TOUCH THE WATERFRONT

An exhibit introducing the ecology of Seattle's future waterfront.

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INTRODUCTION TO TERMS

Waterfront Seattle Project: "a multi-year program to rebuild Seattle's waterfront following the removal of the Alaskan Way Viaduct. The Program spans the waterfront from Pioneer Square to Belltown and includes a rebuilt Elliott Bay Seawall, a new surface street providing access to and from downtown, and new parks, paths, and access to Elliott Bay. Waterfront Seattle is led by the City of Seattle's Office of the Waterfront, working closely with civic leaders, stakeholders and the broader Seattle public to create a "Waterfront for All."" (Waterfront Seattle, 2017)

Friends of Waterfront Seattle (Friends): The non-profit partner to the city of Seattle on the Waterfront project. Created by the City of Seattle, Friends' role in the waterfront project is to insure that the park meets its full potential. To accomplish this, the organization "educates the public about the park and its benefits, raise philanthropic funds to build the park, and will partner with the City to steward and program the park long-term". (Friends of Waterfront Seattle, "About")

The Waterfront Space (The Space): The office and showroom for Friends that serves as a public outreach tool and houses up to date plans, models, and renderings of the future park and its progress. In addition to their public hours (12-5pm Wednesday – Sunday), Friends hosts events in The Space throughout the year to introduce the project to visitors and gain support for the park.



Ariel shot of the future waterfront park courtesy of James Corner Field Operations

ABSTRACT

Seattle's downtown waterfront is undergoing a huge transformation. The new vision, dubbed "A Waterfront for All", removes the elevated highway separating downtown Seattle from its waterfront and replaces it with a 26-block long park that will feature green public spaces, connective pathways, a bike path, and enhanced streetscapes. To help the people of Seattle better understand this vision, I developed an interactive exhibit about the park's materiality and ecology that will be featured in the park's information center: The Waterfront Space. With the creation of this exhibit, I seek to introduce the public to the materials, plants, and processes featured in the park in a manner that is accessible and engaging. To create this exhibit, I first conducted an extensive literature review on exhibit design and display. I then reviewed the plans for the park to identify the most relevant elements. Working with the hosts of the information center, I then selected and formulated a series of engaging and interactive activities for the exhibit. Finally, I then constructed the exhibit and installed it in the center for public use. This exhibit creates an opportunity for people to build a connection to the future park by allowing them to physically engage with it before it opens, furthering the park's role as a place for everyone in Seattle even before its construction is complete.

INTRODUCTION

This project aims to address some of the missing pieces in the public engagement strategy used by Friends of Waterfront Seattle to share the Waterfront plan in the project showroom (the space). Currently the space is home to extensive renderings and models of the future park, the displays are form focused and visual or text based. Though these displays are highly informative in reference to what the park will look like upon completion, they fall short in telling the important narrative of how the park will work to create a more sustainable future for the city of Seattle. Additionally, because all of the displays are visual, the space is limited in audience to visitors who can see and read in English, which keeps children, non-English speakers, and people with low vision from being able to engage with the future park.

To address these gaps in the waterfront space, I created an interactive and touchable exhibit for the waterfront space about the sustainability and horticulture in Seattle's future waterfront park with the goal of enhancing the visitor experience to be active, engaging, and accessible. The exhibit is intended to expand the audience of the waterfront space by introducing engaging activities focused on the plants that will propagate the waterfront as well as touch, smell, and sound elements to explain how the park addresses sustainability through green infrastructure, use of recycled materials, and the planting of over 400 trees and native plants (Friends of Waterfront Seattle, 2017).

My idea to create an exhibit for the space came out of a position I have with Friends of Waterfront Seattle as a Space Guide. In this role, one of my responsibilities is to give tours to visitors of the space, explaining the waterfront project, its history, and projected timeline. Through this experience I have been given the opportunity to learn intimately about the waterfront project as well as how visitors experience the project in the waterfront space. I noticed that friends was missing out on an opportunity to engage people with the future park through senses other than their eyes and that there were exciting aspects of the park such as horticulture, art, sustainability, recreation, and retail that were not being shared to the extent they could be. I decided to create an exhibit to address some of these short fallings through the use of creating a more well-rounded visitor experience that paints a holistic vision of the future waterfront.

LITERATURE REVIEW

The waterfront project's tag line "a Waterfront for all" reflects its goal to reconnect the Elliott Bay waterfront to the City of Seattle through the introduction of a public space where people from all over the city, state, and world can come together to enjoy the company of one another and the natural beauty of our region. Throughout the process of reshaping the Waterfront, the city of Seattle has worked to promote themes of democracy and responsiveness in the project plan with the aim of creating an inclusive and successful public space. This literature review will look at how public space theory around democracy and responsiveness shape the realization of the waterfront project and the role an interactive exhibit in the project's public showroom holds in furthering the goal of creating a waterfront for all. It then delves into best practices for interactive exhibit design.

Public Space Theory and Seattle's Waterfront

In the book Public Space, author Stephen Carr presents a review of the role of public space in American society, as well as "guidance for improving the design, management, and use of public places" (Carr, xi). He identifies the essential values to consider when creating an effective public space to be: responsiveness, democracy, and meaning. I argue that the City of Seattle has attempted to incorporate these values in the process of reshaping its waterfront and aimed to carry these values through my exhibit design.

Meaning in Public Space

A place is considered meaningful as people develop connections to it. When a community develops a shared experience of a place and connects individual memories to it is considered meaningful. (Carr, 20) The notion of meaningful place can be compared to the term sacred place, which landscape architect, social scientist and author Randy Hester defines in his influential study of Manteo North Carolina as places that "have become so essential to the lives of the residents through use or symbolism that the community collectively identifies with the places." (Hester, 15). Though one could argue that the waterfront project intends to transform Seattle's central waterfront into a sacred or meaningful place for everyone in the city, its meaningfulness is dependent on the connections individuals make with it over time. Because connections to the new waterfront will not begin to form until the opening of the park in 2022 (Office of the Waterfront), the following section will focus on the democracy and responsiveness seen in the current status and previous progress made in actualizing the waterfront project.

Responsiveness in Public Space

Creating a responsive space entails designing and managing to serve the needs of the users. Though the needs of users can be varied, "the primary needs that people seek to satisfy in public space are those for comfort, relaxation, active and passive engagement, and discovery" (Carr, 19) A common interpretation of responsiveness in public space is the introduction of movable tables and chairs as inspired by William Whyte's research of the use of public space in New York City. In his observations, Whyte identifies how secured seating in a public space severely limits the use of place, and that there is a significant benefit in allowing for flexibility through movable amenities in public spaces (Whyte). By allowing for the user to manipulate the space for their needs it can be used for varied purposes throughout the day, in turn opening the space to a larger number of people. In response to this work, movable tables and chairs have been introduced to public spaces across the country.



Movable amenities in Occidental Park, a popular public park in Pioneer Square Seattle. *(source http:// gridironcondos.com/neighborhood/)*

Movable amenities in Westlake Park, a popular public in downtown Seattle. *(source https://www.seattle.gov/ parks/find/parks/westlake-park)*

In the waterfront project, public spaces are designed with the concept of responsiveness in mind. Pier 62/63 is a great example of this as it creates opportunity for various events throughout the year. Pier 62/63 cantilevers over Elliott Bay next to the Seattle aquarium and is currently under construction to be a flexible open space integrated into the rest of Waterfront Park. Dubbed "the peoples pier" pier 62/63's design is intentionally flexible, and features built in lighting and utilities in order to allow for people to use in a multitude of ways throughout the seasons (Office of the Waterfront). Though responsiveness can be achieved by means outside of movable furniture, the catalyst of movable amenities can be used to understand responsiveness because it highlights the user's ability to influence place.



Rendering of Pier 62/63 as programed for soccer games. (source James Corner Field Operations)



Rendering of Pier 62/63 as programed for a concert. (source James Corner Field Operations)

Democracy in Public Space

Similar to responsive aspects of public places, democracy in place considers the flexibility of spaces to be formed by its users, but rather than through design; democracy is achieved through accessibility and protection of rights in a public space. A key democratic feature of public space is that it is communally owned, one can put their blanket down in the grass of a public park and lay "temporary claim and ownership" (Carr, 20) of that space. Successful public space reflects communal ownership by protecting the rights of individuals to use the space freely (with the stipulation that the rights of others are not affected) and in turn offering all users "a sense of power and control." (Carr, p.20) As these spaces are available to all and create an opportunity for people to cross paths that normally wouldn't, they hold a valuable role in promoting social connections. "In public space, people can learn to live together" (Carr, p.20)

The democratic status of the waterfront project has been central to the formation of the project since its inception. Initially through the democratic process, since 2011 when the Seattle city council created the Central Waterfront Committee to guide the progress of the waterfront project, there have been "Over 400 public meetings, reaching over 15,000 people, generating more than 10,000 comments that were considered in creating the design. Four large design-focused events drew an average attendance of 900 people each. [And] surveys soliciting community input were conducted in 14 different neighborhoods across the city." (Friends of Waterfront Seattle) In addition to public outreach and comment periods, the city of Seattle has voted on the waterfront three times since November 2012 (Friends of Waterfront Seattle) reinforcing its position as a publicly agreed upon and funded project. Today, public outreach continues with "open house meetings, neighborhood forums, and informational displays at fairs, festivals, and other community events" (Friends of Waterfront Seattle) attempting to reach people around the city for input on how to create a public space for all. In addition to going out into the community, the city of Seattle partnered with a non-profit organization Friends of Waterfront Seattle (Friends) to create an information center for the project. The Waterfront Space (the waterfront space) operated by Friends serves as the public showroom for the project and holds up to date plans, models, and renderings for the public to engage with Wednesday through Sunday from Noon to 5 pm. Reinforcing the project's goal of creating a truly shared public space for Seattle by making its progress accessible to anyone who is interested.

The roles of responsiveness and democracy are key in the creation of a successful waterfront. And though the City of Seattle and Friends of Waterfront Seattle are working to address both aspects of public space, there are always more ways for both notions to be reflected in the process of creation. As central features of the waterfront project, I am aimed to incorporate responsiveness and democracy into the waterfront outreach tool through the introduction of an interactive exhibit to the waterfront space. This exhibit mirror's the flexibility and accessibility of the larger project on a smaller scale in addition to providing and alternative educational tool to connect users to the future park.

Role of Interactive Exhibit in creating a Waterfront for All

Interactive exhibit design allowed me to create an outreach tool that reflects the concepts of shared ownership and flexibility of the waterfront project because it highlights the role of the user in the educational process. By focusing the exhibit experience on the agency of the user I am aimed to reinforce the values of responsiveness, democracy, and meaning from public space theory seen in the larger waterfront project.

Interactive exhibits are defined by their reciprocity, a user "acts on the exhibit and the exhibit reacts in some way" (Allen & Gutwill, 199). Many museums have adopted interactive design under the assumption that by manipulating interactive exhibits the visitor will learn. This concept is rooted in philosophies of experiential education and constructivism which both "hold that people learn by building their own understandings based on experience, and education systems should offer experience to support learning" (Allen & Gutwill, 200). In many cases the primary role of an exhibit is to teach a concept or introduce an idea, interactive components can contribute to this process as they have been proven to help to make information engaging, understandable, and memorable. (Allen & Gutwill, 200). Though my exhibit works to educate the public about the ecology of the future waterfront park, I was more interested in the concept of connecting people to the waterfront project through the experience of interacting with the exhibit. Research has shown that an interactive exhibit can aid in fostering this connection due to its memorable nature and ability to promote a feeling of discovery in addition to a broader concept of emotional connection.

Off the jump, we see the concept of responsiveness in interactive exhibits. Even if an exhibit has the most rudimentary interactive element, pressing a button, lifting a flap, or opening a drawer it still displays a reaction to the user. Similar to how responsiveness of public space allows for choice, interactivity in exhibits "allows visitors to determine what the exhibit presents. For example, many interactive exhibits allow visitors to determine the order of presented information and whether they want to obtain more information concerning a specific area of interest" (Haywood & Cairns, 2). An interactive exhibit about the waterfront helps to instill the concept of responsiveness in the future park by setting a precedent of choice and flexibility through its outreach.

In considering democracy and interactive exhibits the connection is not as blaring, though it is still there. A key aspect of democracy in public space is a shared experience and sense of shared ownership. Similar to this concept of shared experience in a truly public space, an effective interactive design promotes a shared learning experience. "vom Lehn et al [1999] found that the learning experience of an individual was also determined by collaboration with others. For example, adults may point out features to children, and visitors may observe each other interacting with exhibits. This suggests that any learning occurring by means of interactive exhibits is embedded in the social context." (Haywood & Cairns p.3). By sparking social interaction around a common theme, interactive exhibits have the ability to mimic a future social connection to be seen

in the shared public space on the future waterfront. The connection that they build to the waterfront in this exhibit could also support the public space concept of meaning allowing users to create a memory that relates to the park before its built.

Methods of Effective Exhibit Design

In creating an effective interactive exhibit, key components to consider include; careful consideration of target audience, a clear understanding of intended effect, cultivating visitor emotion, and realistic planning for maintenance. Careful consideration of target audience touches on the notion that in order to best share a message, you need to be aware of your viewer. This could mean using appropriate language, providing alternatives to text, and being aware of scale and legibility. This is a concept well supported in research by Lesley Lagna. Where she points out that tactile aspects are key to creating accessibility for people with low vision, but that scale, labeling, and maps are important to keep in mind for conveying a message effectively. (Lagna et al., 2013) This shaped my exhibit design by encouraging me to prioritized touchable materials and audio explanations.

Most of the exhibit design documents I read mentioned the concept of creating an experience that is both intellectually and physically stimulating. This is often accomplished through storytelling and relaying emotions. (Kennedy, 1997) (Bitgood, 1991) (Bannon, Ciolfi, 2002) (Kojiro, 2013) Interactive and hands-on exhibits have the unique ability to tap into the senses through touch, sound, and smell in addition to sight in order to create an emotional connection that is memorable and effective. This is a point Bannon and Ciolfi explain in their discussion of using drawers in museum exhibits to allow visitors "a real sense of discovery and excitement" (Bannon, Ciolfi, 2013) when they pull drawers out to uncover information. I plan to incorporate this concept in my exhibit design by working off of an established method in the waterfront space of creating a narrative in each display, adding touchable materials, sounds, and smell to both enhance the narrative and provide alternative means to absorb it. By creating a responsive interactive exhibit, I am aiming to illicit feelings of discovery and excitement that make information both personal and memorable.

Another important reality of exhibit design is maintenance. Anything that is public is going to need to be monitored and cared for, especially things that are being touched. I considered maintenance while designing the exhibit and will be performing simple and semi- regular maintenance upon construction. In addition to the physical integrity of the exhibit I will be monitoring the exhibit and how it is used to inform alterations as necessary. Jeff Kennedy stresses the importance of evaluation of hand-on exhibits in the article saying that "evaluate[ing] visitor interaction with the finished exhibit. Mak[ing] modification if needed. Apply[ing] results of your evaluation to your next project" (Kennedy, 1997) are crucial steps in exhibit design.

METHODOLOGY

The research portion of my methodology gave me a frame work for my exhibit design. I knew I wanted to have an activity that reflected responsiveness, democracy, and meaning. And I knew that it needed to be something accessible, accurate, easy to maintain and adjust, and incorporate an element of discovery. Once I had these guidelines in mind, I began to delve into the plans of the future park to form the content of my exhibit. I decided to focus on the ecology of the park because it was an element of the design that was not already explicitly featured in the Waterfront Space but is crucial to how it feels to be in that park.

With the research building, I began the design process of my exhibit with accumulating inspiration. Lucky for me, my parents live in Washington D.C. the home of many incredible (and free!) Smithsonian museums such as the Building Museum, Renwick gallery, Air and Space Museum, Natural History Museum, and National Museum of African American History and Culture which I visited over winter break with the intention of identifying interactive elements that I could pull from for my design. After reading about exhibits in my research it was helpful to engage with some in real time. I coupled this search for inspiration in the museums with research on Pinterest, an online platform for people to share design that had a wealth of images of exhibits across the globe.

I then started the drafting period. This lengthy design process consisted of mapping out the content for the display, mocking up potential activities for the exhibit and budgets, sharing them with Friends of Waterfront Seattle, getting feedback, and creating new drafts for more review until we decided on a direction we were happy with. Throughout this process, I carefully explored seven different activity options until I nailed down one that I thought would be most engaging, impactful, and feasible.

With designs decided on I moved to University of Washington's CoMotion makers space, an amazing resource on campus that gives students access to a series of design tools such as laser cutters, 3D printers, and wood shop, and a bunch of other gizmos I did not get a chance to try. I used these tools to fabricate the activity for the exhibit to be implemented in the Waterfront Space by the end of the school year.

In addition to the activity, I created a series of informational documents that expand on the various ways the waterfront project works to support a healthy ecosystem on Seattle's urban shoreline. I also partnered with a co-worker who was working on a project to integrate Lushotseed language into the waterfront space. Lushotseed is a native language to this region that is important to the history of Seattle. His activity shares audio files of the Lushotseed names of the native plant that will be in the future park and dove tails with my plant exhibit by adding audio and connecting the future waterfront with it's history.

EXHIBIT BROKEN DOWN

The activity I landed on to be the central piece of the exhibit is a "build your own waterfront planter" activity. The activity consists of a simple wooden planter box and six cut-out slides of plants and pollinators that fit into the planter box. Users are invited to organize the series of cut-outs in the planter box to create their own waterfront park planter. The goal of this activity is to introduce people to some of the plants that will be in the future park and the roles they will hold in creating a thriving ecosystem on Seattle's urban shoreline.



To build out this activity, I combed through the planting plans for the park and pulled out heavily recurring plants. Once I decided on 5 plants and one pollinator slide I made digital files of them to be laser cut out of paper:



I panted the laser cuts and sealed them between two pieces of Plexiglas. I also did research on the different plants and came up with information to include on the cut outs so that users can learn about the plants as they play with the activity. This information was reviewed by the landscape architecture firm that created the planting plan Land Morphology before being printed on stickers that adhere to the cut outs and can be modified as needed.



CONNECTING THE ACTIVITY TO RESEARCH

The cut-outs are paper sandwiched between two pieces of Plexiglas which makes them really easy to be modified. All one has to do to change the contents of the activity is unscrew the Plexiglas and replace the paper cut-outs or replace the sticker from the surface of the Plexiglas. It is also very easy to create more cut-out slides or get rid of some if they are taken out of the plan. This flexibility was very intentional because I learned in my research that maintenance and monitoring of interactive exhibits is key to insuring a long lifespan.

This was not the only way my research guided this activity. I also identified accuracy, discovery, and accessibility as key principles to creating an effective interactive exhibit. To accomplish accuracy, this activity focuses on real plants that will be in the future park, each plant is pulled directly from the planting plan and aims at being representative of the planting plan by narrowing in on plants that reoccur frequently in the plan. It aims at addressing accessibility by being digestible for a variety of users. And incorporates discovery through the information at the base of each slide that is uncovered as the user moves the slides around in the planter box.

The plant activity also reflects the principles of effective public space that I wanted to

show through in my exhibit design. This was important to me because my goal was to make sure that the exhibit supported the success of the waterfront project by mirroring some of the things we want for our future waterfront. The principles I focused on were responsiveness, meaning, and democracy.

Responsiveness is the idea that public space should respond to the needs of the users however varied they may be. In the context of a public park, responsiveness can be shown through movable tables and chairs or opportunity for a variety of uses. Manipulatable aspects of space that gives people agency over the location make it responsive and inviting. The plant activity is centered on this idea of responsiveness because the user has control over it. One can move the slide in any order they chose, allowing it to respond to their needs and preferences.

As they move the plant slides around the planter box they are engaging with the idea of democracy. In the context of public space, democracy is the idea that public spaces are communally owned. Anyone can come to a park and spend time there, which makes it a unique place in a city. With no barrier to entry, public parks are meant to be a place where people from across the city can interact. They plant activity which is held in a public space (the waterfront space) is meant to be a micro version of the interaction we see in public spaces. Each time someone plays with the planter box they are interacting with the person who touched it before them, and the person who will reorganize it after them.

In addition to interacting with the people who play with the activity, users will also be interacting with the plants that will propagate the waterfront in 2022 and building a connection to the park before its built. This connection makes the activity an outreach tool that works toward creating meaning for the future waterfront park. Meaning in public space is accomplished when people attach memory and value to a place. My idea is that when exhibit users go down to the waterfront when it opens, they might recognize some of the plants they learned about in the exhibit four years ago. Their connection to the future waterfront will have already been sparked by a short experience in the waterfront space, and they will have be eager to build on that meaning as they spend time in the park.

ELEMENTS OF THE EXHIBIT INFORMATION

To accompany the activity, I created a series of informational elements for the exhibit that build on the plants people are engaging with. The first is a large information board that is affixed to the wall above the activity. The goal of this board is to give an overview of how the future park address sustainability, it is accompanied by a sustainability brochure that goes more into depth about the concepts addressed on the board.



I also created a pamphlet of "plant profiles" that go more in depth about the specific plant profiles of the different sections of the future waterfront.



ELEMENTS OF THE EXHIBIT TOUCH AND SMELL

Live plants in the exhibit bring an element of touch and smell to the experience. The plants that are incorporated in the exhibit are not from the planting plan because I wanted to have plants that would do well indoors. Instead they are indoor plants that are reminiscent of plants that will be in the park, and still achieve the effect of sharing some of the textures and scents that one can expect for our future waterfront.



AUDIO

Audio is incorporated into the exhibit through a Lushootseed language sound activity. Lushootseed is the native language to this region, that most people in this area do not have a lot of familiarity with. As a way to help bring out pre-industrial history into our future waterfront, a co-worker has been working on a partner project that shares audio files of Lushootseed plant names for the native plants that will be in the waterfront.





NEXT STEPS

Setting up an exhibit is not the end of it! I learned from my research that any exhibit, especially interactive exhibits require monitoring and maintenance. The Waterfront Space staff takes counts on how many people visit the space, whether or not they interact with the augmented reality application that is displayed on iPads around the room, and what kind of questions they ask. I plan to add a place in these records for staff to identify if and how people interact with my exhibit with hopes of understanding how it is used and will take this data as well as their feedback into account in updating it. Finally, in order to ensure a healthy lifespan on my project, I will accompany the exhibit with a maintenance plan for staff to use for regular maintenance and in the event of significant damage.

REFLECTION

In creating this exhibit, I have learned about the amount of effort, time and thought behind any outreach material, and the gratification it feels to complete something you are proud of.

Something I didn't completely understand before I did this project was the sheer number of drafts that go into a product. I went through multiple iterations of various ideas until I landed on something I was happy with. And even then, the concept changed based off of budget, materials available, and time. An example of this was my choice to use Plexiglas to hold paper cut-outs together rather than just cutting the plant directly out of the Plexiglas. Though this may have led to a more striking visual component, it would also make for a very dangerous activity with pokey blades of plastic "grass" extending in multiple directions. Instead I decided to seal paper between Plexiglas with glue, but when I tried this it left sticky glue marks that hindered the clean look of new plastic. I grabbed an Ikea drill from my tool shed and started experimenting with making holes in the Plexiglas to screw together. This ended up being a key design element of my exhibit because it enhanced the flexibility of the activity by making it easy to disassemble and reassemble.

In addition to making sure people don't poke heir eye out on your creation, public outreach requires careful thought. In making the outreach material for my exhibit, I learned about the intricate balance of sharing enough information to make things relevant to visitors, but not too much that they lose interest or get lost in the details. Through toeing that line I aimed to create an engaging and informative exhibit that connects users to the waterfront project. It is my hope that through the introduction of truly interactive outreach tools, I was be able to help public space theories of responsiveness and democracy permeate the process of creating a new waterfront for Seattle down to the per-construction outreach.



Exhibit draft

20

Cut out Text

26

Budget

27

Waterfront Exhibit Design Draft 1 January 9th, 2018 Zoe Frumin







The Marbles are meant to represent water. Users can drop the marbles on the dark blue ramp and watch them navigate a series of terraces and wooden pegs much like a pinball machine or a mini golf course demonstrating how water moves through green storm water infra-structre in the future park. Drop Marble Here

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PLANT CUT OUT ORGANIZER

Organize the cut outs to see different combinations of plants for a planter. Each cut out could talk about the plant species and if or how it contributes to bioretnention.

PIECES

CONTAINER

-A wooden contraption with slits in, that wood lazer cut pieces could slide in and out of

CAREX

- A grass like plant that comes up throughout the planting guide. Is often used for bioretention

CAMASSIA

-A PNW native plant that is also throughout the planting guide.

ASTER

- A tall fall blooming plant that attracts butterflies and could be used to discuss habitat on the waterfront.







CUT OUT TEXT

The plants on the waterfront were chosen carefully to support a healthy ecosystem. In addition to creating a colorful waterfront for people to enjoy year round, plants have important ecological contributions to the area. Play with different combinations of plants and pollinators to learn about the roles they hold on the waterfront and design a pollinator friendly planting bed.

Red Twig (leaf logo)

Hearty plants like the Red Twig Dogwood thrive throughout the year and bring color to the Waterfront year round. Known as čičyusac, "little red face plant," in Lushootseed, the Red Twig Dogwood is native to the Puget Sound region.

Camas (leaf logo)

Pacific Northwest Native plants like Camas connect the Waterfront to its preindustrial history. The bulbs of camas plants, or qwəłu?əl in Lushootseed, were an important food source for Native American tribes, who cultivated the plant into thick camas prairies.

Pollinators

Pollinators such as butterflies, bees, birds, and wind support plant health and propagation by carrying pollen from one plant to another. By facilitating the reproduction of plants, pollinators provide a key ecosystem service that sustains biodiversity and healthy habitats.

<u>Carex</u>

Sedges support water management on the waterfront through bioretention. These plants filter out sediment and contamination as water flows into Elliott Bay, helping to restore water quality in the Sound.

<u>Aster</u>

Shrubs like the Dwarf Tatarian Aster provide habitat for pollinators on the waterfront. In doing so, they work to support biodiversity and plant productivity along Elliott Bay.

Ground Cover

Ground cover like this Barren Strawberry protect soil from erosion, weeds, and drought. The roots of these plants hold the soil together to keep it healthy and intact. The plants also serve to regulate moisture and prevent the spread of invasive weeds that could compromise a healthy biodiverse waterfront.

BUDGET

Plant Cut Out Budget

Paper or Thin Board with Plexi Casing

Item	unit cost	quantity		total
wood (12inx8ft)	\$21.63		1	\$21.63
acrylic(30x36)	\$30.08		10	\$300.80
paper (35x140)	\$44.94		1	\$44.94
Paint	\$3		6	\$18.00
acrylic glue	\$12.37		1	\$12.37
				\$397.74

Plants

Plant	unit cost	quantity	total
Carex 'Evergold'	\$12.99	1	\$12.99
Western Sword I	\$16.99	1	\$16.99
Chinese Evergree	\$16.99	1	\$16.99
Hosta/Hellebore	\$20	1	\$20
Pots	\$40	3	\$120
Potting Soil	\$10	2	\$20
Fertilizer	\$15	1	\$15
Watering Can	\$7.99	1	\$7.99
			\$229.96

\$627.70

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