



SUSTAINING THE MEMORY [HISTORY] OF PLACE

By

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April 2009

iv.

“As architects, we should once again adopt a belligerent attitude
in favour of our fellow citizens.”

Josep Martorell¹

v.
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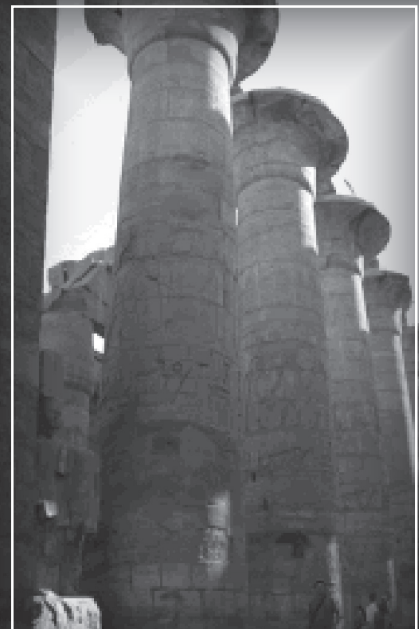
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Architecture connects us with the dead; through buildings we are able to imagine the bustle of the medieval street, and picture a solemn procession approaching the cathedral. The time of architecture is a detained time; in the greatest of buildings time stands firmly still. In the Great Peristyle at Karnak time has petrified into an immobile and timeless present. Time and space are externally locked into each other in the silent spaces between these immense columns; matter, space, and time fuse into singular elemental space, the sense of being.

-Juhani Pallasmaa²



Abstract

Our minds have the ability to recall and sustain memories, so why can't architecture do the same?

Our built environment exhibits the ability to form expectations of the future, while conducting investigations into the past. Every place has an identity, a location, and a memory that characterizes its existence. Memory is a component that, at the moment, may be vacant within the context of our forgotten sites, our terrain vague. These places are currently unseen, ignored, or forgotten, but this does not mean the history is unworthy of resurrection. There is certainly a story that exists, that can classify, identify, and categorize the historic capacity of these places. Without paying homage to, and focusing awareness on our past, we risk losing it completely. As our industrial era evolves into the technological age, we face a decision: to bury our past industrial sites along with their collective memories, or embrace them well into the future.

To address this topic I will research, plan, and design an appropriate solution to the port/waterfront area of Bellingham, Washington. This 170 acre location was once the home of the thriving Georgia Pacific pulp mill that has now been terminated due to economic changes. Not only has this site been socially forgotten, it has been physically mistreated and neglected with the introduction of toxins that affect and systematically dismantle the local ecology. The importance of this site is evident because it represents industrial sites throughout our coastlines that have been closed down and/or re-programmed. Without proper recognition, we will be unable to sustain the historical relevance of this site, along with many more. Our society should always keep one foot in the past while making a simultaneous stride towards the future.

HISTORY TOWN

Shipyards and widow's walks abandoned
As if death had eloped with devotion
On a South Seas voyage.

In such a town the people are ecstatic, bound
by nothing in the presence of tradition,
a selling point we've all agreed on.

The Puritans chose it by accident,
or it chose them. Cancel all our appointments
with destiny and chance.

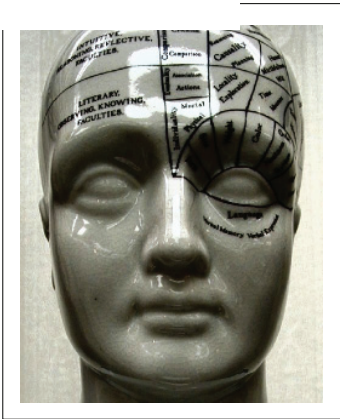
We're students of history
fighting to preserve the century-
cracked masts half-sunk in the shallow harbor,

the ones that never came to use.
And the milk bottle broken on the rocks,
Once filled from local heifers,

Cream like whitecaps on the top.
The ocean used to live here too.
We see it sometimes in our dreams.

Richard Meier, *Terrain Vague*

Memory



History known is a good thing, but history shared is far more satisfying and far reaching.
-Lucy Lippard³

Introduction



Memories are generally fragments of experiences that have taken place in the past. Often, specific colors, textures, smells, or sights will only be remembered. Most memories are actually forgotten as soon as they transpire.

Memories are images or representations within our imagination that are directly tied to recollection of past experiences, perceiving what we believe to be true. It is these memories that structure who we are, as individuals and as a collective entity. Often, these memories become fantasies or dreams not grounded in history. Being grounded is the foundation on which society stands. Yi-Fu Tuan, eminent geographer, advocates that “past events make no impact on the present unless they are memorialized in history books, monuments, pageants, and solemn jovial festivals that are recognized to be part of the ongoing tradition.”⁶ This statement is clearly authentic and verifiable; however, the conversation needs to occur with additional vigor. Individually and collectively, these memories give us a firm stance so we will not lose our sense of being, our sense of who we are and where we come from.

Memory is defined by the Oxford College Dictionary as “the power or process of reproducing or recalling what has been learned and retained especially through associative mechanisms.” I think it is important to recognize and emphasize that it is “...[T]hrough associative mechanisms.”⁷ Does this suggest that without specific triggers we will not remember? Or would it be better to say that these mechanisms would recall more vivid, exceptional experiences that further represent our memory and our fantasies? Henri Bergson explains “...[T]hat memory must be, in principle, a power absolutely independent of matter.”⁸ Thus, it is only the role of physical elements to facilitate the manufacturing of past experiences in the brain. These physical elements, while they may be in the form of matter, exist only in our dreams, in our minds, and in our past. Maurice Merleau-Ponty informs us that “...[A]n object is a system of properties which present themselves to our various senses and which are united by an act of intellectual synthesis.”⁹ It is through this synthesis that connections are continually reinterpreted to form our environments, culture, and our essential place and sense of being.

Traces-Artifacts-Triggers

Aldo Rossi states that “A city is defined by its artifacts.”¹¹ Artifacts are the signature of the city, the physical qualitative memory. Without these artifacts, or what Lucy Lippard calls “traces”, the city or place may be devoid of recognizable history, or an urban fabric. (I will consider these mechanisms to be in the present time.) They may be a material, a smell, or a living thing; all of which are entities of matter that only exist in the present, in real-time. However, what these objects produce are virtual, qualitative representations of past experiences within the dialect of our brain and in the form of cherished recollections. Yi-Fu Tuan believes that “Intimate experiences lie buried in our innermost being so that not only do we lack the words to give them form but often we are not even aware of them”¹²

Sensory activation is frequently cued by sights, sounds and smells that are in turn, directly married with physical entities to define the notion of an intimate place. In the bounds of these categories, each plays a significant role. Often, sensory activation belies our unique interpretation of the present. It is within the capacity of these senses to instantly redirect the understanding of the present with comparisons to past intimate places, giving us a comprehension of our environs and there narrative. As our experiences lengthen over time, our catalogue of sense perceptions widen, creating more individualized and personal experiences.

They [intimate places] are elusive and personal. They may be etched in the deep recesses of memory and yield intense satisfaction with each recall, but they are not recorded like snapshots in the family album, nor perceived as general symbols like fireplace, chair, bed and living room that invite intricate explication.

-Yi-Fu Tuan¹³

Buildings and towns enable us to structure, understand and remember the shapeless flow of reality and, ultimately, to recognize and remember who we are.

-Juhani Pallasmaa¹⁰



Leftover pilings on Bellingham Bay's Waterfront leave traces of pasts that no longer exist.



*An embodied memory has an
essential role as the basis of
remembering a space or place.
-Juhani Pallasmaa*

These sensations are felt within our body and within our soul. One of the most pertinent senses with regard to the unearthing of typically forgotten or misplaced images is our sense of smell. This exacting sense has the facility to fashion distinct recollections, or representations of past happenings. It (seems) that the expansive range of unique smells can construct imperative reflections from our past. For example, the smell of salmon can instantly redirect my present-being to a commercial fishing boat in Alaska where I spent five summers of my adolescent childhood. The intensity of this recollection can unlock a catalogue of similar feelings; the sensation of movement, the state of exhaustion, the feeling of desolation or the longing for home. I often capture these scents and forget the present, while I clutch for experiences of my past - closing my eyes and dreaming, or imagining, of these elapsed moments. I am equally amazed by the power of a local pastry shops ability to send me back to my Grandma's house. After all, "The most persistent memory of any space is often its smell."¹⁴ Smell has this keen ability to make me visualize the surroundings that housed the scent, giving me a surreal opportunity to relive the lapsed moment. Not only do I think of my Grandmother's cookies (which happened to be a divine form of the very well-known Rice Crispy Treat), I think of the kitchen, the wallpaper, the smile on her face, or the table they laid upon.

Significant smells, similarly, materialize on a macro scale. One important feature of living by the sea is the collective's sense of its presence. This is a feature I did not acknowledge until after my departure from the vicinity of the ocean. Now, one of my beloved experiences when going home is the first whiff of the sea. I catch myself closing my eyes, looking towards the sky, and gaining an awareness of the fact that I am home again - triggered by the smell of the ocean - its life connecting with mine, making me submit to the resonation of home. Pallasmaa decisively notes that "Fishing towns are especially memorable because of the fusion of the smells of the sea and of the land; the powerful smell of seaweed makes one sense the depth and weight of the sea, and it turns any prosaic harbor town into the image of lost Atlantis."¹⁵



Sensory stimuli can link to a catalogue of experiences, recollections, and feelings stored within our brain.



Great images have both a history and a prehistory; they are always a blend of memory and legend, with the result that we never experience an image directly.

-Gaston Bachelard¹⁶

While all the senses play a crucial role, over the centuries it is suggested that there is a delicate connection with sensory activations, specifically visual components in Western culture. Juhani Pallasmaa suggests "...[T]he eye has certainly produced imposing and thought-provoking structures, but it has not facilitated human rootedness in the world."¹⁷ He then cites a collection of philosophical essays entitled *Modernity and the Hegemony of Vision* and states that "Western-culture has been dominated by an ocular centric paradigm, a vision-generated, vision-centered interpretation of knowledge, truth and reality."¹⁸ Even so, we cannot disregard our other senses. Vision is very important with regards to memory of our surroundings, but certainly the other senses play an imperative role in the recollection of experience and of place. For example, one may have a very intimate experience with a space, yet, "A camera is likely to disappoint us, revealing a midget where we would expect to find a giant."¹⁹ Even though a camera can capture a visual image, it can by no means capture the essence of a certain place. Not to discount the attributes of smell and sound, but to affirm the mental capacity of understanding this place through previous recollections.

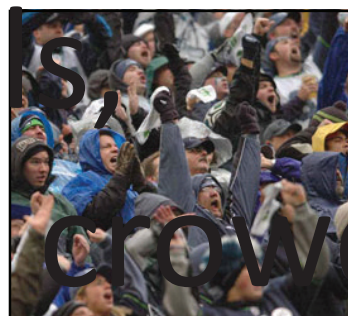
While our society holds much presence in the capacity of visual importance, it is important to note that "Many places, profoundly significant to particular individuals and groups, have little visual prominence."²⁰ Our images of past times are physical elements to "...set the waves of the imagination radiating."²¹ Classrooms lack the explorative nature to understand these concepts. John Stilgoe, a distinguished explorer, directs this argument, "Students with no particular interest in schoolroom history involving presidential elections, treaties, and wars often awaken to the richness of spatial or visual history, simply because objects and even landscapes from the past have shaped their lives and shape them still."²²

Now, let us explore the sounds - echoes of everyday life placing us in the present, while also capable of digging into the past or projecting us into the future. The acoustics of the community become the soundtrack of its people. The sound of a brittle dead leaf falling delicately out of the tree to the ground gives us an understanding of the season, of time. We also recognize that sounds have the ability to unite listeners as an assemblage. "The sound of church bells echoing through the streets of a town makes us aware of our citizenship."²³ At the same time, we understand that hearing drips of rain may make us feel more comfortable indoors, in the familiarity of our dwelling. Specific sounds can give us an appreciation of being home; the garbage truck on Wednesday morning may reassure the structure of one's surroundings, or the sound of a distant train makes one recognize they are home, or near their surroundings.

It is important to grasp the understanding and importance of all our senses, for on certain occasions, one or the other can let us down, dismantling our understanding of place. It is the conglomeration of the senses that materialize our most intimate experiences. It is important to have vivid imaginations within our memory not only to secure our consciousness of the past, but also to give us hope and expectations for the future.



The Bell Tower in Florence, Italy rings sounds through the street letting the population know they are home.



Seahawks fans join to form the "12th man" at Quest Field in Seattle, WA.

church bells, crowds

Action vs. Representation

Henri Bergson was an influential philosopher and author who published a book called *Matter and Memory* in 1912. In this book he introduces two thoughts about the mechanisms of memory. First, he introduces memory of action; the memory that is compiled after repeatedly performing a specific task or action - a habit. In explaining, he uses the example of repeatedly reading a study lesson until it is learned by heart or imprinted on his memory.²⁴

Like a habit, it is acquired by the repetition of the same effort. Like a habit, it demands first a decomposition and then a recomposition of the whole action. Lastly, like every habitual bodily exercise, it is stored up in a mechanism which is set in motion as a whole by an initial impulse, in a closed system of automatic movements which succeed each other in the same order and together, take the same length of time.²⁵

Conversely, he brings to light the memory of imagination, our thoughts of representation. He explains this in accordance with the process of each individual reading. Each particular reading has a memory, existing completely separate from the present. We can imagine, or compile a representation of each occasion within its own time-frame. This experience can be located at a certain moment in time, whereas the preceding argument cannot effectively be put on a calendar. Effectively, this encounter with our memory happens in our imagination, which essentially survives in our digital world.

Simply put, memory of action is brushing your teeth, the act of writing your name, or using a telephone. The actual memory of these learned actions are timeless. While on the other hand, memory of representation, is recalling the smell of your Grandmother's apple pie, thinking about the past holiday season, or imaging a specific Rainbow trout caught on the Gallatin River (although the size may be often exaggerated). It gives our imagination the power to recall an experience, the power to dream. Bergson solidifies this argument with this engaging statement, "To call up the past in the form of an image, we must be able to withdraw ourselves from the action of the moment, we must have the power to value the useless, we must have the will to dream."²⁶

Take for example, two people entering a bay-side environment. For person A, who has never visited the site, the experience is about exploration. It is a new experience, new smells, new visuals, new people, and new expressions; this person “perceives” the site as Bergson describes. This event is being catalogued for future experiences and interactions, while at the same time being linked to previous memories. It is being stored to be recalled later in life, whether it be at the same site or in a whole new atmosphere. Now think about person B, who has early childhood memories of this location. They remember faces, interactions, frames in time, emotions. Again, as Bergson explains, this person ‘recognizes’ this site; they have ‘learnt it.’²⁷ The person has a spiritual tie to the essence of the place; they have mental images that recall a complete representation. However, even though person A has not been to the site, it is still a place for them. This site can recall experiences, feelings, and senses that have been previously acknowledged in another place in time. Even though person A has never been to the site, they can still recognize it as a place linked to other experiences, feelings, or moments.



A rare trace of snow at Squalicum Harbor in Bellingham, just west of the Georgia Pacific facilities.

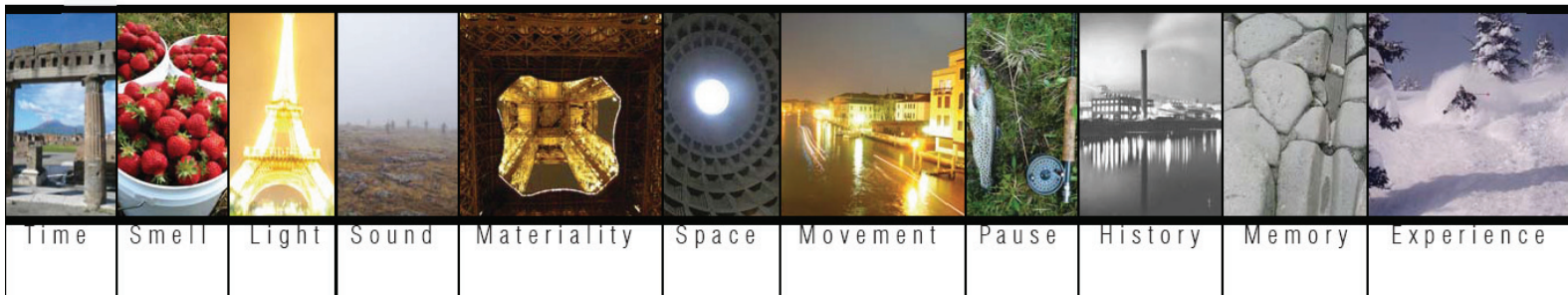
Where would we be without our memory - without our knowledge, recollection and perception? The totality of the importance of memory is consistently forgotten within our society. Memory and its impetus, the senses, connect the masses. It is through this synthesis that we learn to live . It informs and facilitates nearly every movement, every thought, and even every recollection. It connects family, community, state, nation, and world. It is the indiscernible glue that binds people as a whole. Not only does it intrinsically link individuals to the masses, it connects us to a location, while giving us the calculated deliberations to comprehend our surroundings.

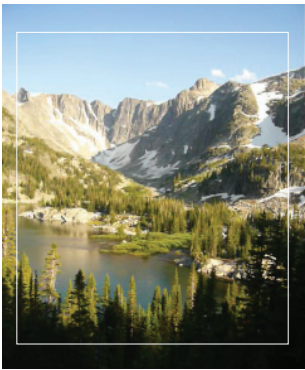
We understand how memory effects the masses, but we need to also remember the formation of these actual memories - the moments that we hold forever. It is these memories that form our identity in our imagination and in the world. They help us to embrace where we are from, with whom we have grown, and how these events transpired - this is what creates our story. These recollections inform us of place, time, and emotion, giving us better understandings of ourselves. After all, we are our memories, and this project will create new memories . But most of all, we will use these successful experiences to help create future successes.

Place

Here I am. Sitting in the sun. A grand arcade - long, tall, beautiful in the sunlight. The square offers me a panorama – the facades of houses, the church, the monuments. Behind me is the wall of the café. Just the right number of people. A flower market. Sunlight. Eleven O'clock. The opposite side of the square in the shade, pleasantly blue. Wonderful range of noises: conversations nearby, footsteps on the square, on stone, birds, a gentle murmuring from the crowd, no cars, no engine sounds, occasional noises from a building site. I imagine the start of the holidays making everyone walk more slowly.

(Peter Zumthor, Atmospheres)





Place

Place is unique to space with respect to its historical context. Space defines the locale in the physical sense, while place is an environment that is distinctive within the margins of memory. Any personal or collective memory of space can define history, location, and the phenomenological essence, which will transcend spaces’ definition into place. Yi-Fu Tuan describes place “As an organized world of meaning.”³³ He delineates place “As whatever stable object that catches our attention.”³⁴ Thus, illustrating that space is in the analog (quantitative) realm, while place becomes a virtual (qualitative) component that occupies the capacity to recall memory, induce sensory activation, and include an experience of historic complexity within futuristic capacities. Place retains a reliable flexibility that is reflexive in nature, but is boundless in its recollection and imaginative capabilities. Because of this - space, on the contrary - may not induce personal or collective inclusion unless it has the ability to encourage a thought of recollection and/or imagination of elapsed moments.

Norberg-Schulz describes the structure of surroundings as *landscape* and *settlement* and further investigation portrays these ideas as space and landscape. “Whereas ‘space’ denotes the three-dimensional organization of elements which make up place, ‘character’ denotes the general ‘atmosphere’ which is the most comprehensive property of any place.”³⁵ I sometimes question, however, if we have any ‘landscape’ left. Whether it be a power line, a fence, a trail or a road, or a piece of trash - our settlements are widely varied, but universally present in our landscapes.

3000-10,000 BC
Evidence of migration of people
from Somalia and Ethiopia

400 AD
Evidence of Bantu Peoples into
South Africa

1750-1100 BC
Shang Dynasty
in China.

1523-1027 BC
Shang Dynasty’s
invention of wri

When one attempts to recall a certain place (or memory), what are they recalling? Is it the spacial structure, the color, the smell, or a certain feeling? The combination of all these things becomes place. It is not an individualized component that is remembered, but an experience that encounters sensory activations and memory triggers to create an impression of the environment at that time in space. When we imagine a place, it involves the senses, the emotions, the locale, and our sense of being.

Within the qualitative realm, recollection of place plays a very intimate role. The memory of a certain place (which can be widely varied) can induce memories of childhood, whether they are good or bad, through a certain smell, a familiar sound, or a visual phenomenon. Our memories of place are specific to each person on an individual basis. With regards to American societal tendencies, our memories tend to be more indistinct than introspective. This should not, however, come as a surprise. As a country, we are juveniles lacking an elaborate, developed time frame. With just over two hundred years from our beginning, we are centuries behind our European, African, and Asian counterparts whose societies have existed and evolved for thousands of years. Conversely, in spite of everything, we boast a narration that should help to explain our origins and our character that will give us a feeling of being found - an orientation.

"If place is defined by memory, but no one who remembers is left to bring these memories to the surface, does a place become no place, or only a landscape? What if there are people with memories but no-one to transmit them? Are their memories invalidated by being unspoken? Are they still valuable to others with a less personal connection?"³⁶
-Lucy Lippard

memory
orientation
switch...off

Orientation

Christian Norberg-Schulz describes understanding a site as being “oriented.” He goes on to say that “To gain an existential foothold man has to be able to orientate himself; he has to know where he is. But he also must be able to identify himself with the environment, that is, he has to know how he is in a certain place.”³⁷ Local design principles should be an illustration of place that represents a region’s history, culture, and even the traditions relevant to that locale. American society, in general, lacks a certain connection with its roots, where an obvious disconnect is present with its ancestors and their story. It is like we have turned off the history light switch, for with it on we don’t know what we might see; embarrassment, maybe denial, or perhaps a skewed truth that we’ve denied ourselves for centuries. “The environmental quality which protects man against getting lost, as Kevin Lynch calls ‘imaginability,’ which means “that shape, colour, or arrangement which facilitates the making of vividly-identified, powerfully-structures, highly useful mental images of environment.”³⁸ After all, where would we be without our history, without a commentary? “In modern society, attention has almost exclusively been concentrated on the “practical” function of orientation; whereas identification has been left to chance....It is therefore urgently needed to arrive at a fuller understanding of the concepts of ‘identification’ and ‘character.’”³⁹

Identity of place is achieved by dramatizing the aspirations, needs, and functional rhythms of personal and group life.

-Yi-Fu Tuan ²⁹

So is place a moment in? Is it a feeling? Or is it an experience? Take for example my fondest memories of childhood, most of which are a frame printed in time. These specific frames (images) of time allude to the idea of place being a moment in time. Conversely, take my love for skiing. I moved to Montana in search of a place, a place that gave me a certain feeling. That feeling is one connected to the earth, in beautiful mountainous landscapes, enjoying the solitude of this life. So I found the “place”, but it could have been any other number of places that gave me this very feeling. And now reflect on an experience. An experience contains multiple components of meaning and significance. It contains the space where this particular experience was housed, its surroundings, colors, scales, emotions, and temporal qualities. Unlike a feeling, an experience has physical features that existed in a certain environment at a certain point in time. A feeling is the activation of certain senses and emotions to define a certain “place” in our head and in our being; but it does not have to be a specific experience or an actual celebrated event.

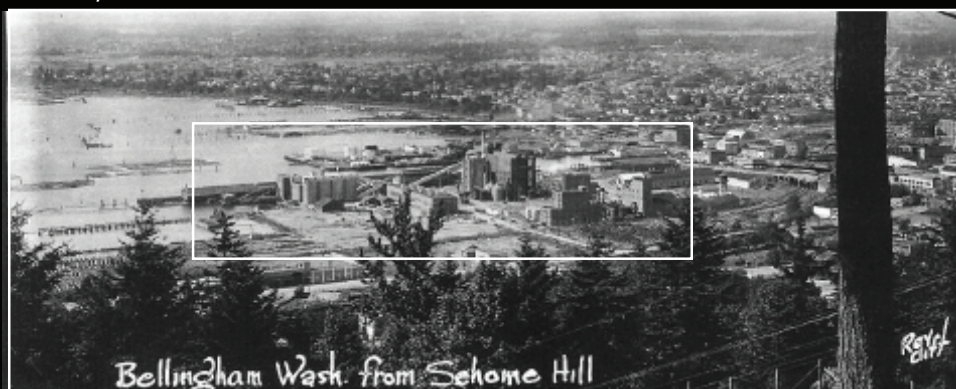
Imagine a place near the ocean. This location has lush banks that encourage life and connect with the natural world. You hear the sound of stirring water, leaving an acoustic footprint in your mind. You smell the flora, exuding its presence throughout. Smells of the ocean are in your every movement. Now, step back and imagine this space coinciding with a bustling timber factory, the smokestacks, machinery, and noises. The workers moving throughout the site like electricity through the lines. Stacks of timber freshly milled with heaps of sawdust meticulously confiscating portions of the horizon. Can these two places coexist? Can one have two individual perceptions of one place over the other? These two perceptions can be shared as a collective memory, but the personal memory will generally be one cohesive thought, one representation, with a distinct regard toward the individual.

memory
switch on...



Looking through the chain-link fence or viewing from Sehome Hill, this site has seemingly been a foreign entity to the people of its community.

Most of Bellingham's population has never entered the former Georgia Pacific Pulp Mill. The notion, impression, or sentiment of this site as a place is merely a fantasy, a past reality. Largely, community members only see an image that is the embodiment of this condition. The populace generally only experiences this site as they drive by, (or as) they have seen the steam rise for years, (or as) they hear sounds reverberate throughout the downtown. However, "When it comes to understanding and accepting a landscape for what it is, history, even fragmented and distorted history, is more reliable than theory."⁴⁰ This embodiment is a solitary function of past utilities and lies beyond our rationale of the present. It is only a space, to most, that lies beyond an invisible boundary; a mere image of physical entities, an evoked memory, represented in our mind's eye. Even accepting this to be true, these images can still, however, guide an experience of this site that is devoted to its historical memoirs by way of past recollections, experiences, and similarities to analogous locales throughout the city, the country, and the world. Without these mental images of the past, this site would simply be a space - a coordinate that lacks an association with its origins and with its people, which it most certainly does not.





*Space defines landscape, where space
combined with memory defines place.*
-Lucy Lippard²⁸

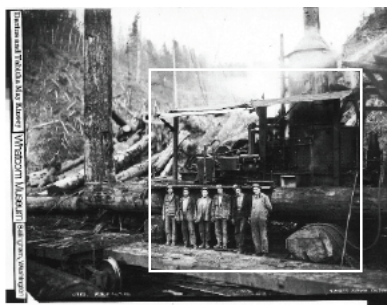
...They are foreign to the urban system, mentally exterior in the physical interior of the city, its negative image, as much a critique as a possible alternative.
- Alan Berger⁴¹



Terrain Vague

Terrain Vague is a French term which categorizes abandoned spaces which have been left behind or forgotten about after a multitude of layers have been imposed upon the locality. They are often perceived as “Negative, unknown, and/or problematic.”⁴² Even so, these conditions are becoming more widespread throughout our landscape. It is no secret that America is in the post-industrialized process of deindustrialization. In fact, since 1990, 600,000 abandoned and contaminated waste sites have been identified in the United States.⁴³ Existing within this milieu are leftovers and remnants that retain the story of our existence. Typically, these sites were the rationalization and induction of our earliest settlements, which most certainly hold the primary key to our narrative. “There can be no doubt that the exercise of reinterpreting great internal projects in our cities from the viewpoint of terrain vague allows us to enrich the scope of activity of urban architecture, due to its condition as an experimental field. In this sense, the re-examination of ‘vague’, undefined lands, makes us see, once again, the heterogeneity, the discontinuity with which the city has been made, allowing us to see other processes which are, perhaps, not conventional.”⁴⁴ Design intentions will need to encompass the needs of the community. Josep Martorell reminds us that “These (terrain vague) must be considered as sophisticated design strategies.”⁴⁵ It is important to recognize and capitalize on these sites ability to, once again, be a connection to their city, after years of being the abandoned entity that has been misused, misunderstood, and misplaced.

Some very successful, large scale solutions to the problem of terrain vague have taken place at the Barcelona Waterfront, The Pearl District in Portland, and London’s Docklands. All of these projects allow the users to see an essential paradigm switch from consuming more land to re-evaluating and re-programming existing misused locations, while at the same point keeping the existing character and allowing private entities to thrive. These projects seek to move inward rather than outward, situating development within the boundaries of the city rather than consuming additional undeveloped land on the periphery. These difficult design opportunities give architects, planners, and developers alike the opportunity to regain the trust of the populace within the scope of sustainability. By doing so, we create a continuation of the historical city without adding new variables that begin to disintegrate the character of the city.



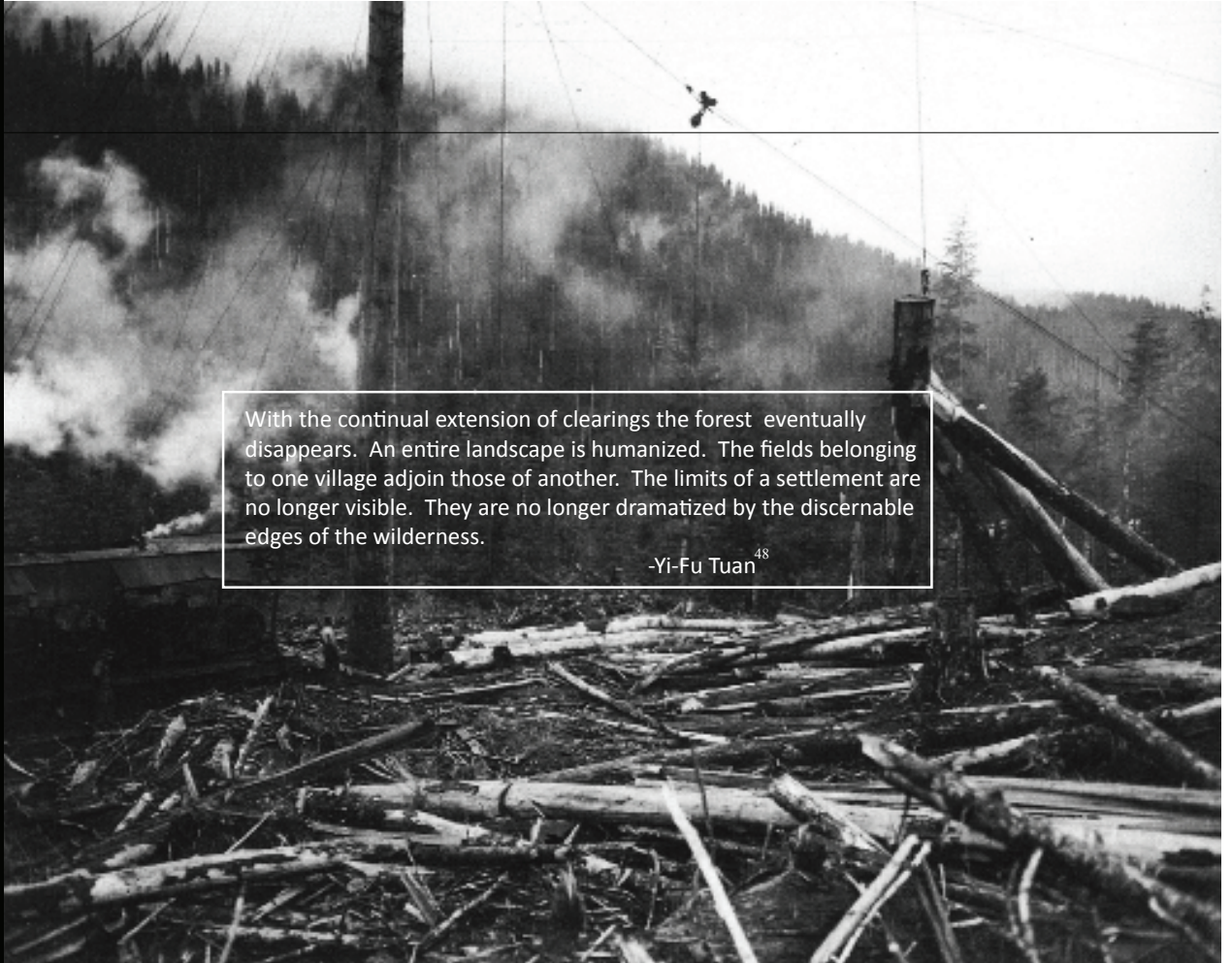
The site as a place is always linked to human history.

-Pierre VonMeiss³²

Dissolving Locales by Way of Manifest Destiny

Manifest Destiny is defined in Webster's Dictionary as "A future event accepted as inevitable [in the mid-19th century expansion to the Pacific was regarded as the Manifest Destiny of the United States]; broadly: an ostensibly benevolent or necessary policy of imperialistic expansion."⁴⁶ Take this process as being, as they suggest, "benevolent." This declaration contradicts what actually happened. "Marked by or disposed to doing good, organized for the purpose of doing, marked by or suggestive of goodwill." Is this really the true story? Destroying vital estuaries for economic gain, ravaging local resources (forests, minerals, and land and sea life) for development and fiscal opportunity, "relocating" native peoples to make more room for expansion, and the list goes on. This Georgia Pacific site is the epitome of the negative impact of Manifest Destiny.

And now the industrial age has left these sites like an abandoned pet. Its use consistently exploited for monetary gain with no regard toward its historical bearing and its future capacities. It is about time we reverse our thinking away from immediate, short sided monetary gain. It is more important to solidify our society's history before irreversible damage ensues in the future course of our developments. It is time to accept and to appreciate intellectual capital. Let's worry about the success of the culture for the benefit of the public; let us create a contemporary interpretation of the concept of Manifest Destiny; but this time, our desires, aspirations, and choices will be benevolent, unlike our historical malevolence.

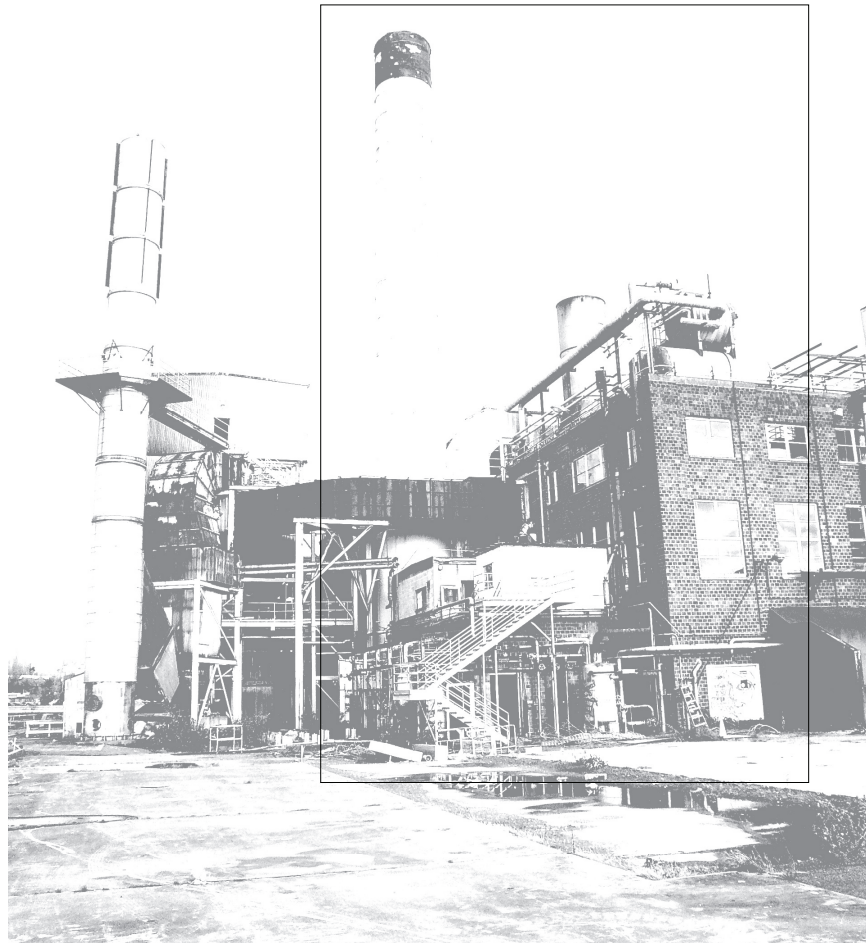


With the continual extension of clearings the forest eventually disappears. An entire landscape is humanized. The fields belonging to one village adjoin those of another. The limits of a settlement are no longer visible. They are no longer dramatized by the discernable edges of the wilderness.

-Yi-Fu Tuan⁴⁸

Site Analysis

A city's history essentially creates a typological framework that helps to explicate the circumstances of place with regards to economic, social, and political conditions. Juhani Pallasmaa outlines, "Buildings and cities are instruments and museums of time. They enable us to see and understand the passing of history."⁵⁰ Historic artifacts become the urban fabric that is representative of spatial structures, design intentions, and overall architectural vernacular. The historic buildings, the original streets, the monuments, the local legends: these are the artifacts that put us back in history while are equally inclusive to the future. They can give us an understanding of the customs and traditions that define the character of the city, while also revealing an insight that these characteristics have guided us to where and who we are today. It is these memories, these artifacts that form our expectations for the future while retaining the importance of the past. It is these very characteristics that give us the utility to survive. Fundamental understanding of these principles will guide our existence, to eliminate failure of memory.



Bellingham, Washington

Whatcom County

“Whatcoom,” or the “place of noisy (or rumbling) waters.”⁴⁷



The Mount Baker Theater is one of Bellingham's most iconic buildings and is located just blocks from the site.

Located in Northwest Washington (80 miles north of Seattle), Bellingham is a town which cherishes the outdoors. People participate in sports like mountain biking, skiing, fishing, and rock-climbing, which are present everywhere one looks. People are generally on the liberal side when it comes to politics (58% voting Democratic in the 2008 presidential election with an 87% turnout⁵⁸). Weekend activities may include a trip to the local farmer's market, a kayak excursion around the islands, a ski day at Mt. Baker Ski Area, or a casual round table with friends at the local coffee shop. In the summer, community members flock for the outdoors due to long, wet winters. Even though winters are long and wet, this doesn't keep people from enjoying the outdoors. I recently visited Bellingham on a miserable November day, to find, admirably, people riding bikes, walking with friends, and even fishing (keep in mind this is a day that rained over one inch). “Rains just water,” a Port of Bellingham official jokingly reminded me with a smile.

Varieties of landscapes are abundant, with rural farmlands to the north, the Cascade Mountains to the East, and the scenic San Juan Islands to the west. Whether you want to sail, fish, ski or bike - or simply enjoy the company of friends and family - Bellingham's got your flavor. With a variety of landscapes brings a variety of people, to create a dynamic atmosphere that calls itself the Pacific Northwest.

Bellingham's economic stability is widespread with trade, transportation and utilities comprising the majority of the workforce with 15,700 employees, government came in second with 14,700, and leisure and hospitality rounds the top three at 10,200. The unemployment rate as of September 2008 is 5.2% compared to the national average of 6.5%.⁵⁹ Even through economic transitions, the manufacturing sector has seen rates continual climb from 1990 to the present (8,000 jobs in 1990, 9,200 in 2008).

Population ⁵⁷	Bellingham	WA
1900:	1682	518,103
1950:	25,450	2,378,963
2000:	67,171	5,894,121
2006:	75,150	6,395,798
2022 :(projected)	100,000	7,815,100

People Profile

<5 years old:	5.2%	6.7%
<18:	17.7	25.7
<65:	63.1	56.3
>65:	12.4	11.2

White	87.9%	81.8%
American Indian	1.5	1.6
Asian	4.2	5.5
Hispanic	4.6	7.5
2 or more races	3.1	3.6

Foreign Born Persons

9.1%	10.4
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High School Graduates

88.5%	87.1
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Median Household Income

\$32,530	\$45,776
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Elevation

0-150 feet

Land area

25 square miles

Persons/sq.mi.

2,619.8

Climate⁵⁷

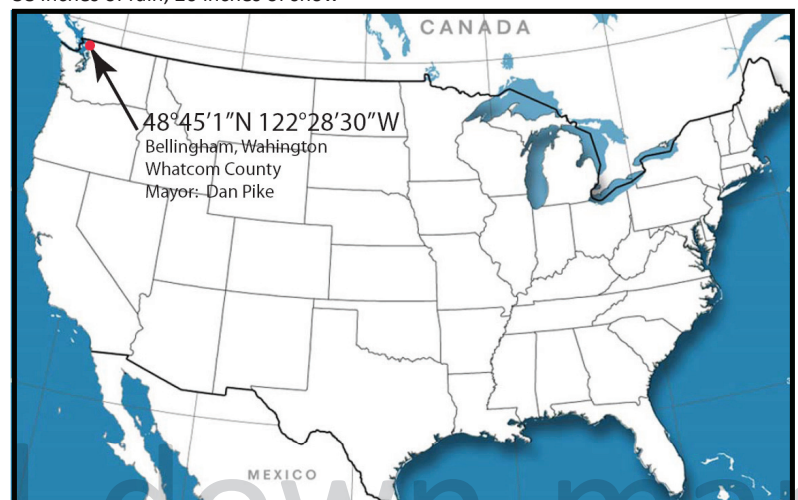
Bellingham has a mild, maritime climate with temperatures ranging from 45 to 60 degrees in spring and fall, 30 to 50 degrees in winter, and 60 to 80 degrees in summer. Most days have at least partial sunshine or rain; sleet and hail occur only about 15 days per year. Snow is a rare event in Bellingham, on average receiving under 20 inches a year. The mountains, however, post record snow-falls nearly every year. Large, coastal fronts hit the region on a continual base. This is why people correlate rain going hand-in-hand with the Pacific Northwest.

Average Temperatures

January, 40.5° F; July, 63.5° F; annual average, 51.5° F

Average Annual Precipitation

38 inches of rain, 20 inches of snow



Bellingham, Washington Timeline

1792-2008

Henry Roeder and JE Peabody build a mill near the site of Prospect St. Bridge. (1852-1853)

mile-long wharf out to deep water in Bellingham Bay. (1882-1883)

Captian George Vancouver explores the area, he names Bellingham after his fellow navy officer Sir William Bellingham. (1792)

At the time of first Euro-settlement, over 1,000 native people lived in Whatcom County (down from about 3,000 before the epidemics of the previous seventy-five years) utilizing the forests and water resources to make their living.

Nearly 10,000 arrive in response to the brief Fraser Valley Gold Rush. (1858)

Roeder Peabody Mill burns. (1873)

Sehome Hill Coal Mine closes after years of marginal profits. (1879)

White City Amusement Park opens in Silver Beach near Lake Whatcom. (1907)

The settlements of Fairhaven and Whatcom consolidate to form the city of Bellingham. (1903)

Bellingham's economy is driven by resource extraction: agriculture, fishing, forestry, and mining

1800

1810

1820

1830

1840

1850

1860

1870

1880

1890

1900

For nearly a decade after first European exploration, the Whatcom County area sees very little settling.

Bellingham's European settlement and development slows.

Bellingham Bay sees an influx of settlers after the southern coastlines see mass homesteading.

The village of "Whatcom" is settled. (1853)

In 1855, the Lummi Chief Chow'it'sut (?-1861) signed the Treaty of Point Elliott, which ceded most of the tribe's aboriginal lands to the United States in exchange for a 15,000-acre reservation on a peninsula between Bellingham Bay and Lummi Bay.

Governor John McGraw signed legislation establishing the New Whatcom Normal School on February 24, 1893. (Western Washington University)

The Sehome Coal Mine is constructed in what is now downtown Bellingham. (1854)

Roeder gives the city 4.5 acres of undeveloped land, present day Maritime Park. (1883)



This timeline shows pertinent events that structured the formation of Bellingham, Washington. Not only do these events define the town, they also begin to extend into the story of the former Georgia Pacific site.

Timeline

n o e Events

Sandstone Arches from the burned-out Pike building downtown were brought up to Whatcom Falls Park to build a Stone bridge that exists today. (1939)

Led by the Young Men's Commercial Club, 40 acres were purchased from the EB Estate to establish Whatcom Falls Park. (1908)

The city builds a sewage plant on filled in land next to the Whatcom Creek Estuary. (1947) In 1960, the city expanded the facility.

Atlanta based Georgia Pacific buys Puget Sound Pulp and Timber Mill.

Old sewage plant is re-programmed into a fish hatchery in Maritime Heritage Park. (1974) First salmon released in 1979.

Bellingham Herald columnist notes, "For years humans have been the takers and the little estuary where Whatcom Creek meets Bellingham Bay has given itself up to their notions of progress,...the humans have begun to give back." (1997)

Georgia Pacific Pulp mill closed March 30th 2001, eliminating 420 jobs.

The post-industrial economy: manufacturing, trade services, and government

1910 1920 1930 1940 1950 1960 1970 1980 1990 2000 2010

By the end of the 1920s after decades of cutting down forests and catching fish people could see it was the end of a golden era.

Paper and pulp mills are founded on Bellingham's waterfront. Among them, the Puget Sound Pulp and Timber. (1925)

Whatcom Falls Park Fish hatchery is built with federal funds and help from the State Game Commission and the Whatcom County Sportsmen's Association.

It is realized that Whatcom Creek was "The Birth-place of Bellingham" and yet residents simply turned their back to the creek.

Georgia Pacific closes two mills, eliminating 50 jobs. This is the first closure since its beginning in 1925. (1984)

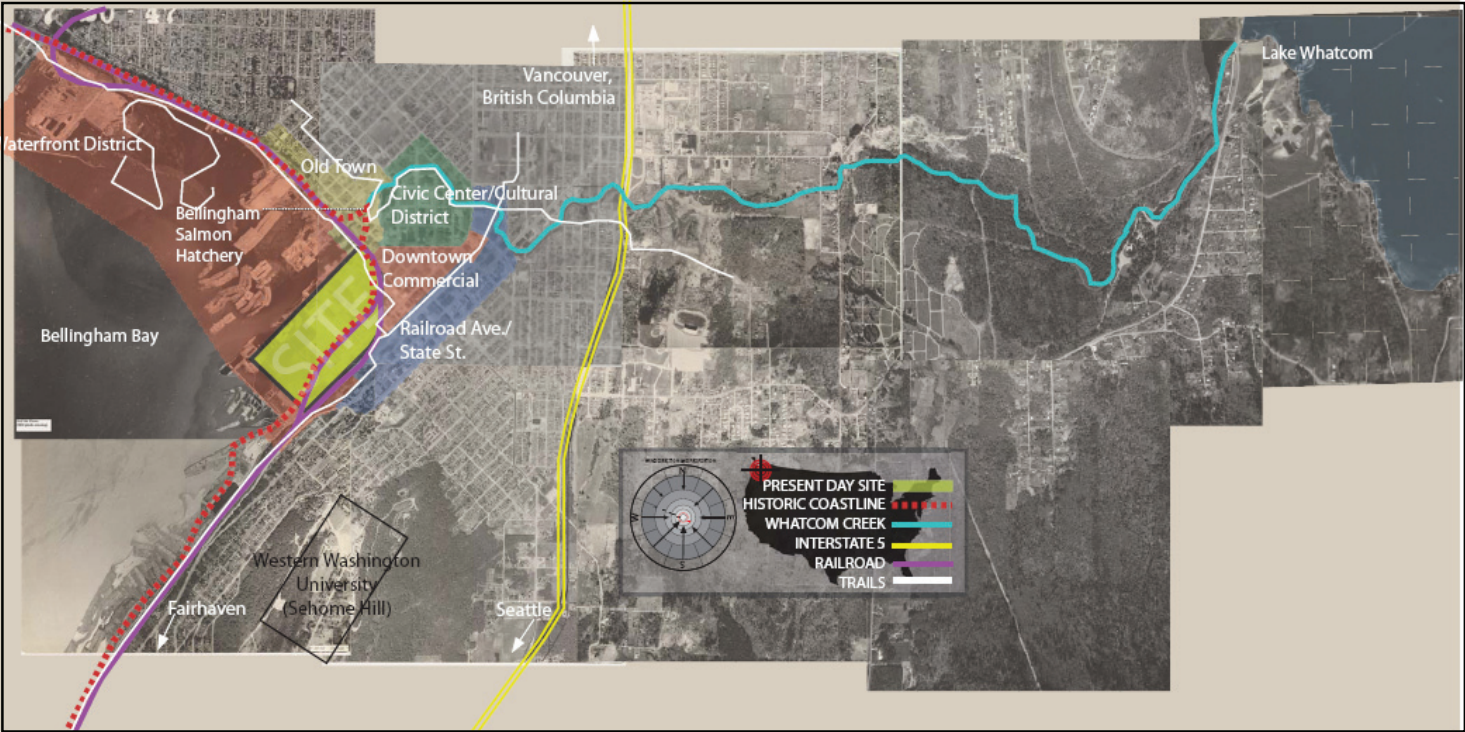
Georgia Pacific Paper mill closed December 21 2007, eliminating over 200 jobs.

First concerns are raised about the ongoing abuse to Whatcom Creek by local industry. (1907)

A pipeline explosion in Whatcom Falls Park kills three and creates national attention with a mushroom cloud and fire. (1999)



Downtown Bellingham



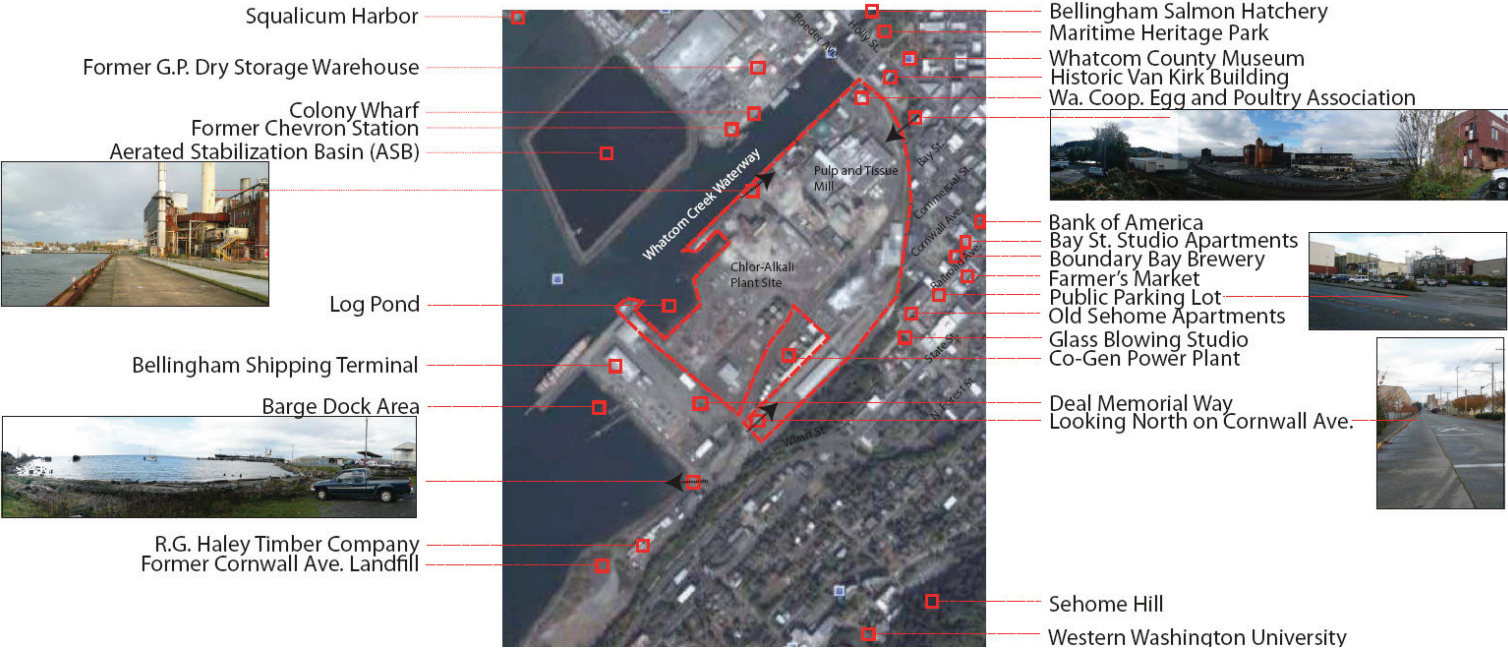
Location

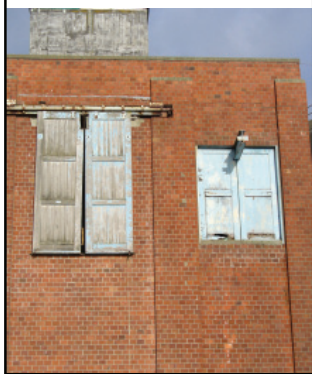
The chosen site is located in the Southwest corner of downtown Bellingham. It borders nearly all sections of the central commercial core while also sitting on Bellingham Bay. Bordering the southern end of the site is one of two deep water ports in the Pacific Northwest (Seattle is the only other one in Puget Sound). The railroad tracks run through the entire site, leaving traces of the industry that once thrived. At merely eight feet above sea-level, it still sits below nearly all of Bellingham, becoming a focal point when glancing to the south and west island views. This, however, raises concern about sea-level-rise, and the future of the site.

Today, this location lay in shambles. Demolition and development work simultaneously to bestow a loneliness upon the location. Even though, locals feel the value and importance of this site; I see old-timers walking by the site and stopping to take a minute of reflection to wonder about the possibilities, or maybe to foresee the liabilities. The periphery of the site has also re-kindled a new sense of hope. Buildings that typically failed because of there close proximity to the factory, now contain future identities that appear to be successful. This site will re-align with the core of downtown, giving it the framework to once again be incorporated. This extension will supply downtown with the infrastructure it needs to facilitate any future development.

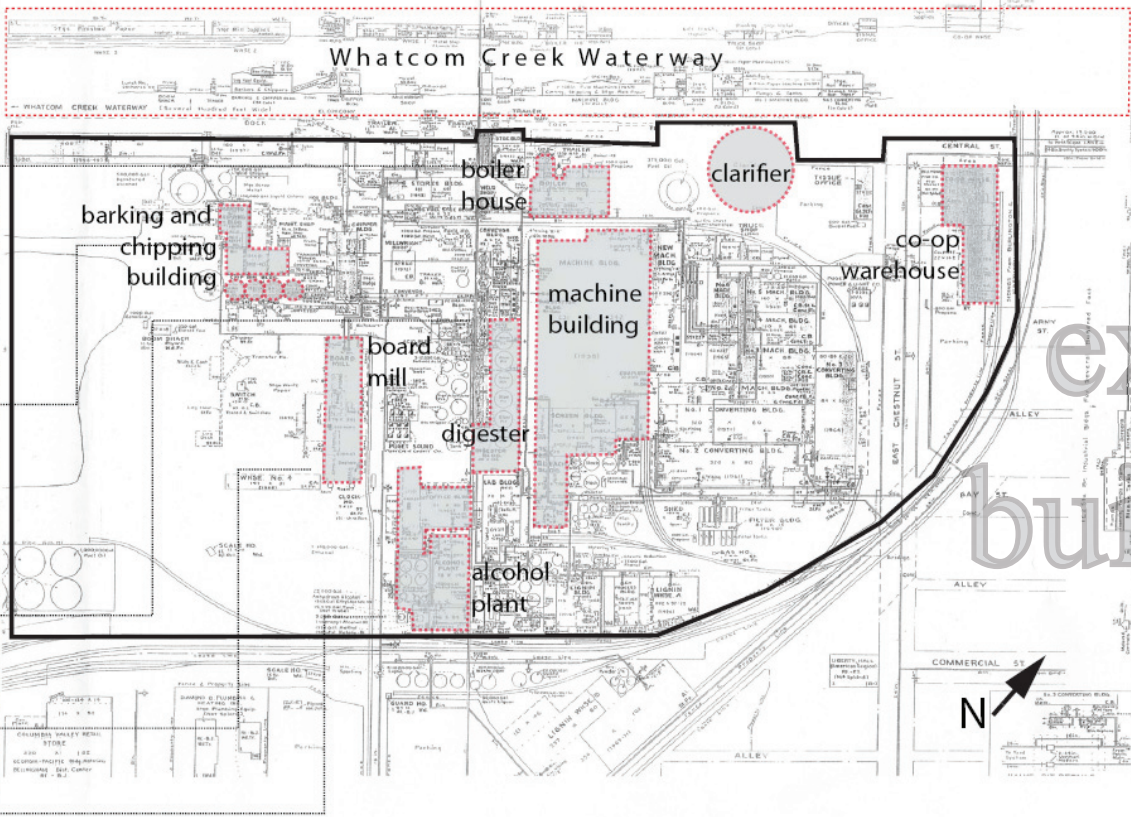


There are several different buildings types around the edges of the site. There are office supply stores, glass blowing studios, banks, apartments, restaurants, and a brewery - creating a pleasant diversity within the area.





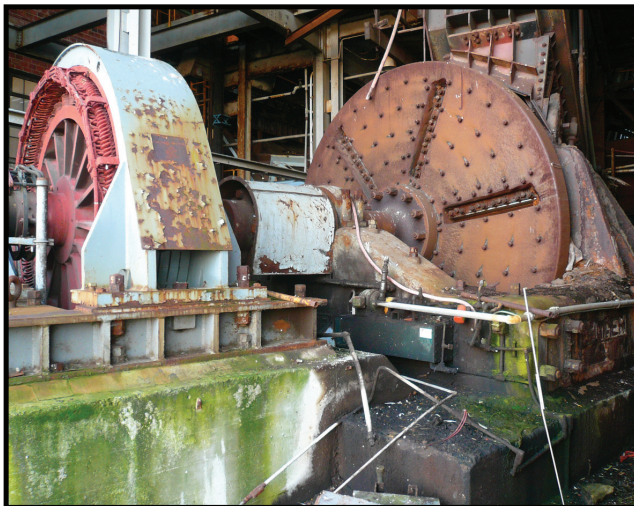
*Our 'old' images can only
help us to find new ones.*
-Peter Zumthor



These existing buildings represent the past operations at this site. They are salvageable as new uses and needs arise. To lose these buildings would be like losing a century worth of history books.

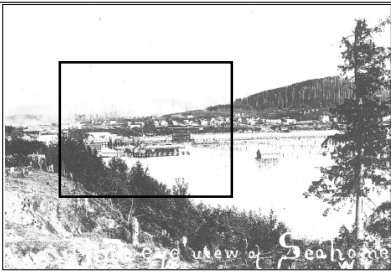
existing
buildings
map
Downtown
Bellingham

Existing buildings are generally steel and brick construction built from the 1920's to the 1960's. While all of the buildings housed individual processes, they all speak a language derived from the industrial age. Facades are conventional brick with utilitarian fenestration. They all possess a dominant portrayal of industry, manufacturing, and history. These Buildings housed important components that were, at the time, cutting edge technologies with regards to not only the timber industry, but many other manufacturing processes.



To the right is the chipping machine, once used to chip the logs that arrived on the site.





This site is better understood within the story of its evolution. Since America’s initial westward expansion, “Destruction of wildlife and cutting down of trees had been part of the pioneering...”⁵¹ Once this site contained lush terrain with abundant, hearty vegetation, superb old-growth forests, and a plethora of land and sea creatures used to easily sustain the local tribes. Now this site epitomizes the backlash our industrial era has set in our lap. With poisonous levels of mercury, destabilized sea floors, and little to no flora, this site needs to be brought back to its historic roots.

Bellingham has a history typical of coastal towns along the Northwest Coast. Settlements were discovered and inhabited by a specific formula.

- i. Locate an area with abundant resources (timber, fish, minerals, etc.)
- ii. In the vicinity of a running water source to give the future mill the capacity to operate (transportation, energy)
- iii. Proximity to a market to sell manufactured goods (Victoria, B.C. and San Francisco, CA)

In Bellingham’s case, the headwaters of Whatcom Creek and Bellingham Bay (present-day GP Mill site) provided a perfect prospect to make a marketable timber mill. In 1852 two men, Henry Roeder and his partner J.E. Peabody, built Bellingham’s first mill at this location. Although this settlement at the time was used frequently by the local Salish Indian tribes (Lummi and Nooksack) for collecting fruits, berries, and fish at seasonal settlements. It is said the fish were so thick at the base of the last falls into Bellingham Bay the natives were able to simply collect them similar to the berries and fruit. The natives to the land for thousands of years prior, they initially welcomed European settlers and actually gave them the rights to the estuary of Whatcom Creek into Bellingham Bay.

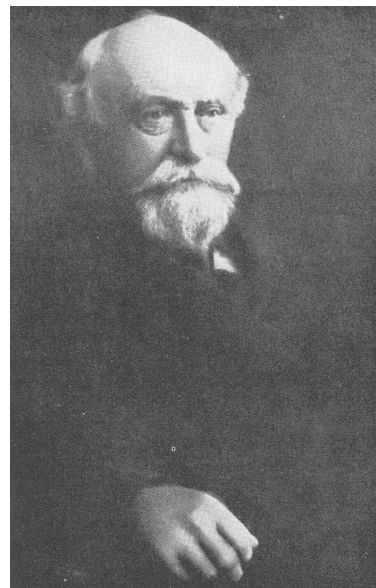
lummi salish semi-ah-moo

Chris Friday, a Whatcom County Historian, sheds light on this event:

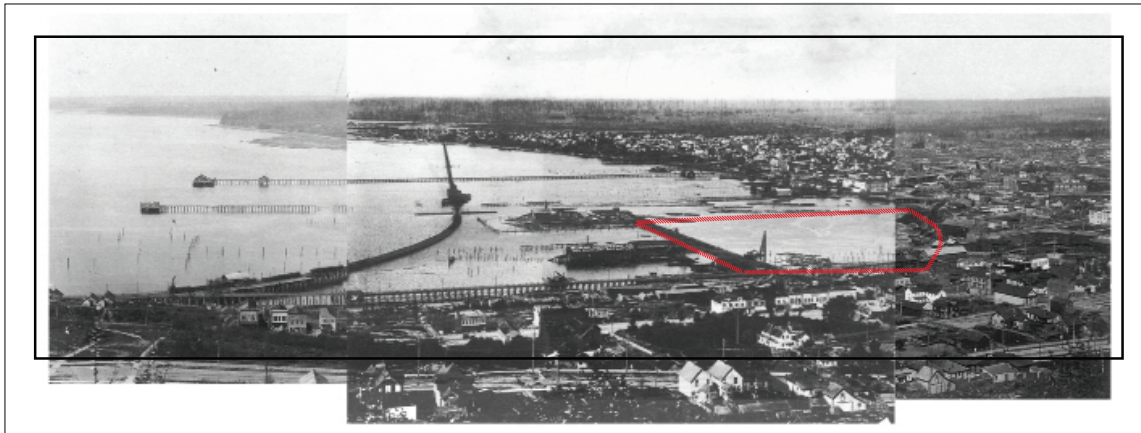
Just what Native Americans thought of the impact on this place is unclear. Later accounts hold that Roeder and Peabody traveled to the large Lummi village at The Portage. There, according to early local chronicler Lottie Roeder Roth, "Chief Chowitzit not only gave them the falls and the land surrounding it, but promised to send some of his men to help raise the mill." While Chowitzit (sometimes spelled Chowitsut) was a major figure among the Lummi, especially at The Portage village, it is not clear that he really had any authority to cede the rights to use Lummi lands. Etiquette and oratory conventions may have impelled Chowitzit to offer up the lands. His motives may also have been less than sincere. We know that only two years later one particular Lummi designated by federal officials as a "chief"--a designation that emerged among the Lummi only after the influence of the fur trade and missionaries--signed away Nooksack territories in the Treaty of Point Elliot while protecting Lummi lands. European Americans willingly and unquestioningly accepted his authority to do so because it served their interests as well.

If Chowitzit actually had any authority to make such a grant and indeed gave permission for Roeder and Peabody to build the mill along the creek, his rationale for doing so remains unknown. He may have hoped that the establishment of European American activities in Lummi territory might give him access to trade goods and resources then only available through trade with British at Fort Langley to the north. He could have been calculating, too, the value that Roeder and Peabody offered as allies against Indians from the northern coastal stretches of British Columbia who periodically raided Coast Salish villages and encampments, including those of the Lummi. Perhaps he simply determined that the Noisy Waters site was unproductive enough to grant to these outsiders. No matter what his reasons, Roeder's descendants and most historians of the area have used this story to justify and legitimize their claims to the site and by association to the rest of Bellingham Bay. After all, they imply, Chowitzit did give away the mill site and the surrounding lands.

This is interesting in the fact that the Indians gave away the land with a motive in mind (protection, trade, job security) just as Georgia Pacific gave this land to the Port of Bellingham, in return, Georgia Pacific would be essentially cleared of responsibility for the remediation of the site. This land has been bartered since the beginning for alternative motives, and that trend seems to be continuing.



A photo of Captain Henry Roeder.
(1824-1902)



It is important to note that two thirds of this former Georgia Pacific site, prior to the early 1900's, existed only on the bottom of the ocean. It was filled in to promote the manufacturing of goods along the coast in 1913, and further fill was added in 1930. This, obviously, not only dismantled the existing ecology, but changed the headwaters forever. The identity of the site was essentially re-programmed from a thriving native atmosphere, to an industrialized entity. Even after the creation of this new site, it is "Abandoned by time, by chance, or by the destiny of the city."

How many more environmentally and culturally destructive projects can we survive? We need to understand that we are covering our brilliant hardwoods with outdated shag. Places history needs to be understood and experienced to understand ourselves and our culture. We need to be oriented to our place. We talk about densification of our city-scapes, but densification only happens on an insignificant scale and we continually lose our open space; our public space. Josep Martorell, a distinguished author and architect, advocates the need to "Believe in the priority of the voids (public spaces) without leaving aside the importance of the filled spaces (buildings)...: the West-are particularly concerned with building filled spaces, because their economic output can be privatized and controlled. The void, however, is the public domain which excludes nobody." Downtown Bellingham has a multitude of voids that, if condensed, will keep the core of the city contained. Currently, there is a proposal that is essentially downtown sprawl, a development that extends the boundaries of an already large, yet empty entity. I cannot find the proper reasoning to explain why the city should deface the most valuable piece of public space. After all, are we trying to please our developers or our citizens?



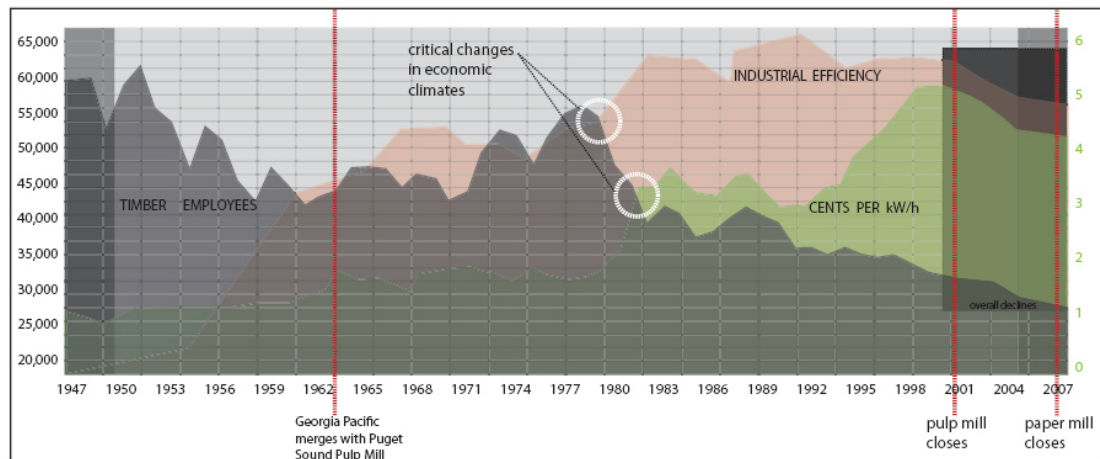
Pilings were driven into the ground to help support the massive infrastructure and buildings that would one day be built. It is said that hundreds of thousands were set into the ground.

Screen Room Foundation

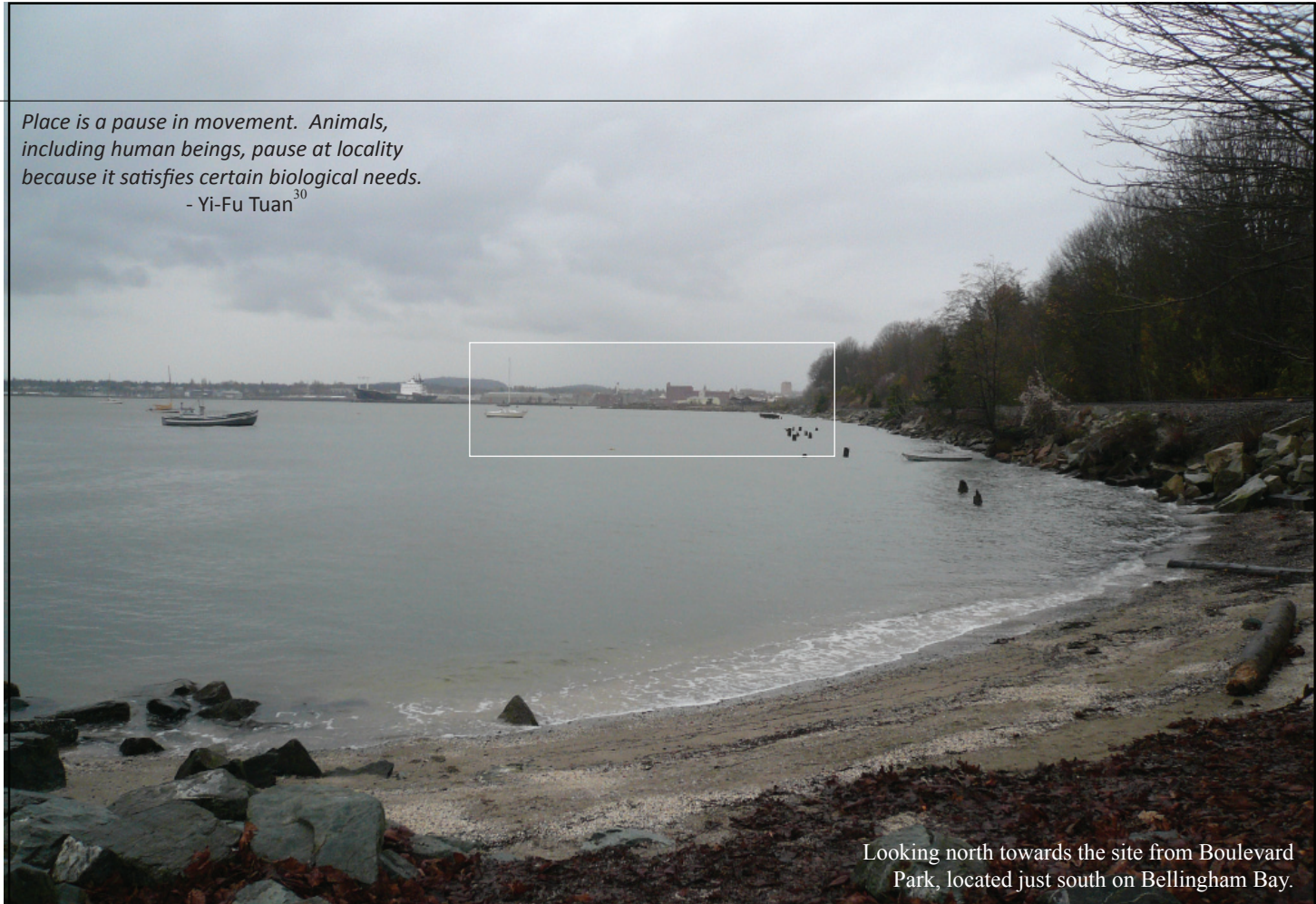
Blow Pile Oct 26 1922

The Georgia Pacific Pulp and Paper mills faced a demise similar to many more industrial entities throughout the United States. In this particular case, three critical variables played a role: (1) Timber employment, (2) Industrial efficiency, (3) Energy prices. These three variables met in the proverbial perfect storm in the 1990's. In 1992, energy prices nearly doubled over an eight year period. Since the mid-seventies, timber employment faced a downward spiral. And with the rise of industrial efficiency, technology, and globalization, industrial methods and locations would be changed forever.

In 2001, Georgia Pacific's Pulp Mill would close its doors. Following in 2007, the Paper Mill would also end operations. Their doors will remain closed forever. These events would essentially leave nearly 500 employees without a job, temporarily capsizing the communities work force.



*Place is a pause in movement. Animals,
including human beings, pause at locality
because it satisfies certain biological needs.*
- Yi-Fu Tuan³⁰



Looking north towards the site from Boulevard
Park, located just south on Bellingham Bay.

Program

While it was not a site of extensive settlement--it had no permanent winter village at its mouth--the ancestors of the Lummi Nation appear to have established seasonal fishing encampments near where the last of the falls tumbled into Bellingham Bay. There they harvested the fish congregating at the bottom of the falls. While at that spot the women and children spread out along the banks of the creek to gather berries and other fruits for the leaner months ahead.

-Chris Friday⁶⁰



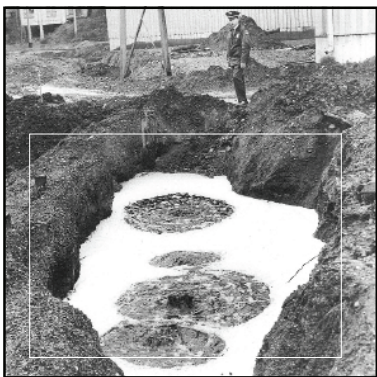
I would suggest there is a formula for finding public space that is similar to the previous suggestion for early settlement but with some mild variations. For instance, the new hybridized formula for settlement of public space is as follows:

- i. Locate an area with abundant resources (access to the Bellingham Bay and Whatcom Creek, historic resources)
- ii. Desired location shall be situated in the vicinity of a water source (or natural environment) to give the experience of being in touch with nature, in touch with the surroundings.
- iii. Proximity to a market, typically retail, to allow the users to partake in both consumerism and recreation/entertainment. (Downtown Bellingham)



Most people hold a venerated position towards our environment and our natural surroundings. However, at the same time, we hold a high regard toward our society's capacity to consume the products we need for daily life. Here lies the problem - we portray an extreme dislike for the manufacturing processes that impairs our natural settings - while simultaneously consuming the by-products, the manufactured elements of this process. In Bellingham's case, the community could not turn their backs to this process because the site was in close proximity.

In this manner, the story of the site is revealed. For years - certainly decades - this site, along with our industrial era mentality, has manufactured products for everyday use (paper, tissue, wood products, plastics, etc...) while meticulously devastating the natural environment within the periphery. Environmentalists and industrial critics alike have demonstrated disapproval for this process for decades. It is my belief, that an introduction of a solution that not only manufactures positive attributes for the environment, but also successfully creates financial prosperity and essential futures for our economy, our culture, and our history.

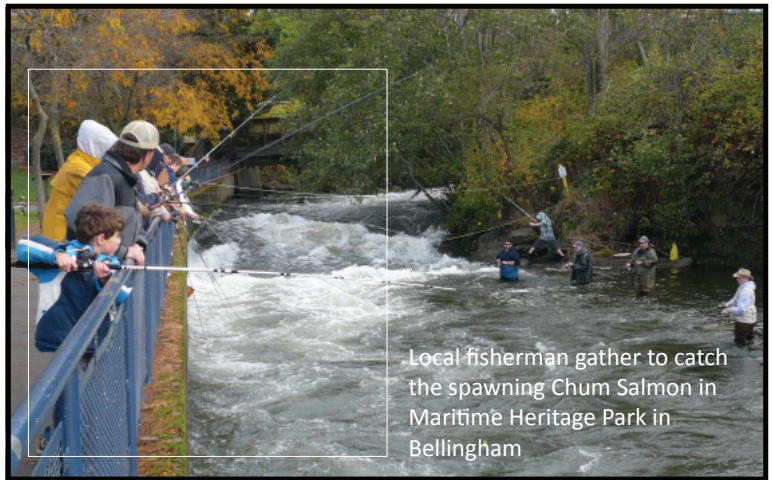


The understanding of a life process, originating at the earliest point of conception, to that last dying breath will make an emotional and memorable impact on those of all ages. J.B. Jackson suggests "The sense of place is reinforced by what might be called a sense of recurring events."⁶² He continues:

I'm inclined to believe that the average American still associates a sense of place not so much with architecture or a monument or a designed space as with some event, some daily or weekly or seasonally occurrence which we look forward to or remember and which we share with others, and as a result the event becomes more significant than the place itself.⁶³

Witnessing a natural process involuntarily connects us to our natural environment. We reconnect to our “organic and functional periodicity”⁶⁴, which we have disbanded ourselves to for centuries. Even long before our industrial era, we have been more associated to that of “Mechanical periodicity, which is dictated by the schedule, the calendar, and the clock.” We need to understand our natural processes on a temporal aspect so we can again be a companion to our natural environment and its happenings, presently and historically. Ideally, this will create an appreciation for the processes we so easily and willingly devastate. James L. McGaugh, a distinguished memory scholar, states in his book *Memory and Emotion* that “...[M]emories of such significant public events may not be etched in our brains and stick there forever, they do appear to be more vivid and long-lasting.”⁶⁵

With this said, it is my intention to introduce a salmon hatchery on the site, to help rehabilitate the environment with a natural species, while at the same time creating jobs, revenue, and an attraction for the community. Coinciding with this interjection will be the ability to transform and dissolve this site to its pre-European contact, internally linking us to the historic circumstances that once dominated.



Local fisherman gather to catch the spawning Chum Salmon in Maritime Heritage Park in Bellingham



This 170 acre site (7,405,200 sq/ft) will accordingly house many buildings and facilities. Some of these buildings are vacant buildings that will be modified to handle the new practices on site. They range in size from 10,000 sq/ft-50,000 sq/ft. These buildings not only hold a high historical value to the site, but will also be multi-use facilities to ensure the success of this new program.

There will also be an introduction of educational rooms that range in size. These classrooms will be for visiting students, scholars, tourists and community members ranging from grade-schoolers to senior citizens. These facilities will work in accordance with local public/private schools, collages, historic societies, and technical collages. Not only will this accommodate and present itself to many people, it also helps to formulate an introduction to the site. Approximate sizes are listed below.

- 4 - 800 sq/ft classrooms
- 2 – 1200 sq/ft classrooms
- 1 – Auditorium
- 8 – 150 sq/ft Administration offices

Fish hatchery components will include reservoirs, raceways (highly circulated pools for young salmon fry), fish ladders, and holding pens for spawning salmon (until salmon eggs and milt are ripe). This infrastructure is vital to the function and operation of the facility. To supply this great amount of water will be an existing inlet pipe that directs water from Lake Whatcom to the site. This fourteen inch steel pipe is operational due to the high necessity of water during previous operations on site (This inlet pipe directs nearly five million gallons of water per day). Pools and reservoirs will cover nearly 10-15 acres of the site. These areas will not only be functional hatchery components, they will also serve as a place of observation, a place of rest, or an outdoor interactive classroom. The Bordeaux Botanical Garden in Bordeaux, France⁶⁶ employs strategies that will be further investigated and explored. Techniques include mimicking nature to not only produce plant life but to also allow these species to be studied and researched. This opens the possibility of Locating the Huxley College for the Environment (a branch of Western Washington University) to monitor, study and research this procedure.

In addition, facilities will be needed to aid in the artificial spawning process. Rooms will be needed for the incubation of eggs, while supplementary rooms will also host the process of fertilization (mixing eggs and sperm) which is sometimes as simple as mixing the two in a container. Once the newly formed embryos reach a certain age, they are transferred to the race-way outside. Program requirements are subsequently listed below.

- 15,000 sq/ft hatchery building
 - o 6 – 1000 sq/ft incubation rooms
 - o 2 – 500 sq/ft fertilization room
 - o 4 – 100 sq/ft restrooms
 - o 2 – 500 sq/ft spawning sheds (egg/sperm collection)
 - o 1 – 2000 sq/ft observation exhibit
 - o Various interactive displays

This site also boasts significant opportunities to become a complete aqua-culture establishment. This possibility will be further investigated and implemented if the need or solution is required. There is a notable capacity of this location to grow mollusks, freshwater fish, and other aquatic species for retail purposes, or simply to rehabilitate the local and peripheral ecologies. This procedure can also aid in the remediation and removal of toxins through the practice of bio-remediation.



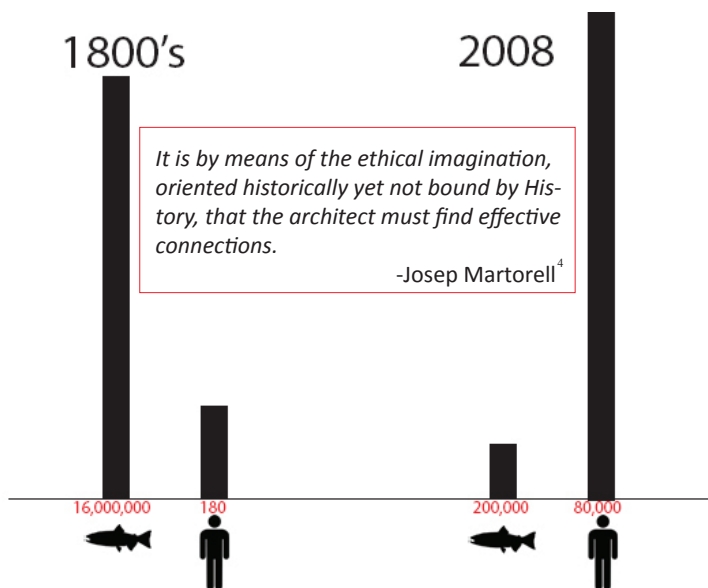
An incubation table located at the Issaquah Salmon Hatchery, just east of Seattle.

Bellingham Salmon Hatchery

Salmon and human populations have had a connected relationship since their introduction. As the graph below shows, salmon numbers have dropped significantly in the last two centuries since the European settlements, while human populations have risen significantly. This can't be blamed on one specific event. Commercial fishing, industry, and poor waste-management has led us to where we are today. When we begin to look at this scenario on a larger scale, we begin to see that entire ecosystems are beginning to be dismantled and will remain this way unless we begin to change our practices and help to re-populate our dwindling species.



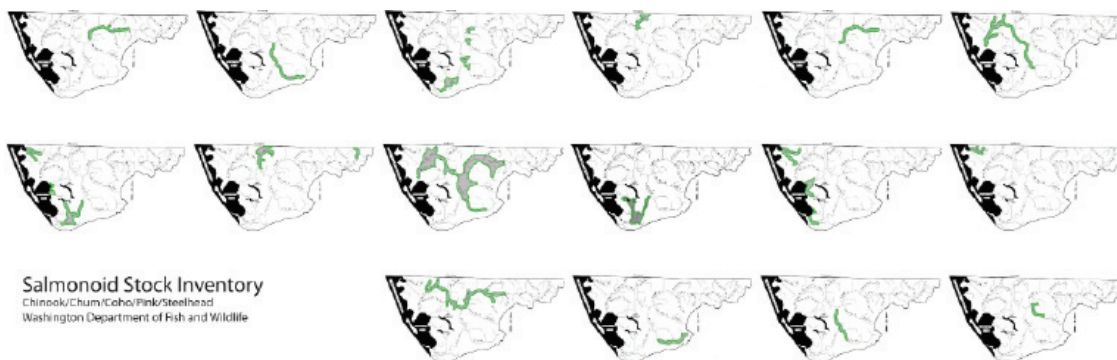
A local fisherman showcases his catch for the day at the headwaters of Whatcom Creek and Bellingham Bay.



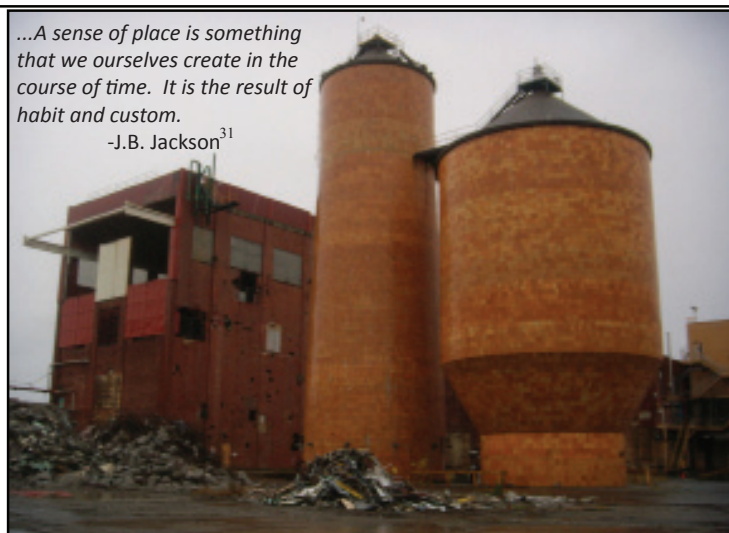
Salmon congregate on the lawn near the headwaters of Whatcom Creek. This location reports the highest numbers for the recreational salmon industry in Washington.



To help aid in the rehabilitation process is the Bellingham Salmon Hatchery. This facility works with the Bellingham Technical College to train hatchery personal for work throughout the world. Being in close proximity to the site (the headwaters of Whatcom Creek and Bellingham Bay) gives it the opportunity to couple with this newly proposed program, giving it the opportunity to expand practices and production capabilities. With staff already on hand, and willing students to fill the arising positions, operations will be begin efficiently when the day presents itself. As of now, the hatchery has outgrown its current location and is in need of additional buildings, pools/reservoirs, and raceways. With the addition of further infrastructure, this hatchery will have the capability of re-stocking greater quantities of sea species. The maps below show the areas in local rivers that salmon spawn (in green), these locations are within 20 miles of the site. This showcases the possible areas of release for the developed salmon.

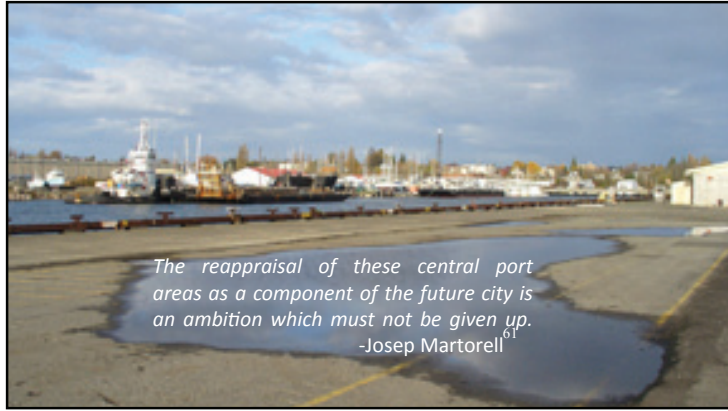


The fish ladder routes spawning salmon to holding pens. After enough salmon have congregated, they collect them and extract eggs and sperm.

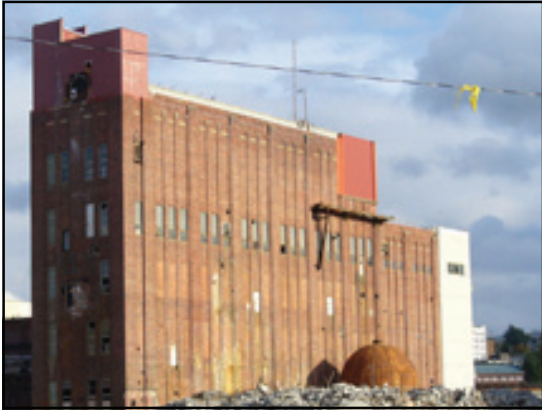








The reappraisal of these central port areas as a component of the future city is an ambition which must not be given up.
-Josep Martorell⁶¹



Use and Occupancy Classification

Educational components will classify into Section 303 in the 2006 International Building Code

-**303.1 Assembly Group A.** Assembly Group A occupancy includes, among others, the use of a building or structure, or a portion thereof, for the gathering of persons for purposes such as civic, social or religious functions; recreation, food or drink consumption; or awaiting transportation.

Hatchery Components will classify into Section 304 in the 2006 International Building Code

-**304.1 Business Group B.** Business Group B occupancy includes, among others, the use of a building or structure, or a portion thereof, for office, professional or service-type transactions, including storage of records and accounts.

Construction Type

SECTION 602 - CONSTRUCTION CLASSIFICATION

-**602.5 Type V.** Type V construction is that type of construction in which the structural elements, exterior walls and interior walls are of any materials permitted by this code.

The height permitted by Table 503 (Type V, A-1) is two stories with 11,500 sq/ft per story.

Means of Egress

1003.2 Ceiling height. The means of egress shall have a ceiling height of not less than 7 feet 6 inches (2286 mm).

1003.3 Protruding objects. Protruding objects shall comply with the requirements of Sections 1003.3.1 through 1003.3.4.

1003.3.1 Headroom. Protruding objects are permitted to extend below the minimum ceiling height required by Section 1003.2 provided a minimum headroom of 80 inches (2032 mm) shall be provided for any walking surface, including walks, corridors, aisles and passageways. Not more than 50 percent of the ceiling area of a means of egress shall be reduced in height by protruding objects.

Exception: Door closers and stops shall not reduce headroom to less than 78 inches (1981 mm).

1003.3.2 Free-standing objects. A free-standing object mounted on a post or pylon shall not overhang that post or pylon more than 4 inches (102 mm) where the lowest point of the leading edge is more than 27 inches (686 mm) and less than 80 inches (2032 mm) above the walking surface. Where a sign or other obstruction is mounted between posts or pylons and the clear distance between the posts or pylons is greater than 12 inches (305 mm), the lowest edge of such sign or obstruction shall be 27 inches (685 mm) maximum or 80 inches (2030 mm) minimum above the finished floor or ground.

Exception: This requirement shall not apply to sloping portions of handrails serving stairs and ramps.

1003.3.3 Horizontal projections. Structural elements, fixtures or furnishings shall not project horizontally from either side more than 4 inches (102 mm) over any walking surface between the heights of 27 inches (686 mm) and 80 inches (2032 mm) above the walking surface.

Exception: Handrails serving stairs and ramps are permitted to protrude 4.5 inches (114 mm) from the wall.

1003.3.4 Clear width. Protruding objects shall not reduce the minimum clear width of accessible routes as required in Section 1104.

1003.5 Elevation change. Where changes in elevation of less than 12 inches (305 mm) exist in the means of egress, sloped surfaces shall be used. Where the slope is greater than one unit vertical in 20 units horizontal (5-percent slope), ramps complying with Section 1010 shall be used. Where the difference in elevation is greater than 12 inches (305 mm), ramps complying with Section 1010 shall be used.

tion is 6 inches (152 mm) or less, the ramp shall be equipped with either handrails or floor finish materials that contrast with adjacent floor finish materials.

Exceptions:

1. A single step with a maximum riser height of 7 inches (178mm) is permitted for buildings with occupancies in Groups F, H, R-2 and R-3 and Groups S and U at exterior doors not required to be accessible by Chapter 11.
2. A stair with a single riser or with two risers and a tread is permitted at locations not required to be accessible by Chapter 11, provided that the risers and treads comply with Section 1009.3, the minimum depth of the tread is 13 inches (330 mm) and at least one hand-rail complying with Section 1012 is provided within 30 inches (762 mm) of the centerline of the normal path of egress travel on the stair.
3. A step is permitted in aisles serving seating that has a difference in elevation less than 12 inches (305 mm) at locations not required to be accessible by Chapter 11, provided that the risers and treads comply with Section 1025.11 and the aisle is provided with a hand-rail complying with Section 1025.13.

Any change in elevation in a corridor serving nonambulatory persons in a Group I-2 occupancy shall be by means of a ramp or sloped walkway.

Accessibility

1104.3 Connected spaces. When a building or portion of a building is required to be accessible, an accessible route shall be provided to each portion of the building, to accessible building entrances connecting accessible pedestrian walkways and the public way.

Exception: In assembly areas with fixed seating required to be accessible, an accessible route shall not be required to serve fixed seating where wheelchair spaces or designated aisle seats required to be on an accessible route are not provided.

Interior Environment

1203.4 Natural ventilation. Natural ventilation of an occupied space shall be through windows, doors, louvers or other openings to the outdoors. The operating mechanism for such openings shall be provided with ready access so that the openings are readily controllable by the building occupants.

1204.1 Equipment and systems. Interior spaces intended for human occupancy shall be provided with active or passive space-heating systems capable of maintaining a minimum indoor temperature of 68°F (20°C) at a point 3 feet (914 mm) above the floor on the design heating day.

Exception: Interior spaces where the primary purpose is not associated with human comfort.

1205.1 General. Every space intended for human occupancy shall be provided with natural light by means of exterior glazed openings in accordance with Section 1205.2 or shall be provided with artificial light in accordance with Section 1205.3. Exterior glazed openings shall open directly onto a public way or onto a yard or court in accordance with Section 1206.

Precedent Study

Gasworks Park, Seattle, WA

Architect: Richard Haag and Associates

Year: 1971-1978



The site was a poisoned layer-cake of industrial waste and resisted becoming a conventional park.

-Richard Haag⁶⁷

Gasworks Park, located on Lake Union just north of downtown Seattle is akin to the former Georgia Pacific site. Both sites were driven by industry for decades until world markets or new technologies displaced these utilities with more efficient and economically successful places. This thirteen-acre site manufactured synthetic gas starting in 1906 (a process that was effectively extinct by the 1960's). Similar to the Georgia Pacific site, it was enlarged when the government locks were constructed. After nearly two years of site research, architect Richard Haag, found that the relics left from the gasification process were the only left in the world and were therefore sacred to the site and the story of the gasification process. He additionally proposed the idea of bio-remediation to treat the toxins left from multi-layered decades of industrial disregard for environmental quality. Haag explains the site as he found it:

No sensuous earth forms, but a dead level wasteland.

No craggy rock outcroppings, but peaks of rusty roofs.

No thickets, but a maze of tubes and pipes.

No sacred forests, but towering totems of iron.

No seductive pools, but pits of tar.

No plants (not even invasive exotics) had been able to secure a root hold in 15 years.

Within these findings lies a theme that was subsequently linked to the proposal of bio-remediation. This concept incorporates microorganisms, fungi, plants, and their enzymes to help recondition the environment to its original state. In this instance, bio-phyto-remediation, consisting of 18 inches of sewage sludge and sawdust, decontaminated the soil and allowed for the growth of field grass and foliage on what is now called "The Earth-mound."

Actual work on the site began in 1972, and was completed in 1975. This site serves to large gatherings, the regular jogger, or a family picnic. It is an asset to the community and to the story of its city. The collective historical and societal value of this park is not only priceless for the community, but is equally valuable as a voice for the story of the industrial era. To-day, this site stands in as the only voice for the past practice of manufacturing synthetic gas.



Precedent Study

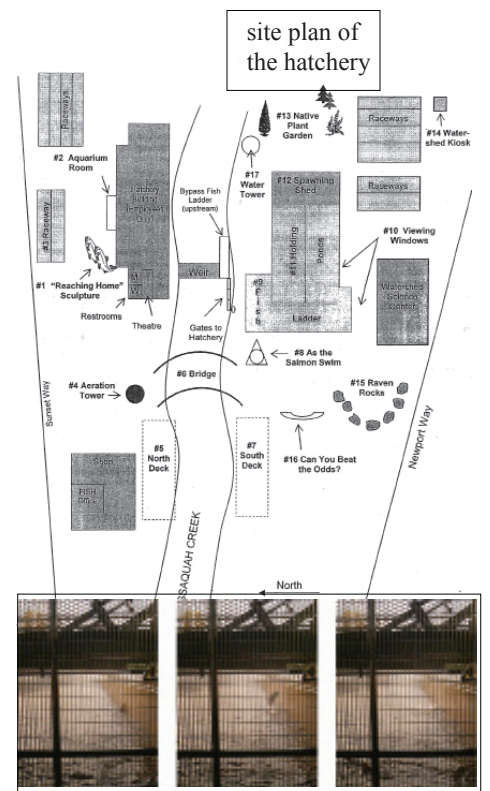
Issaquah Salmon Hatchery, Issaquah, WA
 Architect: Federal Works Administration
 Year: 1937 - present



The original building on the site is hardly recognizable today.

Fish Hatcheries have a unique characteristic that consequently lend themselves to the idea of place and a sense of time, as a particular event happens (annual salmon spawning) the same time of year, every year on the natural calendar. People continually come to see this process. Perhaps this explains why this particular site gets more visits than any other in Washington (300,000 people per year).⁶⁸ It is a celebration we can look forward to year after year, regardless of calendar (mechanical) events.

This specific Salmon Hatchery may not have phenomenal architecture, or even a brilliant monument that attracts people year after year. What people come to see is life, and the continuation of it. Once a city park in the early part of the twentieth century (continuously hosting large community celebrations and picnics), it was not until 1936 that the hatchery was conceived, and incidentally built in 1937. Later, in the 1990s the Department of Fish Wildlife and Ecology announced plans to close the doors due to budget shortcomings. Demonstrating its popularity among community members, the City of Issaquah, The Friends of the Issaquah Salmon Hatchery, and local Indian tribes urged the state to keep the operation open. Thankfully, after re-focusing on education, watershed stewardship, and boosting threatened salmon species, the doors remain open.



Salmon rise from the water in the holding pens.



I recently witnessed the salmon spawning at the Issaquah salmon Hatchery. It was an amazing process that was engaging, informative, and very enjoyable. I crowded around with 20-30 more visitors (in the rain) for a chance to see the salmon peak through the viewing glass on there way up the fish ladder. To see these incredible animals make this epic journey is quite amazing. Once they reach there destination (the holding pen below), they congregate in anticipation for the next step.



Two identical holding pens at the hatchery (left), the salmon viewing windows located on the fish ladder just below the holding pens (upper), and the incubation rooms with salmon row developing within (lower).



Precedent Study

Duisburg-Nord Landscape Park, Germany

Architect: Latz + Partner

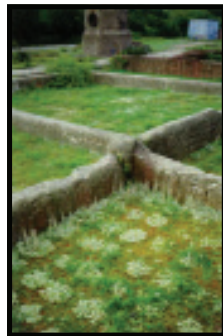
Year: 1990-2002



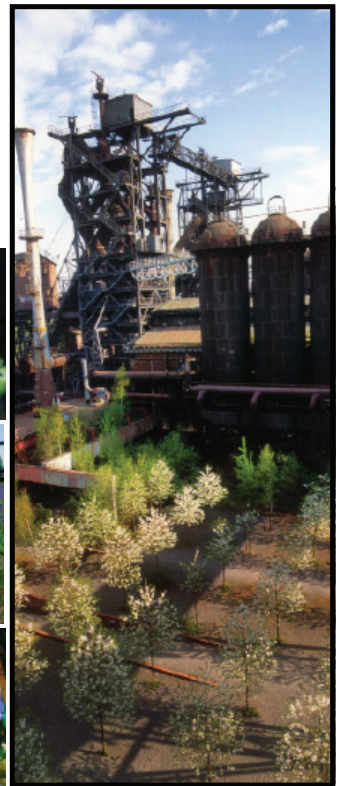
Rather than try to erase the past, Peter Latz recognized that the combination of industry and nature results in an experience rich with memories, associations, and feelings.

Duisburg-Nord Landscape Park is located in Emscher, Germany. The park not only pays respect to Germany's industrial age, but also to the materials, mechanisms, and processes that were features of the era. Within these parameters, the park uses nature to emphasize the artistic value of the existing artifacts. This park attempts to give a narration not only to the past utility of the site, but also to the social and natural futures of the site. Structures, trails, and natural aesthetics bring attention to the role of the senses in experiencing place. The neon light show, displayed on a former incinerator induces genuine feelings of progress - or the movement from the past to the present and far into the future.

The architects intended to create a relationship between the binary pairs of the site: process and product, art and nature. These concepts are inverted, and therefore become residents of the park. "Rather than try to erase the past, which was fiscally irresponsible if not impossible, Peter Latz recognized that the combination of industry and nature results in an experience rich with memories, associations, and feelings."⁷⁰



The site plan has a feeling of organized movement. Images explore the possibility of nature one day taking over this site. Not only is it impossible not to pay homage to the past, but it is equally impossible not to have an imaginative exploration of the future. We imagine the hardness and ruggedness of industrial cycles, coupled with the progression of natural processes beginning to take over, giving us a settling feeling of the future.



Precedent Study

Jewish Museum, Berlin, Germany

Architect: Daniel Libeskind

Year: 2001



We can only learn from an image such as this. We can only ponder on what has happened, but we can also make sure it does not happen again.

This museum is important because it facilitates the story of the Jewish ethnicity and the holocaust without necessarily using installations or artifacts to do so. This building activates the senses to make the feelings, experiences, and stories of their past visible. It is about the experience: the light, textures, orientation, and sound. The history becomes the experience, disorientation leads to desolation, which then captures the viewer in isolation. These tactics are achieved primarily through the architecture. The tunnels, the voids, and the courtyards develop feelings not dissimilar to that of the events of the Holocaust. Unreachable portals of light, unregulated temperatures, distant sounds of the public and obstructed views overwhelm the viewer with emotion and understanding of these tragic events. In any case, "We perceive atmosphere through our emotional sensibility – a form of perception that works incredibly quickly, and which we humans evidently need to help us survive."⁶⁹ Emotional responses can be the result of experiences that are memorable to us personally, while they also help us retain awareness in our understanding and evaluating processes.

The museum for such a place as Berlin should not only be for the citizens of the present, but should be accessible, let's say imaginatively or metaphysically, to citizens of the past and of the future, a place for all citizens, a place to confirm a common heritage. (Jewish Museum 65)





These images seemingly portray the devastating moments of the Holocaust. Creating chaotic moments through emotion, sensibility, and understanding.

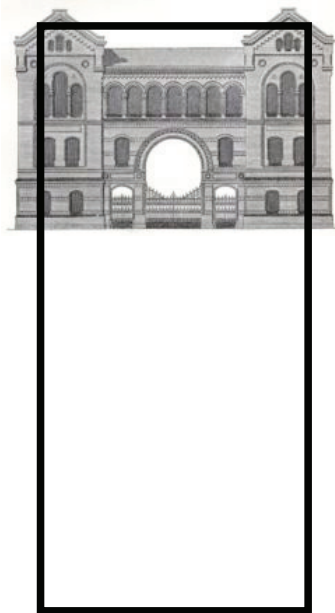


Precedent Study

Linde Strasse Memorial, Berlin Germany

Designer: Zvi Heckler

Year: 1996



Modern Germany history is one of destruction and devastation. Hundreds of German synagogues were partially, if not completely destroyed in the *Kristallnacht*, or Night of Broken Glass.⁷¹ During this night on November 9, 1938, the Nazis brutalized the Jewish community with a pragmatic demolition of personal and communal artifacts that were lost forever. Among these, was the Lindenstrasse Synagogue, which was burned to the ground. These activities, artifacts, and memories of Jewish life were destroyed for eternity.

Today, resurrecting itself from the ruins is this very temporal memorial. Located where the original synagogue stood, the newly formulated rows of concrete pews stand to show the loneliness, absence, and eradication of numerous sites just like this one. Trees and vegetation that overgrew the site were also left, to show the potent nature of this installation. The power lies in the beautiful simplicity of this installation, while leaving the viewer with the power to imagine the original structure and space. Designer Zvi Hecker's states, "Our work is a page of a book telling a 100-year history of a piece of land....We have added nothing to the site that had not been there before."⁷²



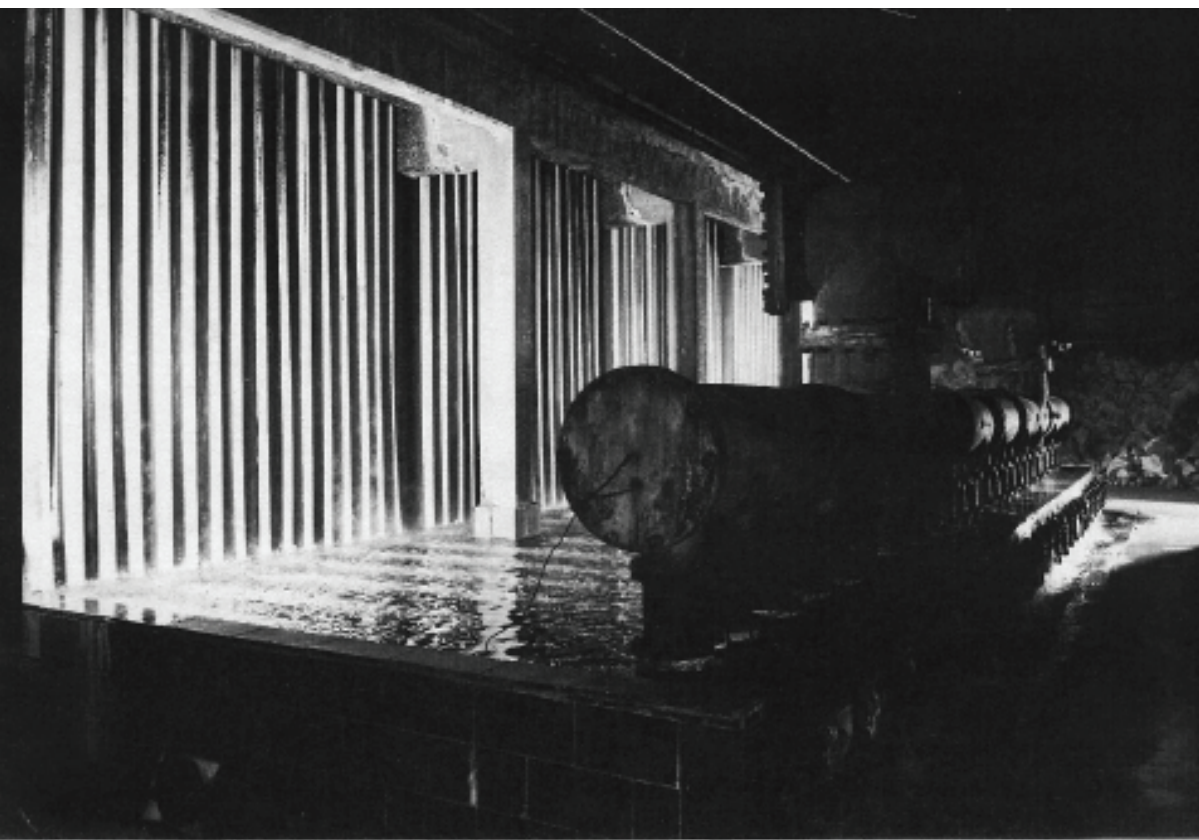
The introduction of simple concrete pews brings thoughts of the former enclosure that once was the roof for members of the synagogue. This installation poetically refreshes and engages in memories of a time that will never be forgotten.



Intentions

It is the objective of this thesis to create and retain memorable and intimate experiences that are directly linked to the past, while being represented through the architecture and site installations. Through the process of re-programming, investigating, and re-interpreting, the solutions will reveal the past utilities through future capacities. These moments will have one foot connected with past essences while also having one foot in future progressions. It is important to know where we are going, but it is also necessary to understand where we have been; for without reference and acknowledgment of the past, we have no direction for the future.

This proposal will be an advocate of rehabilitating the site and its surroundings to benefit the community and to also ensure success of on-site activities. This will also aid in reinforcing the inherent qualities of the people and of the site. Never before has Bellingham seen such an opportunity to evoke such a massive change to the city. This proposal will make Bellingham one of the most dynamic Waterfront towns in the Pacific Northwest by not only helping to save our natural environment, but ensuring the longevity of our people and our place.



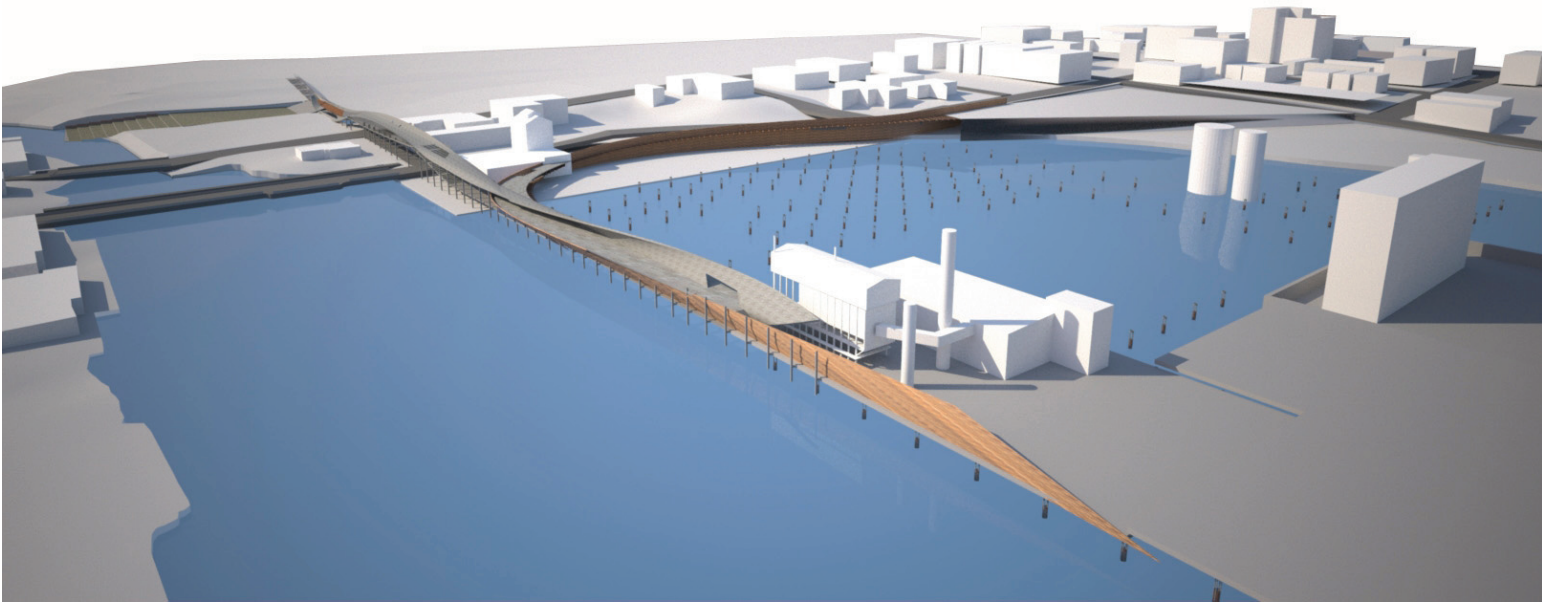
Night view of acid cooler

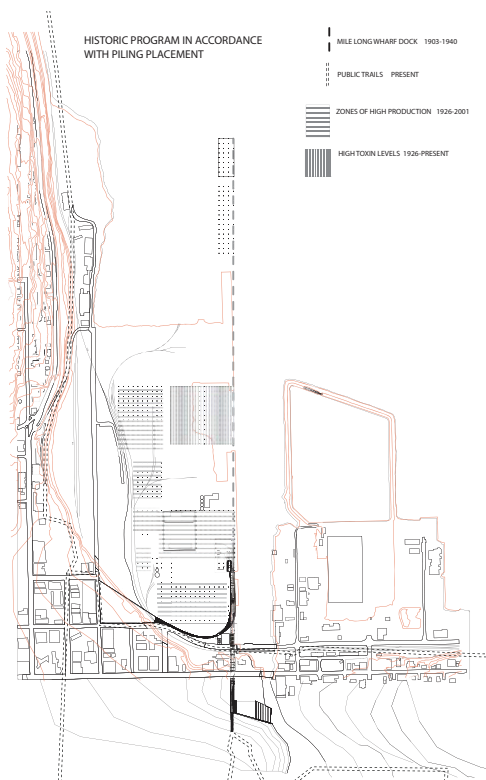
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Sometimes a kind of glory lights up the mind of a man. It happens to nearly everyone. You can feel it growing or preparing like a fuse burning toward dynamite. It is a feeling in the stomach, a delight of the nerves, of the forearms. The skin tastes the air, and every deep-drawn breath is sweet. Its beginning has the pleasure of a great stretching yawn; it flashes in the brain and the whole world glows outside your eyes. A man may have lived all his life in the gray, and the land and trees of him dark and somber. The events, even the important ones, may have trooped by faceless and pale. And then - the glory - so that a cricket song sweetens the ears, the smell of the earth rises chanting to his nose, and dappling light under a tree blesses his eyes. Then a man pours outward, a torrent of him, and yet he is not diminished...

John Steinbeck's *East of Eden*, published in 1952, *East of Eden* was, according to Steinbeck, a "story of his country and the story of himself."

Solution

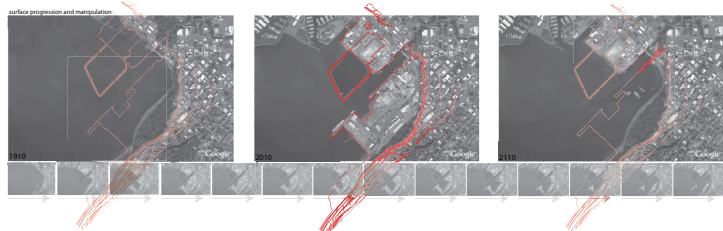


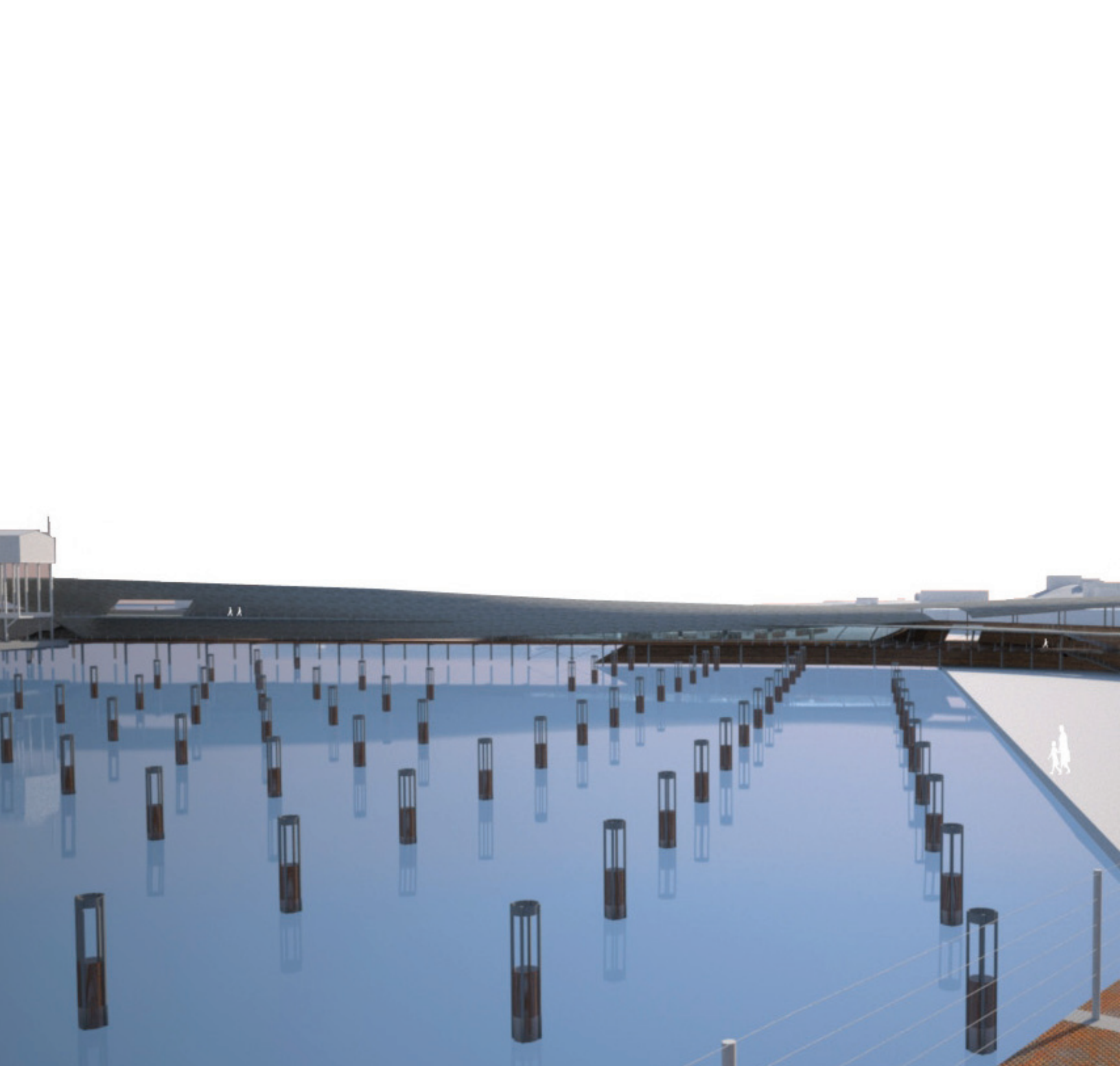


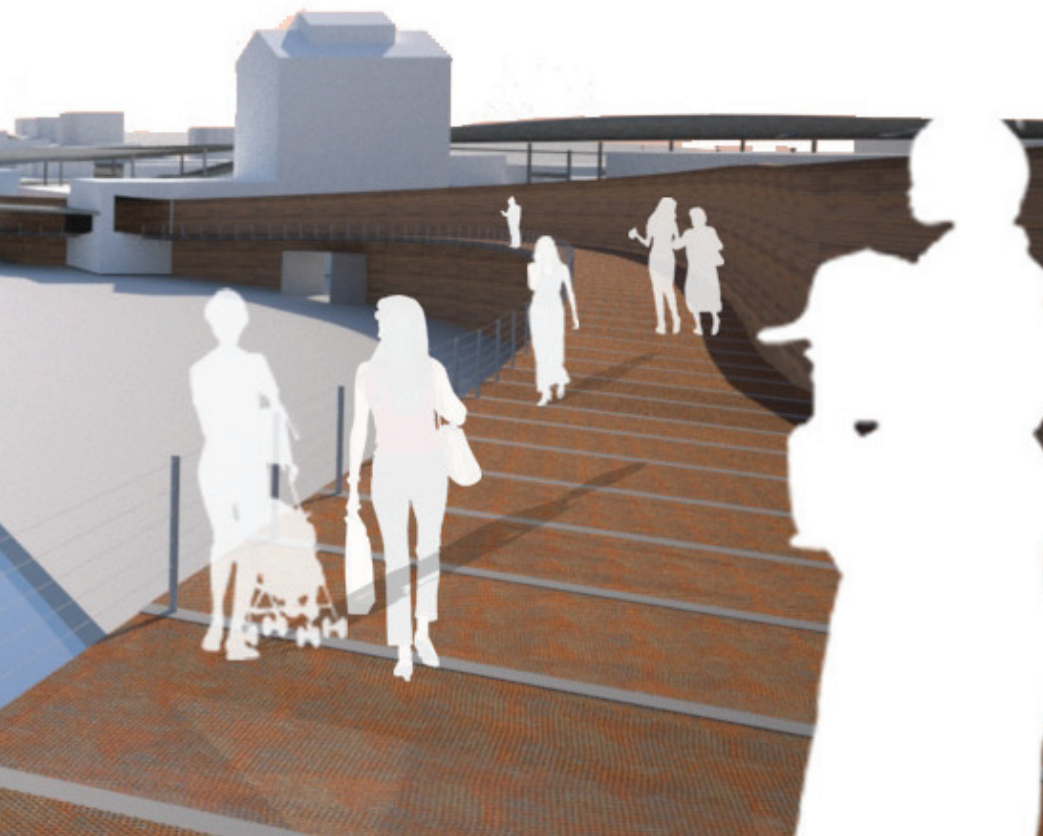
This site has seen many layers imposed upon it while also being spatially manipulated to serve designated needs. This solution was derived from these very same manipulated layers. Understanding this place as one constant surface of variation, utility and repetition within the demands of a manufacturing process. The diagram to the left is the manifestation that outlines the evolution of surface.

To map existing uses, a one mile by one quarter mile grid of pilings spaced every 30 feet was over-layed on the site and then systematically removed to leave the footprint of past systems. This technique was informed by a mile long wharf dock that once existed, former roads and railroad tracks, buildings and areas of manufacturing, the existing cartesian grid, and contaminated areas that resulted from various processes.

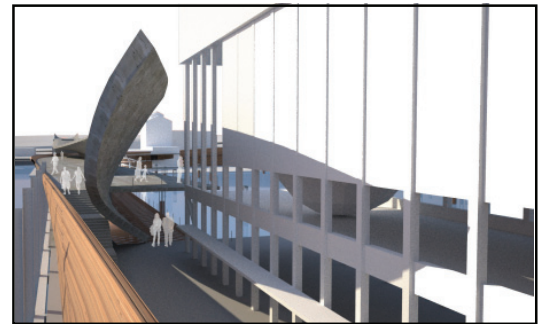
This information, which is an important part of the history, now leaves a footprint to dictate program, placement, and design principles. This process poses questions for the viewer in the form of voids and grids. In addition, a large platform of lush native vegetation inaccessible to the viewer will exist over an area that was highly polluted. This helps in the process of questioning and awareness.

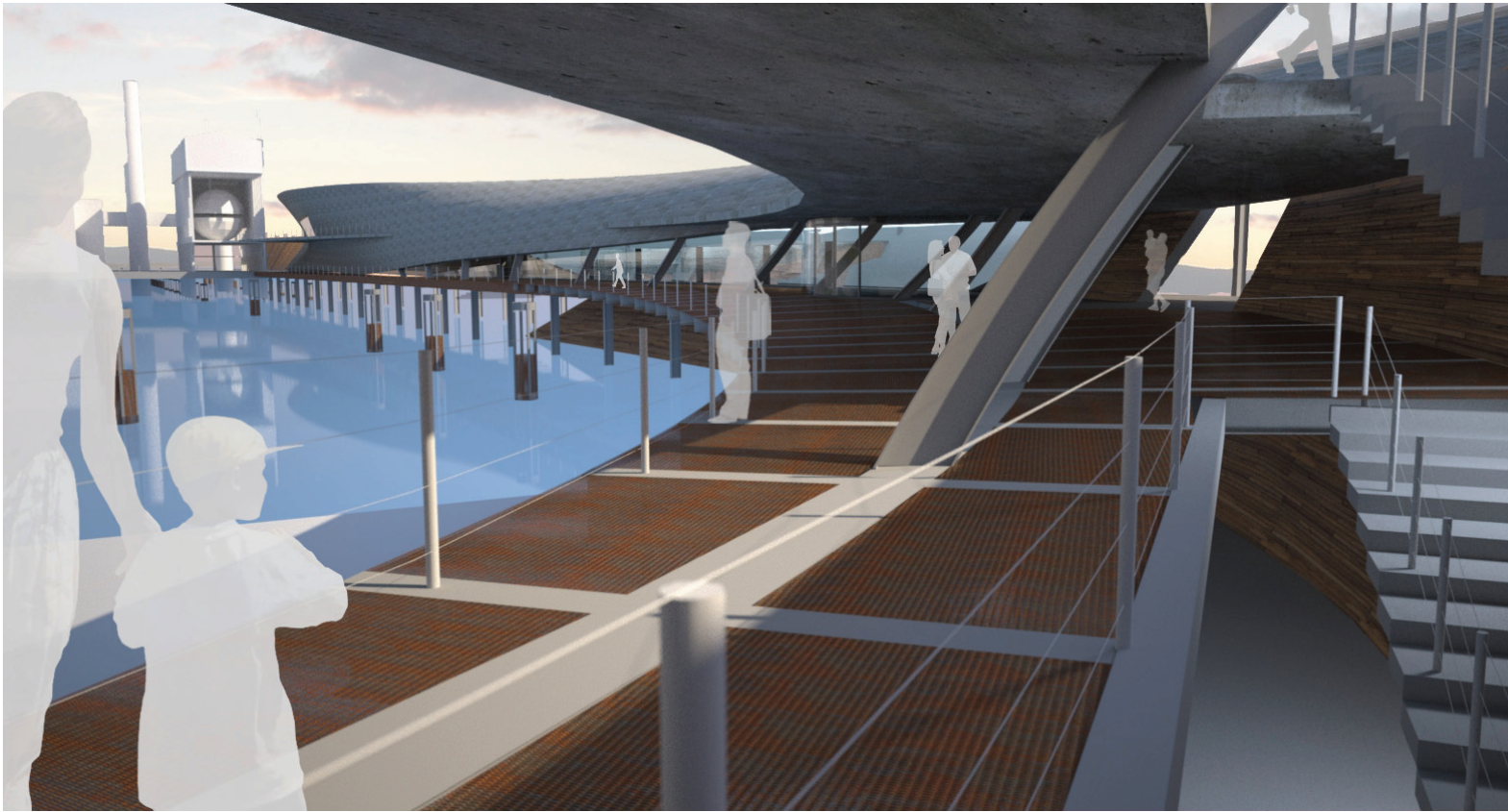


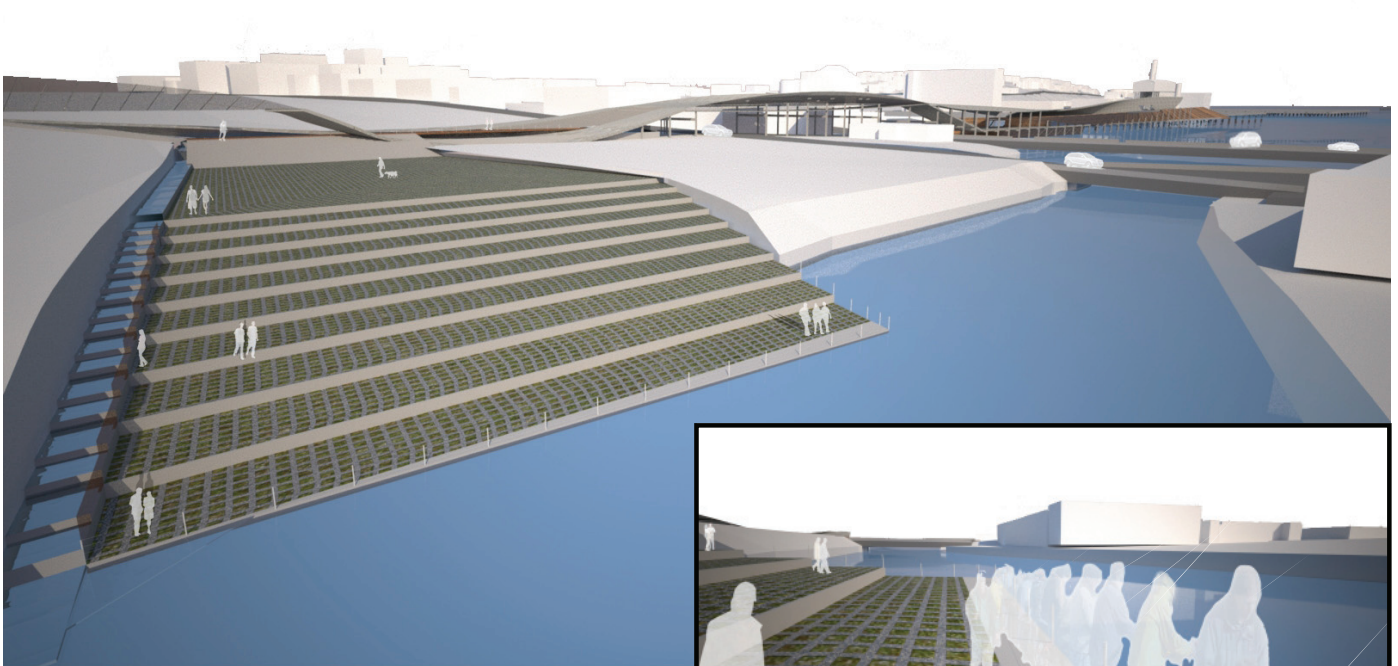




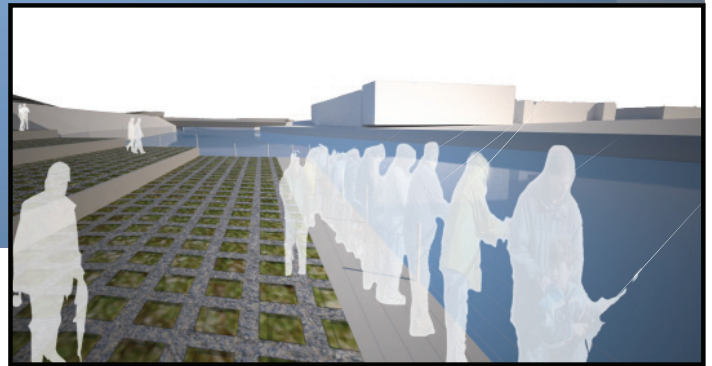
This site has seen many layers imposed upon it while also being spatially manipulated to serve certain needs. This solution was derived from these very same manipulated layers. Understanding this place as one constant surface of variation, utility and repetition within the demands of a manufacturing process. The rendering to the left is the manifestation that outlines the evolution of surface.

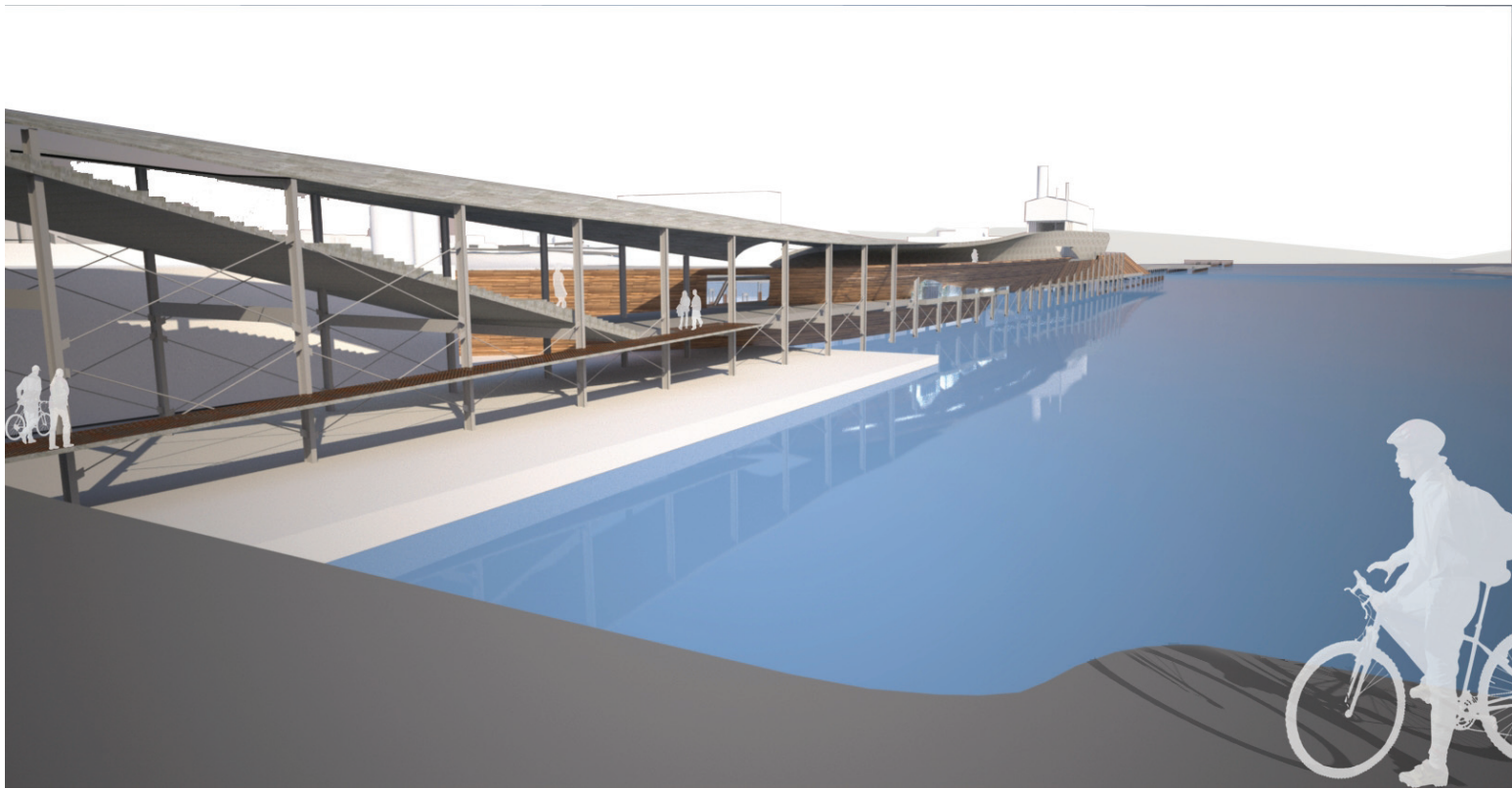


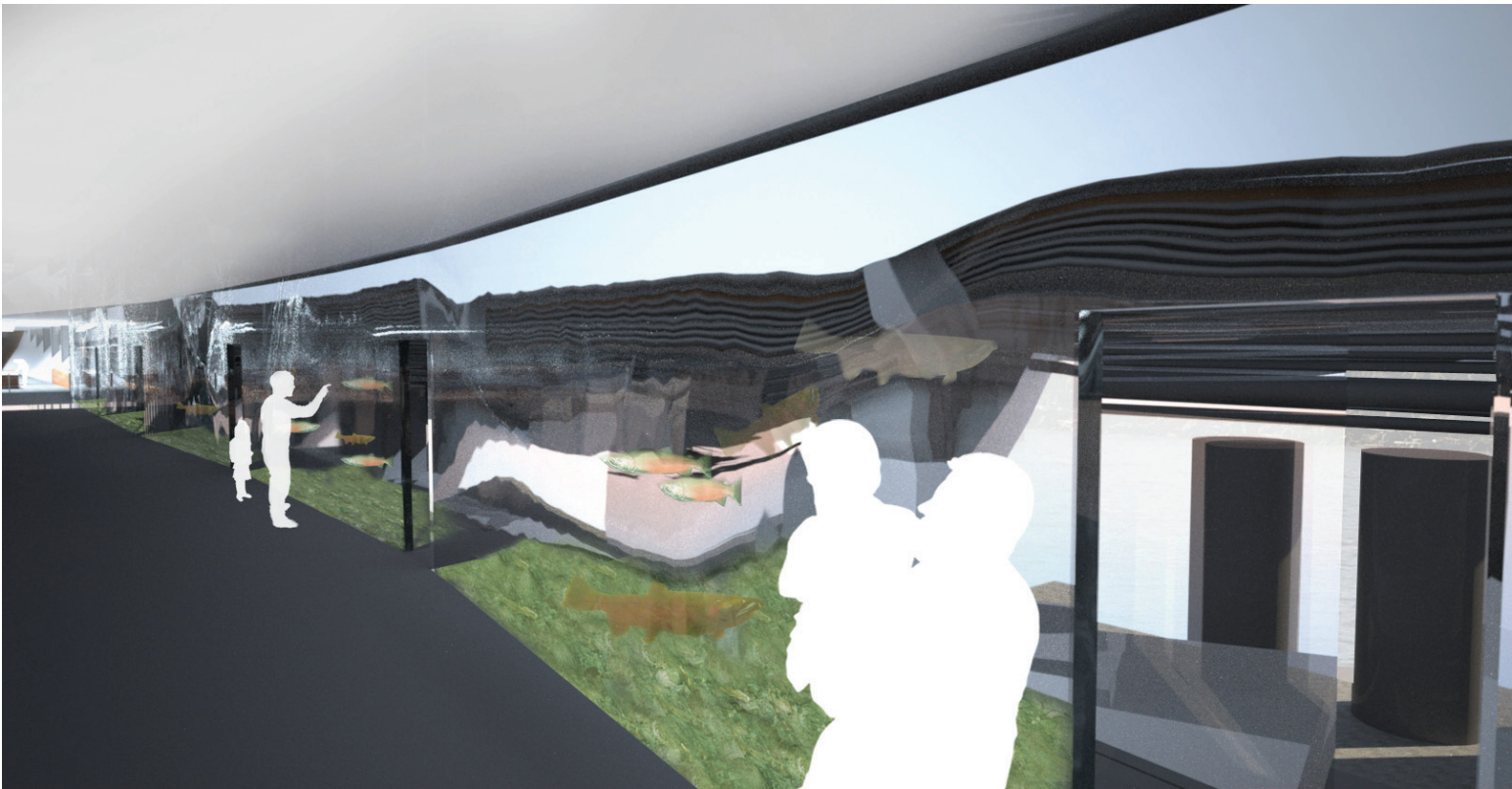


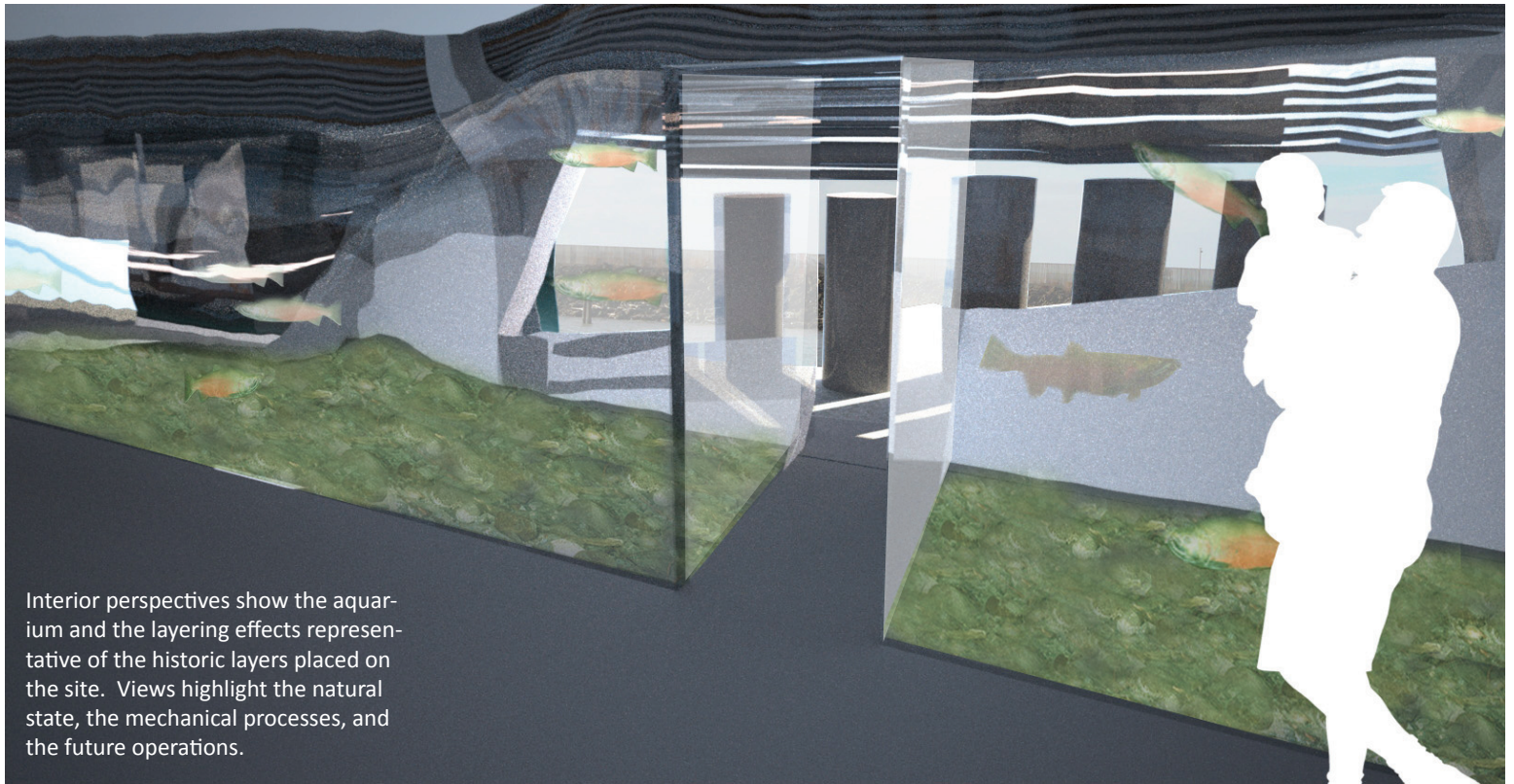


The fish ladder component of the project is largely a public space that helps to enliven an already inactive part of the city. This becomes an area of high involvement in the spawning months of September, October, and November.

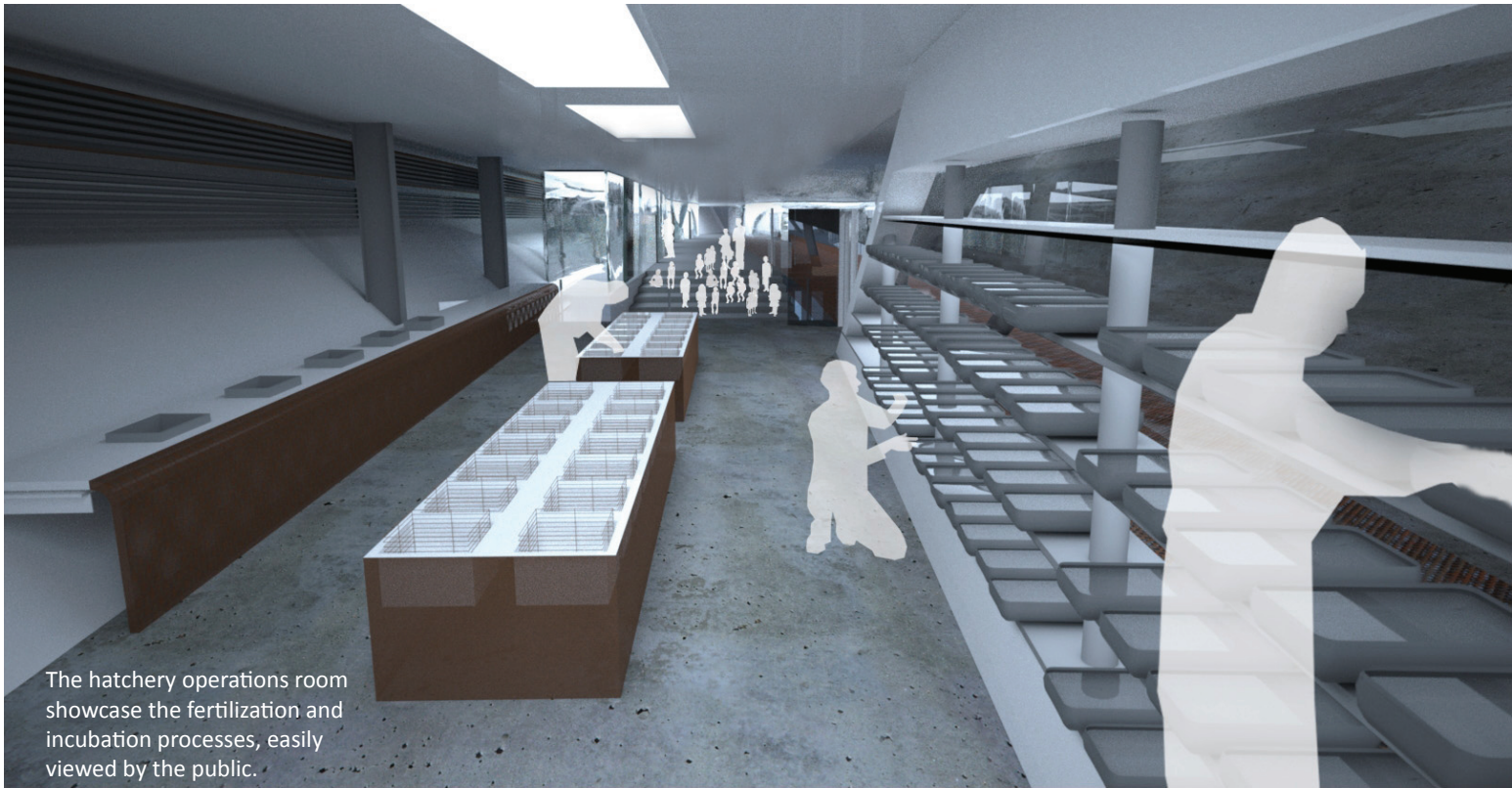








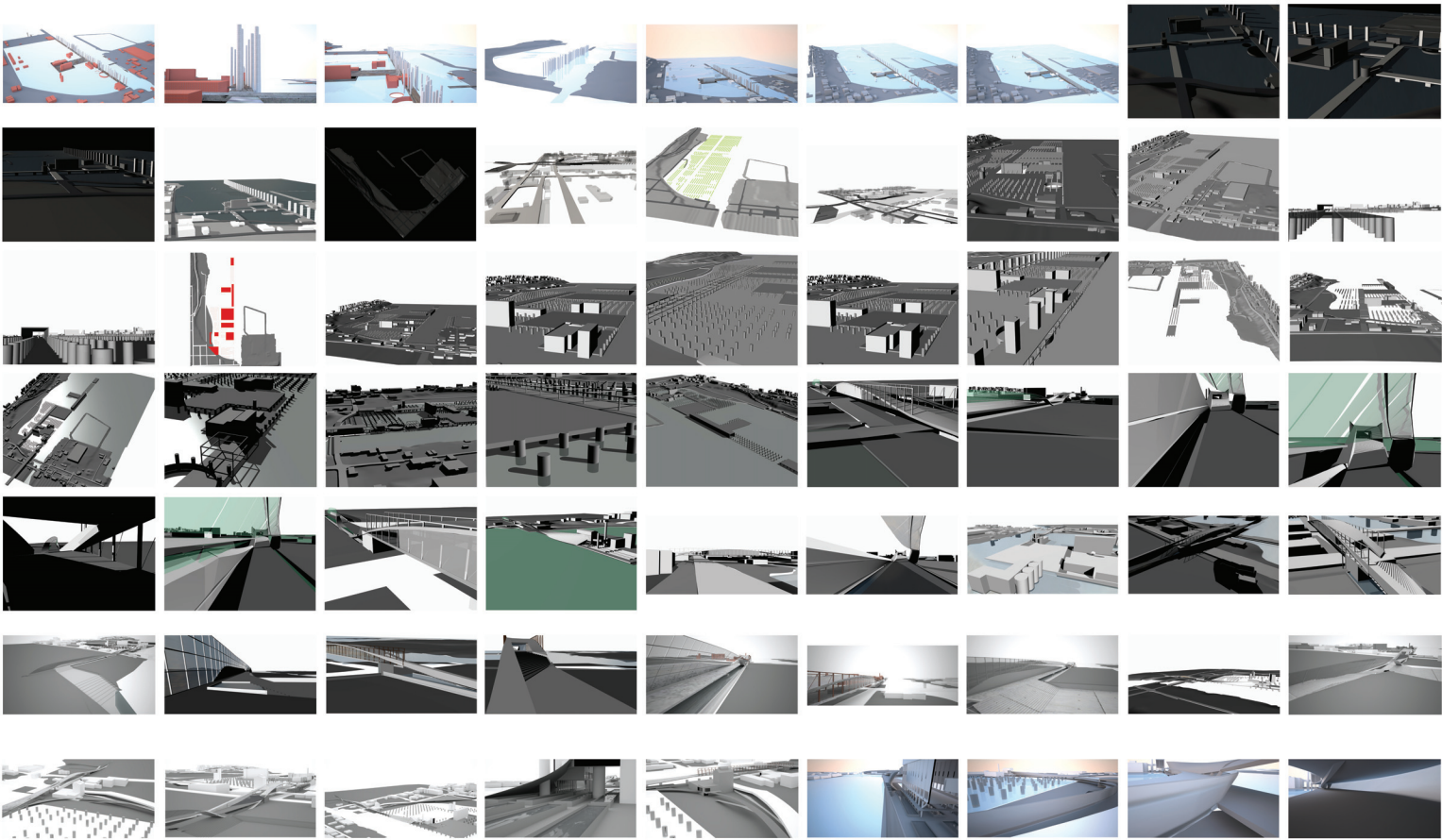
Interior perspectives show the aquarium and the layering effects representative of the historic layers placed on the site. Views highlight the natural state, the mechanical processes, and the future operations.

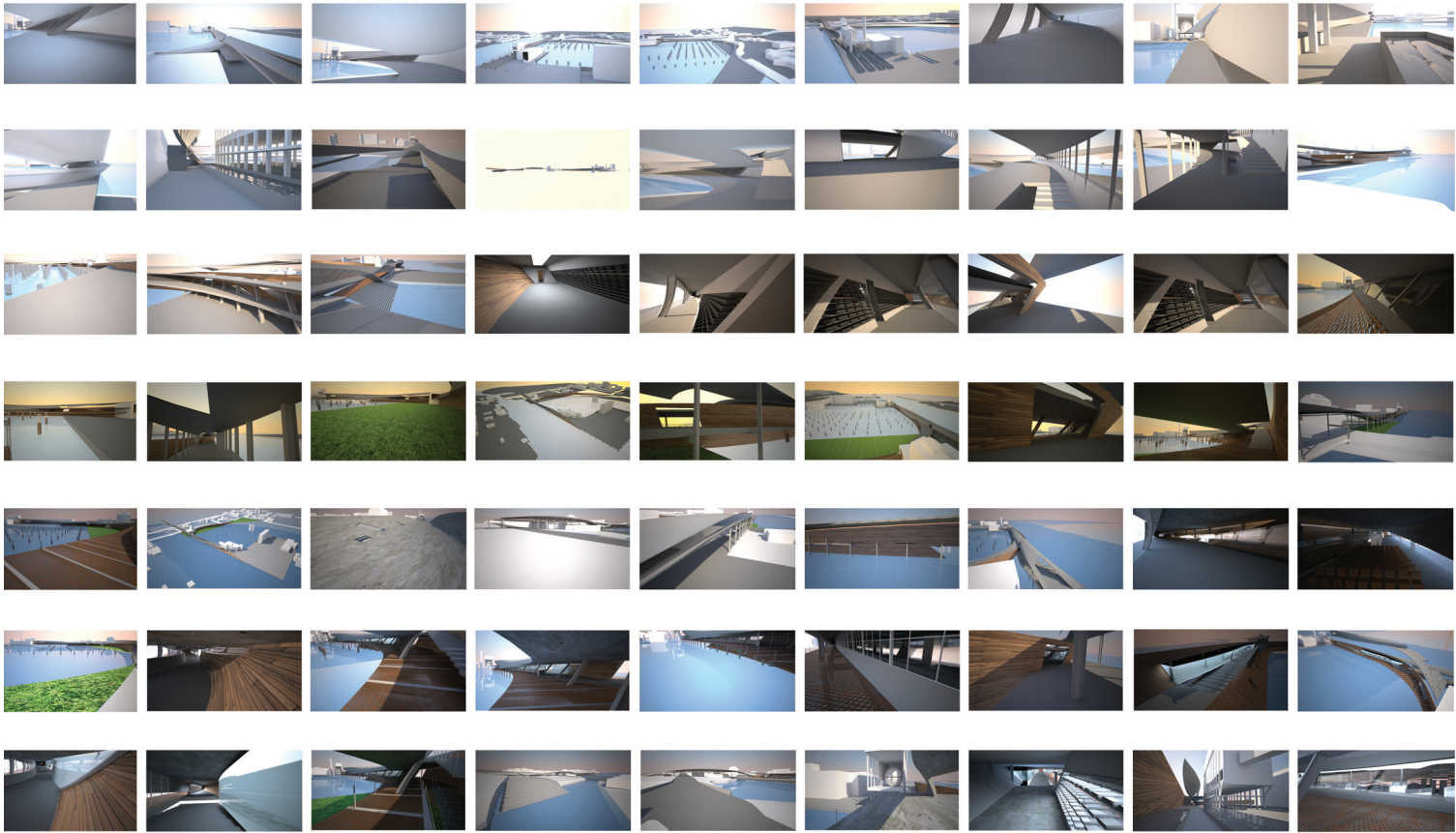


The hatchery operations room showcase the fertilization and incubation processes, easily viewed by the public.

The final solution not only links the site back to the city, but also allows new processes and techniques to be layered upon the site. By re-programming existing buildings, mapping old manufacturing techniques, and imposing a new dialect on the site, the historic operations are memorialized, and new programs are applied. This allows the site to function in a similar manner without causing harm to the ecology, community, and the place itself. It is a continuation of the utility and repetition that has driven the operations for centuries. In essence, the focus is not only placed on the historic capacities, but also on the future utilities.

Community interaction is reinforced through the connections to the core of downtown, existing trail infrastructure, and by programming green space for the needs of the populace. No longer will this site lay dormant to the activities of the city. This location, this place rather, now has a new identity that makes Bellingham one of the most interactive waterfronts in the northwest United States and Canada.





Endnotes

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46 Photo taken by Peter Costanti
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 RIGHT: Photos taken by Timothy Nels Sanford
65 LEFT: www.issaquahhistory.org/sites/images/2004/gibsonhall5.jpg
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66 CENTER: Photo taken by Peter Costanti
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