

**Lower Shore Battery Interpretive Centre: Graffiti Writers, Wreck
Divers, and Transatlantic Trade History at the York Redoubt**

by

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Abstract

This thesis lays out the rationale, goals, and design of a center for graffiti writers, scuba divers, and an exhibiton on trans-atlantic trade history at the York Redoubt, near Halifax, Nova Scotia. It begins from personal interests and preoccupations across literature and architecture, and from that foundation builds a theory of how architectural design can work to bring out the meaning latent in the infrastructure and other functional spaces that make up the world around us. It engages with the history of previous architectural design movements that have been endedbted to literary criticism and differentiates itself from them. It engages with history through the technique of montage and the ideas of Harold Innis. It concludes with an overview of the design proposal.

Acknowledgements

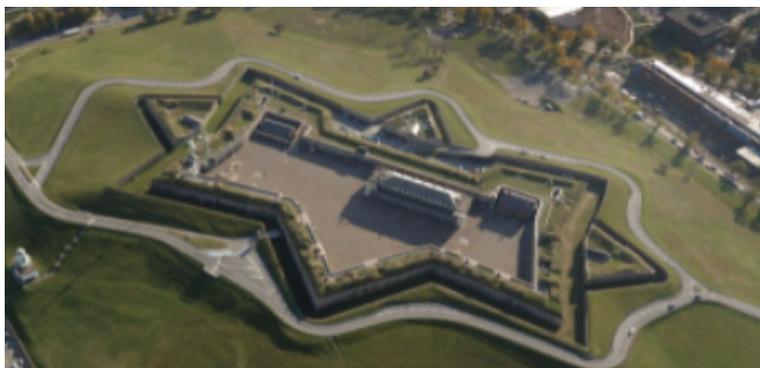
I would like to thank Dr. Sarah Bonnemaïson and Christine Macy for their support and input throughout the thesis process; my parents and family for their support in all forms at all times; Melissa Gerskup for being my first architectural mentor; William Roelofs for talking about politics until I started to listen; and Annik Carson for being an imaginary friend who was always there to give real support.

Chapter 1: Introduction

In his 1965 conclusion to the landmark two-volume anthology, *A Literary History of Canada*, the eminent Canadian literary critic Northrop Frye summarized Canadian cultural attitudes, as expressed in their French and English writing, as exhibiting a “garrison mentality.” He writes that French and English Canada has historically consisted of small isolated communities, which face hostile physical or psychological “frontiers,” separated from one another and from American and British cultural centres.

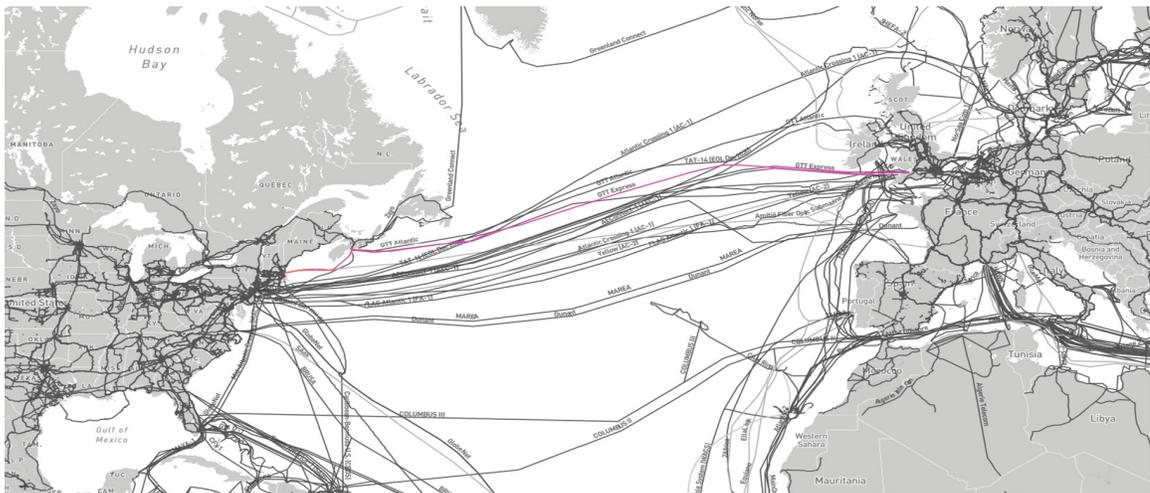
He writes: “A garrison is a closely knit and beleaguered society, and its moral and social values are unquestionable. In a perilous enterprise one does not discuss causes or motives: one is either a fighter or a deserter.” (Frye 1965, 342)

This project attempts to challenge this current in Canadian culture through architecture: to make a place that can broaden perspectives, assuage isolation and fear, wherein causes and motives can be discussed, and that can open up the Canadian garrison to an awareness of its global connections and place in larger networks.

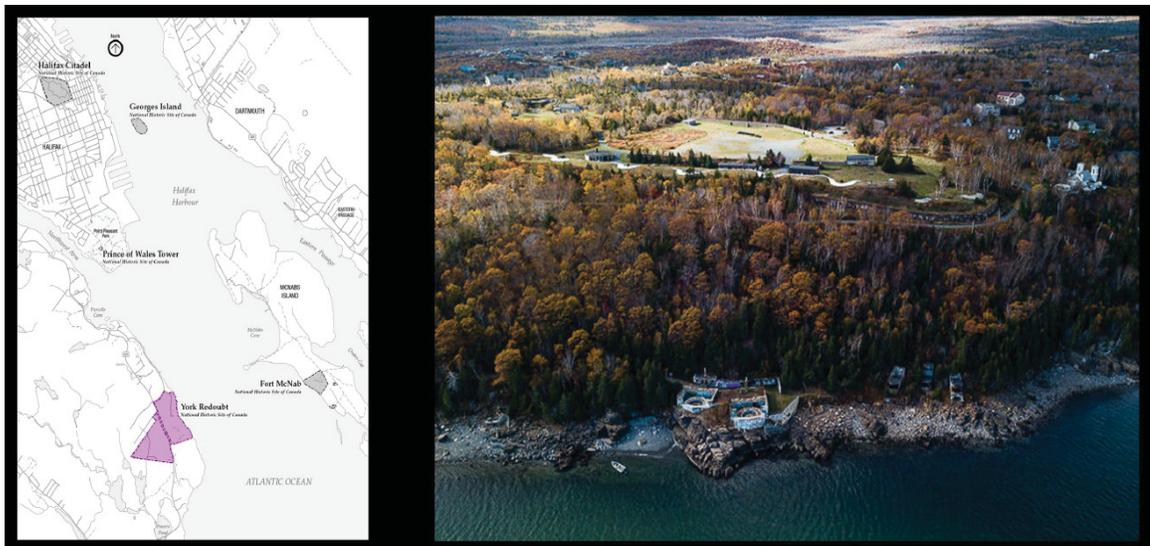


The Citadel anchors the city of Halifax.
Photograph of Citadel Hill, Halifax (HFXNews.ca 2018)

In addition to historical garrisons the city is rich with direct connections to the larger world; it is a palimpsest of transatlantic trade technologies. But the most cutting-edge of these is almost completely invisible in day to day life. The GTT Express data cable runs across the Atlantic to connect New York and London; it is currently the fastest connection between the two cities and is exclusively used by automated stock-trading algorithms.



Map of global internet infrastructure (Infrapedia 2021) with the GTT Express Cable indicated in pink.

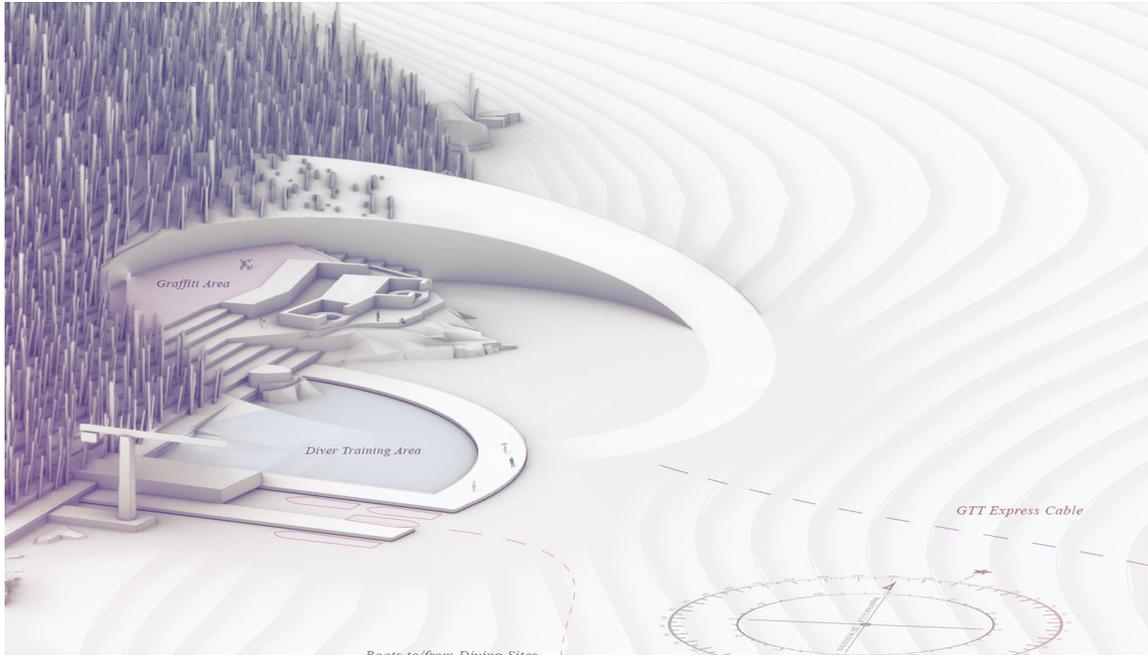


Map of the Halifax Defence Complex (Hallman 2020) with the redoubt indicated in pink and aerial photo of the York Redoubt (Life Peripatetic 2021).

The place where it lands on the coast of Halifax to 'refuel' before its trip across the Atlantic falls just a few kilometres south of the York Redoubt, a British fort, part of the Halifax Defence Complex, first built in 1793. The fort has been expanded and modified repeatedly over its lifespan, each time in response to advances in military technologies. In the photo above we are looking west across the Redoubt, looking into the cannons. At the bottom along the coast, you can see the Lower Shore Battery, a WWII-era addition that kept watch over an anti-submarine net which ran between the Redoubt and McNabs Island, put in place to stop Nazi U-boats from entering the harbour. This lower battery was decommissioned and fenced off after the war and has fallen into neglect.

A fundamental first-move of this project is to relocate the GTT Express Cable Landing Station, a small, unremarkable, and essentially invisible piece of infrastructure, to the Lower Shore Battery. The garrison and the network, the line and the circle, are brought together, and an experiential connection between them is made. This montage of colonial infrastructures juxtaposes military history with commodity exchange infrastructure, the past and present, and invites contemplation of the links between force, capital, and history.

The primary architectural move of the project is the construction of a building on the site which works to choreograph the experience of this act of montage. The building is circular and made of concrete. The circular building has been placed on the site, around the remnants of the Shore Battery, and tilted down into the water to open views from the fort out over the ocean, let southern light into the upper portions of the building, and create an underwater space at the lowest level. The formal movement



Massing and site model of the thesis proposal.

continues by twisting the circle slightly so that its south side passes underground, allowing foot traffic to enter or exit the interior of the circle. Formally and materially, the concrete embedded in the landscape takes a cue from the gun emplacements on the site, and the rounded language plays against the angularity of the rocks and structures along the coast. It appears as a kind of garrison, or bunker, but its tilt and turn make it open and permeable.

The Lower Shore Battery was only recently, in the last few years, cleared of dangerous materials and opened to the public. Nonetheless, it has been something of a haven for local graffiti writers, who were clearly not deterred by the fence. The writing on the abandoned fort is extensive and elaborate, often political, and often highly crafted. In addition to exhibiting the two pieces of infrastructure, the cable and the fort, the project will create a legal and public

space for graffiti writers to practice their craft and build their community. It will also make a home for scuba divers to train and use it as a 'home base' for expeditions out to dive at one of the many nearby sunken wrecks.

In the site overview drawing on the next page we can see the layout of these programs on the site from a plan perspective, with the graffiti writers based on the inside of the circle, indicated by the pink area.

The scuba divers are based slightly to the south of the fort, shown in the overview drawing in blue. Near the scuba divers training area are the proposed docks and loading crane, from which divers will launch wreck diving excursions.

The docks are also used for loading. Disused train cars are brought to the site by boat, and form a primary component of both the graffiti and scuba programs. For graffiti writers they act as a renewable supply of 'free walls' where they can practice and gather. When they are completely covered in paint they are removed and placed in the ocean as artificial



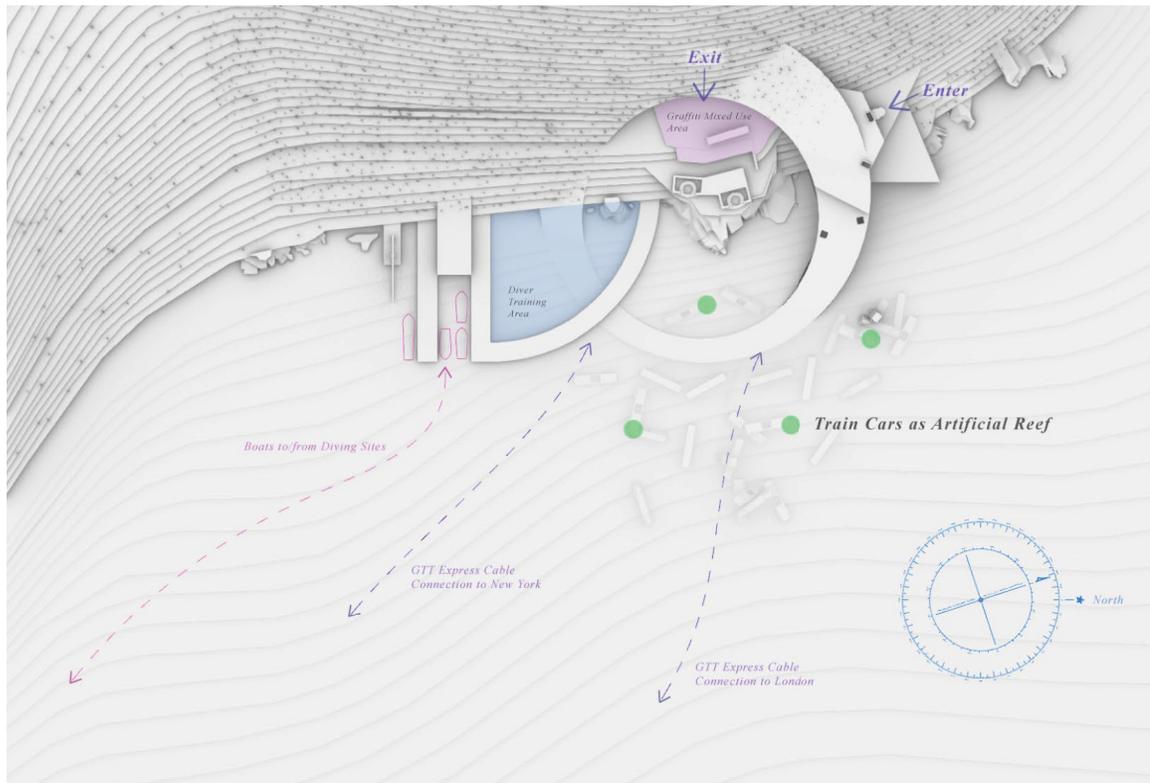
The Lower Shore Battery at the York Redoubt.

reefs, around the areas indicated here with green dots, which act as a habitat for local wildlife.

Here they are also used by divers as part of their training for wreck diving, and act as a kind of underwater art gallery.

Artificial reefs are a common strategy for helping to bolster coastal marine ecosystems damaged by human development. There is currently an ongoing effort by environmental groups to place artificial reefs in the Halifax harbour, in the form of concrete 'reef balls'. This thesis project can be thought of as, in part, an extension of that effort.

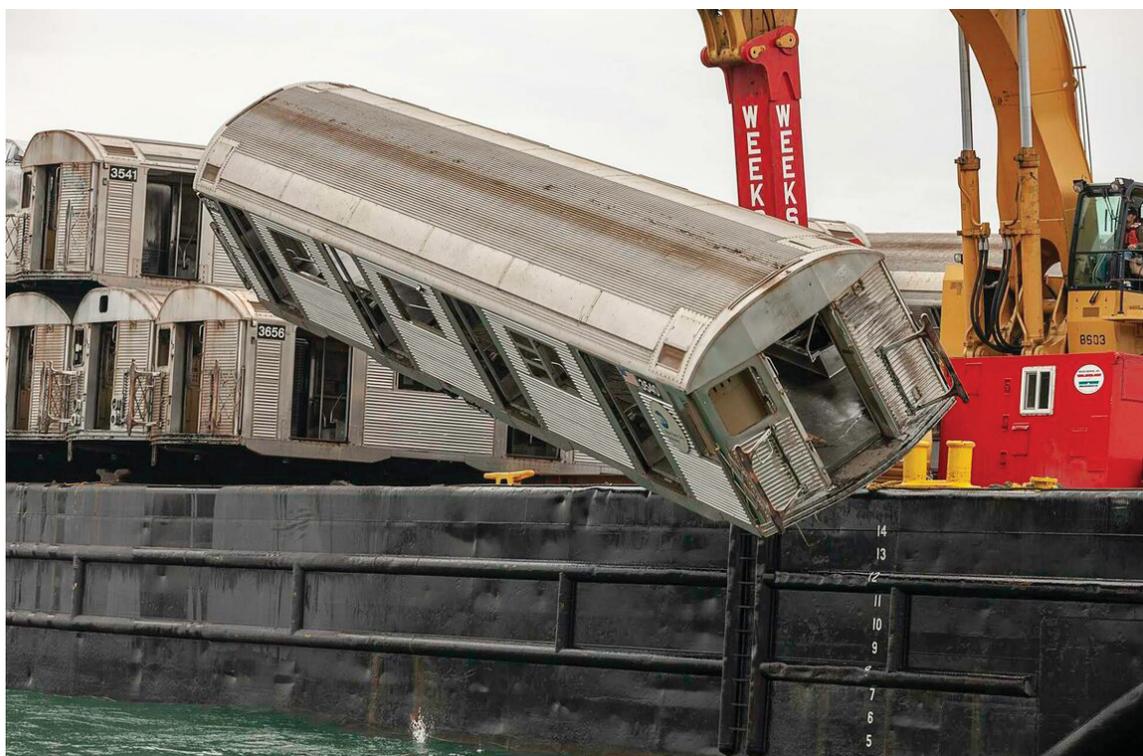
There is recent and ongoing precedent for using disused train cars as artificial reefs off the Atlantic coast as part of



Site overview, plan view. The graffiti writers area is shown in pink, the wreck-divers area is shown in blue, and train cars are placed underwater as an artificial reef around the locations indicated by the green dots.

the Redbird Reef, a mass of hundreds of disused Redbird subway cars donated by the New York City Metropolitan Transit Authority.

Of the trains underwater, Jeff Tinsman, artificial reef program manager for the Delaware Department of Natural Resources and Environmental Control, described them to the New York Times as “luxury condominiums for fish,” saying that subway cars in general are roomy enough to invite certain fish, too heavy to shift easily in storms and durable enough to avoid throwing off debris for decades. He summarized his feelings by saying that “The one problem I see with them is that just like the DeLoreans, there are only a limited number” (Lee 2019).



Discarded New York City subway cars are lowered into the Atlantic off the coast of Delaware to become a home for marine life as part of the Redbird Reef. (Mallon 2008)

The Atlantic and Gulf States Marine Fisheries Commissions extensive 2004 *Guidelines for Marine Artificial Reef Materials* mentions concerns around paint only three times: once in relation to paints which contain PCBs (outlawed since 1977 in North America); once in relation to paints which contain lead (which they conclude is a non-issue and which is not present in most spraypaint regardless), and once in relation to aircraft topcoat and undercoat paints which contain chromium compounds. None of these concerns apply to the sorts of commercially available spray paint proposed for use on the site. (Lukens and Selberg 2004)

In short, there is little concern voiced about the environmental impacts of either dried spray paint or disused train cars in contemporary literature around artificial reefs, and the environmental benefits of the reefs themselves are widely acknowledged.

The circular building will house rotating exhibits of historical artifacts, art, or most anything else. The aim of the project



Fundamental project organization. Four programs, united by a circular interpretive center building.

is not to fully curate the exhibit, but to use the polyfocal experience of thematically related programs, positioned in a dialectical relationship with infrastructure, to provide a backdrop which places any cultural or historical object on display in the exhibit into the context of the connection between global historical forces and communal life at the local level. The nature and implications of the critical relationship between the programmatic and infrastructural functions on the site is not made explicit through the facility, but is rather left to be discussed by the community of visitors. By leaving the content of the exhibition open to be changed—rotated, curated, and re-curated again—and the specific message of the programmatic montage unstated, the experience of the site is able to be made fresh over and over again even as the primary activities of the facility remain consistent. The frame can contain almost any content, but will always contextualize it in the same way.

Chapter 2: Motives

Years ago I took an introductory course on critical theory that began with a discussion of the definition of literature. I don't think we settled on any one definition, I don't think anyone ever really has, but one attempt that has always stuck with me is that literature is language which draws attention to itself as language. That is to say: there is a distinction between practical language and literary language, and the distinction rests on a self consciousness, and on the way that literary language deliberately slows down the communication of literal meaning to defamiliarize its object. I've gone back and forth on this idea as a definition of literature, and maybe for other forms of art, but deep down I still believe it. Nobody has ever been able to really convince me that the manual that comes with my TV is literature; nor have they been able to convince me that the factory it's made in is architecture.

The definition comes from the Russian Formalists, a loosely organized group of literary theorists whose productivity peaked around 1917, the same year as the February and October revolutions. Their work has been deeply influential, notably on Saussure's development of structuralism in linguistics and on Soviet formalist filmmakers, but was fractured by Stalinism and declined sharply after the late twenties. (Leitch 2010, 191) In any case, it is maybe not accidental that a definition from such a revolutionary place and time has haunted me during the period of my architectural education, a period which began just before the 2016 American election and is wrapping up in the wake of President Biden's election in 2020. In the Trump era it felt hopeless to me to make work that was exemplary of a different way of life, serene designs that attempt to seduce

people away from capitalism. This has not felt like an era when asking anyone to calm down was going to accomplish anything. I wanted something more confrontational; more self-conscious; more defamiliarizing. Something that, in the words of the Russian Formalists, “roughened the form”, not just of architecture, but of life. But it’s a tricky thing. You really shouldn’t make buildings that people have to live with every day that are physically uncomfortable, spatially disorienting, formally illegible. Even if you want to, there is so much of that kind of architecture already built and it’s hard for me to see how it is achieving anything politically.

My desire to bring ideas from literary criticism into architecture, as well as my desire for unfamiliar forms, led me to what turned out to be a passing interest in what K. Michael Hays calls the architectural late avant-garde. Discovering Eisenman et al was initially thrilling for me but eventually frustrating. They frustrated me because while their buildings were designed as self-reflective collections of signs, which insisted on being read as signs, it has always seemed to me that that reading needed to be performed at the level of the diagram, on paper, and is barely, at least for most people, legible in the final construction itself. In other words they never really leave the condition of literature and remain paper architecture even when built.

What I really wanted to create was an architecture that invites reflection on its design by the occupants of the building, not just by ivory tower academics. And more than that, reflection on what the program of the building represented; in other words, an architecture that gives people perspective on their actions. This seems to me to be in some ways a continuation of the project of the late avant-garde, a desire for self reflection in architecture, but a departure from them

in the sense that the reflection is done at the level of function rather than architectural form. The function of a building, the reasons people go there and the things they do while they are there, are the story, or stories, of the building. What I've been looking for is a way to work on the 'plot' of the building, with plot understood as the constructed form of the story, not the story itself. A kind of programmatic formalism.

Chapter 3: Preoccupations

A project that I have always been fascinated with is the Vietnam Veterans Memorial. On some level this comes out of my appreciation of Maya Lin's process; she writes that "I begin by imagining an artwork verbally. I try to describe in writing what the project is, what it is trying to do. I need to understand the artwork without giving it a specific materiality or solid form" (Lin 2000, 35) Clearly this is someone I resonate with. But the memorial itself is an incredible construction. I am still captivated by the way that it connects different scales and worlds, guiding the occupant through not only a confrontation with death, but, through its siting and relationship to historical monuments, a confrontation with history and politics, linking the personal with the global. Its design is entirely functionalist, but the function is understood as a deeply human one.

And I'm just as fascinated with Rem Koolhaas, a very different architect and writer and someone with whom I have a more conflicted relationship. *Delirious New York* was one of the first books on architecture I read, and I immediately fell for it. I've since become politically skeptical of his work, but there is still a lot that I find resonant and interesting. As with Lin, Koolhaas is someone who approaches architecture via language and storytelling. He first became famous as an author, and before that started his career as a journalist and filmmaker. His treatment of program as plot in DNY seems to follow logically from this background and has been influential for me. Likewise, the way that he foregrounds programmatic, cultural, and historical forces that work on and through architecture is something I have always been attracted to. And I like that his work focuses

on the metropolis, the place that exemplifies so much of our current culture, for better or for worse. As in Lin, there is a functionalism to his work, but the function isn't about efficiency or commodity production. Both architects centre the production of a particular kind of experience: in Lin's case a very controlled and personal one, and in Koolhaas's a chaotic and social one.

Essentially my feeling is that these two architects represent two sides of the same coin, and that a synthesis of their approaches would give me the kind of self-reflexive architectural language I am looking for. A synthesis will involve the deep attention to the phenomenological orchestration of reflection that Lin does so well, with the focus on program, urban infrastructure, and plot developed by Koolhaas. Rather than reflecting on death, as in the VVM, or getting caught up in the delirium of urban life, as in Manhattan, in a synthesis an occupant would be invited to reflect on the actions being conducted in the city around them, both historically and in the present, the civic values reflected in infrastructure, and their own place in a larger system. Ultimately it becomes about orientation, a fundamental principle of architecture.

Chapter 4: Montage

Montage is a unifying principle and technique that works across writing, film, architecture, history, and criticism. It is a form that comes out of the Industrial Revolution, the invention of the camera, the development of mass media society, and the metropolis. As Martino Stierli tells us in the introduction to his excellent book on the topic, *Montage and the Metropolis*, “The scale and speed of the modern city and the new typologies within it enforced changes on the human perceptual apparatus, as was first analyzed by Georg Simmel in his seminal essay “Die Großstädte und das Geistesleben” (1902; “The Metropolis and Mental Life”). The modern metropolis required viewers to perceive it in motion, and buildings within it required a sequentialized perception.” (Stierli 2018, 1) This requirement for sequentialized perception leads to photomontage, the attempt to bring sequentially disparate elements together to be able to be perceived within one picture plane, as well as other forms of montage in both film and writing.

In Koolhaas, as in other monteurs before him, including Walter Benjamin, montage becomes an essential tool for understanding the modern city and its culture.

On Koolhaas, Stierli writes that:

Delirious New York suggests that even more than a ghostwriter, the architect is an analyst or therapist: one who renders visible the dreams of modern society about its spatial equivalent, the metropolis. The architect liberates collective images and fantasies from their latency into manifestation. Architecture is work on the text, the written processing of the trauma to which modernism has subjected us. (Stierli 2018, 237)

I find this reading of architecture, and Koolhaas, incredibly compelling. I also find it somewhat troubling. As Stierli writes, “Koolhaas, while sharing with Benjamin the notion

of a metropolitan unconscious that had to be brought to the level of awareness through a process of historiography, was pursuing a different political agenda. His take on capitalist forces behind the manifestations of the modern metropolis was not critical, but ironically or even cynically affirmative.” (Stierli 2018, 237) The “metropolitan unconscious” that is expressed in the architecture of Manhattan is one that follows naturally from a capitalist drive towards efficiency and production that disregards humanity to whatever extent it can get away with. But still, there is something inefficient in the delirium of the metropolis as read by Koolhaas; congestion is in some ways the flip side of efficiency, and possibly where the human finds purchase within the machine.

Montage and congestion both play pivotal roles in the workings of the Vietnam Veterans Memorial. The memorial is in some ways a work of deep efficiency, with no embellishments or architectural elements unnecessary to presenting the facts of the death of American soldiers in the war in Vietnam. As Maya Lin writes in her book *Boundaries*, “I am interested in presenting factual information, allowing viewers the chance to come to their own conclusions. I create pieces in which to think, without trying to dictate what to think.” (Lin 2000, 23) But the sequence of those facts as encountered by the visitor to the memorial is deeply filmic. In his essay *Montage and Architecture*, the Soviet filmmaker Sergei Eisenstein writes that “The Acropolis of Athens has an equal right to be called the perfect example of one of the most ancient films. ... It is hard to imagine a montage sequence for an architectural ensemble more subtly composed, shot by shot, than the one that our legs create by walking among

the buildings of the Acropolis.” (Eisenstein 1989, 117) Seen through this lens, the sequence at the memorial of:

- finding the name of a loved one in the directory of names,
- walking along the wall, deeper into the earth, past the names of the dead,
- finding the name you are looking for and having a moment of remembrance, and
- leaving the memorial and walking back up to ground level with the Washington Monument directly in front of you,



Drawing from Lin's original competition entry, showing the Washington Monument as seen from the memorial. (Lin 2000, 47)



“Although the Washington Monument is a memorial to a man, there is no trace of him in the Monument. He is completely sublated in the symbol representing him. “ (Griswold 1986, 694)

Functions essentially as a montage. The element of time, the time it takes to do each of these tasks, is important for their impact. Lin is explicit about all of this, saying “Time is also a crucial element in how I see my architecture. I cannot see my architecture as a still moment but rather as a movement through space. I design the architecture more as an experiential path” (Lin 2000, 27) But the time, the slowness (which the Russian Formalists would appreciate) is not created through any artificial extension of space or difficulty of navigation. It is created fundamentally through the number of names on the wall; in a way it is created through congestion. Even with every attempt made to design for efficiency, the human brain and body can only get through so much so fast. In the memorial the time it takes the visitor's body to travel to the one name it wants to find among the many is a gap that intensifies meaning and experience. In Manhattan the overwhelming crush of people and actions has a kind of narcotic effect, creating a different kind of intense experience.

The Vietnam Veterans Memorial is fascinating to me because it is an industrial memorial, designed as a kind of assembly line, for an industrial war, and I was not surprised to learn that Lin was inspired by memorials to the dead of World War I, the first major industrial conflict. Efficient killing

requires efficient mourning. But, as in the metropolis, this industrial efficiency meets a bottleneck at the level of human perception. Information can only be refined so much, and the amount of information (buildings, activity, names of the dead) produced in our world is overwhelming to human senses. In Manhattan this feeling of being overwhelmed is, for Koolhaas, a cause of joy. In the memorial it becomes a moment of contemplation. In the case of the avant-garde *monteurs* the gaps in the montage become a space for the viewer to think; they become part of a political argument. As Stierli writes in his conclusion, “Montage is the cultural technique that, through its distinctive production of meaning in a gap bounded by disjunctive, prefabricated elements, has been singularly able to address the nature of perception in the age of technological reproducibility.” (Stierli 2018, 268) The system, the age of technological reproducibility, contains the method and necessity for its own critique. I see all of this at play in the Vietnam Veterans Memorial, in the ways that the congestion of the dead and the proximity of the memorial to other national monuments are used to make a political point (no matter how much Lin claims neutrality).

Stierli quotes Eckhard Siepmann as saying “With metropolises, more and more took on a montaged character; the environment increasingly appeared as a reality montage.” (Stierli 2018, 14) The aim of my thesis is to take conscious control of this reality montage, to make it critical, and use it against itself—a technique possible in an architectural thesis due to the fictional quality of the project, but also possible in reality through government-controlled or funded public buildings and infrastructure projects. The delirious free market resists careful arrangement, as Koolhaas shows, and it is significant that the Vietnam Veterans Memorial is

not a for-profit construction. In this sense Canada makes a much more likely place to realize these ideas than America, due to our comparatively strong central government.

Chapter 5: History

In his book *Architecture's Desire*, a critical account of the late avant-garde of the 1960s and 70s, K. Michael Hays discusses the arrival of *Delirious New York* in 1978 as an end point for the era, a moment when the architectural discourse shifted from a concern with “the construction of concepts and subject positions” (Hays 2010, 1) and moved in a more technocratic direction. He refers to the mechanisms of Manhattan as the “grid-elevator machine,” writing that:

The grid-elevator-machine has no substance even though it presides over all the delirious events of New York: “congestion without matter,” as Koolhaas put it. What is more, there is no architectural intention behind it, only “a systematic overestimation of what exists”: a strange, empiricist quid pro quo in which a senseless disarray of “objectifying facts”—Manhattan’s grid, the skyscraper, Coney Island—asserts itself as a set of brute things exactly where one expected to find architectural signs and representations. This is nothing less than a glimpse of the architectural Real—not Hejduk’s Real seen anamorphically through the Imaginary: not Eisenman’s dead still swath of symbolically constructed emptiness; and not Tschumi’s disruptive, spaced-out gap of the Real. This is the intrusion of the obtuse, meaningless Thing itself, which punctures a hole in the architecture sustaining Symbolic order. The stupidity of the apparatus foregrounds the fact that the most trivial things can trigger recognitions of the anomalies in the order of the Symbolic. The obscenity of the Thing is its reminder of the fragility of that order. (Hays 2010, 167)

A quote that illustrates quite well the solipsism of that era of architecture. But as I’ve said, I have some empathy for this period. I am as fascinated with language and signs as they are. But the idea that elevators and roads are the Real, totally unassimilable into any kind of Symbolic order, makes me raise an eyebrow. Without getting bogged down in the weeds of Lacanian theory, fundamentally this seems to me to be a question of bracketing.

Hays defines the Real of architecture, in an earlier chapter, as follows: “when architecture’s symbolic efficiency is

in doubt, when the stability of its Other is undermined, the imaginary itself starts to collapse. And yet at this brink we are also able to ask the question, What then is architecture's Real? and to answer in one powerful word: History." (Hays 2010, 48) But are elevators and roads really "History" itself? My feeling is that they are manifestations of particular historical drives and processes, the physical stuff that make visible, in their amalgamation, political systems, ideologies, and mythologies. In other words these systems and ideas and forces are to the elevator what the elevator is to the Downtown Athletics Club. Changing the frame of reference changes our understanding of what counts as the Symbolic. The assumption that only that which is designed and intended as architectural *by an architect* ought to be considered as part of the semiotic content of a building is what I mean above by the solipsism of the late avant-garde. When Umberto Eco writes about the origins of semiotics in architecture, he starts by writing about tools and natural shelters, saying that "The spoon promotes a certain way of eating, and signifies that way of eating, just as the cave promotes the act of taking shelter and signifies the existence of the possible functions; and *both objects signify even when they are not being used...*" (Eco 1997, 175) In other words meaning comes from function; function creates a semiotic meaning. In which case how can an elevator be meaningless?

Hays concludes his book as follows:

Thus what is glimpsed in the architecture of the late avant-garde is not the actual end of architectural practice but the real finality of its signifying network: the late avant-garde enacts architecture's inadequation to itself. The ungraspable totality of the desire called architecture inserts itself as the limit condition of all mere practices of architecture, and leaves the need for something else unassuaged. (Hays 2010, 169)

To which I reply that the signifying network of architecture may end, but architecture's engagement with the symbolic is always ongoing, or at least always a possibility. If the language of architecture itself is no longer workable, then the symbols it uses will have to come from outside itself. One possible future for architectural semiotics could look more like Maya Lin than Peter Eisenman. Given that architecture is the arrangement of functions in space, and that, as Eco tells us, function is the root of signification, that seems to me to be the only way out of an architectural semiotics that "enacts architecture's inadequation to itself" and towards one that has something worthwhile to say about the world. It may not be the "mere practice of architecture" but it is a semiotic practice that uses architecture as a medium to frame the extra-architectural. A practice that is to architecture as documentary is to film.

Chapter 6: Procession

I have been working with Dziga Vertov and Elizaveta Svilova's 1929 silent documentary film, *Man With a Movie Camera*, as a filmic precedent. The Soviet film, shot in the cities of Kyiv, Kharkiv, and Odessa, depicts everyday people going about their everyday lives, from dawn to dusk. It is a celebration of the people of the city, of workers, of film itself, as well as being a work of political and social criticism. The portable film camera was an exciting new technology in 1929, and the filmmakers saw revolutionary potential in its ability to see the world from many different angles and scales. This celebration of polyfocal perspective was contemporary with developments in photomontage which also worked to represent the new and delirious reality of life in the post-industrial metropolis. Through its propulsive, rhythmic editing and strong political intent, the film turns what is literally a dry and straightforward catalogue of activities into an engaging narrative and critical text. It embodies an energy and an optimism, a spirit of both artistic and social experimentation, that I think we very badly need right now.

Vertov wrote about representing "life as it is," positioning himself against what he saw as romantic arts like painting and drama, by stripping away artifice through the use of the camera: a tool that could record the facts of life in an authentic way. But in today's world we don't trust cameras or images; we don't trust much of anything. However, as architects we set up and organize the activities of life directly, giving building occupants an unmediated, by definition factual, if edited, self-guided documentary of the disparate activities and functions happening simultaneously in the city.

My proposal for a design methodology is to harness the power of places like corridors and waiting rooms, the necessary but often ignored utilitarian square footage of buildings, and turn them into viewing spaces from which we can observe the active spaces of the building where the program is enacted: places where the architectural work of programmatic 'editing' can be understood.

The above is a general description of a design methodology which could be applied to any multi-programmatic building. However, in this project the idea of the unprogrammed circulation space as programmatic 'exhibition' is used as the foundation for the design of a real exhibition, allowing the 'programming' of the 'unprogrammed' space to act as the driver for a specific building design. In other words, the exhibition program that moves around and through all the programs of the site in this thesis is a kind of exaggeration of a typical hallway space: the circulation system is pulled out for examination and in the process grows into something independent and multifaceted; servant becomes served.

The design of the exhibition space becomes a place where strategies for the viewing of programmatic montage can be tested and experimented with. The generic "hallway" is expanded to become a specific building; the generic "building" is expanded to become a small campus of specific outdoor activities. The experience of moving through the building becomes the primary program.

Happily, it turns out that the Atlantic coast of Canada is an excellent place for this kind of experiment.

Chapter 7: Place

I wrote earlier that Canada is a good choice of place for realizing these ideas about program because of its strong centralized government. Like the culture of Manhattan, the culture of Canada can be traced back to its infrastructure. As Canadian historian and theoretician Harold Innis writes in his book *The Fur Trade in Canada*, “No such tendency toward unity of structure in institutions and toward centralized control as found in Canada can be observed in the United States. The Canadian government has a closer relation to economic activities than most governments. The trade in staples, which characterizes an economically weak country, to the highly industrialized areas of Europe and latterly the United States, and especially the fur trade, has been responsible for various peculiar tendencies in Canadian development.” (Innis 1930, 401) Like Koolhaas, Innis traces the development of the culture back to its roots in infrastructure. However, Innis is much more wide-ranging than Koolhaas, and in this sense is an ideal candidate for a theoretician to help expand the frame of what counts as Real and Symbolic. His work comes out of material economic research, and traces commodity flows and technologies and their impacts on culture in a direct cause-and-effect way. Because he is so close to physical infrastructure, and particularly the physical infrastructure of Canada, he is an excellent source to let us talk about the forces shaping our world, starting with what is tangible and available.

His theory of distribution networks as foundational for culture, starting with his research into the production and economies of staple products in Canada, extends into a theory of media and communications in his later work. One

of his central ideas is that communications mediums can be characterized as having either a bias towards time or a bias towards space; he writes: "The concepts of time and space reflect the significance of media to civilization. Media that emphasize time are those that are durable in character, such as parchment, clay, and stone. The heavy materials are suited to the development of architecture and sculpture. Media that emphasize space are apt to be less durable and light in character, such as papyrus and paper." (Innis and Innis 1972, 26) He discusses the ways in which these two types of media come in and out of balance within various historical civilizations and the ways in which that balance or imbalance affects that civilization. Currently we are living in a space-biased age, with digital communications representing perhaps the ultimate space-biased media. A central consequence of this focus on space is a lack of focus on time, on what is stable and enduring in the world. Space-biased media, through its speed and bias towards spectacle, locks us into an eternal present. As Innis writes, "Obsession with present-mindedness precludes speculation in terms of duration and time." (Innis 1951, 87) He continues: "It is possible that we have become paralysed to the extent that an interest in duration is impossible or that only under the pressure of extreme urgency can we be induced to recognize the problem." (Innis 1951, 87)

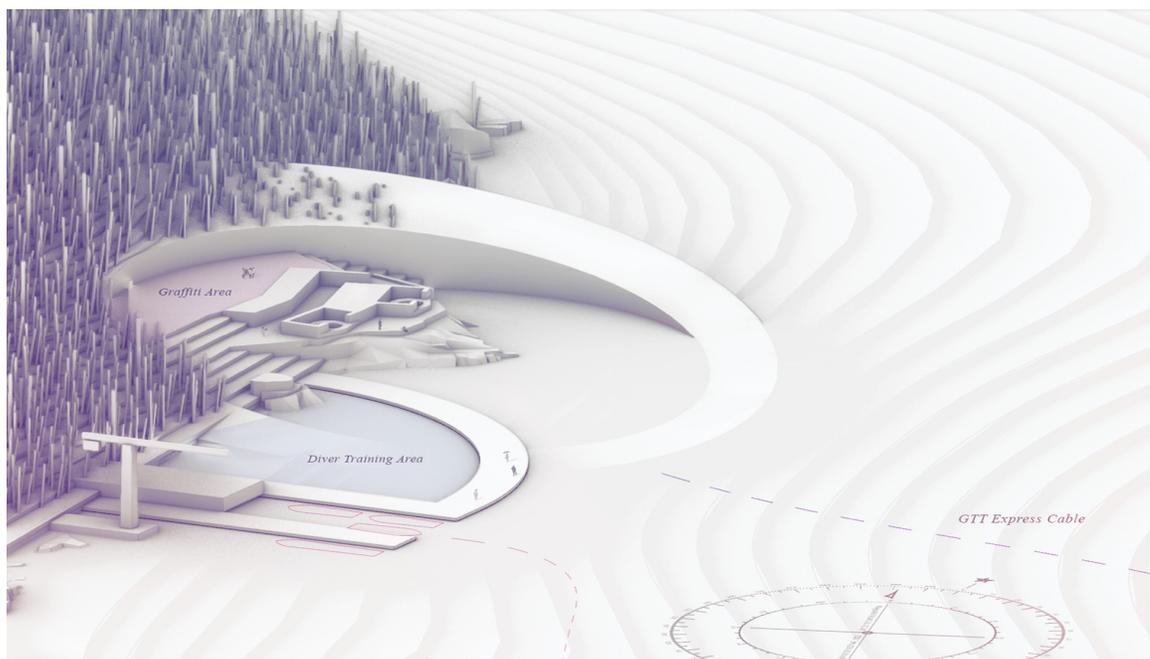
Architecture then, understood as a medium for commenting on history, is in some ways exactly what we need. A time-biased medium that can anchor us in a sense of place and time while also, through functional montage, give us a large-scale perspective on the forces, visible in our infrastructure, that are not only connecting us but creating our realities. Not only is Canada an excellent country to do this from, Halifax

is in many ways an ideal city. By tracing the development of commodity transport over time, with media understood to function as a commodity, we can understand the large-scale trajectory of our civilization. To do this well we need a vantage point separate from the great centres of Europe and America, where the media of the day is completely dominant, but one connected to them in enough ways over enough time that trends can begin to emerge. Innis is on our side here. As Alexander John Watson tells us in his introduction to Innis's *Empire and Communications*, "He believed that the very lack of intellectual sophistication on the periphery created an environment that provided a comparative advantage for the development of critical thought. In Innis's view, the margin, not the centre, was the cornerstone for the renewal of Western civilization." (Innis and Innis 1972, 12)

I mentioned earlier the ways that gaps, in montage, and in life, give us space and time to reflect. In some ways Canada represents such a gap on the world stage. And certainly there is no bigger gap in the Western world than the Atlantic.

Chapter 8: Site

The project, then, becomes an exhibition of transatlantic trade history, sited on the Atlantic coast near the Halifax harbour. The exhibition program adds to the project the ability to be very specific about how the programs of the site are contextualized by bringing in other artifacts, fragments of text, facts, etc; in other words adding other, nonprogrammatic, elements to the filmic composition of the central procession. The campus of the site will also make a home for the local subcultural activities of graffiti writing and scuba diving, which, as I will expand on below, are conceptually related to the fundamental gesture of seeing commodity transportation infrastructure in an oblique, recontextualized way.



Massing and site model of the thesis proposal.

From the colonization of the Americas to the transatlantic slave trade, to the development of transatlantic telegraph cables, and ultimately transatlantic data infrastructure, the Atlantic coast of Canada has been witness to a long history of colonization and international trade that is at its core the continuation and development of the same basic impulse to make more money by moving more commodities faster, while ignoring the human consequences of that program. This trend culminates, so far, in the GTT Express transatlantic data cable, the fastest data connection between New York and London which has a landing station near Halifax and is used for stock trading by automated algorithms. To me, this infrastructure represents the total erasure of the human in the name of efficiency and space-based communication. While this erasure is a common thread throughout history, algorithmic trading completely eliminates the congestion that happens at the bottleneck of the human, as in Manhattan or the Vietnam Veterans Memorial. The commodity chain really becomes trans-humanist. Exposing this infrastructure architecturally becomes a way not just to understand it but also to oppose its cultural bias by anchoring it in time.

The landing station for this cable is currently just a few kilometres south of the York Redoubt, a British fort first built in 1793. The redoubt is where the exhibition building is located--specifically at the water's edge on the site of the Lower Shore Battery, a WWII-era addition. The data cable landing station is moved to the grounds of the fort as well, and placed within the exhibition building. This fundamental move juxtaposes military history with commodity exchange infrastructure, past and present, inviting contemplation of the links between force and capital.

The York Redoubt has been expanded and modified repeatedly over its lifespan, each time in response to advances in military technologies. This progression ended after the second world war, the last time Halifax felt threatened enough by a foreign power to build and maintain gun emplacements along its shore. The fort has never seen combat; it has instead been a place of waiting, of anticipation, of building up defenses against an attack that never came. One has to imagine that soldiers stationed here had a lot of time to think.

This thesis continues both of these trends on the site. The technological component is provided by the transatlantic cable landing station. The contemplative history of the place is reified through the installation of the exhibition which acts as a gloss on the history of the fort as well as on the history and context of the cable and the other programs introduced to the site through this project.

The coastal site is also an opportunity to express, through both architecture and exhibition, the reality of past and future sea-level rise due to global warming. The fort is a palimpsest of technological advancement, the cable an artery of power so great that the gun batteries can afford to sit empty, and the rising sea a lapping omen of where these centuries of progress end.

The World War II defenses included the installation of the Lower Shore Battery, which was fenced off and decommissioned after the war and has fallen into neglect. It was only recently, in the last few years, cleared of dangerous materials and opened to the public. Nonetheless, it has been something of a haven for local graffiti writers, who were clearly not deterred by the fence. The writing on the

abandoned fort is extensive and elaborate, often political, and often highly crafted.

There is also a popular scuba diving spot just to the north of the fort along the coast, and nearby shipwrecks are a popular attraction for local and visiting divers alike.

These twin subcultural activities, graffiti writers and wreck divers, are brought together on the site to complete the programmatic tableau.

Wreck divers and graffiti writers share an oblique perspective on transportation infrastructure and in a way are mirrors of one another. Traditionally, graffiti writers go out at night, descending into tunnels and hopping fences to deserted rail yards. The subway goes to sleep a transit system and wakes up a metropolitan broadcast network, transformed by energy and dreams that have nowhere else to go.

Like trains underground, ships underwater suffer a change—“of their bones are coral made.” However, unlike trains, which carry murals across the space of the city, the shipwreck is stationary and its transformation takes place over time. As the human history fades a natural history is written—corals, seals, all manner of things rich and strange make their home in wrecks and reefs. Divers travel to the wreck to explore and read this mysterious new territory.

In both cases the functional becomes the fantastic. Bringing them together represents a meeting of the global metropolis and the cycles of nature, and an attempt at finding balance between mediums of space and time.

The exhibition orders and contextualizes the fragments of the site. To the extent that the programs of the project constitute a text, one which is critical of myths of progress

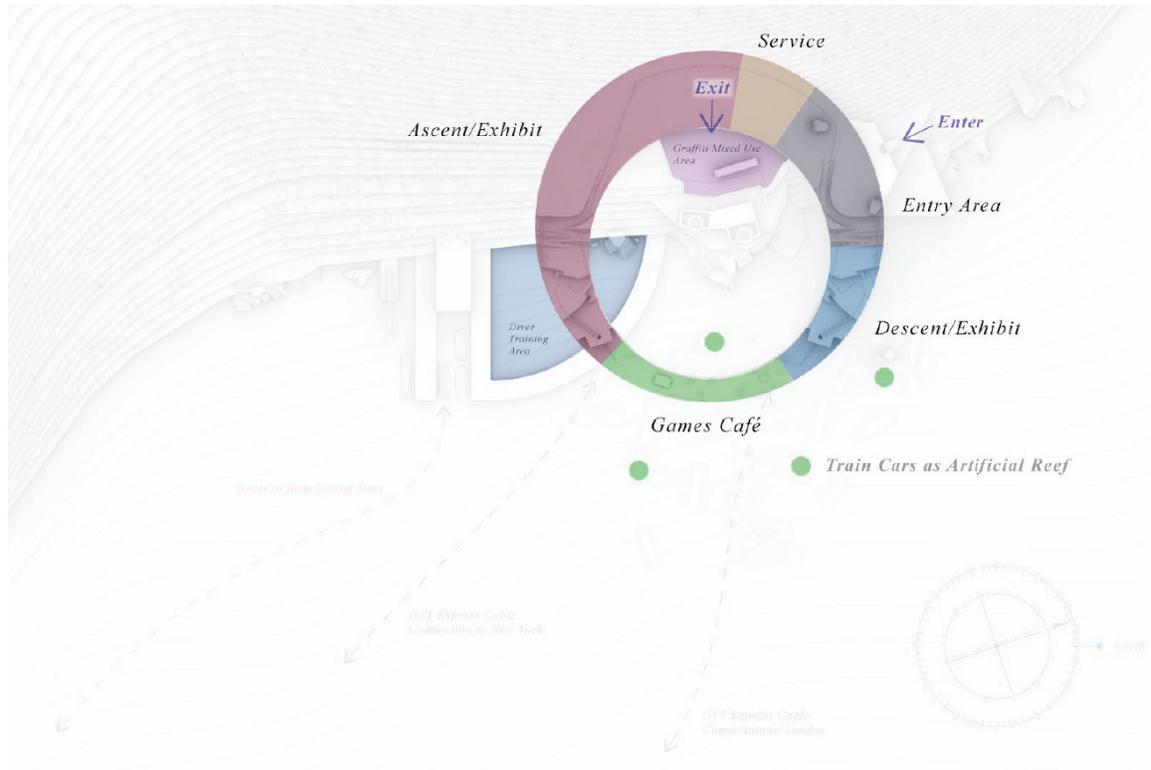
and encourages shared activity and an oral tradition, the exhibition is an explanatory gloss. It speaks the language of montage; rather than being linear or explicit it brings things into relationships with one another and asks the visitor to conceive their own synthesis. It is an opportunity to add depth, character, and context to the programmatic montage already underway.

The exhibition employs members of the graffiti community, thereby giving them a sense of ownership and stewardship. Formally and materially, the concrete embedded in the landscape takes a cue from the gun emplacements on the site, and the rounded language plays against the angularity of the rocks and structures along the coast.

Like a hybrid of *Man with a Movie Camera* and a Manhattan skyscraper, the exhibition takes the visitor through a series of rooms, each with its own theme.

Explications of the history of graffiti and wreck diving allow transportation technology, trains and ships and their local history, to enter the montage naturally and become linked with the communications technology of both the fort and the cable.

Like the Vietnam Veterans Memorial, visitors are taken underground, and at the lowest point are offered an encounter with a different world. There they look out into the Atlantic, where they see graffiti-covered trains being slowly devoured by the ocean, sculptures, lights, divers, and the transatlantic cable fading into the distance.



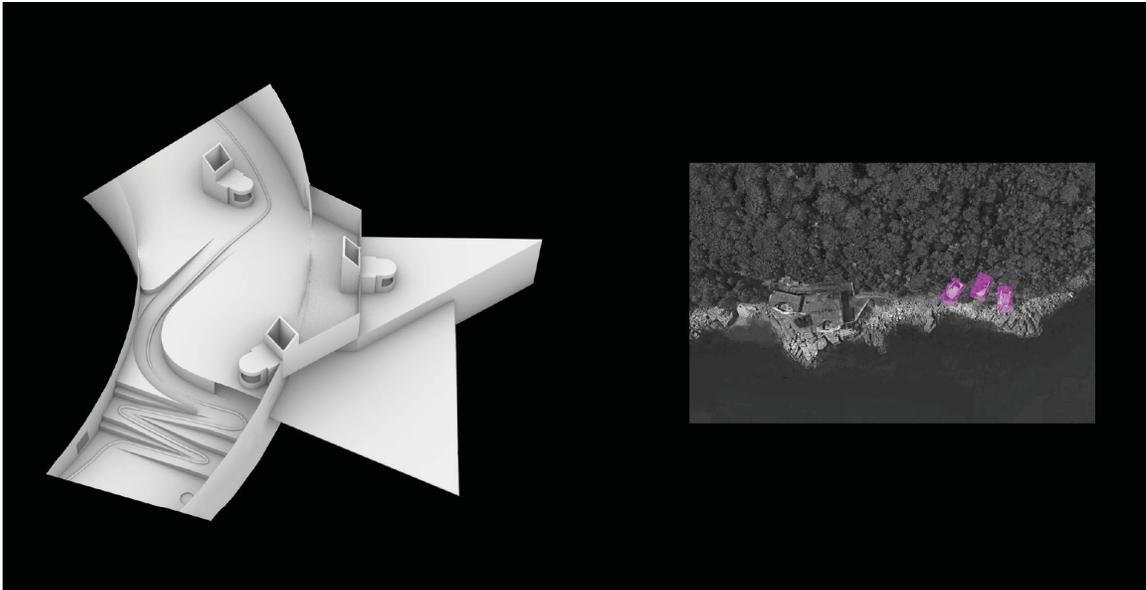
Schematic plan of the exhibition interior.



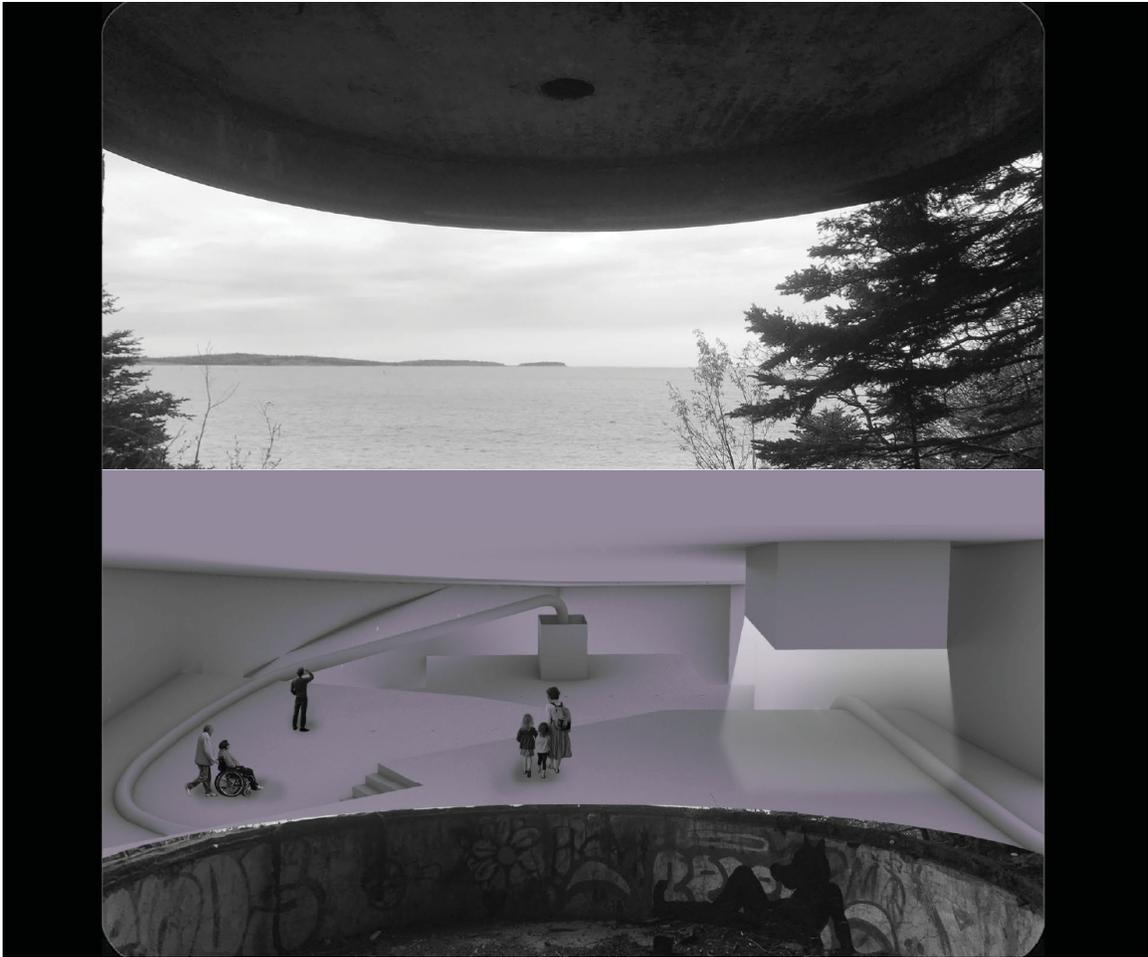
Visitors start at the existing parking lot of the historic fort (Google Earth 2021) and work their way down the hill through the forest pathways pictured here.



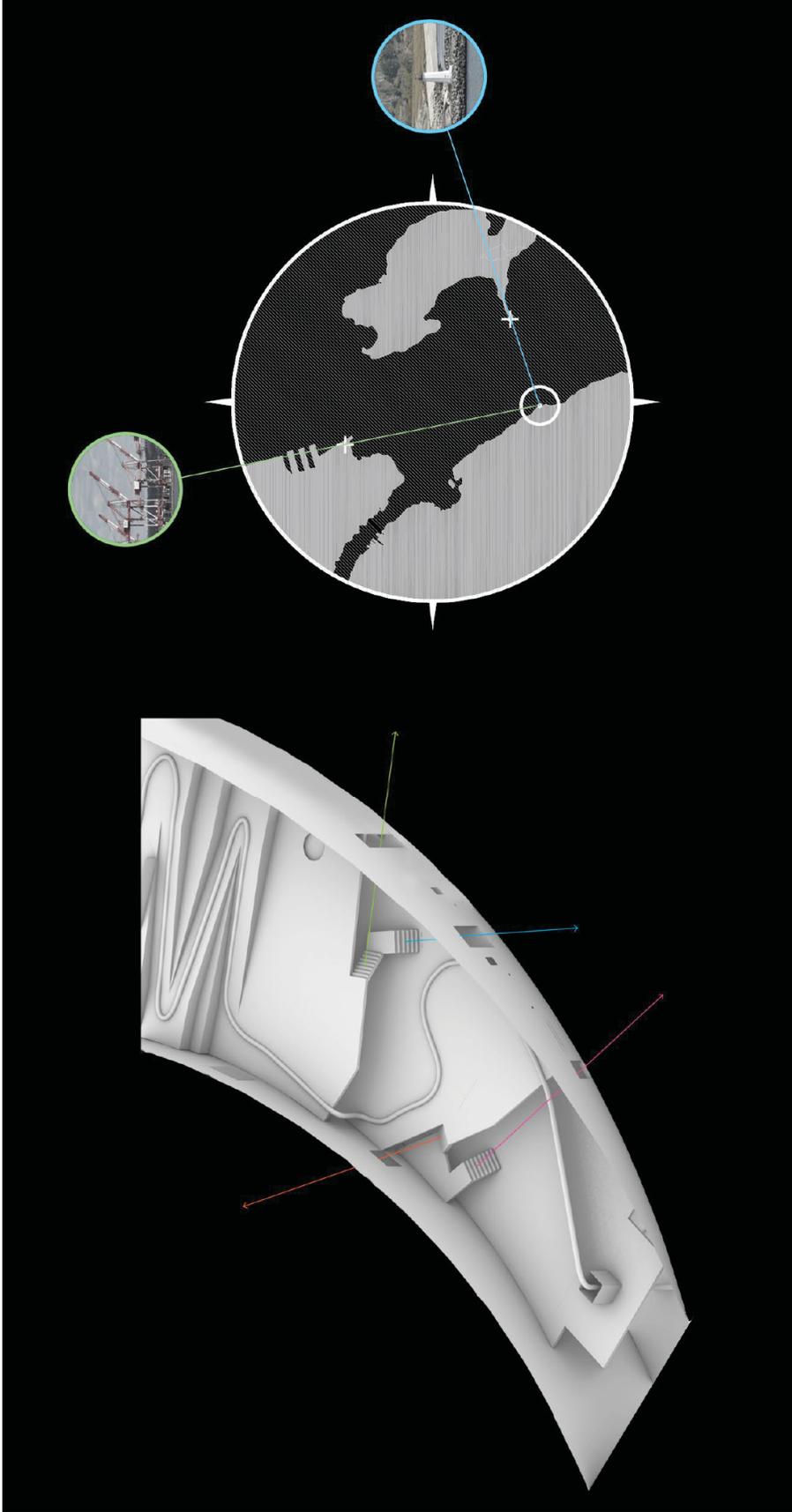
Visitors enter the interpretive centre from the path, greeted initially by an austere concrete façade based on the architectural language of the bunker and garrison.



The entry is anchored by the relocated concrete enclosures of what used to be three large searchlights, which sat slightly to the north of the guns of the battery: their original locations are indicated in pink here. Neglected and crumbling in place on the site today, with the earth that supports them eroding and their foundations exposed, the room-sized searchlights are brought into the building and preserved as part of its architecture. One functions as an entryway, with its semicircular eye housing a revolving glass door, one functions as a ticket-taking booth, and one, with its original orientation towards the ocean preserved, acts as a lookout across the water as well as down into the interpretive centre.



From this searchlight enclosure visitors experience the directed, bordered, perspective of the garrison, are placed firmly within its walls and in the controlling position of the observer. They also are given an overview of the exhibition they are about to enter, and a hint of things that lie below the surface.

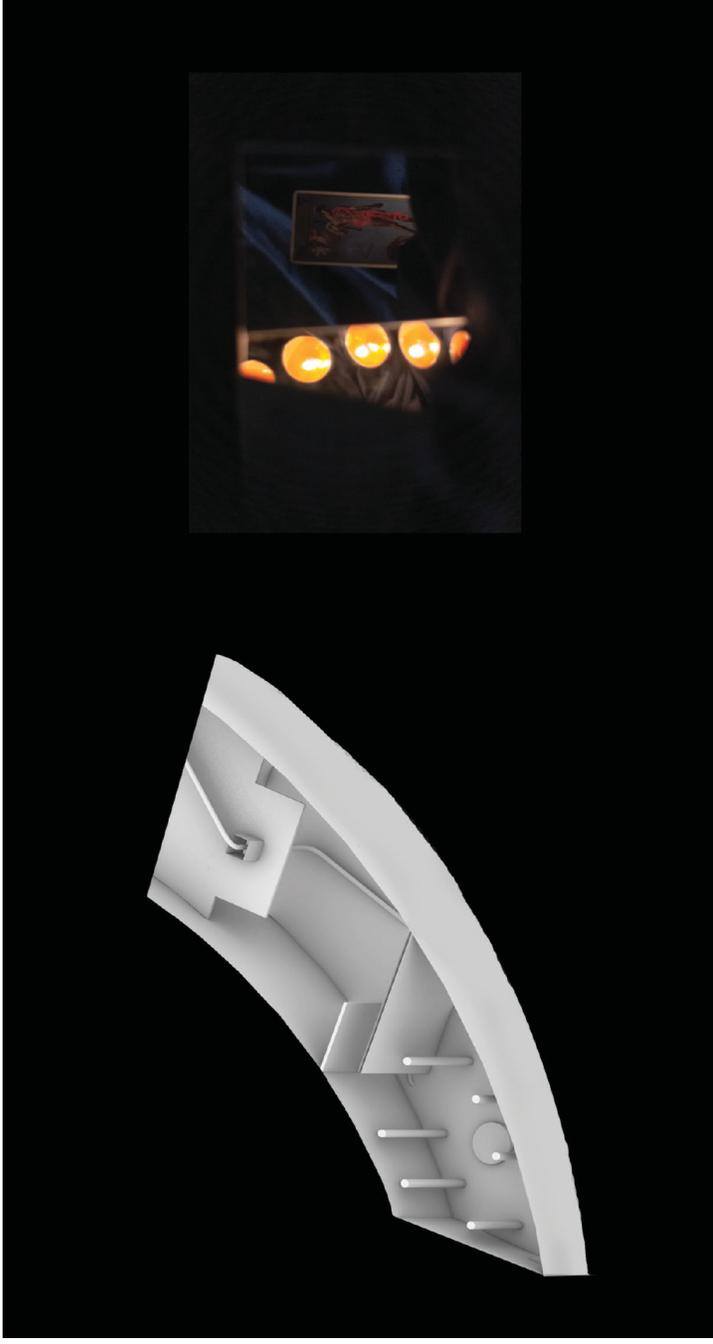


The stairs between levels are oriented towards points of interest visible from the site. The first set of stairs face first the Halifax docks, and second the Maugher's beach lighthouse; the procession here frames landmarks at the scale of the city, connecting commodity distribution and communication infrastructure.



The descent procession is organized into three levels based on the levels of the present and future tides. The top level is, and will be for at least the next hundred years, above the water. The next level down is above the water today, but as global warming advances and sea levels rise it will become completely submerged. The floor here is at the level of the current high tide, and so as visitors descend further they enter a liminal zone wherein the water level will be somewhere between the floor and the ceiling. The floor here is set at the current level of low tide, so that further descent means going underwater.

Small 'porthole' windows at different levels, for occupants of different ages and abilities, allow the water level to be read against the side of the building. Windows dim as the tide rises.

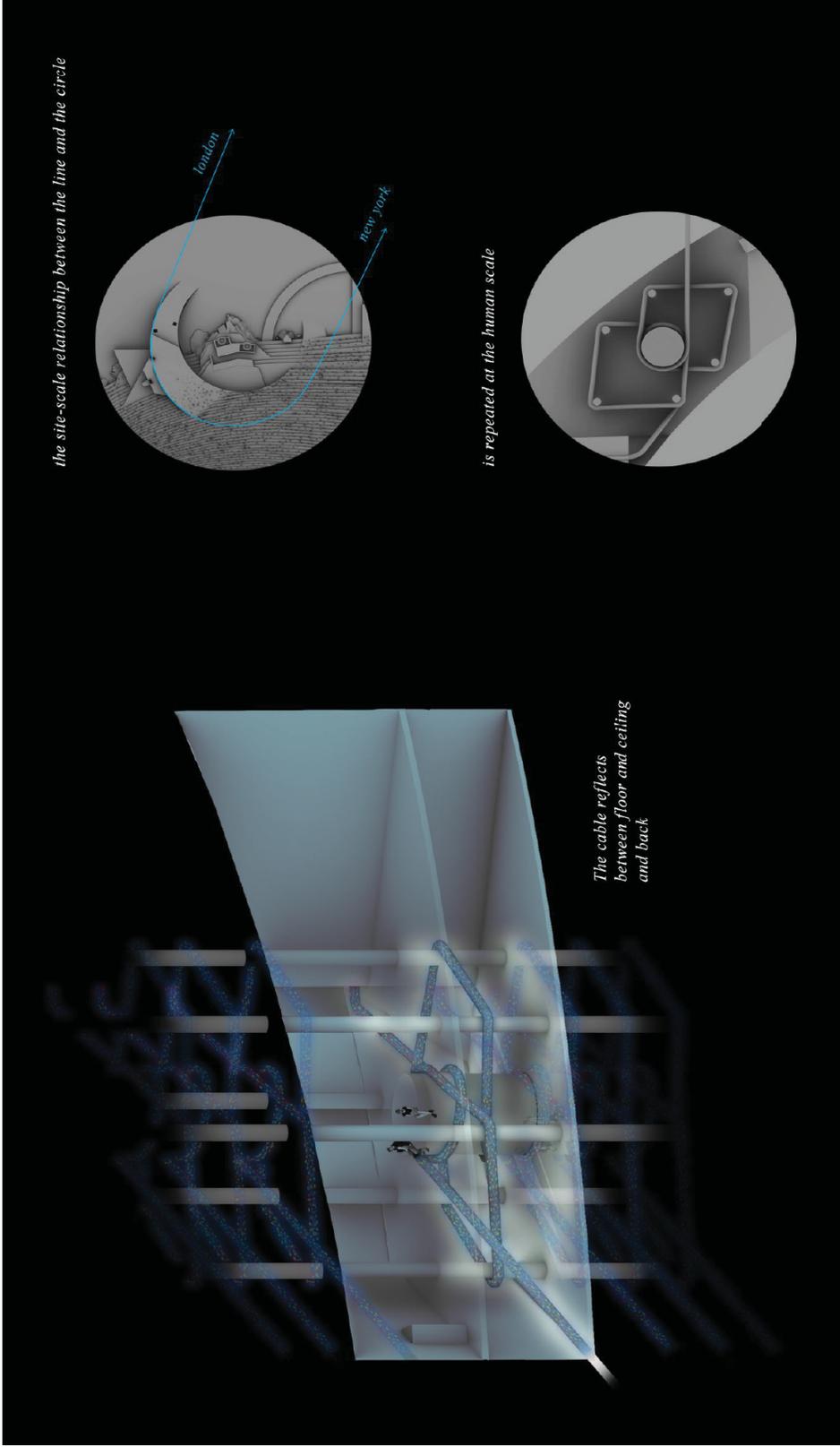


At the end of their descent through the three levels, visitors come to an elevator platform which they take down to the lowest, underwater, level of the building. The data cable runs down the middle of the platform; it becomes a part of the transportation infrastructure of the building.

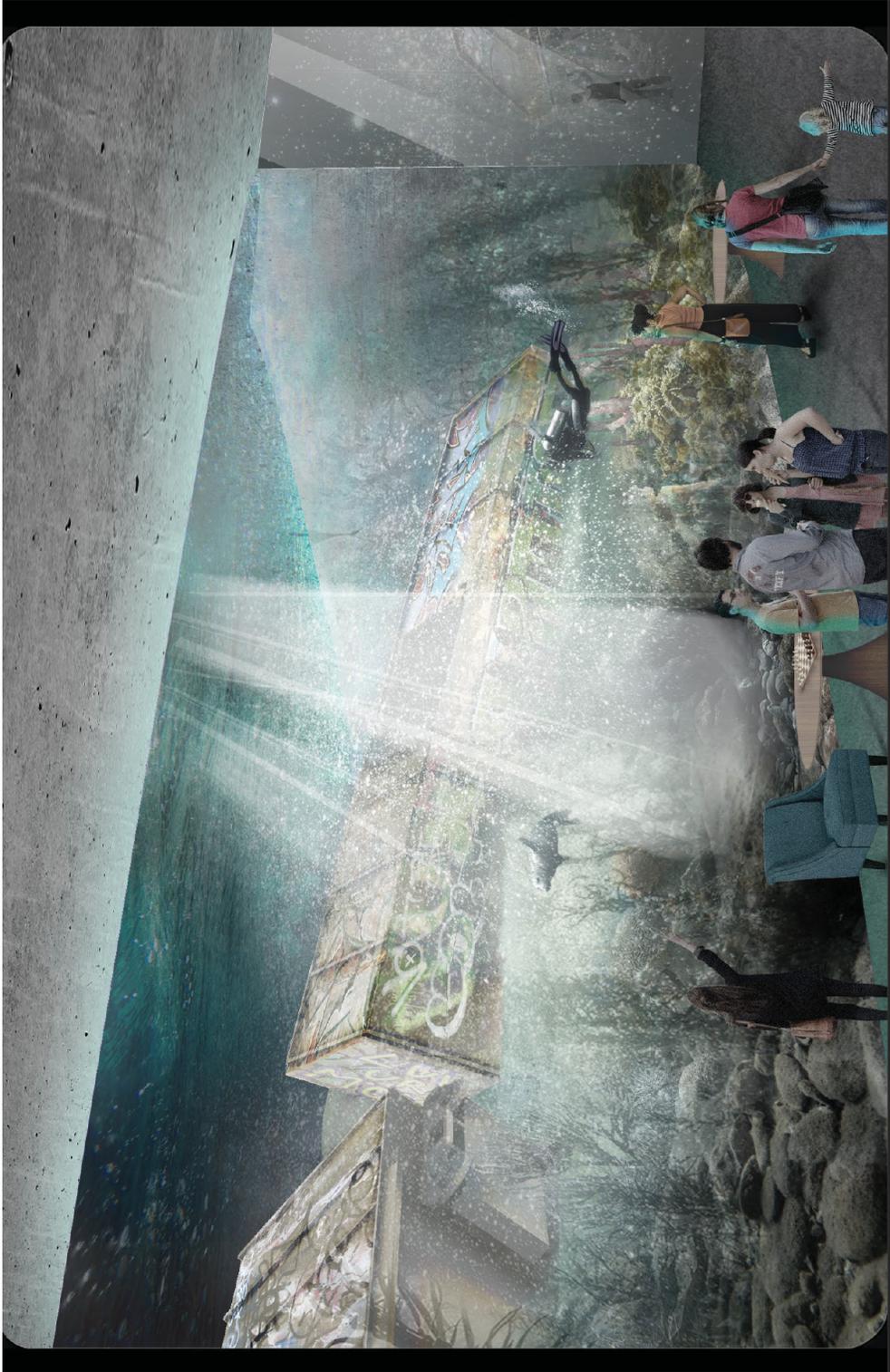
At the bottom, a large mirrored wall is used to bring a selection of disparate elements together into a single composition. Visitors see themselves in relation to the searchlight near the entry; this time they are on the receiving end of its gaze; the subject/object relationship is reversed.

This encounter is abstracted in the photograph on the right, showing a physical mockup of two facing mirrors, with a candle standing in for the lights of the cable, and a card standing in for the searchlight.

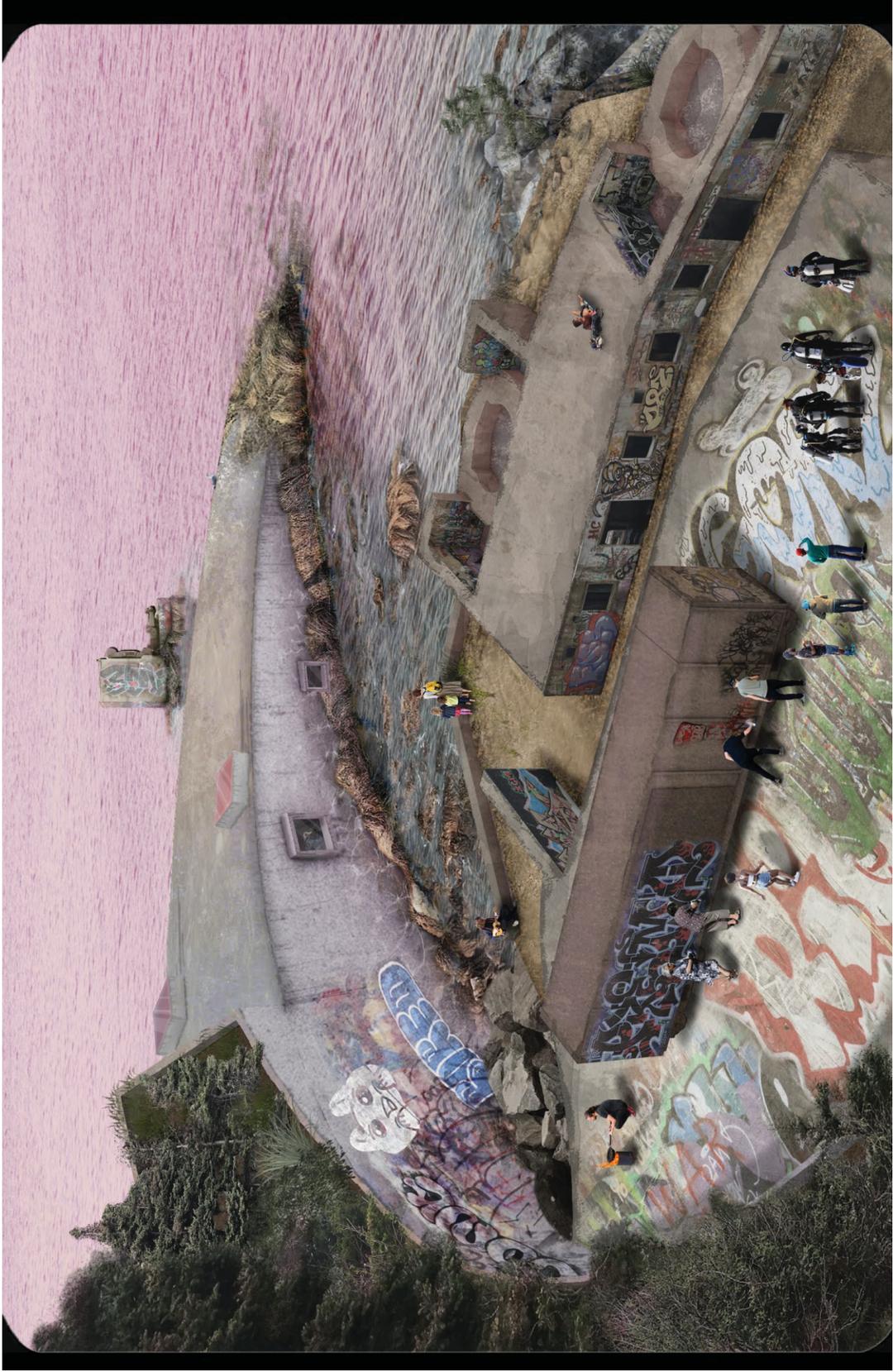
Here, seeing themselves not as commanding these larger systems but as commanded by them, the visitor follows the blinking cable under their feet between the first mirrored wall and a second one which faces it. At this point an infinity mirror effect is created, marking an entry threshold into a world much vaster than the one above ground.



Visitors then enter a room with a transparent floor that opens up beneath them, where they see the data cable woven through columns into a shape that recalls the diamond shapes of netting. Mirrored floors and ceiling repeat this netting infinitely. A large central column rises just proud of the floor and becomes a bench for contemplation. Floor to ceiling glass allows a view of the ocean, where visitors see the cable fade into the distance. The cable wraps around the columns in the same way that it wraps around the building, dramatizing at the human scale the building's role as a node in a global web.



After leaving the cable room, visitors enter a large communal space, and their moment of solitude ends. The program here is a café with books, newspapers, and chessboards, where visitors are encouraged to pause, play, and think. Through the floor to ceiling glass they can take in the underwater art exhibit of the trains, and watch the divers swim by.



Exterior render of the graffiti area, where exhibition-goers exit the building and join the people engaged in the other programs on the site.

Chapter 9: Conclusion

This project is an attempt at a regionalist design that bases itself on the writings, the mythologies, of Canada, as read by Frye, its greatest reader, and the ideas of Frye's senior colleague Innis, Canada's great economist and theorist.

Canada, as a vast imperial hinterland that exists to extract and distribute resources, from the fur trade to the cod fisheries, from lumber to tar sands, has a fundamentally cartographic, two-dimensional, spatial logic. It is a series of distributed garrisons, nodes, connected by supply lines of one kind or another. Whether this relationship is figured as forts and railways, cities and highways, or lakes and streams, the same logic maintains.

Frye tells us that living in these geographically isolated circles creates an inward looking culture, suspicious of difference, while Innis asserts that it is exactly difference, marginality, the outsider, in whom cultural renewal and growth are to be found.

In this project the archetypal Canadian shapes of the circle and the line are investigated and synthesized: the sequential, filmic, perspective of the line is brought into the circle as a way of making physically intelligible the relationship between the Canadian garrison and the larger networks of power that it serves.

It is an architectural move which repurposes the products of relentless utilitarianism: the circle/line network logic of empire and the polyfocal perspective of the post-industrial metropolis it feeds, towards non-, even anti-utilitarian ends, in an attempt to challenge capital on its own terms.

As they move through the circle, visitors are encouraged to see things from new perspectives and to celebrate marginality; to realize that ultimately they are marginal themselves, and that that position is exactly their strength. When they emerge they come into the central area shown here where the different groups that use the site co-exist, and, one hopes, talk to each other.

Global capital and industrial standardization continue to saturate local cultures, traveling via capillary action, wicked along roads and data cables and railways, and the margins of empire are becoming increasingly thin. The garrison can be isolating, but it also provides protection in a hostile environment. As the tides rise the forces of cultural renewal are increasingly faced with the choice of either further retreat to ever shrinking edges, or of learning to breathe underwater.

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