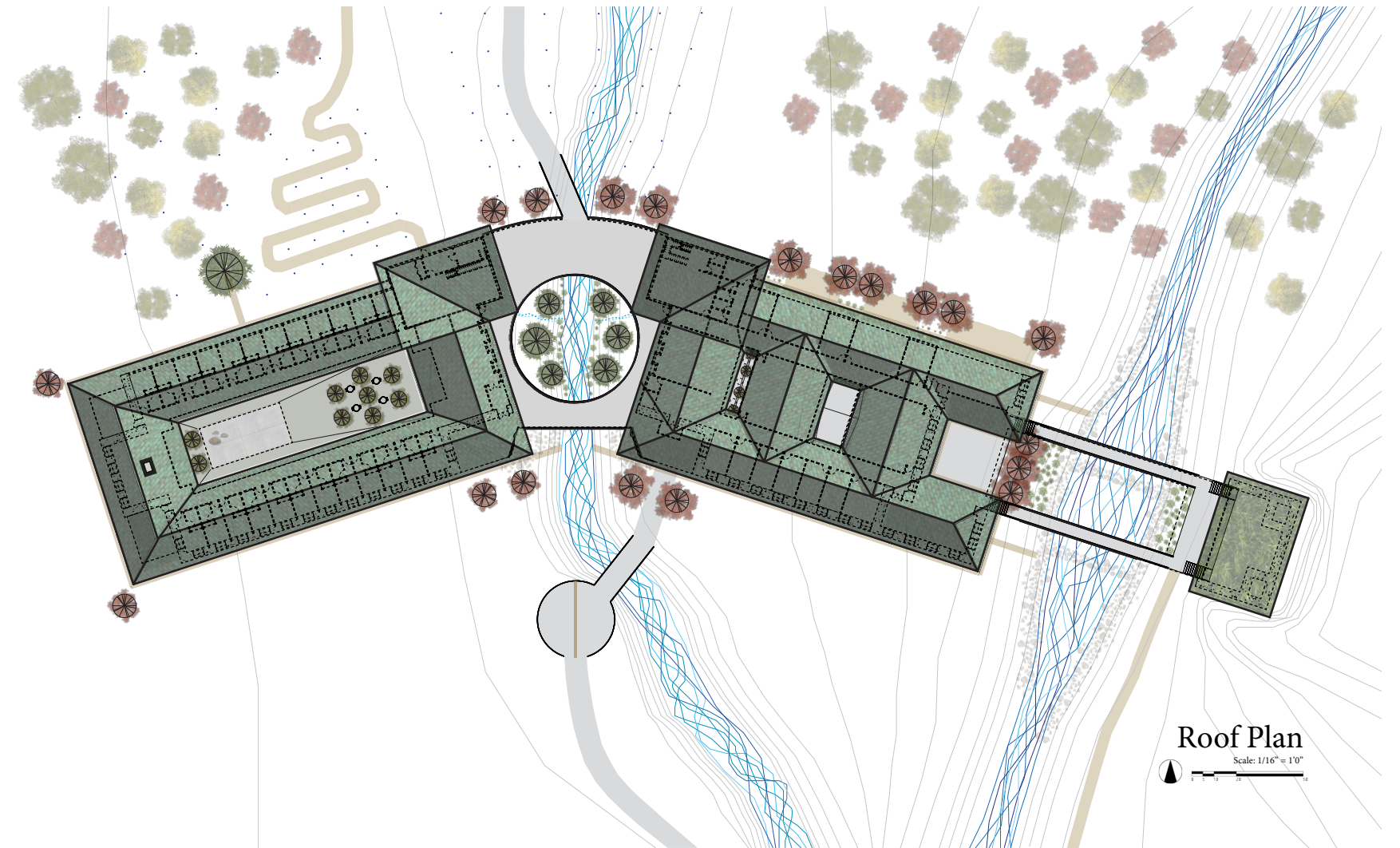
The courtyards in the therapy wing collect water and guide it toward their various plantings, either along the edges or down the center of the courtyard.



Wall Section with Rainwater

For any water that falls on the exterior-sloping roofs of the buildings, rainwater will be directed off the edge of the roof, to a copper gutter in the ground. These gutters encircle both buildings and terminate at the creek with one exception. The gutter on the north side of the living wing will direct all rainwater toward a single river birch tree near the ritual compost path.

The rainwater collected on the butterfly roofs will be allowed to freely fall off the corners protruding over the central courtyard opening, offering patients an experiential difference between the orderly gutters and disorderly free-falling water.



Roof Plan
Scale: 1/16" = 1'0"

Roof Plan

Elevations

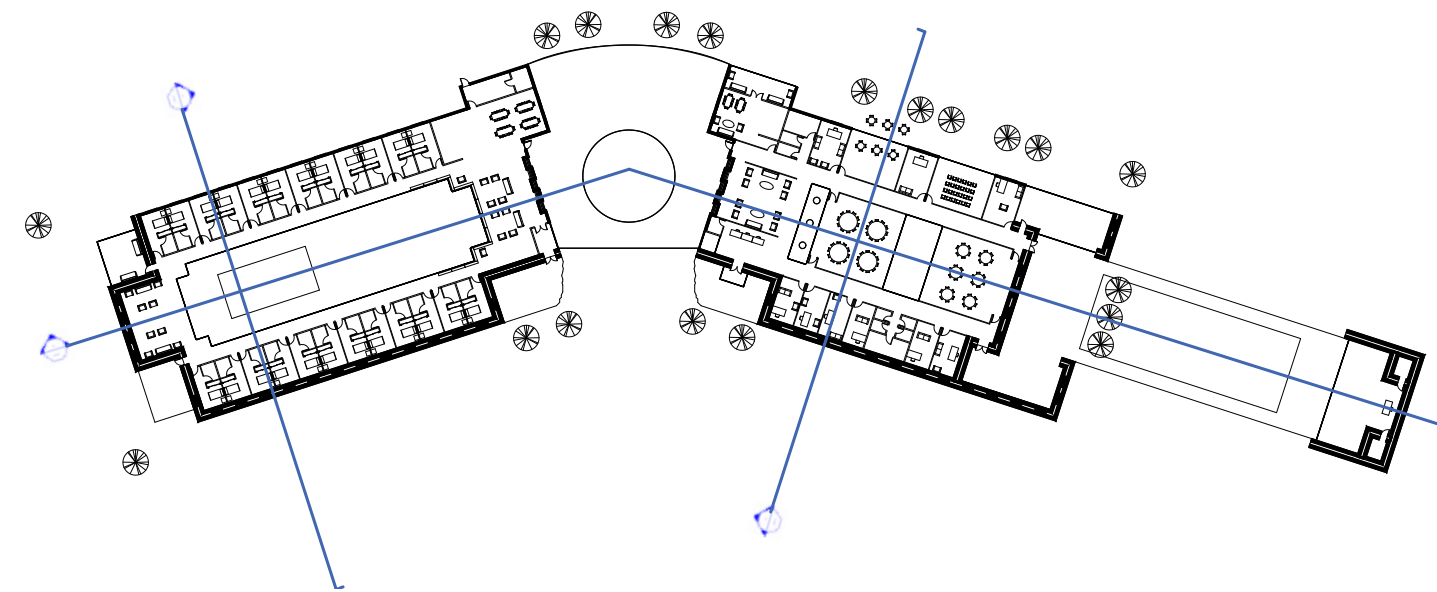
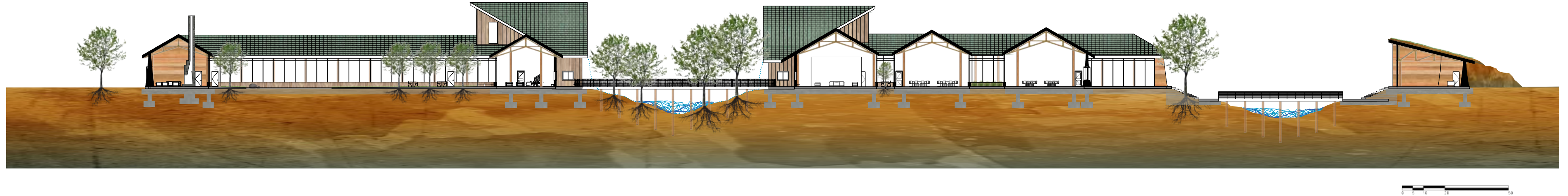


Front (South) Elevation



Back (North) Elevation

Sections

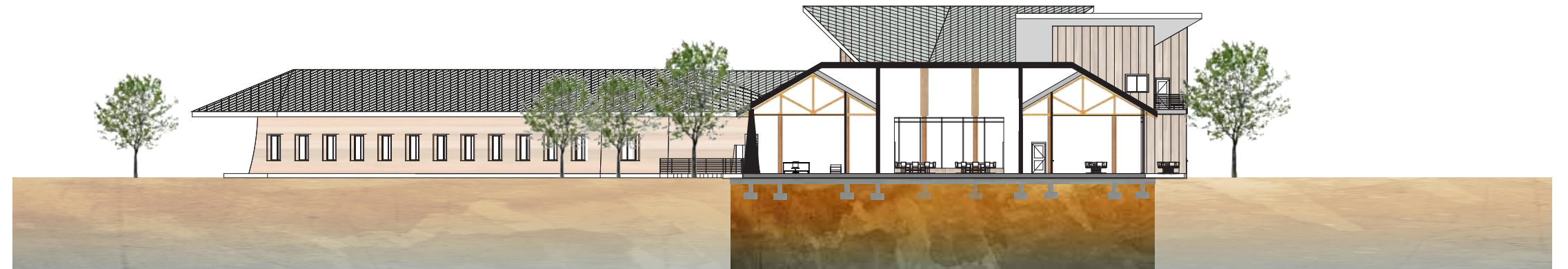


(Top-bottom): Full Building Section, Plan Key

This and the following building sections show, among other things, the varying types of trusses used throughout the building. This section displays the exposed scissor trusses used in the larger gathering spaces. Scissor trusses were specifically selected because the bottom chords are angled, emphasizing the height of the space. Inverted trusses were used to support the butterfly roofs of the double story areas in order to retain as much headroom as possible. For the visitor center, exposed mono-pitch trusses were used to allow the roof to taper naturally with the hillside created by the earth sheltering of the building. Finally (as seen on the following pages), howe trusses were selected to support the roof over the smaller therapy rooms and patient bedrooms. This allows a ceiling to be attached to the bottom chords of the trusses, creating a more intimate ceiling height for the smaller rooms. The portion of the howe trusses that extends into the hallway, however, is left exposed in order to establish a comfortable and regular rhythm for the patients as they walk down the hallways.



0 5 10 20 50



0 5 10 20 50

(Top-bottom): NE Section of Living Wing, NW Section of Therapy Wing

Graduation Ritual



Renderings (left-right): Creek Crossing, Graduation and Meditation Service

Upon completing the intensive inpatient program, a small graduation ritual would be held for participating patients. This would be celebrated by the ceremony of crossing the creek that is actively being cleansed, and then engaging in a graduation and meditation service held in the small building that normally acts as the visitor center.

OCD TREATMENT CLINIC

1900 Anacostia Dr,
Washington, DC 20020

Date of Exam: 9/03/2024

Time of Exam: 9:00 AM

Patient Name: **Dunning, Frank**

Patient Number: **1057201**

PROGRESS NOTE

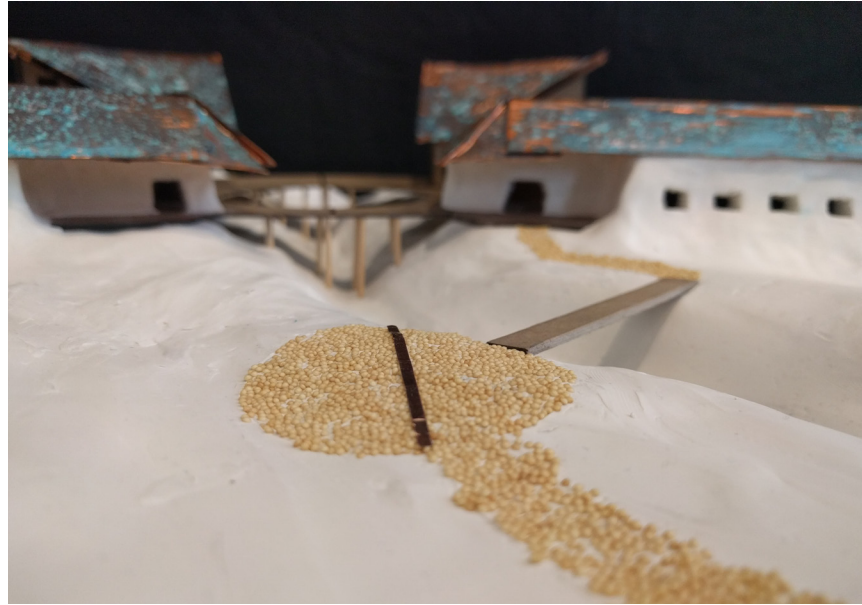
History: Today Frank has officially graduated from our inpatient treatment programs. Moving forward, he will have access to our **Outpatient Program** that will allow him (and more than two million American adults) access to a structured treatment program while also staying involved with work, family, and school commitments.

Mental Status: Frank has made significant progress since his original admittance. He is now able to hold a job and has developed meaningful relationships in his life. Although he experiences the occasional setback, his coping skills gained through the program have allowed him to manage his OCD much better on a daily basis.

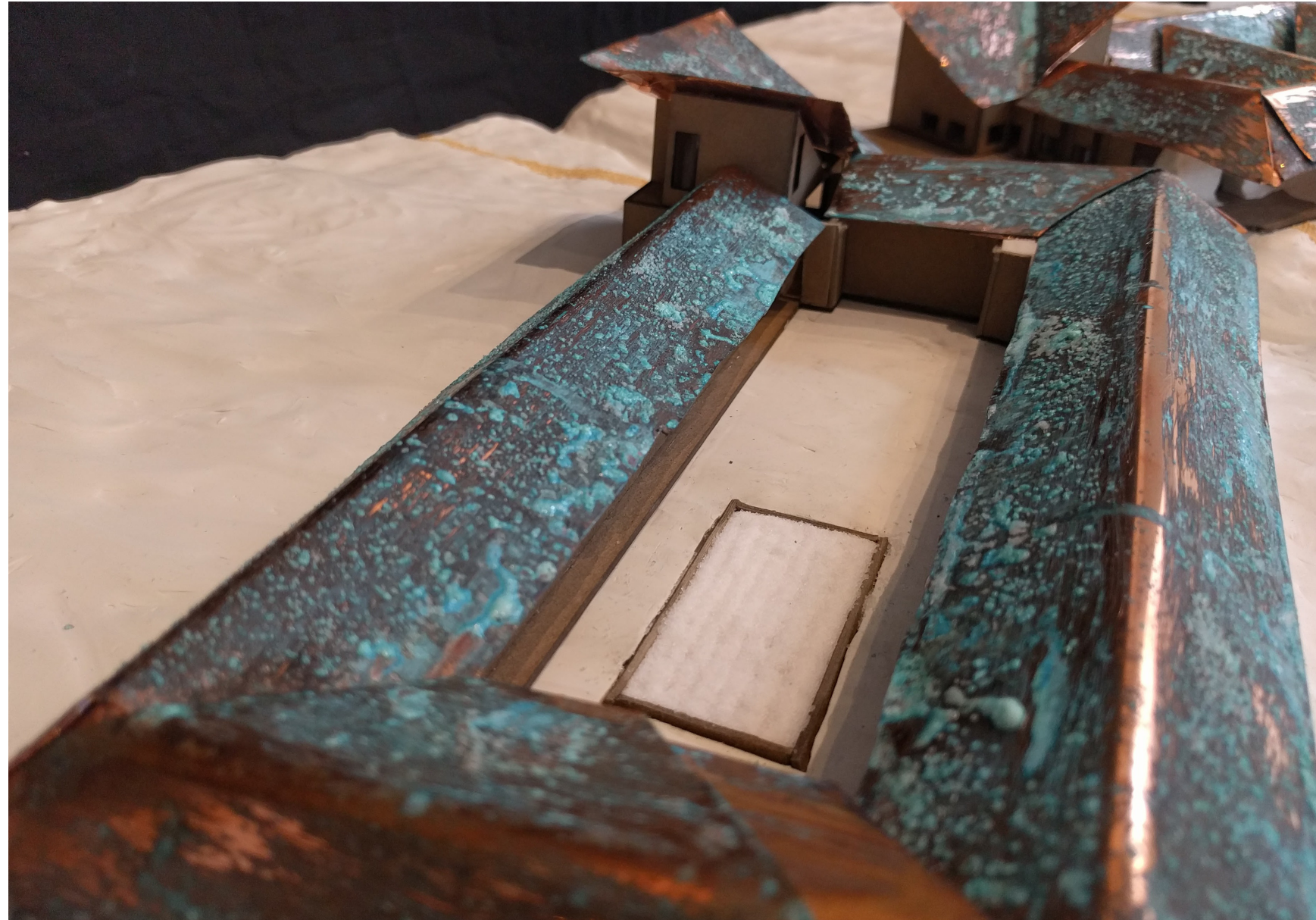
Level of Care Justification: Frank's increased independence should be celebrated by reassigning him to our outpatient program.

Content of Therapy: As Frank is now balancing this program with his daily life, his treatment will begin to focus much more on his obligations in his work and relationships through family therapy. However, other aspects of the treatment program (such as Exposure Response Prevention) will be continued as necessary.

Therapeutic Intervention: It is suggested that he attend treatment one to two days a week, as needed.



Physical Model Photographs



Physical Model Photographs



Thesis Defense and Graduation

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