

**AMONG THE RUINS:
Memory, Trauma, and a Residential Treatment Facility
for Posttraumatic Stress Disorder at Fort Casey, Washington**

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Abstract

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This architectural design thesis is shaped by the intersection of time, memory, narrative and contemporary construction and use in an encounter with military ruins. This thesis argues that ruins need not remain entirely sacrosanct, but rather can, with understanding and care, become sites partly occupied by present-day activity. In particular, present-day uses that focus on the past as well as the present and future can find appropriate placement in a site of ruins. Further, this thesis argues that contemporary interventions in such sites must recognize and protect multiple, nuanced understandings of a particular place and must emphasize multi-dimensional personal experiences rather than a single objective history or a singular formal analysis of such structures.

In this thesis, these themes are explored through the design of a residential treatment facility for individuals suffering from post-traumatic stress disorder. Sited in close juxtaposition to the military ruins of Fort Casey on Whidbey Island, Washington, the proposed facility seeks to provide a location for the exploration and reinterpretation of traumatic narratives. This program fits this site because healing from trauma requires acceptance and understanding of the past even as the patient prepares for a new future. Indeed, the acceptance and partial reframing of the ruins through design intervention thus becomes a metaphor for the healing process itself. In turn, the thesis project relies on two key bodies of theory: the first regarding ruins, and the second regarding healing. Both are discussed herein, along with their respective associations with memory and narrative. The project design that follows is thereby shaped, both in response to these theories, and in response to the specific site of Fort Casey.

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*For my grandfathers, whose lives were permanently affected by their military service
and whose quiet courage inspires me to face my own challenges.*

*And for my Maria, whose constant support and unending love encourage me to be
a better person and have made this project possible.*



Fig. 00 - Approach to Balfery Trevor

“Human memory, driven by emotional self-interest, goes to extraordinary lengths to provide evidence to back up whatever understanding of the world we have our hearts set on - however removed that may be from reality.

Consciously or unconsciously, we manipulate our memories to include or omit certain aspects. Are our memories therefore fiction?”

David Shields

PREFACE

00



Fig. 00.1 - My son, Eliot, playing with the flowers atop Battery Moore.

I was first invited to Fort Casey in June 2017. When my friends extended the invitation, they did so without discussing the site in much detail. Instead, they mentioned something about “an abandoned military site” and “architectural” something-or-other, and they had me hooked. When the day finally arrived for our trip, I remember feeling somewhat anxious about what I would find. Having never visited a decommissioned military site, my expectations were entirely founded upon what I had read about military ruins in my coursework. These articles often described both the “potential for violence...embodied in specific places and objects” and an ability for the scars of human hostility to remain present after many years of abandonment (Beard, 63).

When I arrived at Fort Casey, however, I quickly realized that there was a nearly complete disconnect between my preconceived notions of abandoned military sites and the experience of Fort Casey. Rather than any sense of ever-present aggression, I felt an overwhelming sense of peace. As I explored the site, my mind was drawn to what Ruskin described as the “superinduced and accidental beauty” of ruined architecture (Ruskin, 183). The ruins spoke more of romance, pathos and the passage of time, than of violence, and I found myself marveling at their sublime character.

The ruins of the former gun batteries proved to be only a small part of the site itself. Burrowed into the hillside, these concrete structures seemed almost to melt away into earth once I ascended

to the upper levels. Here the sound of waves crashing on the shore spoke of constancy through change, each wave different from the last but continuing an established rhythm. The water was ever-present, but always changing. Beyond the ocean, dusky blue mountains marked the horizon as a gentle breeze played in my hair. To my left, a path disappeared into a thicket of verdant trees and beckoned me into its quiet solitude.

It was here, in the dappled light of overarching trees, that the idea of this project first came to me. Within the chasm between what I had anticipated and what I actually experienced that afternoon a year and a half ago, I discovered questions regarding the reliability of memory, the subjectivity of narrative, and the influence of the past. This project is my response. I do not pretend to have answered every question that visit provoked; rather, this thesis offers a provisional answer to questions that I anticipate will underlie a life-long exploration.



“What interests me is the transformation, not the monument. I don’t construct ruins, but I feel ruins are moments when things show themselves. A ruin is not a catastrophe. It is the moment when things can start again.”

Anselm Kiefer

INTRODUCTION

01

Fig. 01 - The sea below Battery Valleau



Fig. 01.1 - Entry to storage space in Battery Valleau.

Ruins, in their most basic sense, are relics of the past. Located at the boundary between human endeavor and natural forces, ruins may serve as both the impetus for—and receptacle of—human memory. Although they can, and do, convey a sense of the lost past, they are also often imbued with a sense of timelessness and transcendence. The experience of ruins is primarily individual and subjective. It is among the ruins that one experiences “the eternal becoming of the soul struggling against itself” (Simmel, 23). It is here that “memory crystallizes and secretes itself” (Nora, 7).

This architectural design thesis is shaped by the intersection of time, memory, narrative and contemporary construction and use in an encounter with military ruins. This thesis argues that ruins need not remain entirely sacrosanct, but rather can, with understanding and care, become sites partly occupied by present-day activity. In particular, present-day uses that focus on the past as well as the present and future can find appropriate placement in a site of ruins. Further, this thesis argues that contemporary interventions in such sites must recognize and protect multiple, nuanced understandings of a particular place and must emphasize multi-dimensional personal experiences rather than a single objective history or a singular formal analysis of such structures.

In this thesis, these themes are explored through the design of a residential treatment facility for individuals suffering from post-traumatic stress disorder. Sited in close juxtaposition to the military ruins of Fort Casey on Whidbey Island, Washington, the proposed facility seeks to provide a location for the exploration and reinterpretation of traumatic narratives. This program fits this site because healing from trauma requires acceptance and understanding of the past even as the patient prepares for a new future. Indeed, the acceptance and partial reframing of the ruins through design intervention thus becomes a metaphor for the healing process itself. In turn, the

thesis project relies on two key bodies of theory: the first regarding ruins, and the second regarding healing. Both are discussed herein, along with their respective associations with memory and narrative. The project design that follows is thereby shaped both in response to these theories, and in response to the specific site of Fort Casey.

Following this Introduction, the thesis is structured as follows: Chapter Two addresses the theories surrounding ruin and memory; Chapter Three provides a brief overview of posttraumatic stress disorder and its treatment, examines the emotional experience of healing from trauma, and describes the programmatic requirements of a residential treatment facility; Chapter Four consists of a number of case studies that informed the design process; Chapter Five introduces Fort Casey, its history, and important aspects of the site; Chapter Six describes the design methodology and initial explorations; and Chapter Seven presents the design response. Finally, the concluding chapter revisits the themes of memory and narrative, drawing conclusions about the efficacy of military ruins as sites of healing, the role of the past in preparing for the future, and the role of contemporary design in historic contexts.

While this thesis acknowledges the existence of difficult and troubled pasts, it also recognizes the strength of the human spirit. It argues that through contemporary interventions, the past can be an essential asset in ensuring both present and future well-being.



REGARDING
RUINS AND
MEMORY

02

Fig. 02 - Battery Kingsbury from the bridge



Fig. 02.1 - Batteries Worth, Moore, and Kingsbury from the access road.

THE *TERRAIN VAGUE* OF MILITARY RUINS

In 1996, Spanish architect Ignasi de Sola-Morales conceptualized unused areas of an urban environment as *terrain vague*. Characterized by their apparent obsolescence and abandonment, he argued that these areas are the sites of both “memory and absence” (de Sola-Morales, 23). Although the phrase *terrain vague* has been translated to waste land in English, de Sola-Morales argued that the original French embodies a double meaning that is lost in the translation. Beyond the emptiness or vacancy apparent in the English translation, the French also conveys a sense of imprecision and indeterminacy (de Sola-Morales, 22). Similarly, the Spanish term of *terreno baldío* conveys both a sense of intentional, rather than accidental, abandonment that is lost in both the English and French.

Although *terrain vague* is considered inherently urban, this thesis argues that the defining attributes of *terrain vague* are as evident in military ruins as their urban counterparts. Spaces that are both “vacant, devoid of activity” and “vague, with no clear future,” abandoned military structures share the uncertainty that permeates urban ruins (de Sola-Morales, 23). This similarity is alluded to by psychoanalyst and author Darian Leader in his description of coastal bunkers in Britain. Remarking on the bunkers’ lack of purpose and inherent ambiguity, he notes that the installations are “signs of both possession of a space and the fact that this possession was never secure” (Leader, 121). Furthermore, their abandonment imbues the structures with a sense of alienation from the activity of human life in that “their massive presence marks the beaches with no obvious use” thereby combining their “out-of-placeness with their spatial isolation” (Leader, 121). This combination, brought about by abandonment and subsequent weathering, results from their ruin and the “[loss of] the symbolic value they once had” (Leader, 122). This loss of symbolic association is often ignored

when considering the design of new construction in the context of decommissioned military structures.

Throughout the 20th century, military architecture has been regarded as both utilitarian, its “usefulness as [a] cultural resource...undecided” (Scott, 131), and significant, being “influen[tial] beyond the discrete limits of architectural practice” in its patriotic and militaristic associations (Picon, 7). Due to its embodiment of both utilitarian form and nationalistic symbolism, its duality often results in an emphasis on the “sense of violent potential” and “ever present...militarism” that appears when considered through a typological or theoretical lens (Beard, 62). The experiential qualities of these sites, however, often contradict these typological underpinnings. Like the factories, wharfs, and other industrial spaces that often constitute urban *terrain vague*, the continued disuse of military structures and their subsequent deterioration temper any perceived aggressiveness and result in their existence as passive artifacts. This thesis argues that these qualities, as the results of prolonged abandonment and disuse, preempt the previous sociocultural significance of aggression and violence so often associated with decommissioned military space.

RUIN AND THE ROLE OF MEMORY

Terrain vague, like other architectural ruins, exists at the ambiguous boundary between past, present, and future. Their existence as artifacts of a now absent past is readily apparent in the cracks, discoloration, and other blemishes brought about by the processes of weathering. In spite of their vacancy and decay, however, these structures retain enough of their original form to remain identifiable, thereby connecting the present to the past. Further, their deterioration and emptiness implore a consideration of a future in which our contemporary surroundings are equally weathered and abandoned. Ruins thereby embody a timeless

existence that both predates and extends beyond our own mortality (Dillon, 11).

This compression of disparate time frames establishes the relationship between ruins and memory. In the words of writer Rebecca Solnit:

“Ruins stand as reminders. Memory is always incomplete, always imperfect, always falling into ruin; but the ruins themselves, like other traces, are treasures: our links to what came before, our guide to situating ourselves in a landscape of time” (Solnit, 151).

In other words, memory is inherently tied to ruins as both transcend temporality, inform understanding, and construct narrative. Although all ruins serve as an effective conduit for memory in general, it is important to delineate the extent to which ruins can convey both individual and collective memory.

Individual memory is inherently subjective, being comprised of the personal recollection and interpretation of lived experience. The interpretive role of the individual is paramount, allowing each individual to alter the narrative as additional information is gathered (Lowenthal, 194). Collective memory, on the other hand, extends beyond an individual’s lived experience to incorporate the common elements of multiple individual memories. This reliance on commonality results in a narrative that is inherently dependent on erasure. Unique or different elements are dismissed from the collective memory, existing only in the mind of the individual. The collective memory is therefore slow to change, as any one dissenting view must be ratified by others before it is included (Lowenthal, 196).

The distinction between individual and collective memory is crucial to the understanding of the relationship between ruins and memory. Although the individual experience of some ruins,

such as those of the Greek Parthenon or the Roman Coliseum, is shaped almost entirely by the collective historical narrative that surrounds them, the majority of ruins are experienced without an overarching mnemonic framework derived from the collective memory. The collective or historical experience of these ruins therefore recedes, giving place for the individual to experience “the privileged [site] of identity, of encounter between present and past” (de Sola-Morales, 23). It is, therefore, the individual, rather than the collective, experience that should be considered when designing a contemporary intervention in the vicinity of ruins.

CONTEMPORARY DESIGN AND THE QUESTION OF COMPATIBILITY

In his discussion of *terrain vague*, de Sola-Morales emphasizes the extent to which the “sense of absence and abandonment” plays an essential role in the understanding of contemporary ruins. He argues that a return of such sites to “the productive mesh of...efficient, syncopated, busy” architecture would hinder the “experience of memory” and damage the ethereal and subjective qualities apparent in the site’s abandonment (de Sola-Morales, 23). His thoughts parallel those of Nicholas Stanley-Price, who maintains that reconstruction of ruins should be considered “only if the values of a site will be better appreciated than if the buildings are left in a ruined state” (Stanley-Price, 41). When considering any contemporary intervention, both de Sola-Morales and Stanley-Price advocate for the conservation of the phenomenological qualities associated uniquely with the ruins.

Although both authors write from a contemporary perspective, their arguments are deeply rooted in the theories of John Ruskin. Writing in 1849, Ruskin asserted that the process of weathering is less a deterioration than a transformation. Thus, rather than detracting or

weakening the design intent of the architecture, the weathering process reveals and enhances the “inherent character” of the building (Ruskin, 183). For this reason, Ruskin advocated for as little intervention as possible in the preservation of the built environment. When such intervention is deemed necessary, however, the contemporary design should refrain from “[base] imitation” (Ruskin, 185) of the original work and instead utilize current solutions regardless of the “unsightliness of the aid” (Ruskin, 186). Ruskin thus establishes a direct connection between the physical manifestation of the original structure and the spirit of the place. The use of contrasting materials and technologies allows the historic fabric to reveal its existence through time rather than in a single moment.

De Teel Patterson Tiller, a preservation professional and director of the National Parks Service for over 30 years, makes a similar argument. He maintains that a key characteristic of historic contexts is their ability to form a “vital and living link” between past and present generations (Tiller, 12). Furthermore, this link is conserved and strengthened through the juxtaposition of contemporary style and materials with those of the past. He writes:

“What frequently attracts us to historic places is the rich and oftentimes contradictory nature of the historic built environment. We experience a complexity of generations of occupancy expressed through architecture and material culture, layer on layer, generation by generation, tangible and intangible. ...Historic neighborhoods speak to the continuum of life and endeavor.

“Our time in that continuum carries an important responsibility—important, yes, to steward conscientiously what we have inherited. But important also to speak to

the future about what was significant to us at this time, what we thought about, what mattered to us. And good contemporary design is fundamental to that interaction with the future and the past” (Tiller, 13).

When the designs of today are considered as the ruins of the future, the ability to distinguish between periods of design and construction is considered essential. It is, therefore, through the contrasting styles of present and past design that contemporary designers honor the efforts of their predecessors according to Tiller.

Not all theorists or professionals believe that such a differentiated approach is appropriate, however. Some, such as Steven W. Semes, the director of graduate studies for Notre Dame’s historic preservation department, argue that the integrity of a historic context is dependent on the extent to which contemporary interventions are compatible with and similar to the historic resources in both material and style (Semes, 9). Although the approach of designing to minimize differentiation may be valid when considering interventions in the context of some historic districts or similarly well-maintained historic fabrics, it is inappropriate in the context of ruins.

Because their character is shaped not only by style or material, but also by the visibility of weathering and the passage of time, any new construction that seeks to replicate the ruins will inevitably fail. Only through embracing the juxtaposition of contemporary design in the historic context can the true character of the ruins be preserved and respected.



In its simplest form, post-traumatic stress disorder (PTSD) is a condition in which common responses to intense negative events are magnified and fail to subside with time (Canada, 1). Although traumatic events are unfortunately common and infinitely varied, this thesis focuses primarily on veterans and their experiences. This chapter explores the nature of trauma, its effects on the individual, and the experience of healing.

TRAUMA AND ITS TREATMENT

03

Fig. 03 - The ridge dividing the field from Batteries Trevor and Valleau.



Fig. 03.1 - The gun emplacements of Battery Trevor.

TRAUMA AND PTSD

In common usage, trauma refers to any distressing or disturbing situation or experience. When considered in psychological terms, however, trauma is more narrowly defined as a shocking or overwhelming experience threatening the physical, psychological, or emotional well-being of self or others (APA, 6). Some common traumatic events include sexual or physical assault, military or interpersonal violence, and natural or manmade disaster. Depending on the intensity or severity of the event and the background of the person, an individual event can result in a post-traumatic reaction. In cases where the traumatic event was recurrent, such as in military combat or domestic abuse, the regular repetition or continual threat of traumatic events can lead to an increased severity of posttraumatic reactions (APA, 7). It is also important to note that one does not necessarily have to experience the traumatic experience firsthand to have a posttraumatic reaction. Directly witnessing the event itself, the effects of the event, or being told of the event by a loved one can result in a similar set of psychological and physiological responses that occur from direct experience of the event (APA, 7).

Due to the variety of potentially traumatic events and the frequency with which they occur, it is probable that everyone will experience a traumatic event at one point or another (McFarlane, 3). In the days that follow the event, it is common for individuals to have a posttraumatic reaction. Such a reaction may consist of intrusive memories or nightmares of the event, an inability to focus or bouts of insomnia, and gaps in memory or feelings of numbness (Lawhorne, 58). Each individual's experience will vary in both the type and severity of the reaction (Keane, 22). For the majority of individuals, the symptoms associated with a posttraumatic reaction subsist within a few days of the event. Others experience the emotional distress for a period of about a month, a condition known as

Acute Stress Disorder (APA, 8). In approximately ten to twenty percent of cases, the symptoms develop into Posttraumatic Stress Disorder, becoming chronic and requiring therapeutic treatment (USDVA, "How Common").

As mentioned above, the effects of PTSD and its symptoms are highly personal and vary on a case-by-case basis. Therefore, a spectrum of severity exists even among individuals who meet the criteria for diagnosis. At the lowest end of the spectrum, and in the majority of cases, the symptoms of the disorder do not impinge on daily activities too drastically. Individuals are able to maintain jobs and relationships, even when their symptoms can make these activities difficult. These patients are best served by outpatient therapy. At the opposite end of the spectrum are individuals whose symptoms have developed to the point of psychosis. In such rare cases, the treatment often occurs in an inpatient setting for reasons of safety and surveillance. Somewhere in between these two extremes are those cases best served by residential treatment. Less restrictive than inpatient treatment, this form of treatment allows for a degree of separation from the patients' daily lives while still providing a sense of autonomy (Borlaug, 12 April 2018).

TREATMENT: THE PROCESS OF HEALING

The treatment of PTSD, like other medical conditions, has evolved over the last century. Today there are many alternatives for treatment, including both therapeutic and pharmacological approaches to healing. For the purposes of this project, emphasis has been placed on evidence-based therapeutic treatment processes, or modalities, that are currently recommended by the American Psychiatric Association (APA). Each modality employs different means with the common objective of reducing the severity of posttraumatic symptoms and thereby allowing individuals

a greater quality of life (APA, 15). Although complete remission of symptoms is possible, it is comparatively rare. Therefore, the success of treatment and efficacy of treatment is determined by the reduction, and not the complete disappearance, of symptoms.

Each of the modalities recommended by the APA have a shared theoretical background in Cognitive Behavioral Therapy (CBT). This group of therapies relies on the hypothesis that exposure to trauma has a direct effect on one's thoughts and beliefs, especially regarding individual self-worth, the trustworthiness of others, and the safety of the world (Foa, 48). Once these changes occur, neutral reminders of the traumatic event (household objects, news stories, or images) become associated with the negative beliefs or thought patterns, and trigger the onset of symptoms (Rauch, 64). CBT encourages patients to evaluate their thought patterns and belief systems to identify unhelpful or inaccurate elements. Once the patient is aware of these distortions in thought, they are encouraged to reconceptualize their understanding of the traumatic event, their ability to intervene in the patterns of thought and behavior (APA, Cognitive Behavioral Therapy). Within this larger framework, the following modalities are recommended:

Cognitive Processing Therapy (CPT). CPT is divided into three distinct and interconnected steps. First, the patient learns the relationship between thoughts, emotions, and behavior. Once this baseline understanding is established, the individual begins to process the trauma by reading and writing a narrative of the event. This step also includes discussion of the narrative as the patient seeks to identify and question unhelpful beliefs. The third and final step consists of applying adaptive strategies to evaluate and modify patterns of thought and behavior. Generally, treatment lasts between four and six weeks, and can be done in either individual or group settings (APA, Cognitive Processing Theory).

Cognitive Therapy (CT). CT focuses on modifying overly pessimistic understandings of the traumatic event to interrupt the resulting thoughts or behaviors. It begins with establishing a relationship between the patient's current narrative of the traumatic event and feelings of threat. Through a process of question and discussion, the patient is encouraged to arrive at a different understanding of the events. The personal narrative of the traumatic event is then consciously altered, often through writing and storytelling, to correct the distorted understanding. Throughout the process of narrative restructuring, the therapist and patient seek to find particular elements that elicit a strong response. By directly confronting the memory, this modality seeks to assist the patient in stopping negative behavioral patterns and establishing strategies to live with PTSD symptoms. Treatments typically last three months, and can occur in either individual or group settings (APA, Cognitive Therapy).

Prolonged Exposure (PE). PE seeks to reverse the perceived need to avoid memories of the traumatic event by gradually assisting the patient to confront trauma-related memories, situations, and emotions. Treatment begins with discussion to establish a benchmark understanding of the traumatic event and to develop strategies for managing anxiety. The therapist then guides the patient through exposure to memories of the traumatic event. In therapy sessions, exposure typically consists of imaginal exposure, in which the patient recounts the event in detail using the present tense. The patient and therapist then discuss the memory and its associated emotions. In vivo exposure, consisting of exposure to situations, places, or other stimuli, is also used. Throughout the treatment, the therapist helps the patient to dissociate the memory of the event with feelings of insecurity, fear, and threat. Due to the vulnerability that is essential to successful exposure, treatments occur in individual sessions over the course of three months (APA, Prolonged).

As witnessed in each of the above modalities, the successful treatment of PTSD is predicated on an understanding of the subjectivity of personal memory and its associated narrative. Although this may seem illogical, the instability of memory is of paramount importance to the effective processing of traumatic events. To truly understand this aspect of memory and narrative, it is helpful to differentiate between memory, or how an event is understood, and the event itself (Shields, 33). As Joan Didion so eloquently described:

"We tell ourselves stories in order to live... We interpret what we see, select the most workable of the multiple choices. We live entirely...by the imposition of a narrative line upon disparate images" (Didion, 11).

In other words, it is the individual who shapes memory rather than the memory that shapes the individual. It is at the junction of event and memory that meaning is made. It is through the very subjectivity and vulnerability of memory that an individual suffering from PTSD is empowered to consider and reevaluate, or process, their memory of a traumatic event in order to survive.

THE EXPERIENCE OF HEALING

The experience of living with posttraumatic stress disorder (PTSD) is an emotional one. As outlined above, the symptoms associated with PTSD primarily affect the feelings and beliefs of an individual. In spite of the emotional character of the condition, however, its treatment is often described in step-by-step, almost mathematical, terms. What these descriptions often fail to capture is the emotions, fears, and vulnerabilities that often accompany the healing process. There are allusions, small insinuations that cause one to wonder whether or not the suggestion was intentional, but little concrete discussion of a patient's feelings.

For example, Edna Foa, one of the leading researchers on treating PTSD, differentiates between the initial posttraumatic reaction and the peak posttraumatic reaction (Foa, 46). The initial posttraumatic reaction occurs in the immediate aftermath of the traumatic event. In the overwhelming majority of cases, the symptoms then decrease before stabilizing. Even in cases of severe PTSD, the stabilized reaction is typically less intense than the initial posttraumatic reaction (Foa, 44). The peak reaction, on the other hand, is the point in which the symptoms are most severe. Ironically, this typically occurs during treatment. In fact, there is a correlation between how soon an individual passes through the peak reaction and the effectiveness of the healing process (Foa, 47).

Similarly, the APA recommends PE only in one-on-one therapeutic sessions due to the "anxiety-provoking" character of the therapy. It further recommends that therapists create a "safe space" for patients to approach and experience "very scary stimuli" (APA, Prolonged).

These accounts, and others, insinuate that the healing process is less like taking antibiotics and more like an invasive surgery. Instead of feeling a rapid diminishment of the symptoms after beginning treatment, the symptoms are often intensified before finally diminishing.

Therefore, in considering a residential treatment facility, it is important to understand that the majority of patients will likely be experiencing terrifying and debilitating emotional responses to past traumatic events. Typically, the emotions go beyond pain to include feelings of helplessness, anger, and self-loathing (Snyder, 526).

THE ROLE OF LANDSCAPE

Throughout her academic career, landscape architect Clare Cooper Marcus has studied the relationship between landscape and the healing

process. She notes that, historically, places of healing often included some access to nature and landscape. Thus the medieval monastery was built around a cloister, the 19th century sanatorium in the mountains (Cooper Marcus, 11). Since the early twentieth century, however, an increased emphasis on technology as an indicator of healing potential has resulted in a decreased emphasis on the role of natural settings or elements (Cooper Marcus, 4).

This is unfortunate, as experiences with nature have been shown to greatly reduce feelings of stress and anxiety (Cooper Marcus, 6). Particular landscape elements, such as the ability to see or hear flowing water, access to vegetation that changes seasonally, and the variability of views as one moves through the landscape, contribute to a peaceful environment and can be instrumental in the healing process (Cooper Marcus, 6).

As many of these elements are found at the site of Fort Casey, the design can take advantage of the landscape, but must not affect it negatively in the process.

PROGRAMMATIC REQUIREMENTS

The process for establishing a program for a residential treatment facility began with an investigation into existing precedents. From the many facilities that were examined, three were particularly instrumental in furthering the understanding of the program type proposed in this thesis. While these are covered in greater detail in the following chapter, they are briefly introduced here:

Butler Hospital; Providence, Rhode Island. One of the oldest continually operating mental health facilities in the United States.

The Refuge; Ocklahawa, Florida. A residential treatment facility that embraces access to nature as a key element of the healing process.

Fairfax Hospital; Kirkland, Washington. A local example of an inpatient mental health facility.

Study of these facilities showed that the programmatic requirements of a residential treatment facility could be reduced to three key components:

Therapeutic Spaces: These spaces include both larger spaces for group therapy sessions and smaller spaces used for individual therapy sessions and doubling as offices for the therapists. Also includes flexible spaces for meditation and socialization.

Residential Spaces: The largest component of the program, the living spaces consist of individual patient rooms and shared rooms accommodating up to eight members of staff. Also includes spaces for social gathering and recreation, such as the dining area, art studio, and fitness rooms.

Administrative Spaces: Unlike those of larger hospitals, the administrative portions of the residential treatment facilities studied were relatively small. For this project, lobby and reception space and shared office space are required.

Another helpful result of the various case studies was a more thorough understanding of what occurs on a day-to-day basis within a residential treatment facility. Using this information, a sample schedule (shown at right) was developed. An individual's day typically consists of structured therapy time interspersed with more informal recreation time, plus time for meals and so forth.

PROGRAM		
THERAPEUTIC		4,000
Therapy		
6 Group		1,500
12 Individual		1,200
Meditation		1,000
Waiting		300
RESIDENTIAL		12,300
Residences		
36 Patient		7,000
2 Staff		1,300
Kitchen		750
Dining		1,000
Gym		750
Art Studio		500
Library		1,000
ADMINISTRATIVE		1,250
Lobby & Reception		750
Office		500
TOTAL		17,550

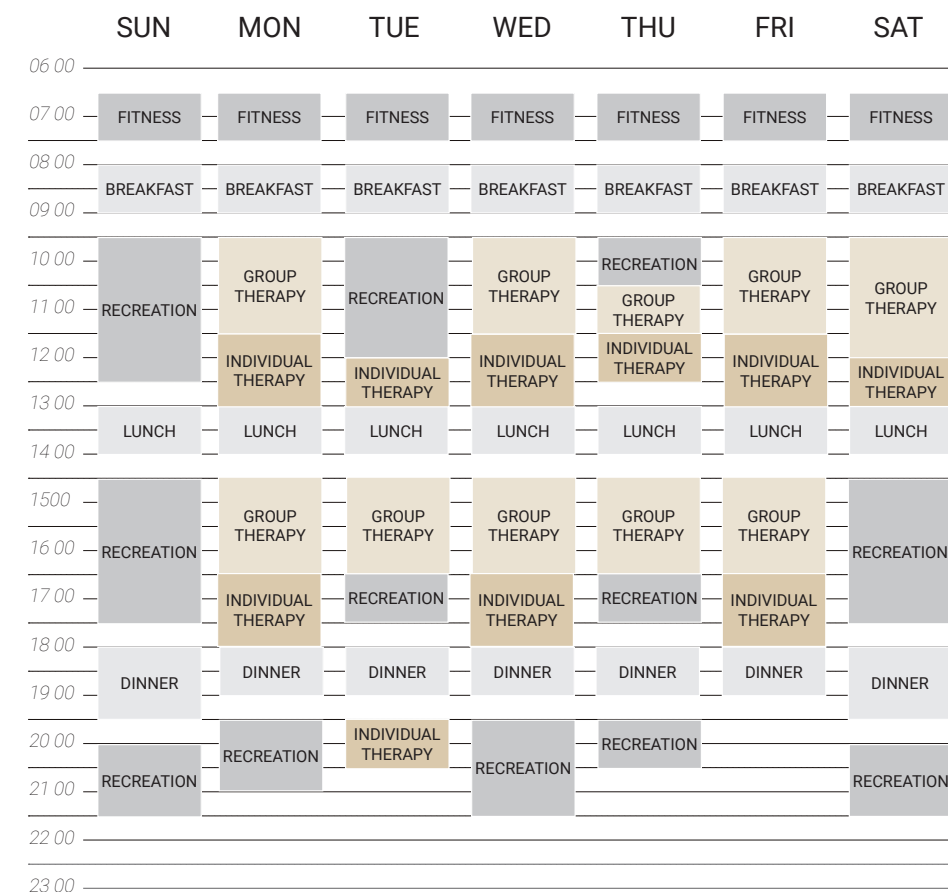


Fig. 03.2 - Table of Programmatic Elements

Fig. 03.3 - Typical daily schedule.



Fig. 04 Path leading to Battery Trevor.

Due to the complex character of the site and program, case studies were used to investigate varied aspects of the design. What follows are a few of the most influential. Some are places of healing, others are juxtaposed with ruins, and some are connected by other design issues. Regardless of how conspicuous or inconspicuous their influence, each informed the design process and contributed to the ultimate character of the design.

The studies are grouped by building type. Hospital and healing places are first, followed by buildings featuring contemporary design in the context of ruins. The third group includes buildings with a large residential component.

PRECEDENTS

04



Fig. 04.1 - Butler Hospital.

Butler Hospital

Providence, Rhode Island
Luther V. Bell
1847

Constructed in the mid nineteenth century, this hospital is one of the oldest operational medical health facilities in the nation. Built on 110 acres, the hospital's multiple buildings connected by the parklike landscape of the campus (Sachs, 251).

The design of Butler Hospital was revolutionary, not only in its emphasis on connecting landscape and architecture, but also in its use of single-loaded corridors to infuse patient's rooms with light and views to the natural surroundings. Its architect, Luther Bell, was also a psychiatrist and believed that the connection to nature was essential to promote the healing process and reduce feelings of anxiety and discomfort (Sachs, 252).

With a landscape design by the Olmstead Brothers (Sachs, 253), the buildings sit in the context of multiple "dense groves, which give to the landscape an air of retirement and repose exceedingly appropriate to the character of the establishment" (Ross, 9). Interspersed between these larger elements, smaller elements allow for patients to sit, walk, or exercise (Sachs, 255).



Fig. 04.2 - Fairfax Hospital.

Fairfax Hospital

Kirkland, Washington
Boulder Associates
2013

Due to a variety of governmental restrictions specific to the State of Washington, a large number of residential treatment facilities do not exist locally (Borlaug, 12 Apr 2018). While these issues are not the topic of this thesis, it became clear that a local example of a mental healthcare facility would be useful in understanding the general proportions of programmatic elements.

Fairfax Hospital is one of the most recent mental healthcare facilities constructed in the greater Seattle area. Designed by Colorado-based Boulder Associates in conjunction with Seattle-based NAC, this facility offers both inpatient and outpatient services.

After a close analysis of the plans and program documents, it became clear that the relationships between patient rooms and communal rooms could vary, and could shift in both scale and location. In other words, the pragmatic requirements of the healing process did not necessarily prescribe a specific relationship of programmatic elements.



Fig. 04.3 - The Refuge: A Healing Place.

The Refuge: A Healing Place

Ocklawaha, Florida

Throughout the research process, multiple residential treatment facilities were analyzed. As little information regarding their design is shared publicly, much of the information had to be compiled from photographs and descriptions published on the centers' websites.

The center that most parallels the type of treatment center that was being considered for this thesis was The Refuge: A Healing Place in Florida. The primary defining attribute of this facility was its reliance on landscape as a critical element of the healing process.

To more fully engage the landscape, the center consists of individual buildings—shared cabins for the residents, a single administrative building, a single gym building, and so forth. By “exploding” the program into individual components, the landscape serves a not only a circulation space, but becomes a critical element of the patient’s daily activity.



Fig. 04.4 - Castelo de Pombal Visitor's Center

Castelo de Pombal Visitor's Center

Pombal, Portugal
 COMOCO Architects
 2014

Unlike some projects, which seek to integrate contemporary construction with historic ruins, the Castelo de Pombal Visitor's Center is a contemporary building built in the vicinity of ruins.

Although carefully sited to allow for the exploration of the ruins without contemporary intervention in the majority of the site, the contrast of form and materials make the new Visitor's Center the most prominent element when it is visible. As this building ages, however, it may be that the white brick will weather to more closely resemble its context.

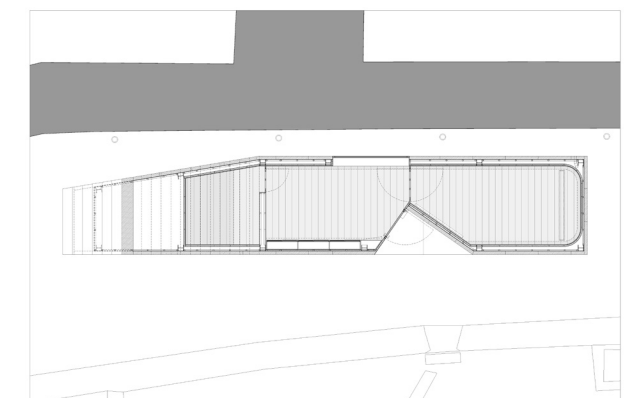
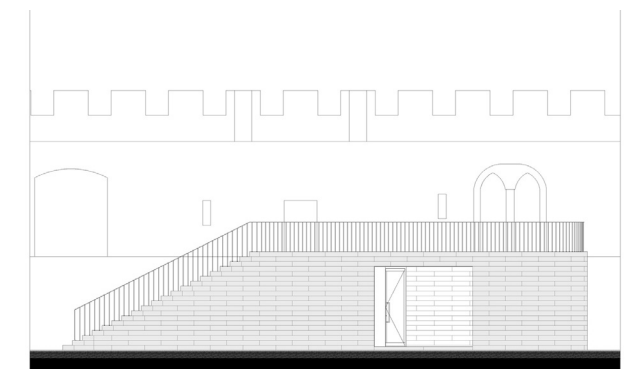


Fig. 04.5 - Elevation, Castelo de Pombal Visitor's Center

Fig. 04.6 - Plan, Castelo de Pombal Visitor's Center



Fig. 04.7 - Hedmark Museum of Hamar

Hedmark Museum of Hamar

Hamar, Norway
 Sverre Fehn
 1967-2005

Constructed on an active archaeological site, the National Museum of Roman Art by Rafael Moneo relates to the ruins in terms of materiality, construction, and location. The structure in the basement (known as the crypt), takes the form of a series of arched colonnades supporting the upper levels while maintaining the understanding and continued use of the historic site.

The building clearly recalls traditional Roman construction methods and forms, but Moneo used contemporary materials and details to differentiate the new construction from the historic fabric (Moneo, 73).

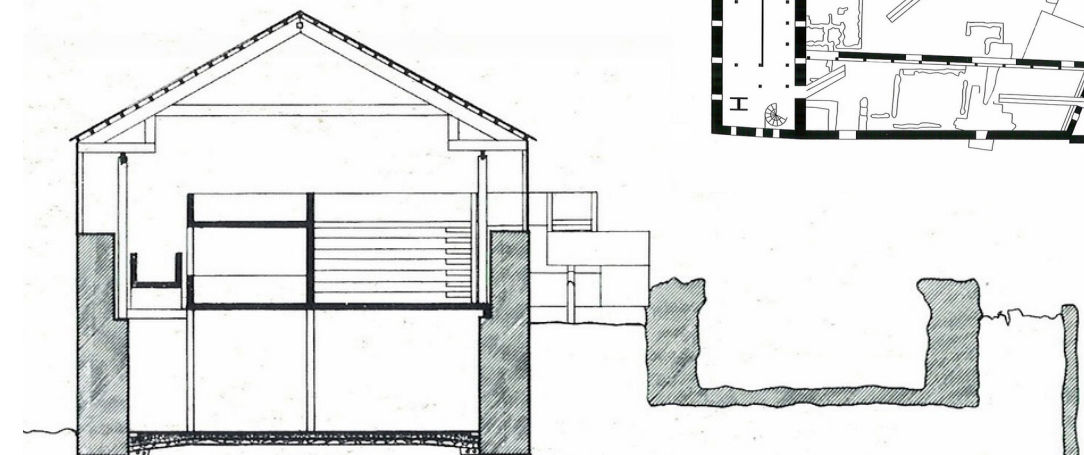
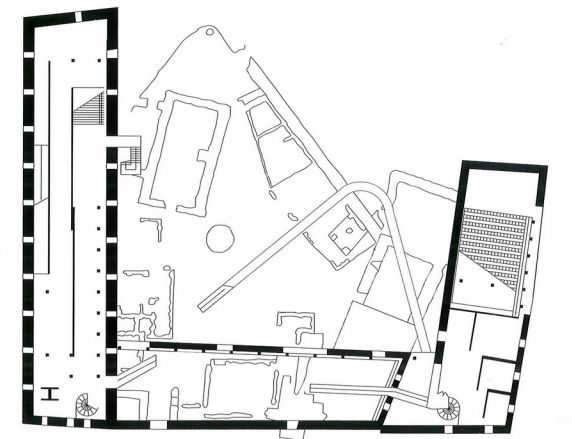
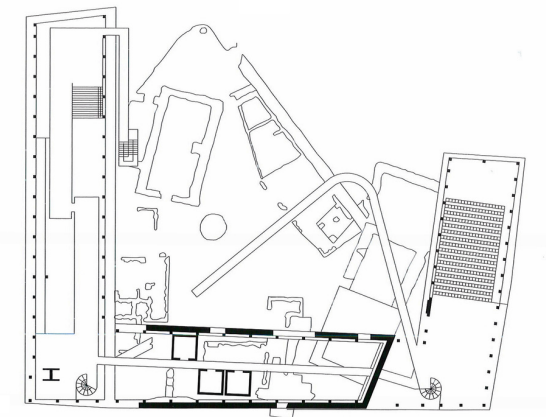


Fig. 04.8- Upper floor plan, Hedmark Museum of Hamar

Fig. 04.9 - Lower floor plan, Hedmark Museum of Hamar

Fig. 04.10 - Section, Hedmark Museum of Hamar



Fig. 04.11 - National Museum of Roman Art

National Museum of Roman Art

Merida, Spain
 Rafael Moneo
 1986

Built on the foundation of an active archaeological site, Moneo's National Museum of Roman Art relates to the ruins in terms of materiality, construction, and location. The basement of the museum, known as the crypt, utilizes a series of arched colonnades to support the upper levels of the museum while maintaining the understanding and continued use of the historic site.

The building also hearkens back to traditional Roman construction methods and forms, but uses contemporary sensibilities and materials to differentiate itself from the historic fabric (Moneo, 73).

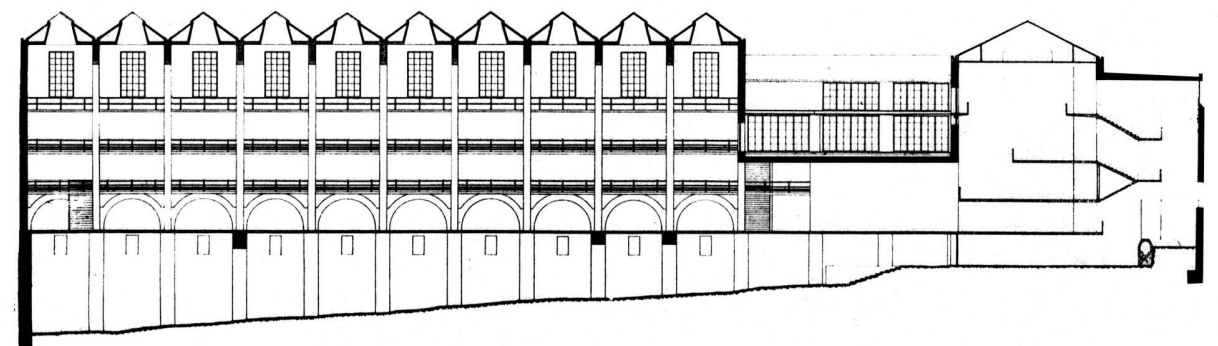
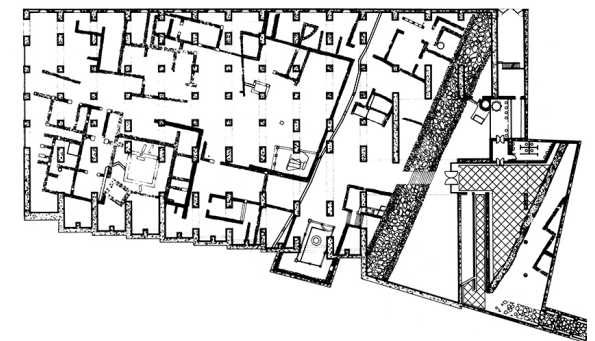
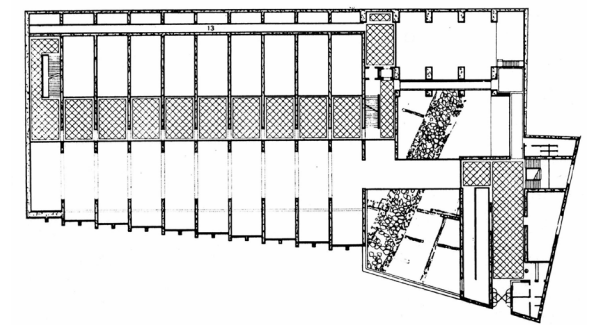


Fig. 04.12 - Upper floor plan, National Museum of Roman Art

Fig. 04.13 - Lower floor plan, National Museum of Roman Art

Fig. 04.14 - Section, National Museum of Roman Art



Fig. 04.15 - Boyd Education Center

Boyd Education Center

Riversdale, New South Wales

Glenn Murcutt

1998

Located in southeastern Australia, the Boyd Education Center forms part of a larger complex dedicated to the visual and performing arts. It combines large open spaces with small residential spaces, all grouped both by type and size and arranged in two bars, one large and one small. The larger of these is rotated slightly, and the "joint" filled with support spaces such as the restrooms and storage (Corda).

Although somewhat difficult to understand from published plans, the building molds to the topography of the existing site; the large program elements are on the flattest portion of the site, while the residential portions step up or down in response to the topography.

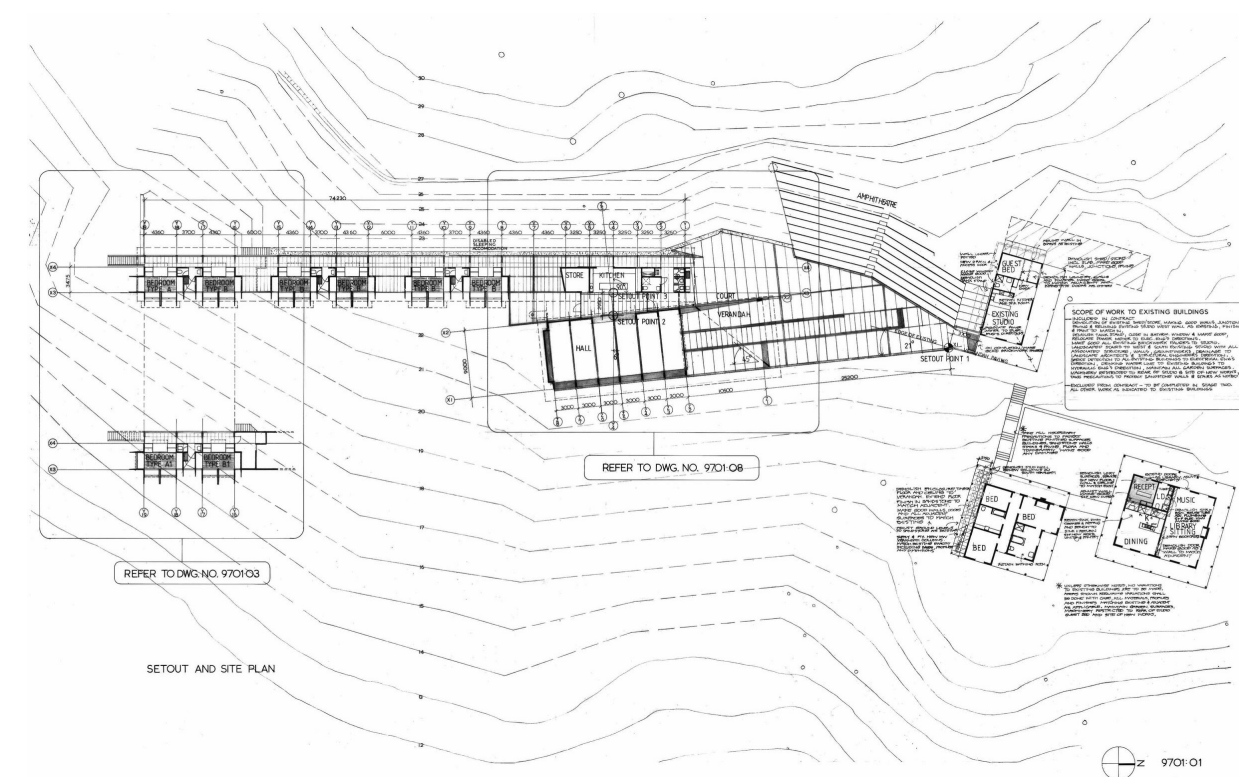


Fig. 04.16 - Plan, Boyd Education Center



Fig. 04.17 - Middleton Inn

Middleton Inn

Charleston, South Carolina
Clark and Menefee
1994

Although the Middleton Inn, designed by Clark and Menefee, is built in the vicinity of ruins, the scheme is laid out to direct views toward the nearby river rather than the historic portion of its site. The visitors to the site remain fully in the

present until they choose to leave their rooms and experience the past.

The individual rooms are clustered and the inn is L-shaped in plan dividing the central courtyard from the larger site. The combination of concrete, wood and large areas of glass provides a smaller scale rhythm that contrasts with the larger size of the complete building.

Beyond the functional aspects of the room arrangement, the scheme also offers added material interest. From the exterior, the glass and wood of the rooms contrasts with the stucco of the restrooms. The contrast is lessened, however, by the planting of ivy at the stucco.

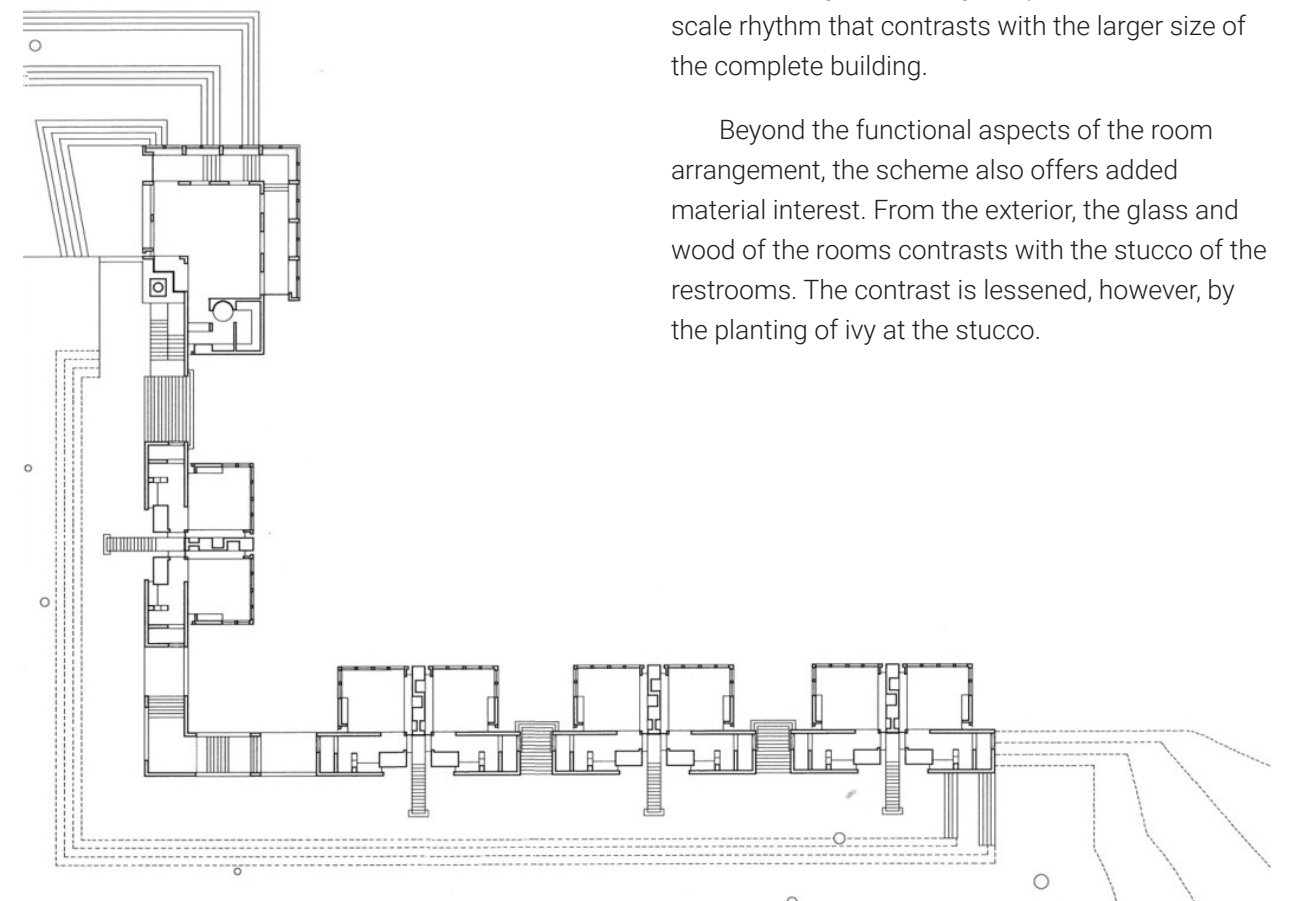


Fig. 04.18 - Plan, Middleton Inn



Fig. 04.19 - Sainte Marie de la Tourette

Sainte Marie de la Tourette

Lyon, France
Le Corbusier
1960

Built on the side of a fairly substantial incline, Le Corbusier's monastery responds to the terrain by elevating the residential and other spaces on his characteristic pilotis and leaving the terrain largely untouched below.

Although a modern building, the design clearly draws on the typology of a traditional monastery of the Medieval period. There is a clear distinction between areas for solitude, areas for small groups, and areas for large groups. These are separated by level, with the lowest level including the chapel and dining area, and the highest level reserved for individual cells (rooms).

Le Corbusier detailed the concrete to shape the phenomenological experience of the residents. While this is particularly evident at the church, it can also be seen in smaller details, such as the way light falls differently over a textured or smooth wall.

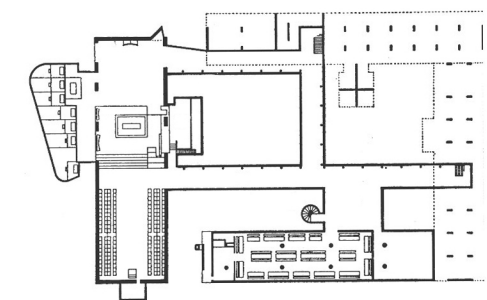
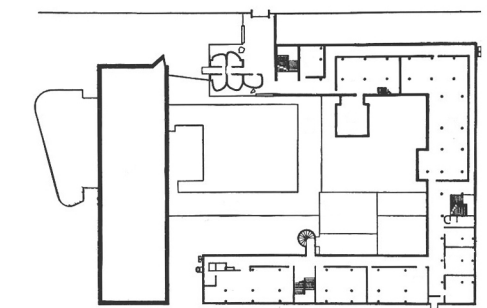
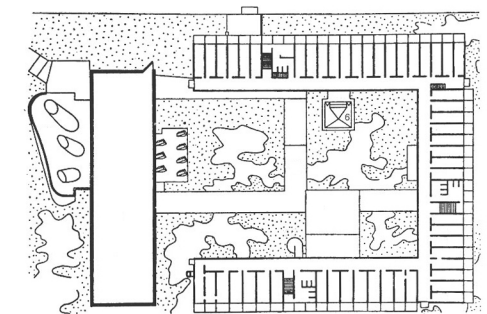


Fig. 04.20 - Upper floor plan, Sainte Marie de la Tourette

Fig. 04.21 - Second floor plan, Sainte Marie de la Tourette

Fig. 04.22 - Lower floor plan, Sainte Marie de la Tourette



Located on central Whidbey Island, Fort Casey is approximately an hour and a half's travel north of Seattle. Once a thriving military site, it was decommissioned in the 1950s, and the structures have since remained largely unused. This chapter provides a brief history of the site followed by an analysis of its current condition.

FORT CASEY

05

Fig. 05 - Bridge connecting ridgeline to ridgeline

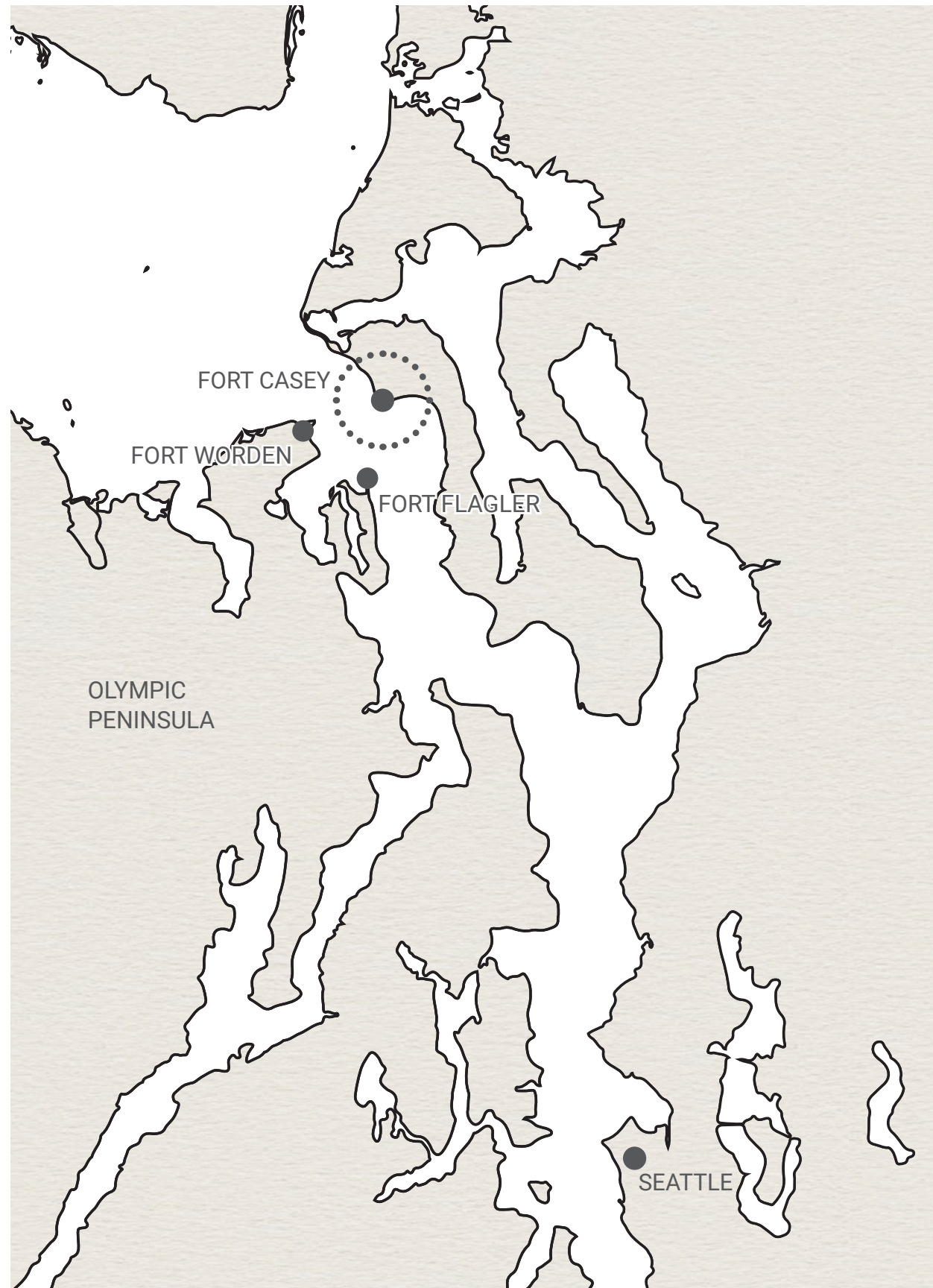


Fig. 05.1 - Vicinity map.

PLAN FOR DEFENSE OF PUGET SOUND

Fort Casey once played an integral role in the nation's plan for the defense of Puget Sound. In the middle of the 19th century, the Mexican-American War and the Oregon Treaty of 1846 raised concerns about protecting the Puget Sound region and led the military to consider a defensive strategy for the West Coast. Congress, however, felt that it should determine a location for a naval base in the Puget Sound area prior to constructing other military structures. Regardless of this delay, local military officials proceeded in developing a plan of defense, complete with the selection of sites (Hussey 1955, 15).

At this time, the War Department determined that the defense of Puget Sound would best be achieved by locating defensive structures on either side of Admiralty Inlet, a stretch of water between central Whidbey Island and the Olympic Peninsula. Although the Sound is also accessible via Deception Pass, the geography was deemed "too narrow and torturous" to be a concern (Hussey, 7). Having determined viable sites, in 1855 the Army purchased ten acres of land for a lighthouse on Admiralty Head, a peninsular point of land jutting south into Admiralty Inlet (Hussey 1956, 35).

By the final decades of the nineteenth century, Congress and the War Department agreed on Bremerton as the location for the Pacific Northwest's primary naval base and authorized the development of permanent military installations for the defense of Puget Sound. By that time, improvements in military technology resulted in the development of long-range rifles that would allow for the entirety of Admiralty Inlet to be defended from three locations: Fort Casey on the southern tip of Admiralty Head, Fort Worden on the norther tip of Quimper Peninsula, and Fort Flagler on Marrowbone Island (Hussey, 25).

FORT CASEY: A BRIEF HISTORY

Following authorization from Congress, the War Department purchased approximately 125 acres on Admiralty Head and requested that the Army Corps of Engineers develop plans for the construction of gun emplacements. Construction began in spring 1897 with the firm of Maney, Goerig, and Rystrom overseeing the work. By 1900, the Army's plans for development had grown so extensive that their execution necessitated the purchase of more than 500 additional acres (Hussey 1956, 38).

To facilitate construction, the existing lighthouse was relocated to the north. Not only did this provide for a more unobstructed firing range, but it also allowed for the emplacements to make use of the existing topography. The Army Corps of Engineers design called for disappearing cartridges, a comparatively recent development in military technology that allowed the fort to be hidden from enemy vessels at sea. By partially excavating the elevated ridge along the perimeter of Admiralty Head and building the emplacements so that their top edges aligned with the existing topography, the fort was essentially invisible from the south and west (Hussey 1955, 32).

Although Fort Casey was an active military base during both World Wars, it never engaged in active battle. The number of men stationed there ebbed and flowed, reaching a maximum of approximately 600 men during the Second World War when the Fort served as a training site. During its use as a training site, many of the guns were removed from their emplacements, leaving only a few for training purposes (Hussey 1955, 36).

Following the Second World War, Fort Casey was demoted to caretaker status and placed in the custody of the Seattle District of the Corps of Engineers. In 1954 it was sold to the Washington State Parks Department. Since that time, it has largely remained unused, except by park visitors.



Fig. 05.2 - Aerial photograph.

HISTORIC STRUCTURES

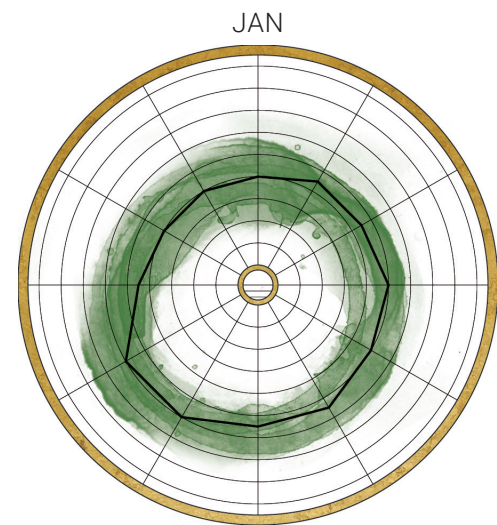
The existing historic structures on the site can be divided into two categories based on the construction technology.

Stick Frame Construction. Used for non-defensive structures, stick-frame buildings are less permanent than their concrete counterparts; each has been relocated at least once.

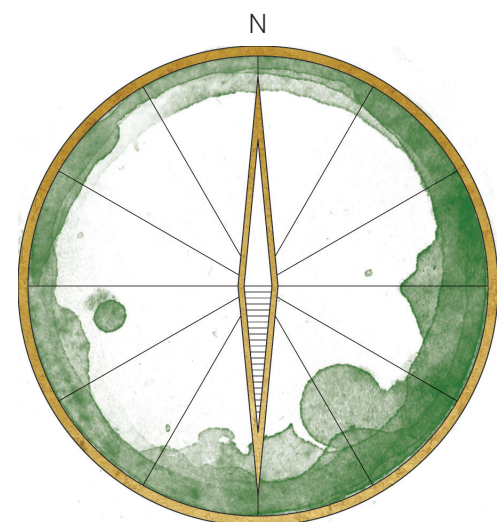
- Admiralty Head Lighthouse was constructed in 1855, and was relocated in 1897 to its current location.
- Camp Casey consists of multiple stick frame structures that originally served as officer's quarters and command posts. Originally located inland of Batteries Worth, Moore, and Kingsbury, they were relocated prior to the site's transfer and are now owned by Seattle Pacific University and serves as a conference center and retreat.

Cast-in-Place Concrete. The gun batteries and emplacements were constructed following the typology of the Endicott Battery. Using the natural topography of the site, the earth on the inland side of the existing ridge was carved away to hide the emplacements from the sea. Each of the batteries varies in height, with the tallest being Batteries Worth, Moore, and Kingsbury at 20'-0" and the lowest being Battery Valleau at 9'-0" Their dates of construction are as follows:

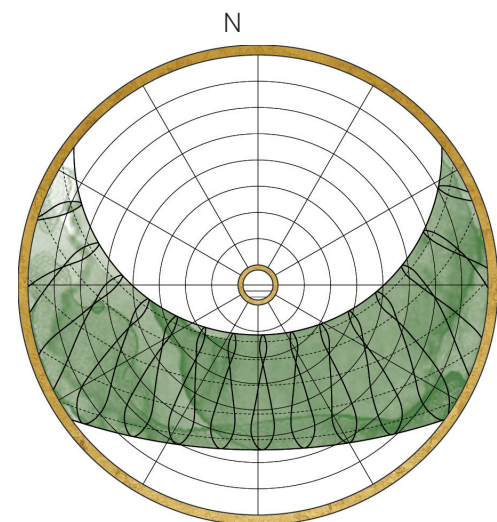
- Battery Turman, 1899
- Battery Worth, 1902
- Battery Moore, 1897
- Battery Kingsbury, 1905
- Battery Valleau, 1907
- Battery Trevor, 1903
- Battery Schenck, 1899
- Battery Seymour, 1902



ANNUAL TEMPERATURES



WIND ROSE



SUN PATH DIAGRAM

CLIMATIC CONDITIONS

In general, the climatic conditions of Fort Casey are similar to those of Seattle with only a few key differences. First, the annual temperatures are slightly lower, typically staying within the 30°F - 70°F range. Second, the wind comes predominantly from the southwest during the winter months. Like Seattle, the prevailing wind direction during the rest of the year is from the southwest. Also, similar to Seattle, the sun exposure on site indicates long, 15-hour days during the summer months and shorter, 9-hour days during the winter months.

Fig. 05.3 - Average annual temperature diagram.

Fig. 05.4 - Wind rose diagram.

Fig. 05.5 - Sun path diagram.



EXISTING INFRASTRUCTURE AND SITE APPROACH

Admiralty Head, the peninsular site of Fort Casey, is accessed by only a single road. Beginning on the road, views are largely unlimited. Upon turning south towards Fort Casey, the view of the land is blocked by a landform to the left and forest to the right; one's view is therefore directed along the road or toward the sky. The road next passes through a wooded area, and one's view is directed forward. Gradually, as one nears the site, the trees drop away opening to a vast, expansive view of land and sea.

A similar contraction and expansion of vision occurs as one continues on this road, passing each of the ruins in turn. It is even more apparent when exploring the site on foot.

Walking among the ruins one encounters surprising silence and the earth and mass block the wind and other sounds. Just slightly higher, when occupying the ruins, it is possible to hear the faint and rhythmic hum of the waves and sense the air stirring. Atop the ruins, the man-made melts away and one finds oneself alone with the land, the sea, and the air.



Fig. 05.6 - Photo illustration of site approach.

Fig. 05.7 - Access road.

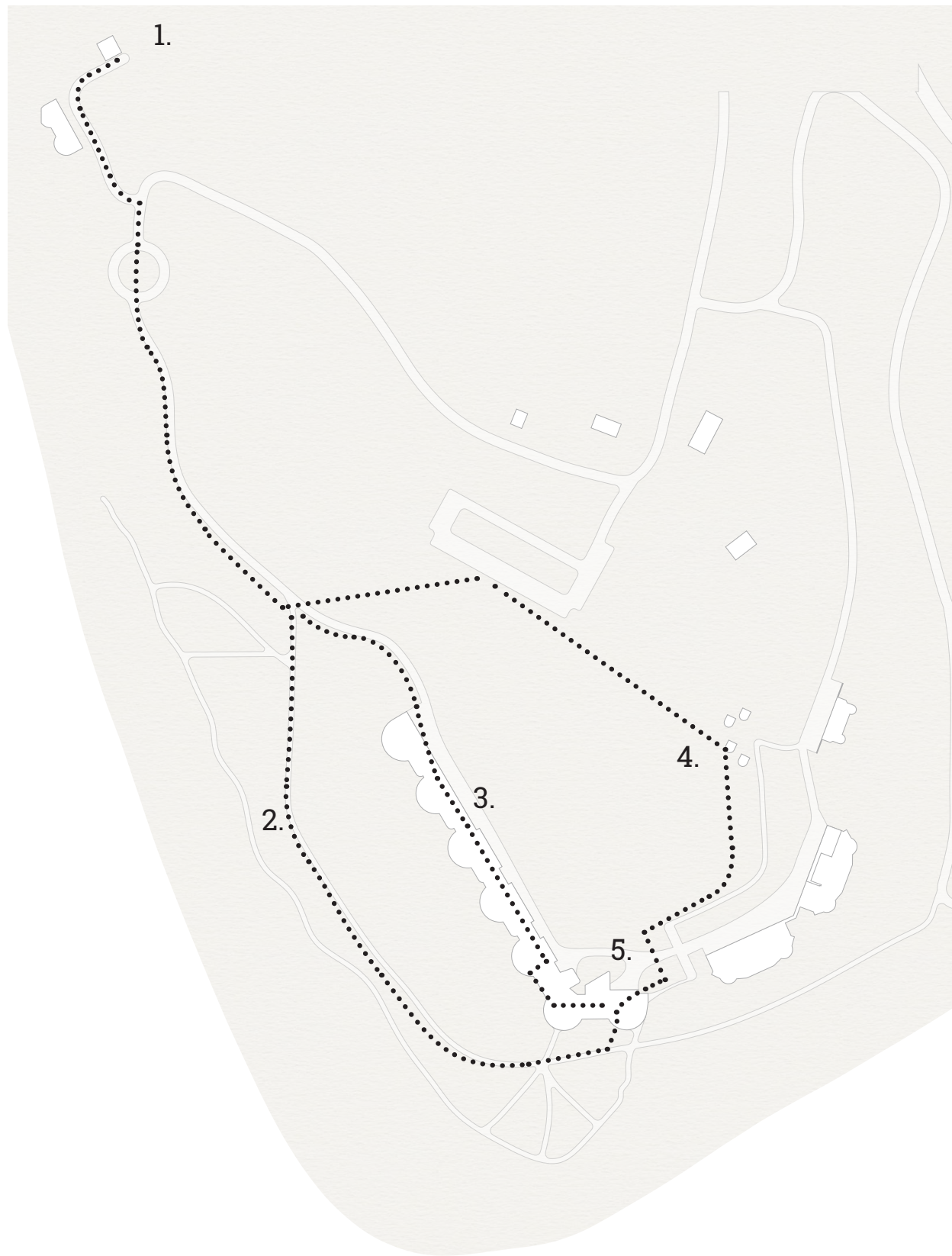


Fig. 05.8 - Key plan of edges, paths, and landmarks.



Fig. 05.9 - Photo illustration of edges, paths, and landmarks

EDGES, PATHS, AND LANDMARKS

There are five areas on site that typically attract attention and direct the flow of activity on the site:

1. Admiralty Head Lighthouse is located at the northern portion of the site. Due to its location near the wooded area, it is nearly invisible from the parking lot. This visual and spatial disconnection result in its being either the first, if one is already aware of its existence, or the last landmark that people visit during their time on site.
2. From the parking lot, one can walk directly toward the sea. Although there is a small path that leads down to the shoreline, most people find themselves walking atop the ruins. From this ridgeline, there is a breathtaking view of the sea and beyond to distant mountains. Visitors tend to pause in their journey before continuing along the path.
3. From the access road and parking lot, Batteries Worth, Moore and Kingsbury are the most visible built structures. Their strange beauty is intriguing, and nearly all visitors walk toward them upon leaving their vehicles.
4. In the foreground of these batteries is a large open field. Due to its form, almost a shallow valley between ridgeline and batteries, occupying the space feels quite secure. Children often play or fly kites here.
5. Often overlooked is the large concrete bridge/archway that connects two ridges. This feature is notable as it both connects the ridgeline and forms an edge between the meadow and the batteries beyond.

The patterns of visitors wandering among these landmarks creates an unmarked division of the site into an area of high activity in the center, and one of low activity along the periphery, particularly toward the east.



THE ELEMENTAL SITE

At its most basic, the site can be understood through four key elements. Each of them conveys a different sense of time, and together contribute to a more complete understanding of temporality.

Land. Solid and unchanging, the land remains constant regardless of seasonal changes. It provides a benchmark against which change can be measured.

Sea. Through the beating of the waves, the sea evokes the inevitable constancy of change and the irrepressible passage of time. It provides both a visual and audible reminder of temporality.

Ruins. Like the land, the ruins appear to pass through time unchanged when seen over a short term. Their existence as built structures, however, results in the traces of time becoming evident through their weathering. Thus, their cracks, lichens and occasional discoloration mediate the constancy of the land and the variability of the sea.

Path. The path promotes agency. By encouraging choice and prompting action, the path allows visitors to engage with the other elements. It offers an opportunity to interact, rather than to be acted upon.

In considering the design of a building on this site, these elements can be understood as one set of parameters for evaluating the successful integration of new construction in this historic landscape.

Fig. 05.10 - Diagram of four key elements on site.



The early design of the Treatment Center proceeded less as a linear equation of singular steps, and more as an iterative investigation into the relationship between the site and program. This chapter focuses on this investigation, beginning with early approaches to the site and program and ending with the selection of a scheme.

METHODOLOGY AND EXPLORATION

06

Fig. 06 - Battery Trevor.

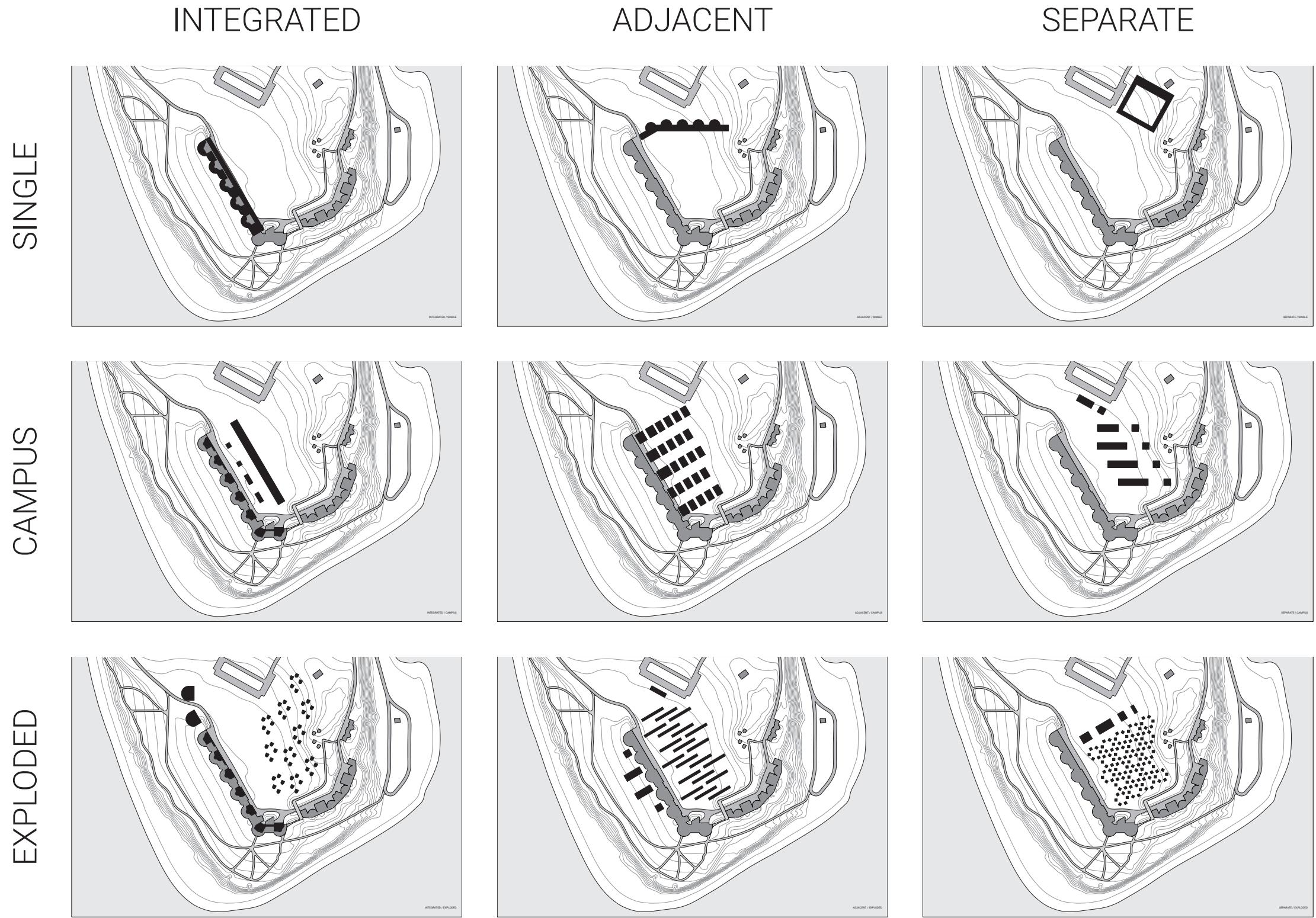


Fig. 06.1 - Early design matrix.

APPROACHES TO RUINS AND PROGRAM

The early design of the Treatment Center proceeded less as a linear equation of singular steps, and more as an iterative investigation into the relationship between the site and program. This chapter focuses on this investigation, beginning with early approaches to the site and program and ending with the selection of a scheme.

It became clear that, if not carefully organized, the building could quickly overwhelm the natural and manmade elements that make the site appealing. Furthermore, the investigations in which the intervention completely inhabited the ruins seemed to compromise their character, transforming them into an element of the design rather than entities with an autonomous past.

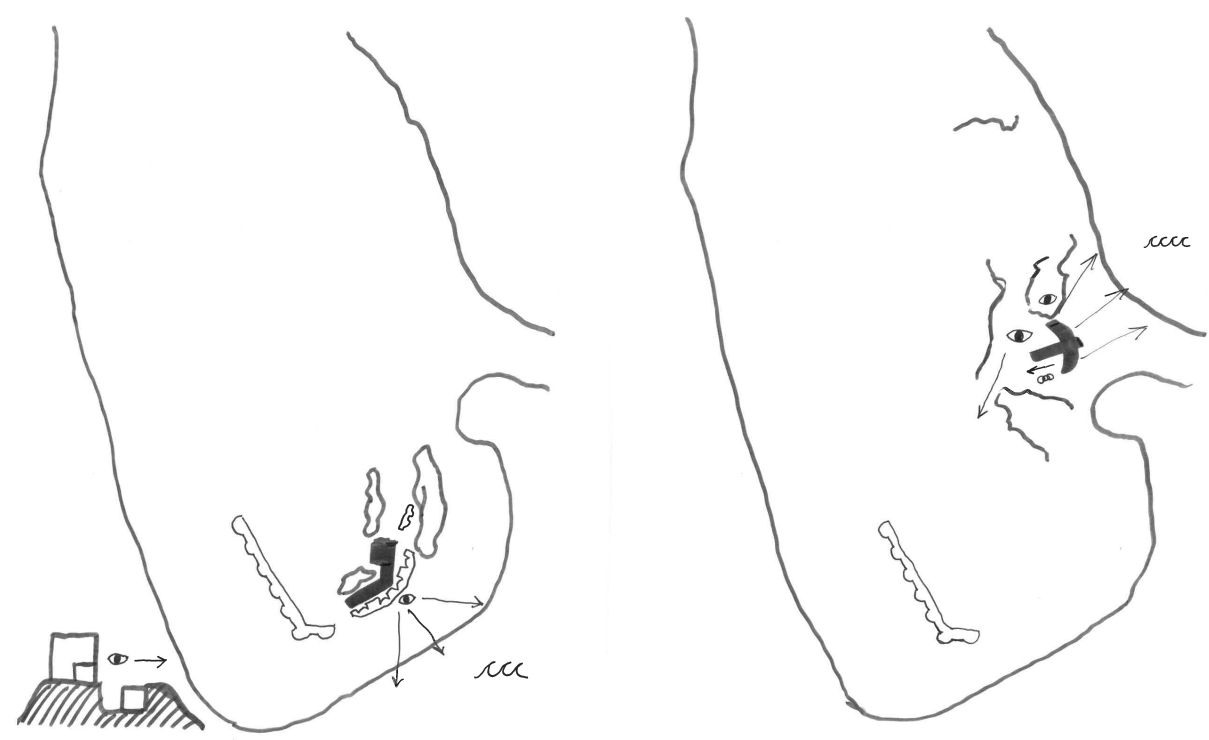


Fig. 06.2-5 - Figure ground diagram.

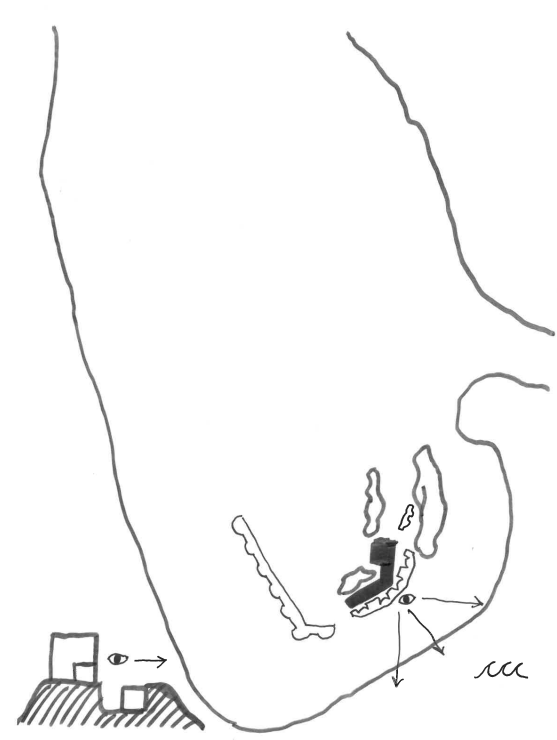
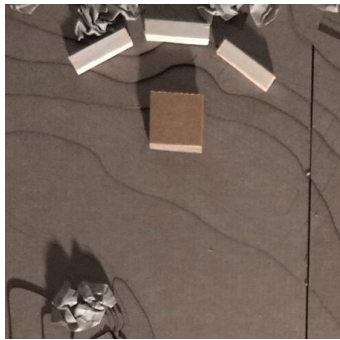


Fig. 06.6-8 - Figure ground diagram.

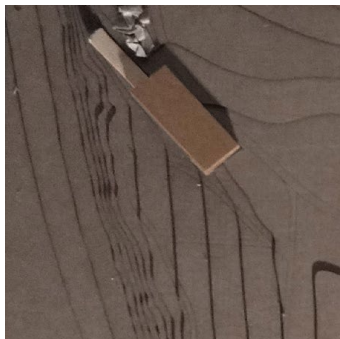
APPROACHES TO SITE AND MASS

The next design iteration looked not only at the relationship between the ruins and the new intervention, but also at the natural elements of the site. Multiple sketches in the form of figure-ground diagrams showing only the pertinent elements of the site enabled a quick assessment of potential placement of the Treatment Center. This analysis focused on the framing of views, the division of public and private spaces, and whether an abstract relationship to the ruins would be sufficient to establish a cohesive interrelationship of the Center and the historical elements on the site.

The study demonstrated that the most effective placement of the Center provided some division of public and private programmatic elements, maintained a (possibly ambiguous) relationship to the ruins, and established itself as a cohesive element within the greater site as a whole.



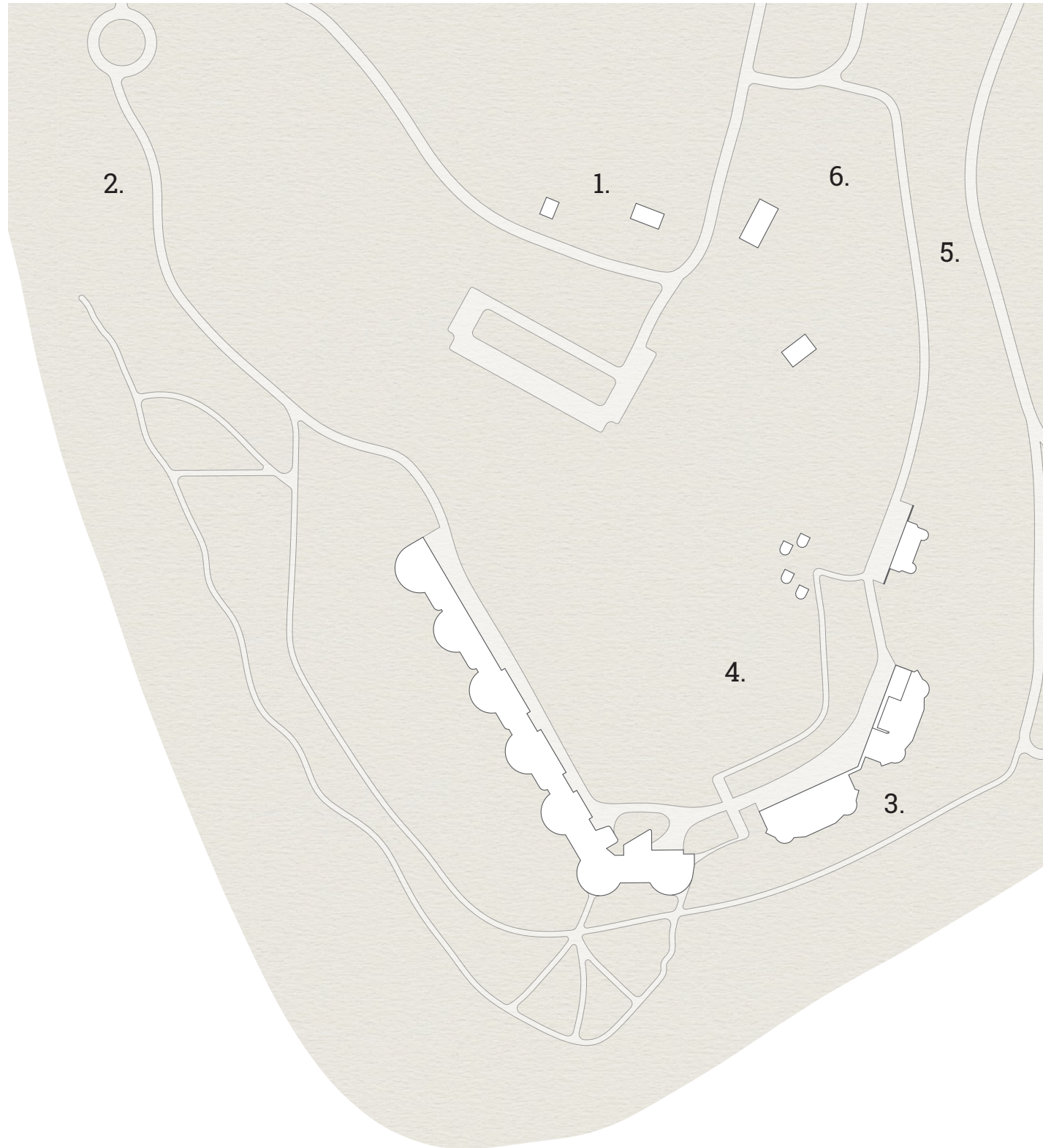
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2.



3.



4.



5.



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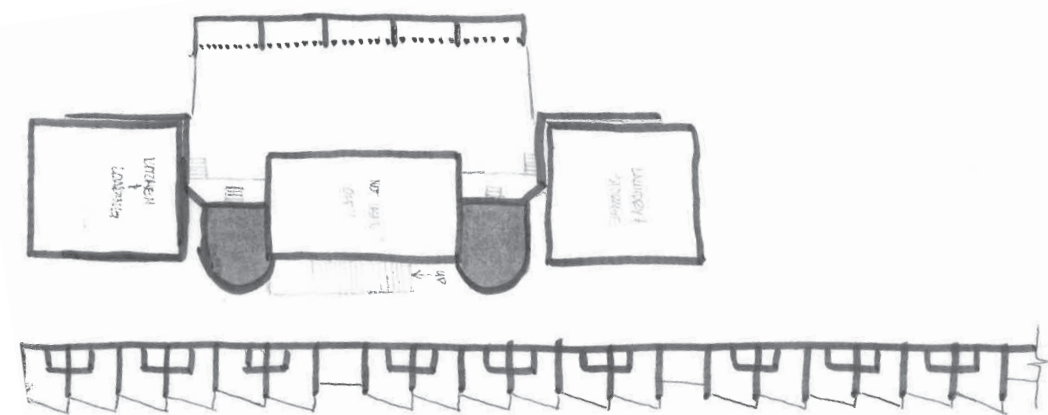
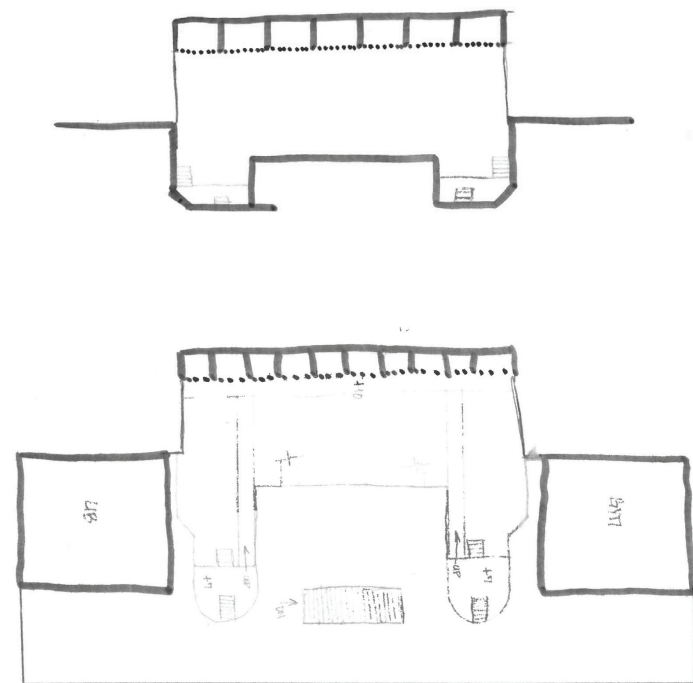
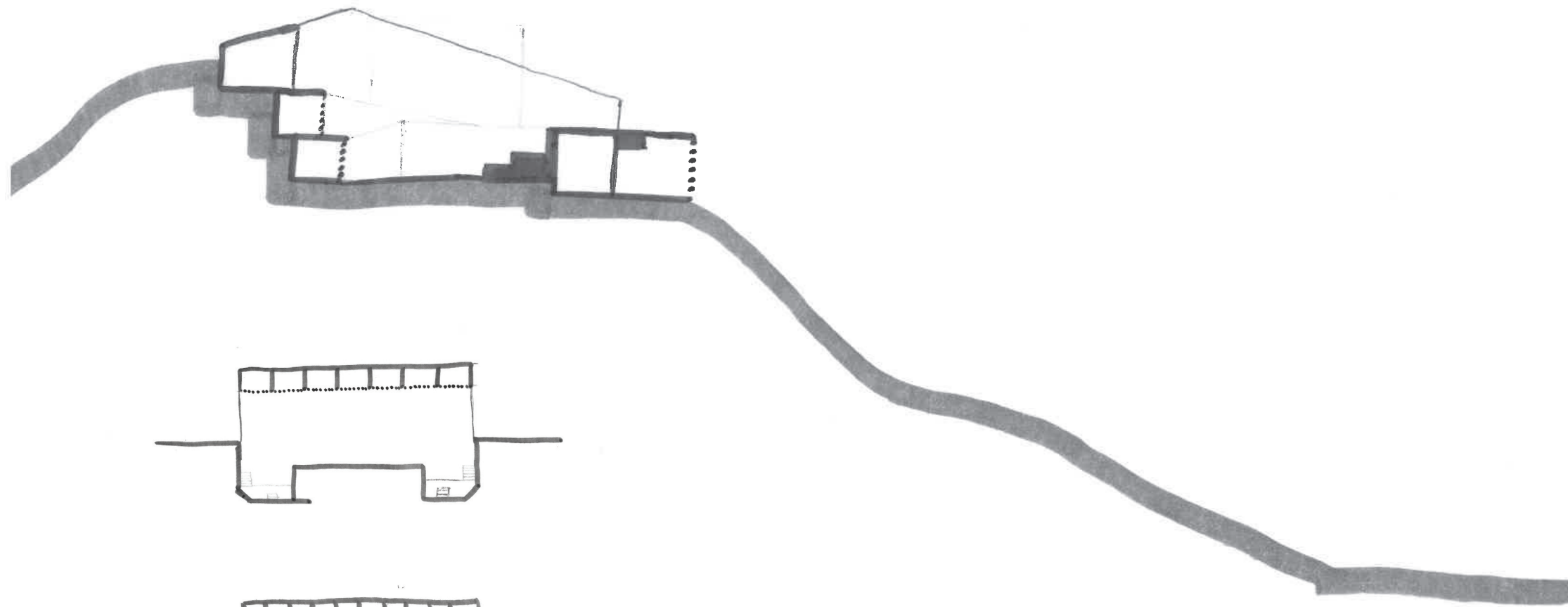
FURTHER EXPLORATIONS OF SITE AND MASS

Following the previous explorations, the most successful figure-ground diagrams were shaped as three-dimensional modeled elements. By considering the third dimension more fully, the following observations could be made:

- In instances where the residential portions of the building faced the public, such as in schemes 1 and 4, the separation between public and private spheres would be insufficient.
- Physical proximity to the ruins, even when the form was unrelated (e.g. scheme 3), established a stronger relationship than physically separated schemes that tried to mimic formal cues established by the ruins (e.g. scheme 2). Schemes that failed to relate to the ruins in either proximity or form seemed inappropriately disconnected from the site (e.g. schemes 1, 5, and 6).
- Some of the more successful schemes (such as schemes 2 and 4) established a connection to the land in addition to the ruins.

These observations and others resulted in the acceptance of the southeast portion of the site as the ideal location for the new design. Not only did this portion of the site offer opportunities for direct interactions with the land and the ruins, but also for indirect associations with the sea. Furthermore, its proximity to the main access road and location east of the concrete bridge aided in resolving the pragmatic concerns of logistics as well as the desirable maintenance of privacy.

Fig. 06.9 - Photo illustration of further exploration using massing models.



SEARCH FOR A SCHEME

Having selected a location, the design investigation now turned to the establishment of a workable configuration. In addition to the questions that drove earlier design ideas, this phase began to look at how the project's interaction with land, sea, ruin, and path could shape the phenomenological experience of the building occupants. Three configurations from this phase of the design are outlined below.

Scheme 1:

This configuration investigated two extreme design decisions: 1) the enclosure of a portion of the access road for use as a lobby space, and 2) the excavation of land behind the retaining walls on the north and south ends of the ruins to accommodate large programmatic elements. Although the resulting scheme incorporated some interesting sectional opportunities, the impracticalities associated with the design (e.g. removing a portion of the access road from operation) were too great for further consideration. Additionally, the decision to divorce the ruins from their context by replacing the land with new construction removed one of the key features of their construction and altered one of their essential character-defining features.

Fig. 06.11 - Section, Scheme 1.

Fig. 06.12 - Plan diagrams, Scheme 1.

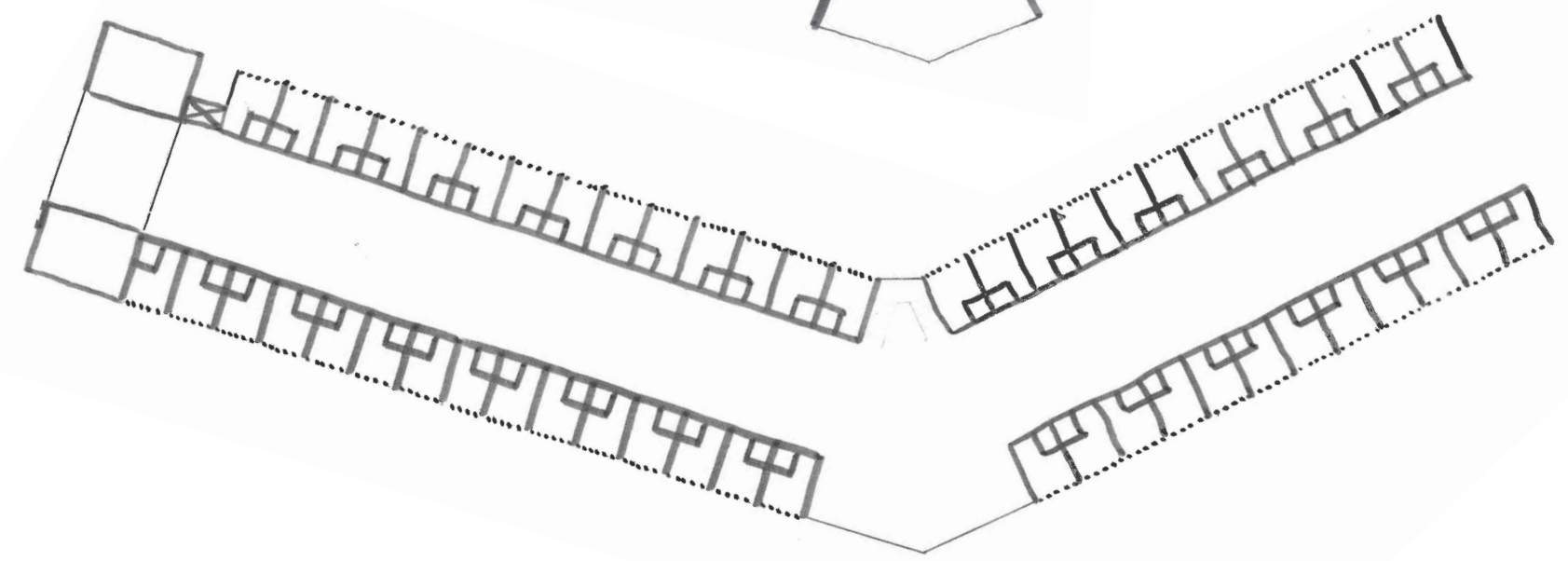
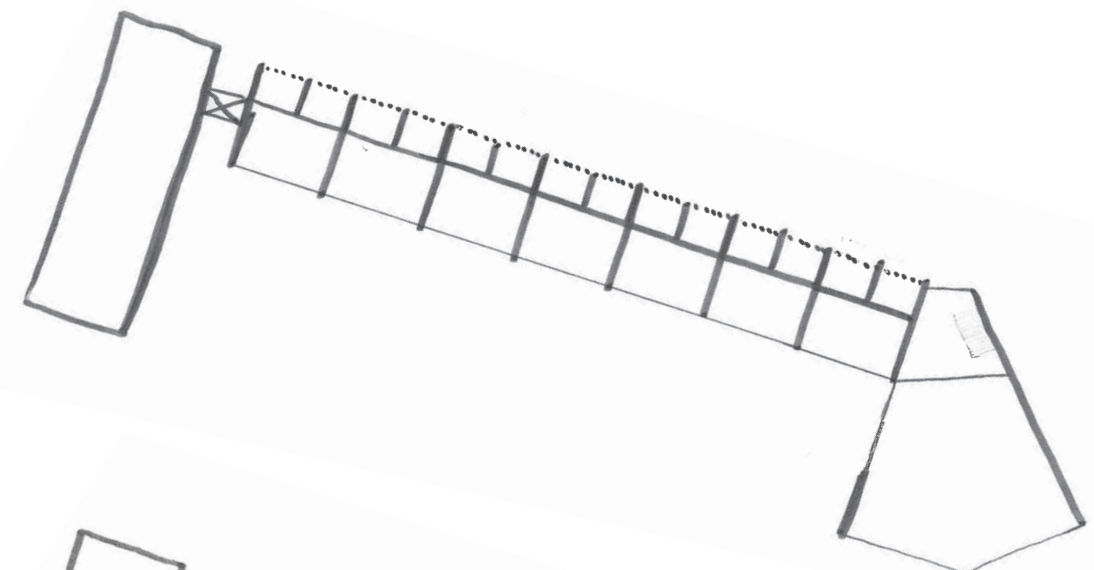
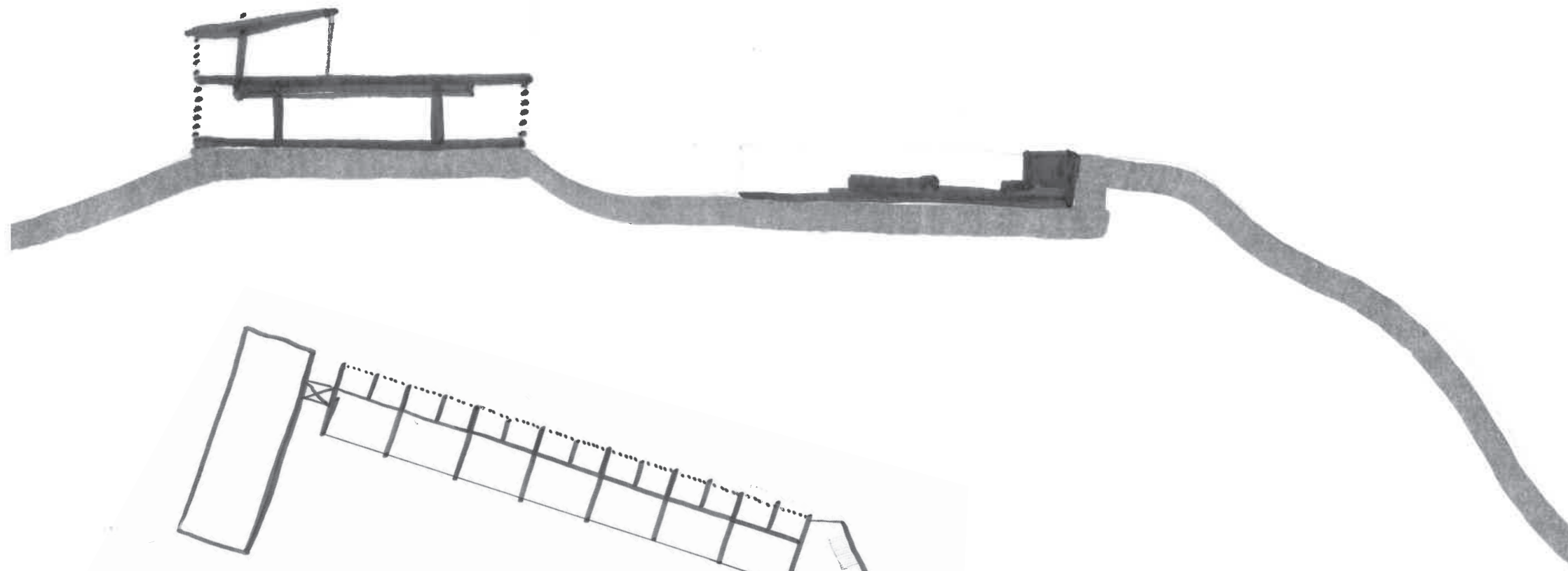


Fig. 06.13 - Section, Scheme 2.

Fig. 06.14 - Plan diagrams, Scheme 2.

Scheme 2:

Rather than attempt to place the project in direct contact with the ruins, this scheme placed the facility overlooking the ruins of Battery Valteau. Although the private courtyard on the upper level offered an opportunity to look over the ruins to the sea, the amount of excavation required to accommodate the residential portion of the program overwhelmed the integrity of the existing topographical relationships on site. In addition to drastically altering the landscape, the placement of the facility removed a portion of the path connecting the ridgeline back to the large field below.

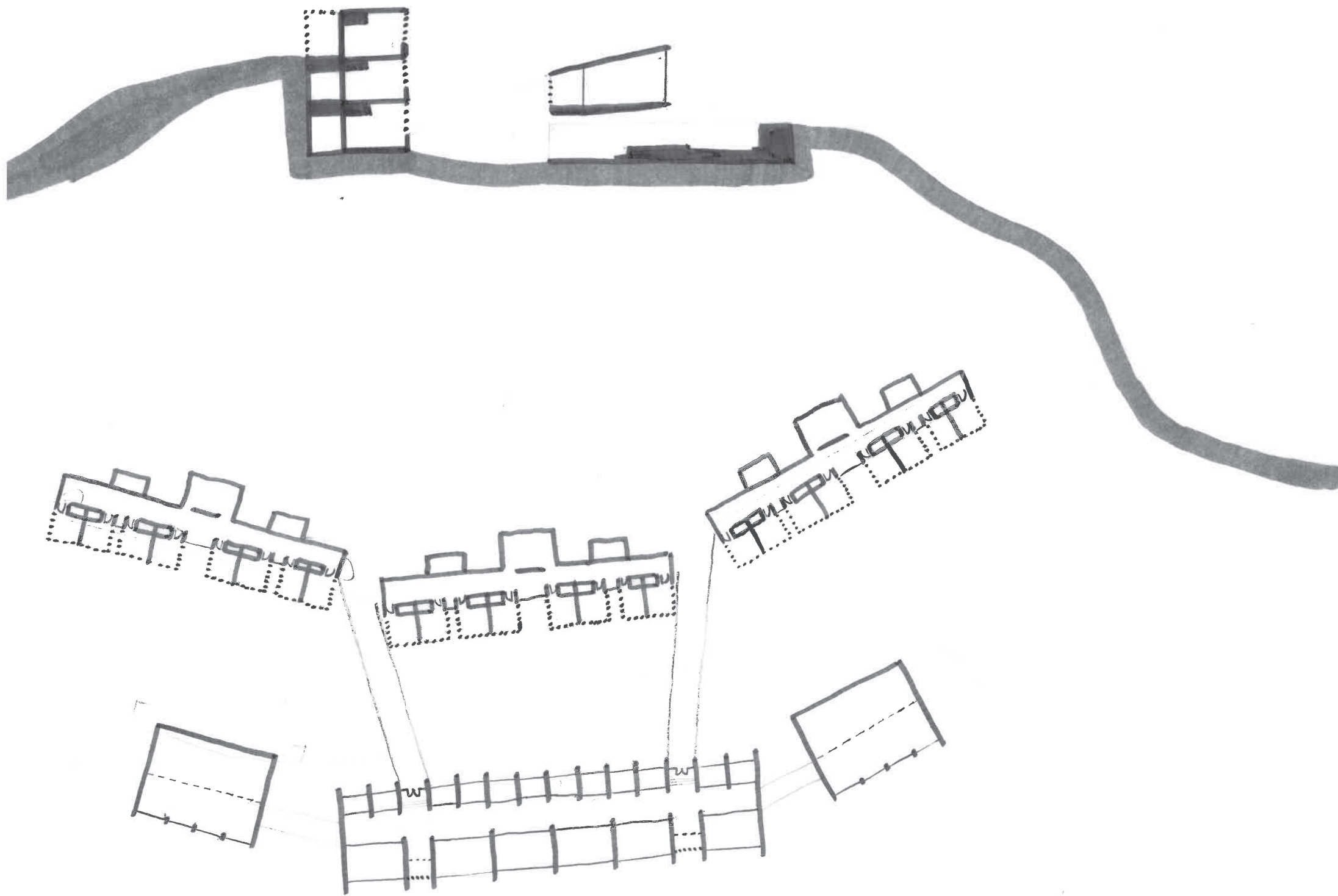


Fig. 06.15 - Section, Scheme 3.

Fig. 06.16 - Plan diagram, Scheme 3.

Scheme 3:

This scheme originated with the thought of placing the therapeutic portions of the facility above, but not touching, the ruins and embedding portions of the residential portion into the land. Not only did this result in appropriate visual tension between the ruins and the contemporary intervention, it also allowed for the continued use of the existing paths while maintaining a sufficient amount of privacy for the residents. Although imperfect, this scheme seemed sufficiently promising that further investigation was warranted.



Fig. 06.17 - Photo illustration of further investigations of Scheme 3 using models.

FURTHER INVESTIGATION

Although Scheme 3 responded appropriately in some aspects, questions remained regarding the relationship between ruins, residential spaces, and healing spaces. Although placing the therapeutic spaces above the residential spaces allowed for easy circulation throughout the day, the height required to do so would have required the placement of the most sensitive and private portion of the treatment facility alongside a comparatively busy public pathway.

Another issue, that of the relationship between the ruins and the new construction, required clarification. To a certain extent, the close proximity of the residential portion of the project already established a juxtaposition between the contemporary and historical fabrics. The need to remove the therapeutic portion of the program from the public portion of the site, however, necessitated the further investigation as to its placement. Rather than enforce a strict separation of the new and old, the decision was made to place them in close contact and thereby reinforce the contrast.

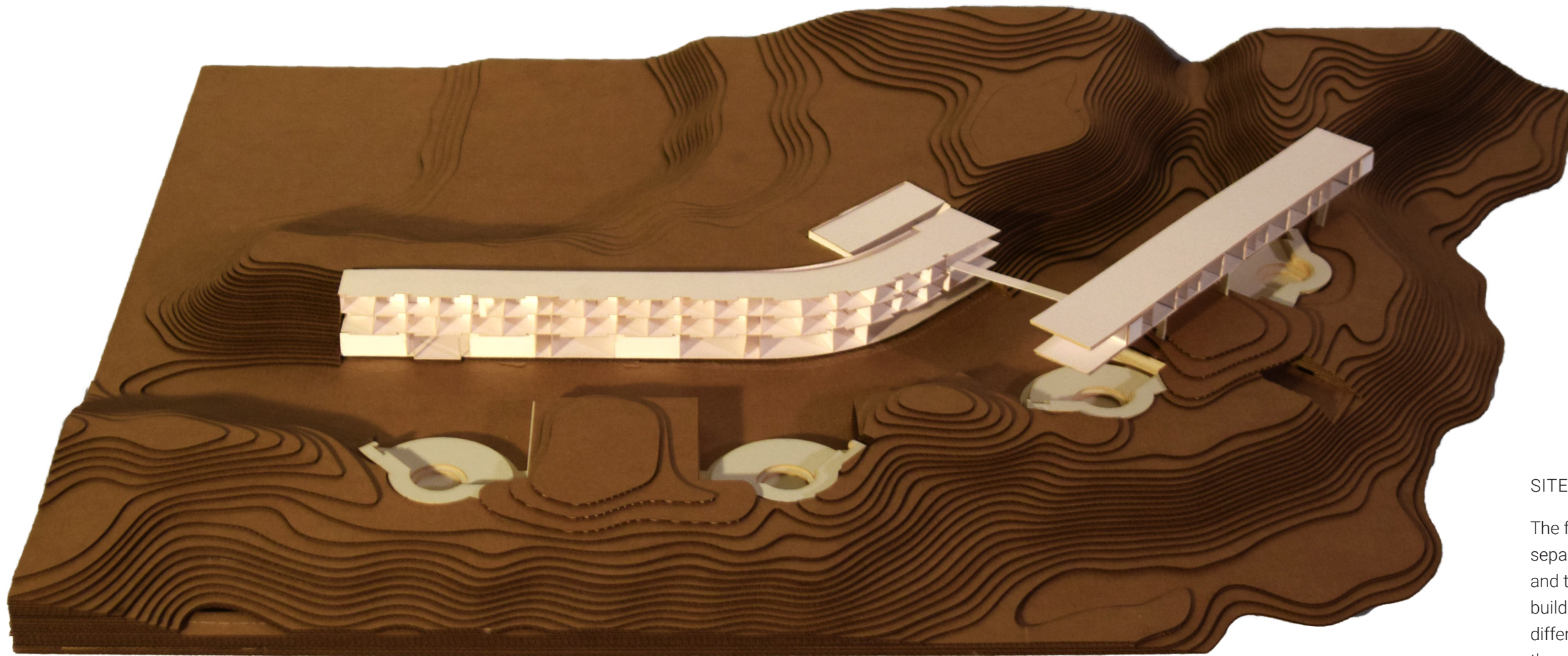


Throughout the design process, a primary focus was the site of Fort Casey and how its ruins would be incorporated to create a healing environment for the Treatment Center's residents. The selected location near Battery Valteau, with its topographical relationship to the ruins, allowed the building to occupy the same space as the ruins without intruding to the point that both the historic structures and the contemporary intervention might lose their individual character

DESIGN RESPONSE

07

Fig. 07 - Battery Valteau.



SITE RESPONSE

The final design divides the program into two separate buildings—one that is primarily residential and the other that is primarily therapeutic. Each building responds to the existing site, but in different ways. The residential building consists of three stories partially embedded in the landscape. Constructed of cast-in-place and precast concrete, it is tied to the land and with a plan that curves to follow the existing topography. In contrast, the therapeutic spaces are raised above the ruins of Battery Valleau and are primarily supported by a Vierendeel truss structure 9'-0" above the ruins. These two buildings are connected by an open-truss bridge that provides for interconnecting circulation without impinging on the access road or the ruins below.

Fig. 07.1 - Site model with design response.

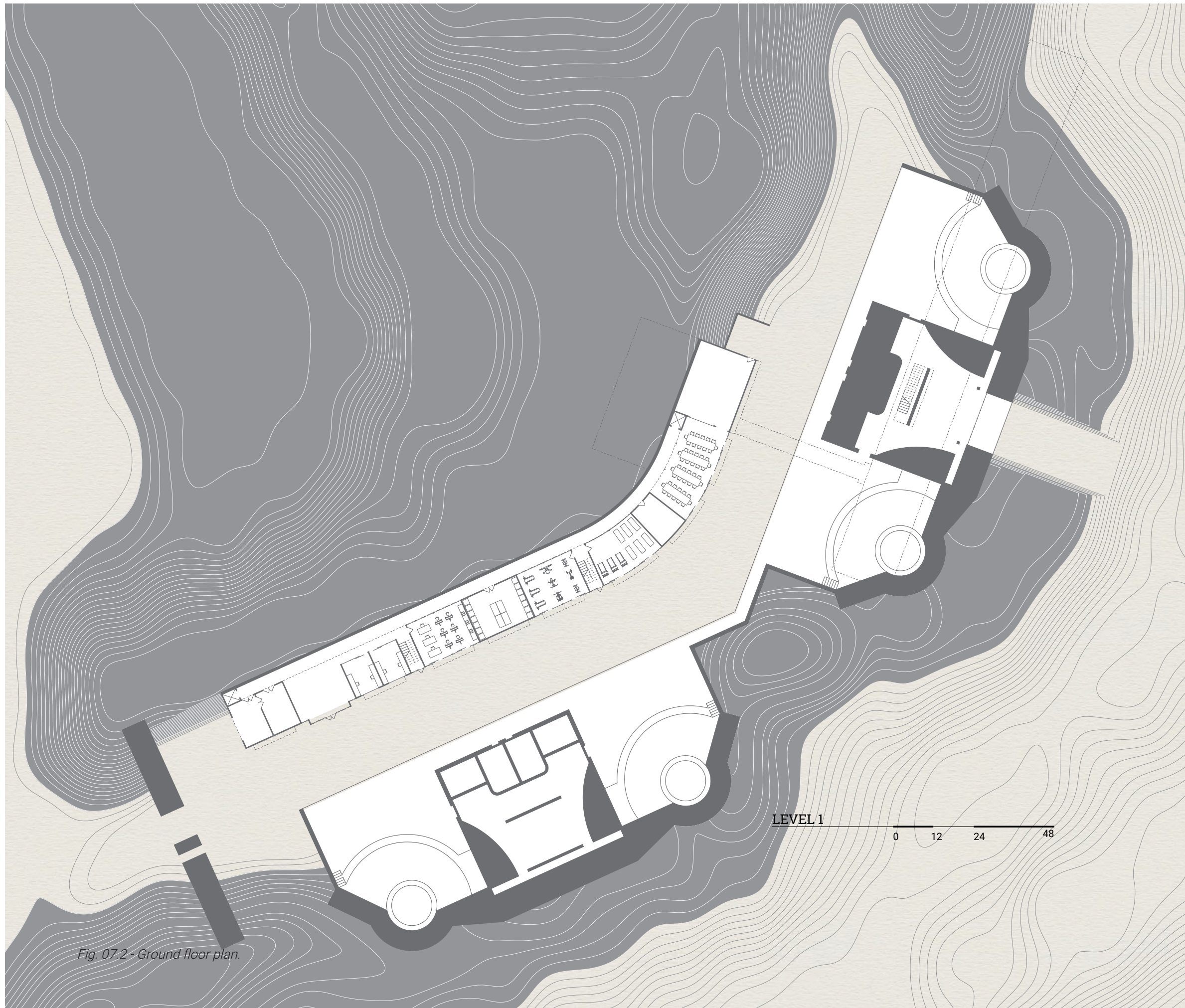


Fig. 07.2 - Ground floor plan.

GROUND FLOOR

The ground floor of the residential building is occupied by most of the communal program elements, including the lobby and administrative spaces, art studio and workout rooms, and dining hall and kitchen. The various spaces are connected by a single-loaded corridor along their north side and the access road to the south. In the majority of the spaces, a glazed wall along the south side faces the exposed ruins. The access road becomes an important element that not only allows for the delivery of supplies to the kitchen and administrative spaces on the east and west ends of the building, but also can be understood as a threshold between old and new.

Also on the ground level is the "Room of Reverie," a meditation space occupying what was once a storage space inside the ruins of Battery Valleau. Quiet and unassuming, the room is invisible from the road and makes use of an existing opening for entry from the ground floor. On the east side of this room, a portion of the ruins and earth is removed to create a direct view to the sea beyond.

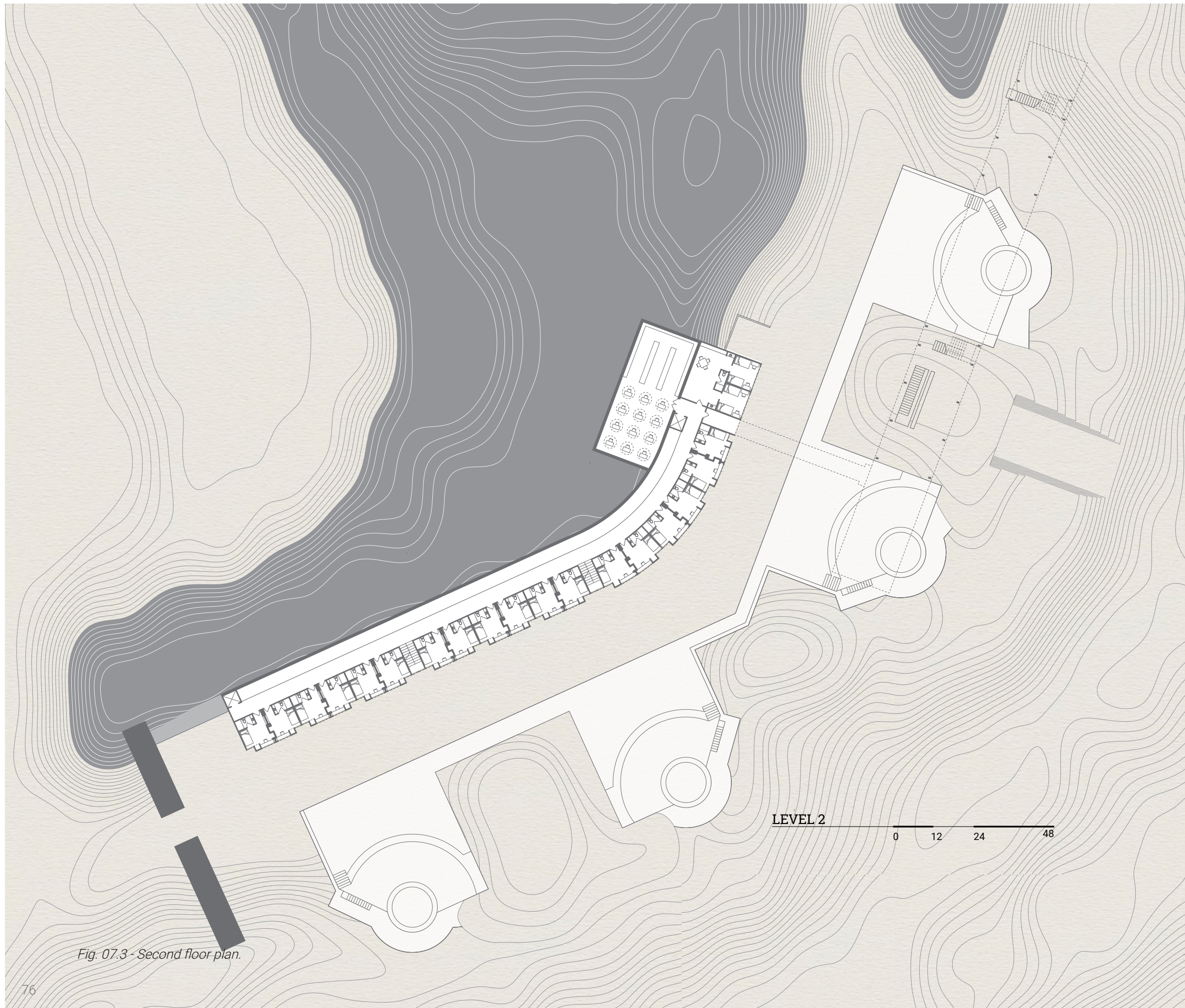


Fig. 07.3 - Second floor plan.

SECOND FLOOR

The second floor consists of eighteen patient rooms capped on the east by a shared staff apartment. Elevated to a floor height of 10'-0", the rooms enjoy uninterrupted views of the ruins below and the sea beyond.

Also on this level, embedded in the landscape at the north end of the building, is the library—a place of knowledge, quiet reflection, and writing. The plan is bifurcated with the entrance at the center; each half is differentiated by qualities of light. Lit only by artificial lights on the stacks, the north portion is dim and intimate. After selecting a book, the occupant turns to enter the daylit reading space to the south—turning toward the light both literally and metaphorically.

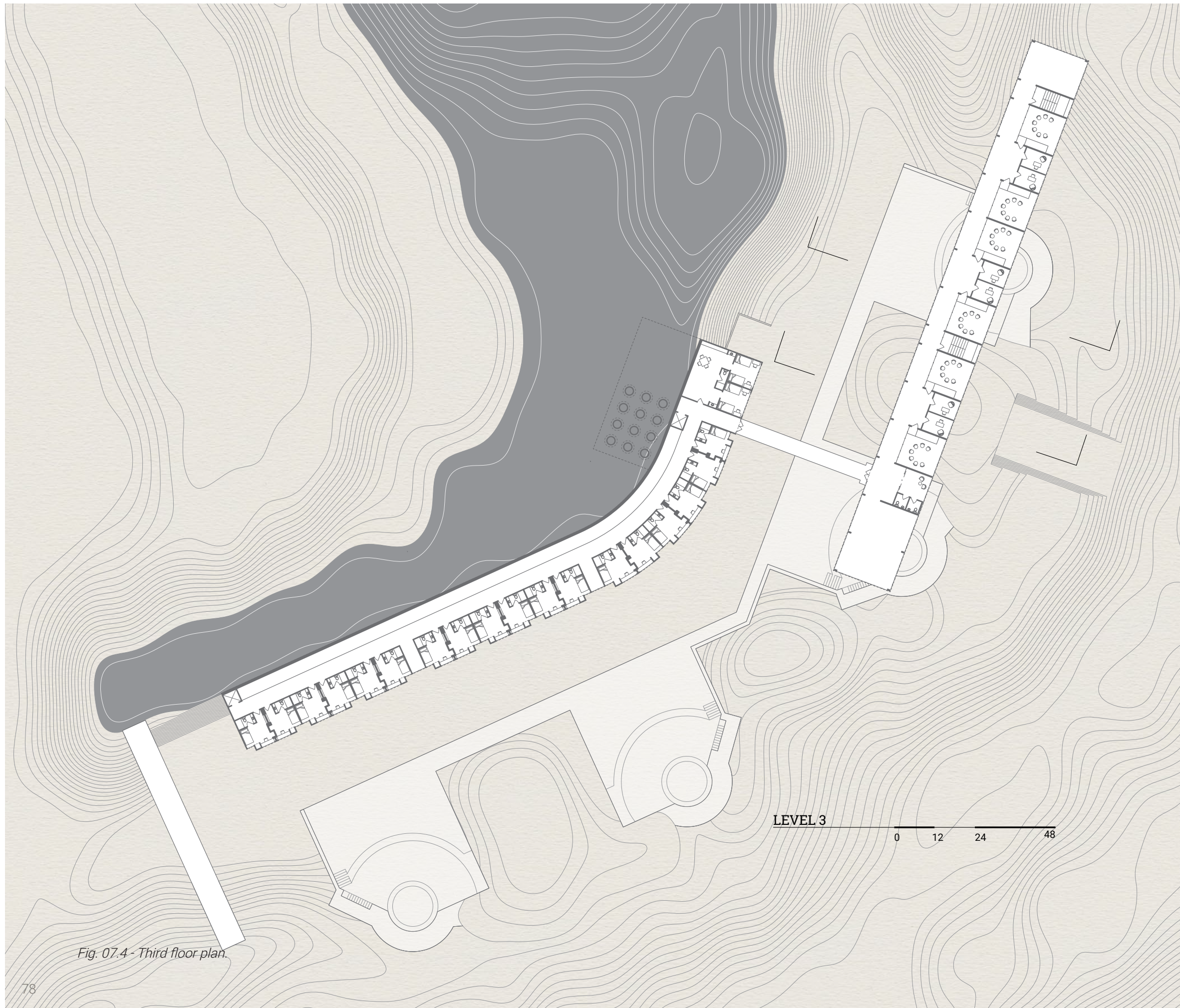


Fig. 07.4 - Third floor plan.

THIRD FLOOR

Like the second floor, the third floor of the residential building contains eighteen individual rooms and a shared staff apartment. From the residential building, patients and staff cross a bridge to the therapeutic building. This bridge is built of a lightweight steel truss that is open to the elements on either side. As one crosses from building to building, the bridge provides an opportunity to experience both the visual and tactile conditions of the site. Constructed above the ruins, and with audible and visual connections to the sea beyond and the landscape below, the therapeutic spaces encourage the careful consideration of the past in preparation for the future.

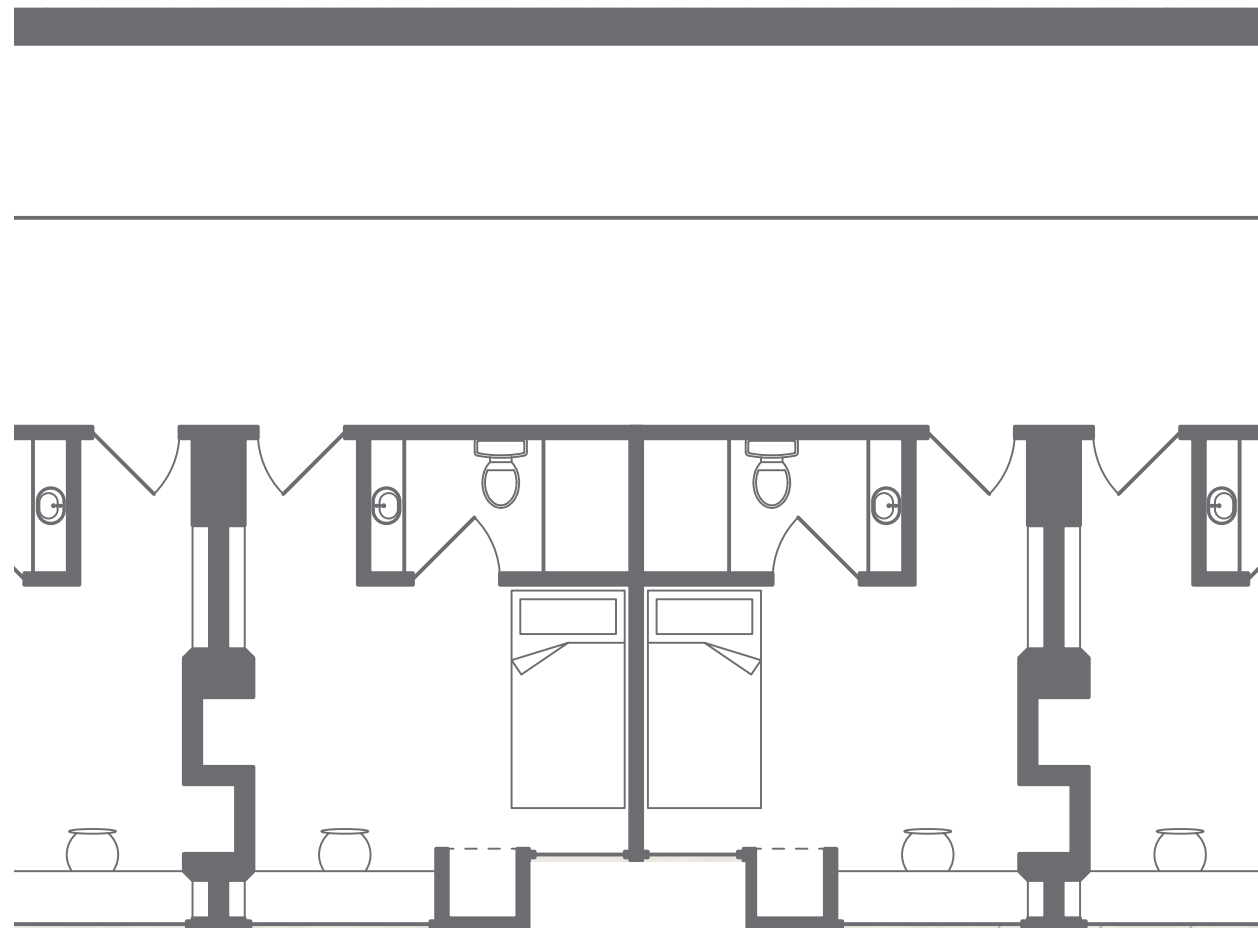


Fig. 07.5 - Floor plan of typical patient rooms.



Fig. 07.6 - Typical patient room

PATIENT ROOMS

The design for the patient rooms contains elements of both prospect and refuge (Appleton, 93). Following a long day of therapy, the rooms provide a space of safety and security through the

solidity of their concrete walls and the warmth of their wood floors. Within the quiet sanctuary of the rooms, patients are able to look out over the ruins of their past lives to the future beyond.



Fig. 07.7 - Room with a View.

ROOM WITH A VIEW

Located at the southern end of the therapeutic building, this room is a place of gathering and communion. Cantilevered over the ruins and glazed on three sides, the room allows for panoramic

views of the ruins, the landscape and the sea. Its open floorplate allows for multiple uses, including large group classes, sunrise yoga, and informal conversations.



Fig. 07.8 - Room of Inner Light.

ROOM OF INNER LIGHT

A smaller, more intimate gathering space is provided at the north end of the therapeutic building. With translucent glazing on three sides (blocking any view of the site while emphasizing

the color and quantity of light), the room offers a space where the passage of time is evident only through the changes in light as the sun traces its path from dawn to dusk.

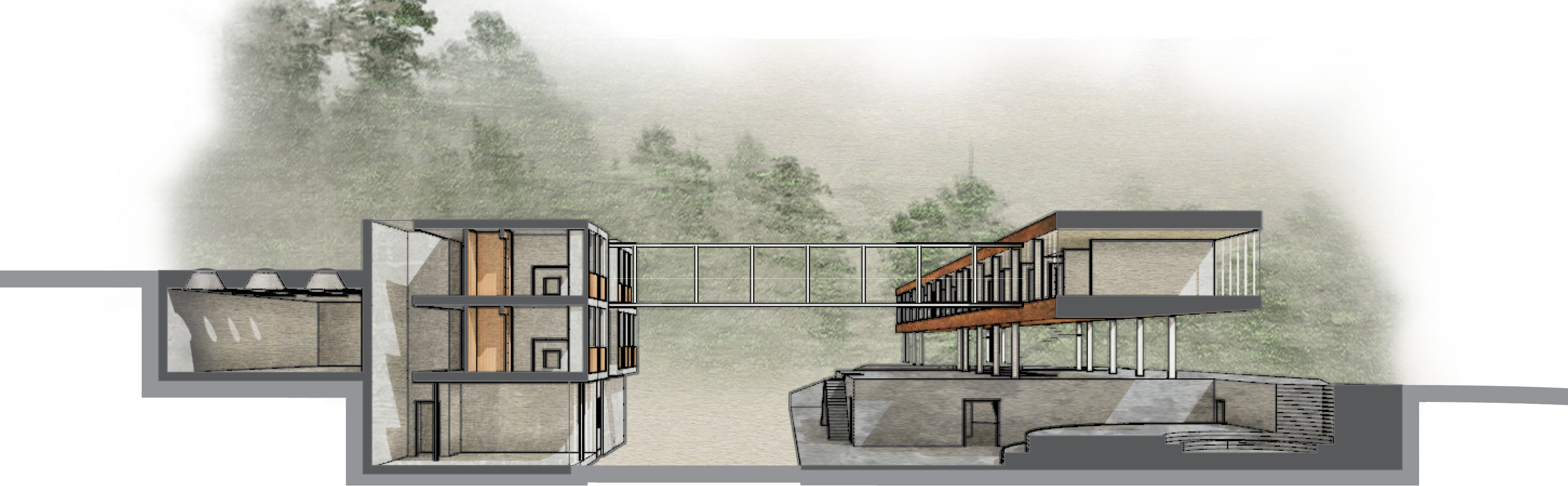


Fig. 07.9 - Room of Reverie

ROOM OF REVERIE

The only programmatic element to occupy the ruins, the Room of Reverie invites quiet contemplation of past, present, and future. Though unconditioned, the mass of the ruins maintains a

constant temperature regardless of the time of day. Within the unchanging ruins, the room allows the opportunity to access the past as they prepare for the future.



THE QUESTION OF OLD AND NEW

The design of this residential treatment facility responds to the historic fabric in four distinct ways:

1. Through its siting along the access road, the design makes use of existing infrastructure and fits with the topography and configuration of the land, road and ruins.
2. By embedding the residential building in the land, the design alludes to the methods of construction used in the site's development for defensive military structures.
3. By placing the therapeutic portion of the program above the ruins, the design provides a clear juxtaposition between the contemporary and historic structures.
4. Finally, in its occupancy of the ruins at the Room of Reverie, the design inserts a contemporary use into the historic architecture while conserving the sense of absence characteristic of the ruins.

Fig. 07.10 - Section Perspective



Fig. 07.11 - Elevation.

MATERIALS AND WEATHERING

Both buildings use the same palette of materials in differing proportions. Each of these materials was chosen specifically for the way they interact with the existing structures and natural elements over time.

Like the Endicott batteries, the residential building has a concrete structure. Instead of primarily using cast-in-place concrete, however, the building relies on precast elements to form a structural framework; only the foundation and retaining wall are cast in place. Not only does this create a visible differentiation in the finishes of the historic and contemporary concrete, but the smoother finish of the precast elements will weather differently than their cast-in-place counterparts.

Within this framework, elements of cedar and copper cladding are used for patient rooms and vertical circulation routes. These elements offer a sense of warmth that contrasts with the coolness of the concrete. This warmth will gradually recede, however, as the sea air proceeds to dim the cedar to grey and the copper to a greyish-green.

The tendency of copper to verdigris in the sea air is of particular importance in the therapeutic building. While steel would corrode quickly, the process through which copper weathers makes it an ideal material for the cladding of the steel Vierendeel truss. The high contrast between the bright copper and the aged concrete ruins will diminish with time. Within a year, the bright hue of the copper will dim to a ruddy brown. By seven years, the first signs of verdigris will appear. After thirty years have elapsed, the grey-green of the therapeutic building will nearly match that of the vegetation beyond. Thus the process of weathering allows the contemporary construction to take its place in the timeline of manmade elements in natural settings.



Fig. 08 - Path north of Battery Trevor.

CONCLUSION

08



Fig. 08.1 - Battery Valteau from ridgeline.

This thesis began with a discussion of ruins and their potential as sites of memory and healing. Due to the intervention of time and weathering, they may lose the sense of use and purpose that typically saturates the contemporary built environment. In their vacancy (sense of absence and of time passed), ruins encourage the contemplation of the past, especially of how the past has shaped the present and may yet affect the future. As one walks among ruins, one is unknowingly invited to consider one's own past and contemplate one's own future.

A similar process of recollection and preparation occurs in the process of healing from PTSD. Throughout the therapeutic process, individuals are asked to recall specific elements of their lived experience and question their understanding thereof. Due to the painful character of these memories and the symptoms they provoke, the healing process is inherently difficult and often results in increased discomfort before progress is noticeable.

This thesis has argued that sites of ruins, particularly those in a natural landscape, can be instrumental in aiding the healing process. For

this to be effective, however, it is essential that the contemporary intervention in the vicinity of ruins preserve the sense of absence and vacancy that distinguishes ruins from other historic sites. The character of the contemporary design, therefore, must be a product of its own time rather than an attempt to imitate that of the ruins. Only through abiding by these two guidelines can the ruins fulfill their role as reminders of the lost past and as catalysts for future progress.

This thesis concludes with a deep respect for the role of memory and its effect on narrative. Although many questions remain in the gap between lived experience and the interpretation thereof, the author remains confident of humankind's indomitable nature and ability to heal. The thesis project is, therefore, an optimistic work even as it addresses the difficult issues of trauma, its consequences, and a site constructed in anticipation of potential attack.

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