jacob wilson / design portfolio

2016

Content

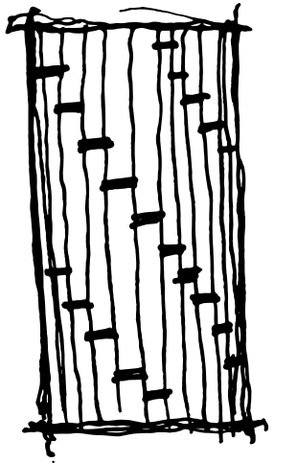
Inside-Out Lamp

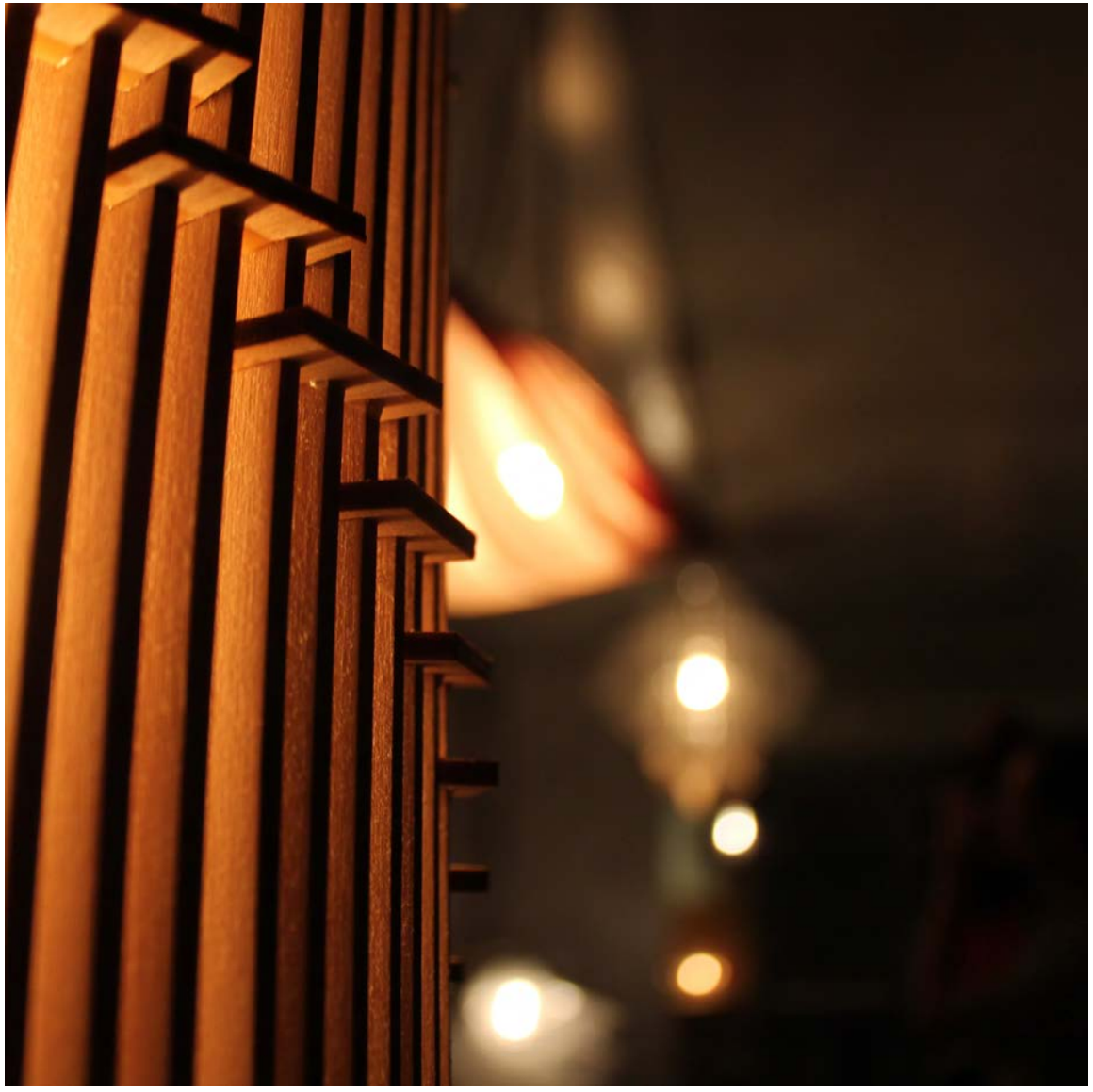
Hanging Lamp with a Performative Exoskeleton

Designed for the dining room setting, the Inside-Out Lamp takes the traditional interior ring of radial-slatted tectonic and extrapolates it into a multi-purpose exterior patterning. The tabbing pattern acts primarily as a structural system, spacing each slat and holding each piece to its neighbours. Beyond, the tabbing adds visual depth to the aesthetic of the lamp and provides a platform to scatter light across the environment.

The design challenge here was to create a visually appealing pattern that performed structurally, but did not overwhelm the design of the lamp. The piece is intended to cast a soft, scattered glow alone or in a series in a dining setting. Designed parametrically, each feature of the lamp is dynamic and editable to allow for rapid prototyping and, thus, light quality testing.

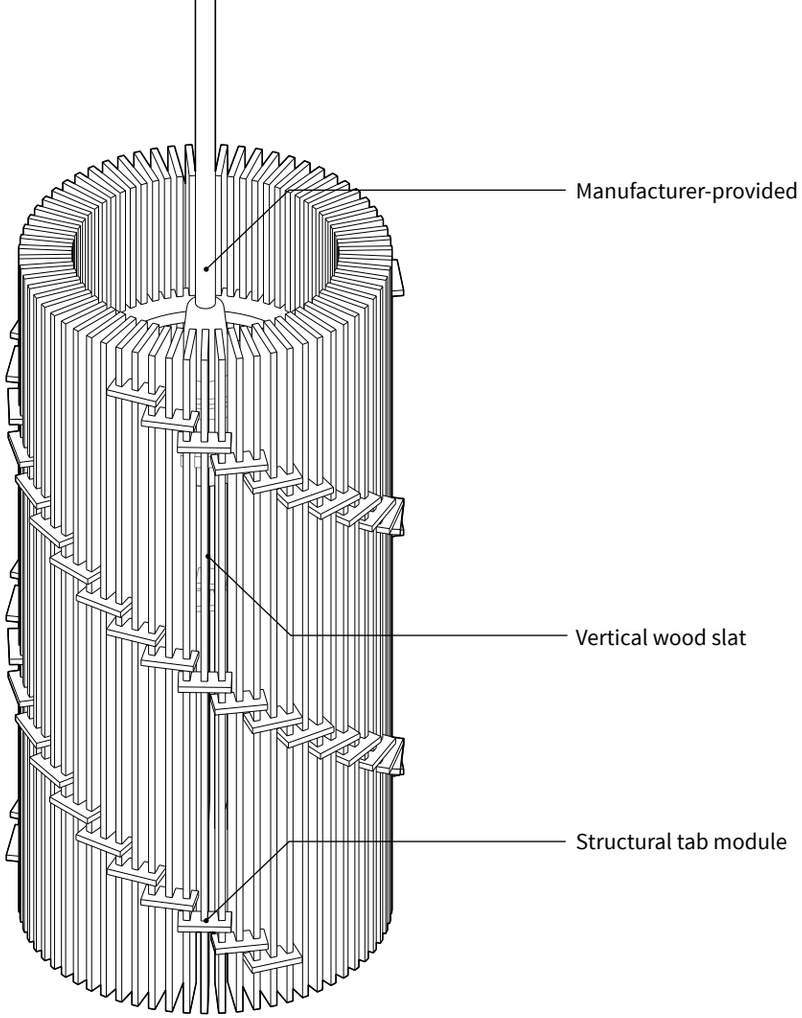
The Inside-Out Lamp was exhibited at the BSA Space from December 2014 through February 2015.



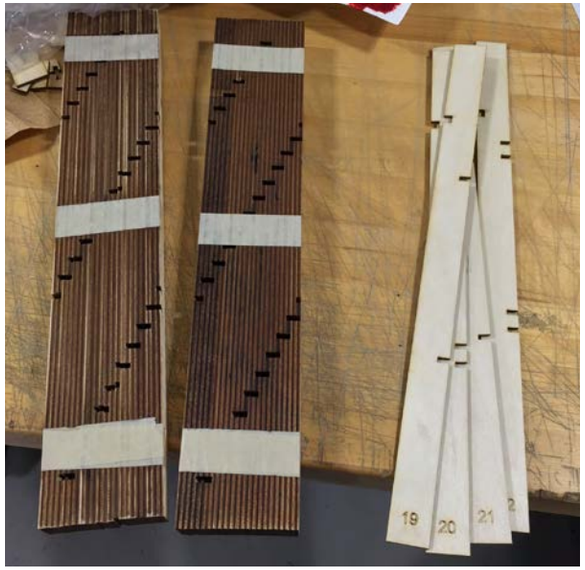


ˆ Tab Detail

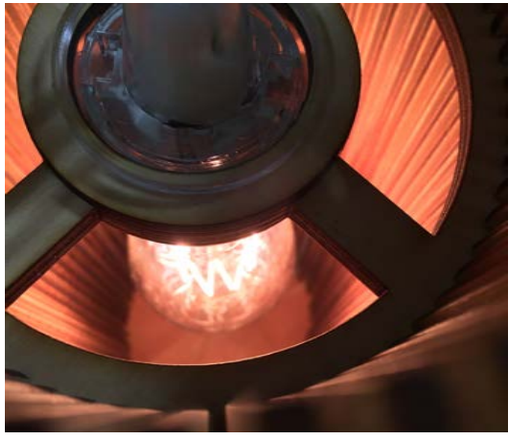
Overall Composition ˆ

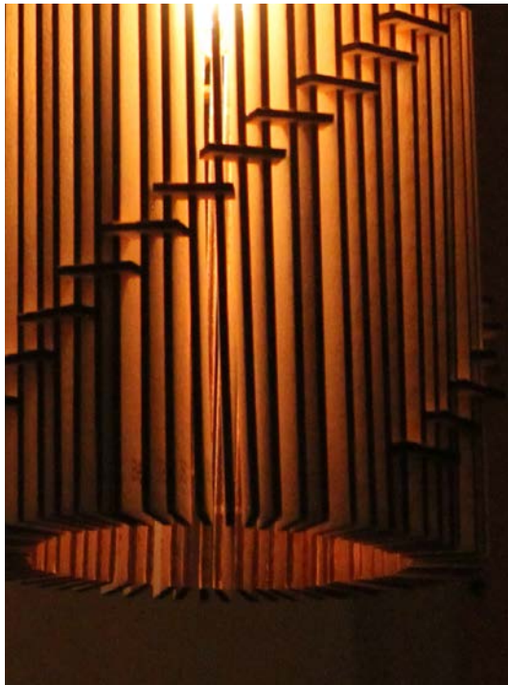


ˆ *Isometric*



Assembly / Process ˇ





The Tectonic of Pattern

Lounge Chair with Sensitivity to Assemby

Using only one 4’ x 8’ sheet of birch plywood for material, the Tab Chair is as much an exploration in tectonic and assembly as it is a piece of furniture. The design is grown out of two systems: a series of long, filleted pieces that aggregate into the overall form of the seat and back, and a series of small tabs that slot into the aggregates, holding each to the next. Each ‘slat’ must be connected to its neighbors via the tabbing system at least twice to keep the chair together—herein lies the marriage of pattern and structure.

The fabrication process utilized a CNC router to cut the individual pieces. No hardware or metal fasteners are required to assemble the chair; the tabbing system and wood glue are the only tectonic at play. The chair features a peeled-back shelf underneath the seat for storage, as well as the subtle arcing of both the seat and the chair back for user comfort.

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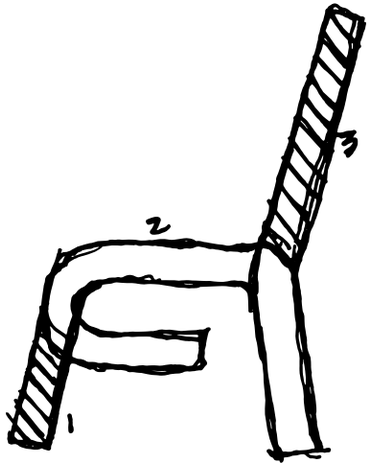
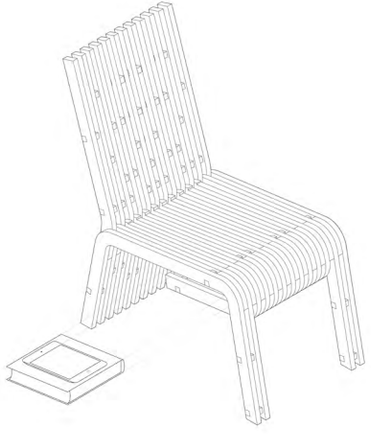
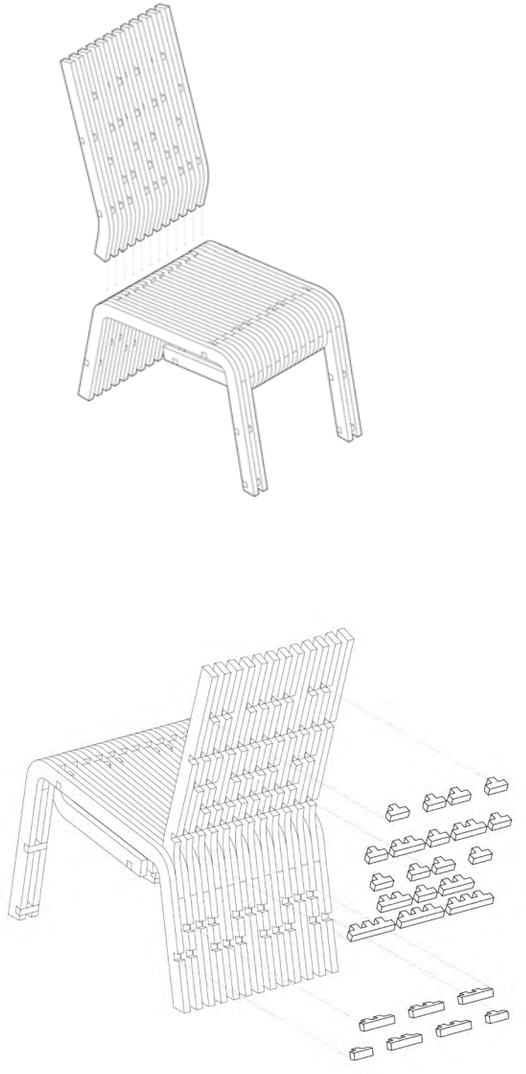




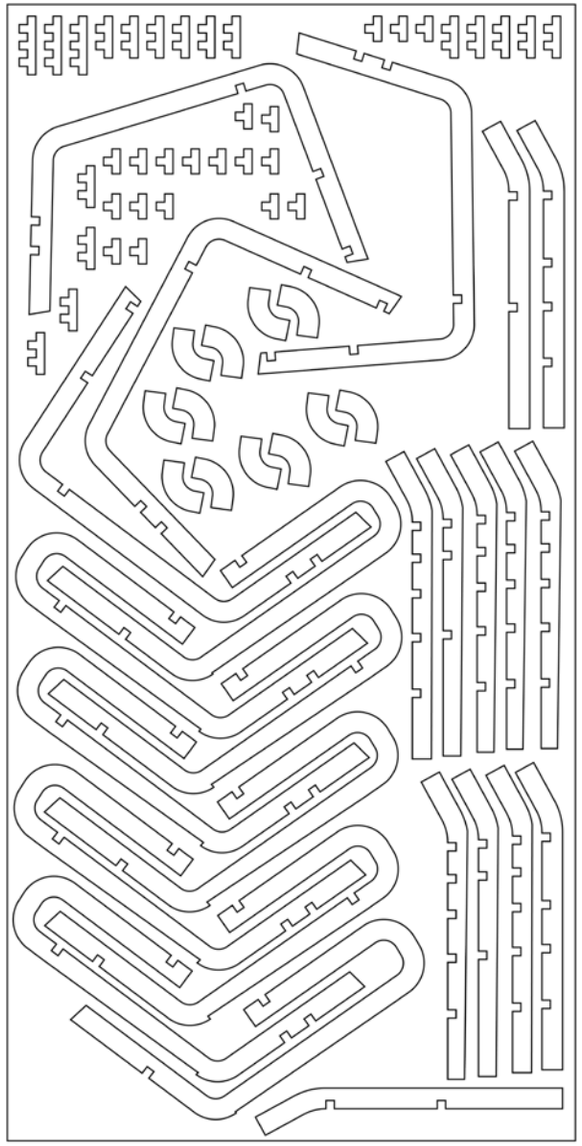
ˆ *Axon / Storage* ˇ

Finished Chair, Front View ˆ



ˆ Assembly / Tab Tectonic ˇ

Finished Chair, Back View ˆ

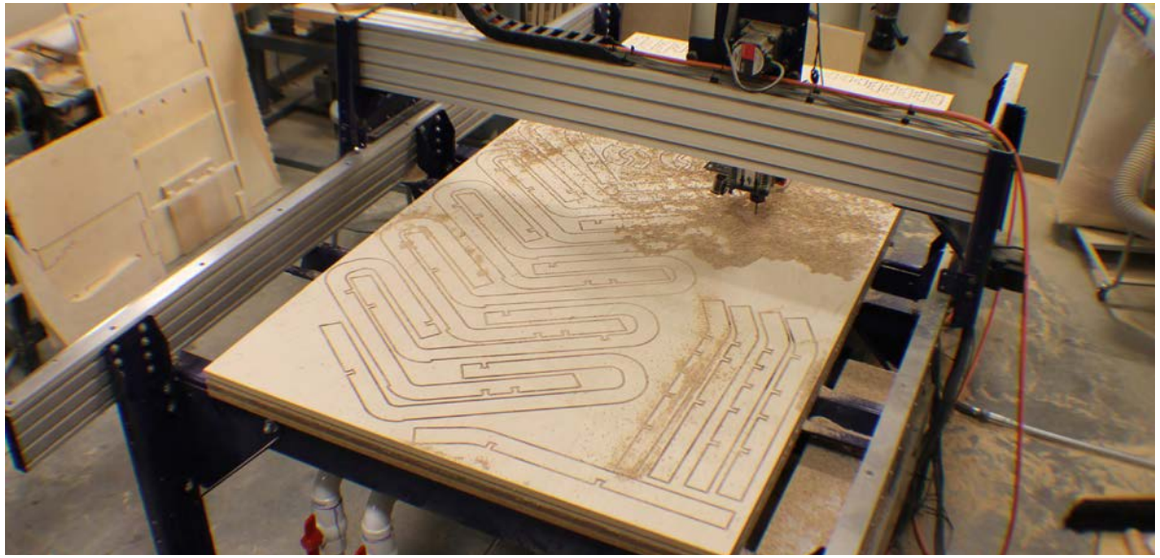


ˆ *Cut Sheet*

Due to the constraints to one sheet of material, the fabrication process truly began with a series of cut sheet layouts. The solution was interlocking the major pieces and milling tabs into each peice to prevent material hold-down issues. Several prototypes were cut before running the final mill.

After the final cut, the chair went through a series of dry-fits before being hand-sanded, assembled, and finished. A clear, matte polycrylic finish was used to protect the chair while bringing out the natural beauty of the material.

ˆ *Profile Cut_01 / Profile Cut_02* ˇ



ˆ Profile Cut_03 / Manual Removal ˇ

ˆ Hand Sand / Assembly ˇ

ˆ *Seat Detail*

Tectonic Detail ˆ

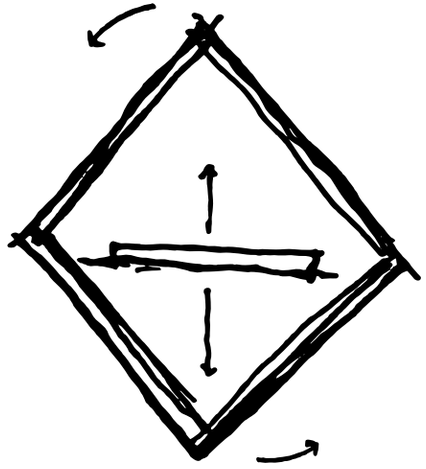
Oscillating Walkway

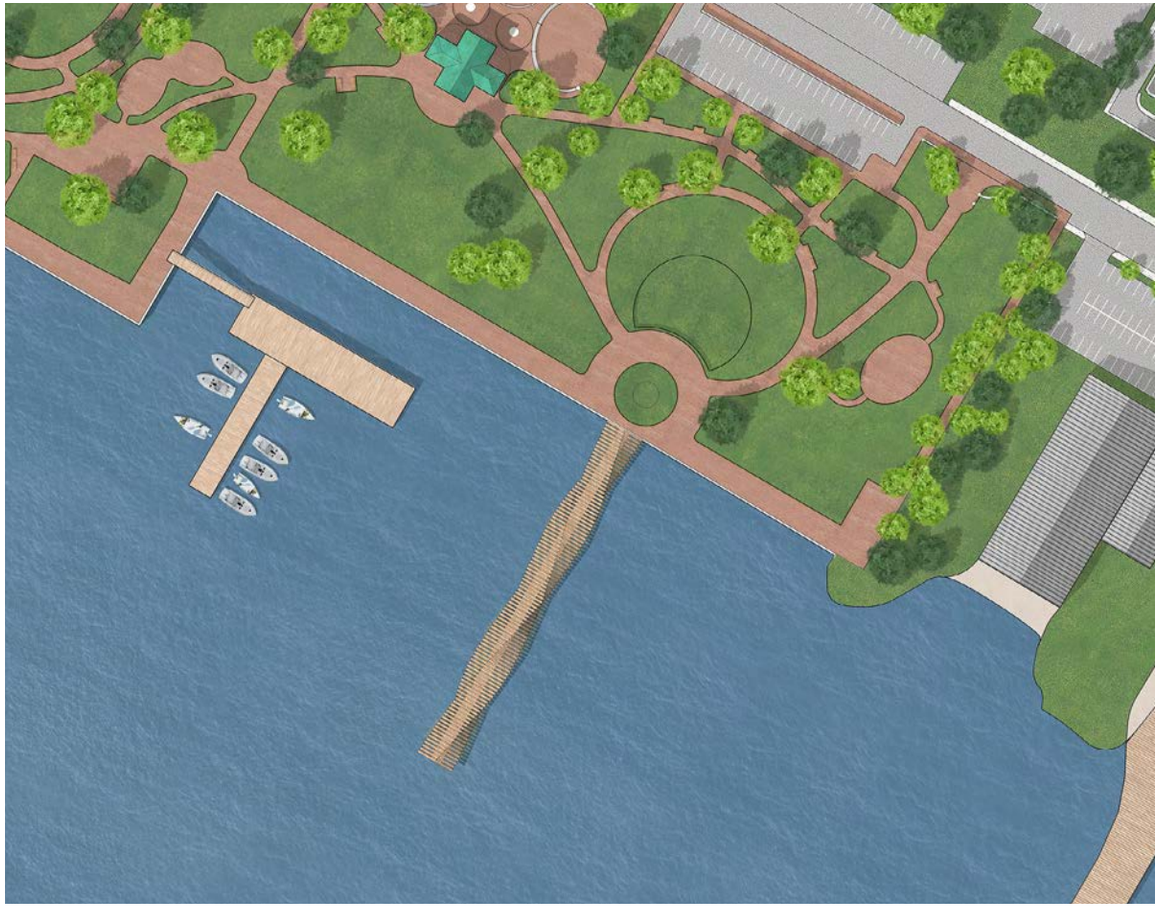
Framed Installation at East Boston's Piers Park

East Boston's shoreline features a range of tidal conditions with a variety of unique sectional and planar qualities. However, one of the most interesting conditions lies along the edge of Piers Park, where a shoreline pathway's structure is only revealed during low tide.

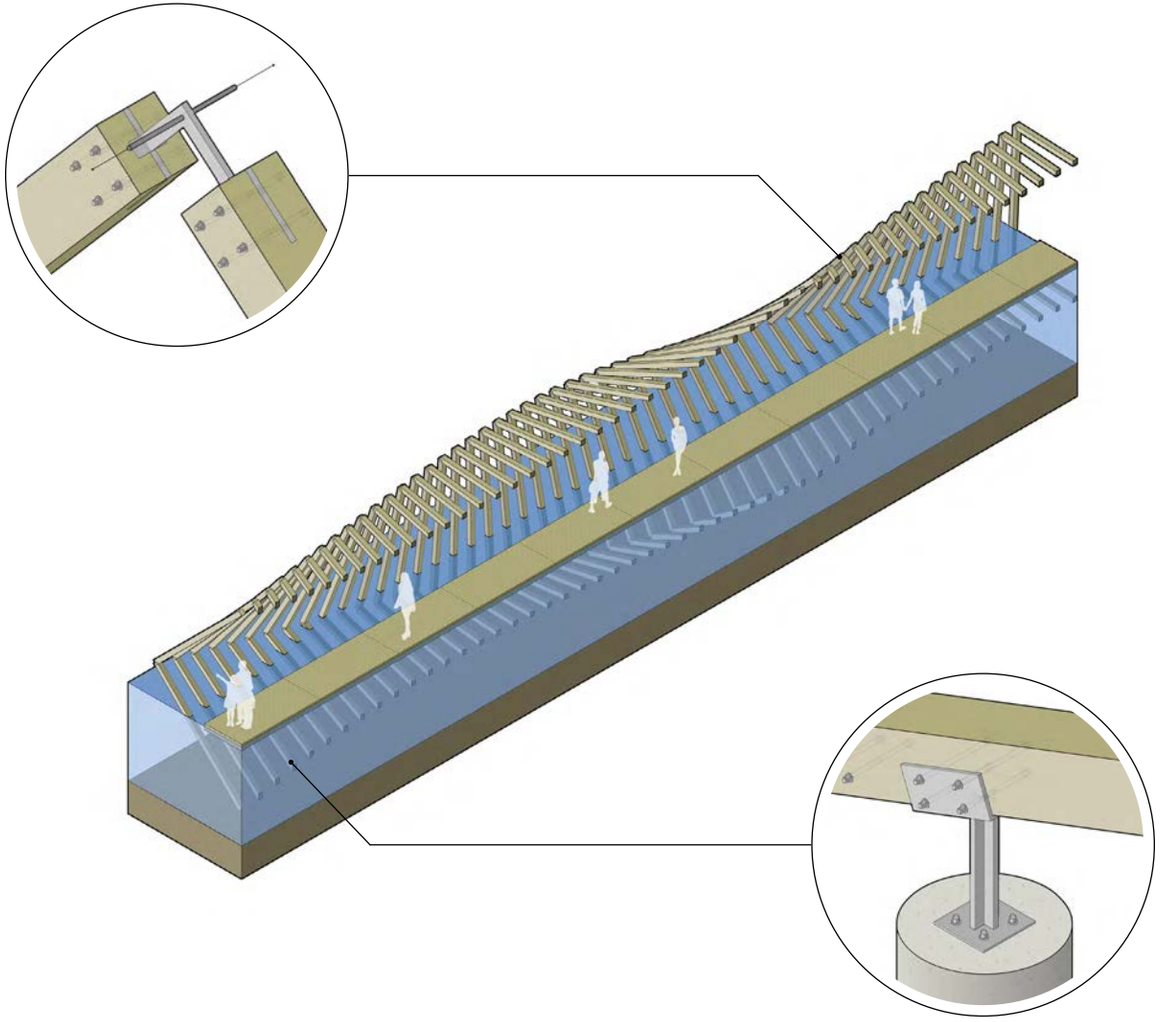
The design strategy developed from the detaching of the shoreside walkway from the main park and placing it directly on the harbor's surface. Doing so creates a much more direct relationship between the inhabitant and the fluctuating tide: the time of day immediately effects how the space is inhabited.

Drawing from this sinusoidal nature, the Oscillating Walkway explores the constantly changing frame of experience. A series of timber frames twists out into Boston Harbor, encasing the buoyant walkway. While the structure itself is stagnant, its dynamic form engages the opposite axis of the tide and creates a similar situational frame as inhabitants travel along the path. Combined, the architecture and the tide-responsive platform provide an ever-changing spatial 'snapshot' of experience. This snapshot rotates via the wooden frames as occupants travel the walkway and is either truncated or elongated as the platform rises and falls with the tide.

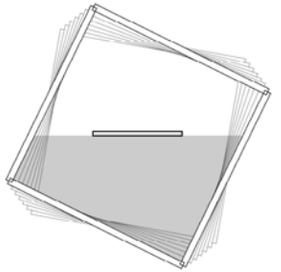


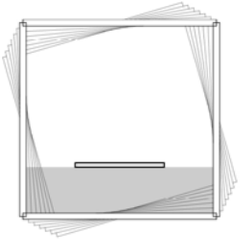


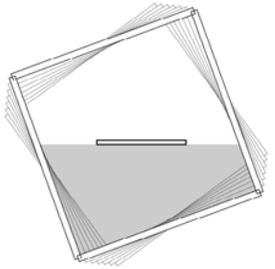
ˆ *Site Plan*



Details ˆ





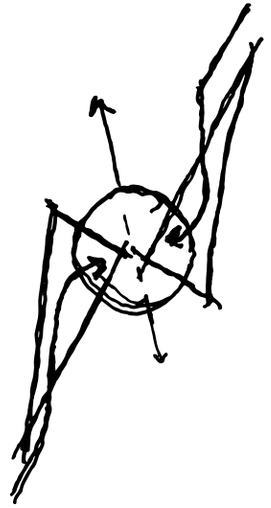


Freedom from Disturbance

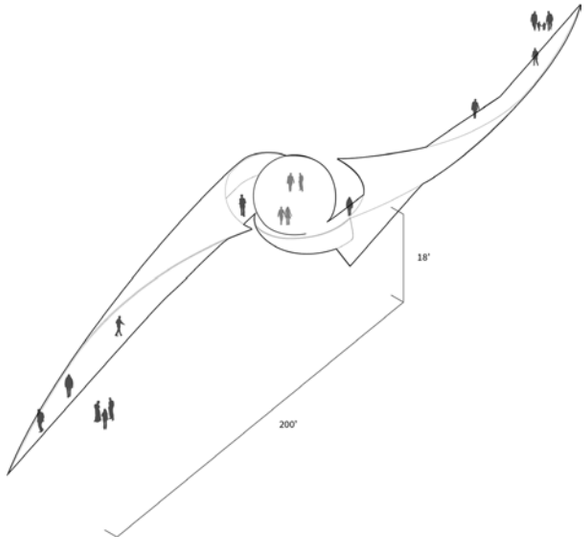
Pavilion for Peace in Paris, France *

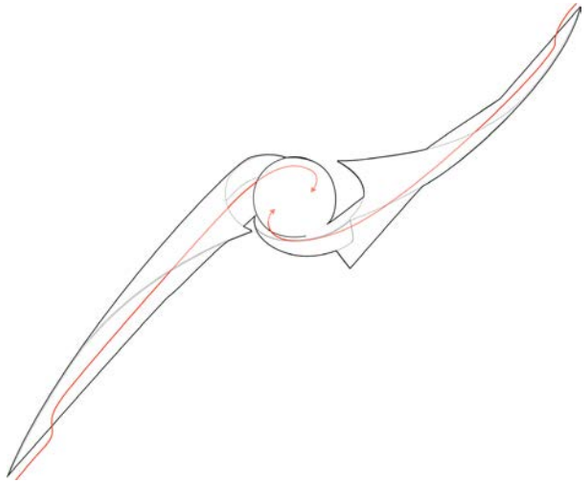
The intention of this pavilion is to encourage communication and contemplation with an awareness of contemporary global crises and the underlying human nuances from which they stem. The swooping stone structure is characterized by two rising arms that lead to a semi-enclosed forum. Each arm features a curated journey through specific artistic themes, arranged by scale from full-size sculpture to smaller, hung pieces.

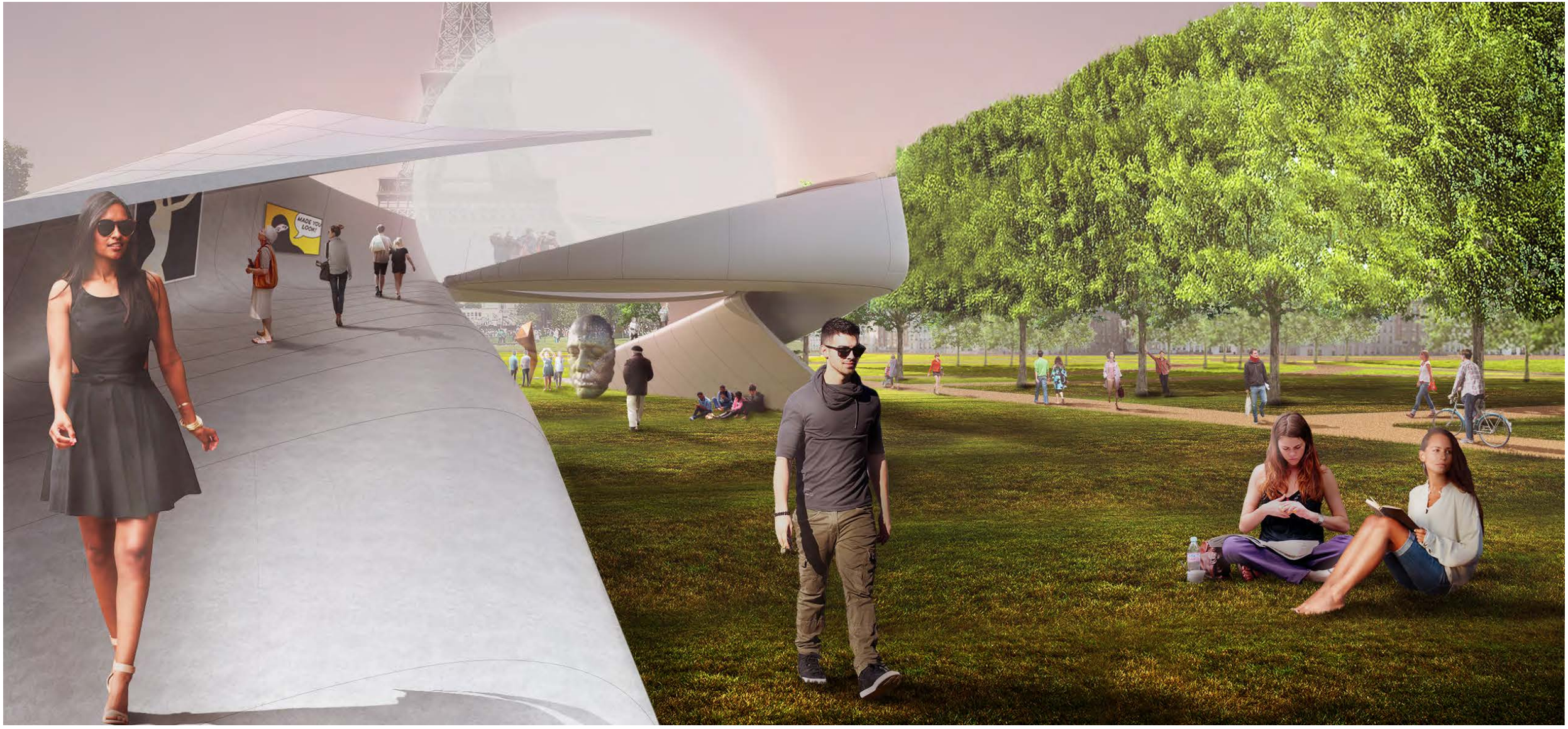
Identifying as formally and materialistically different from the rest of the pavilion, the forum is intended to promote conversation in an effort to help visitors engage with each other with a new awareness of global issues. The space acts as the pearl of the pavilion, rising from the crux of the form and representing a mindful, directional shift towards harmony across all cultures. The mouths of each path that empty into the forum are turned around the enclosure to face the direction from which they started, symbolizing a retrospection of the concepts explored on the journey through the pavilion.



** Completed in collaboration with Jacqueline Mignone*


18'
200'



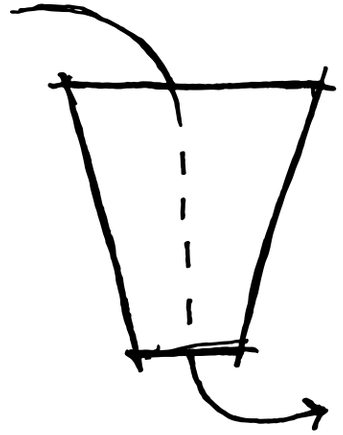

MADE YOU LOOK!

The Ecology of Learning

Ecologic Center in Boston’s Government District *

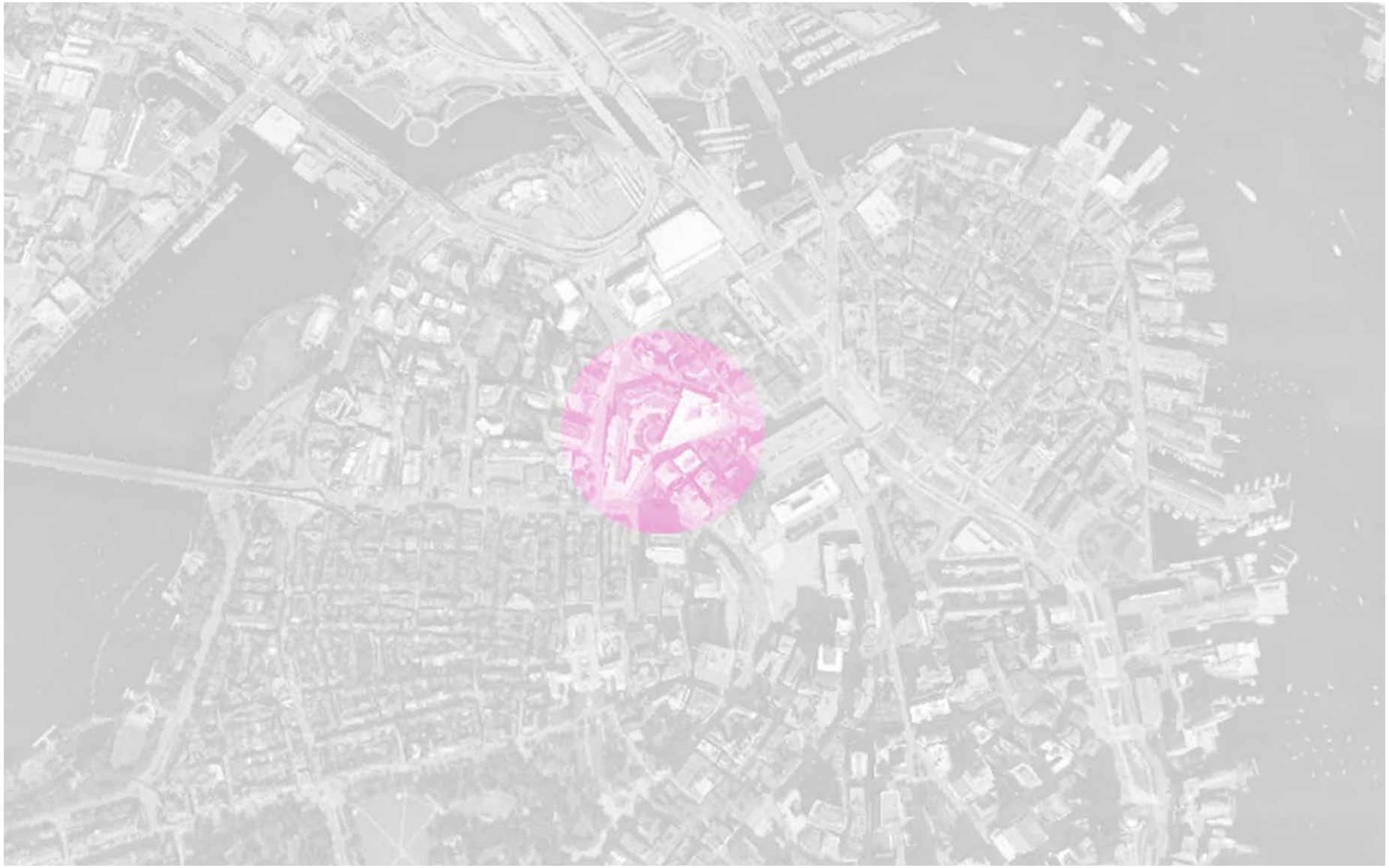
In a city district looking towards the future, Paul Rudolph’s aging Government Service Center is a landmark in dire need of transformation. A vast concrete complex bordering Boston’s West End, the immense amount of hardscape creates a number of programmatic, and, more prominently, ecological problems on the site.

Through a series of additions, landscape initiatives, and interior transformations, the Government Service Center will be redefined into an ecology-themed complex—the epicenter of a new eco-district for Boston. In an endeavor to use architecture and urban design as a vehicle for social revitalization, the complex will feature an ecology-focused school, environmental research facilities, and public education programs. The existing plaza and parking structure will be replaced with a learning landscape based on a high marsh or bioswale that will collect stormwater from the site and surrounding watershed to mitigate runoff, purify the water, and allow for its natural reintigration and use in gray water systems. A series of public spectacles and pavilions will put the center’s processes on display for its community.

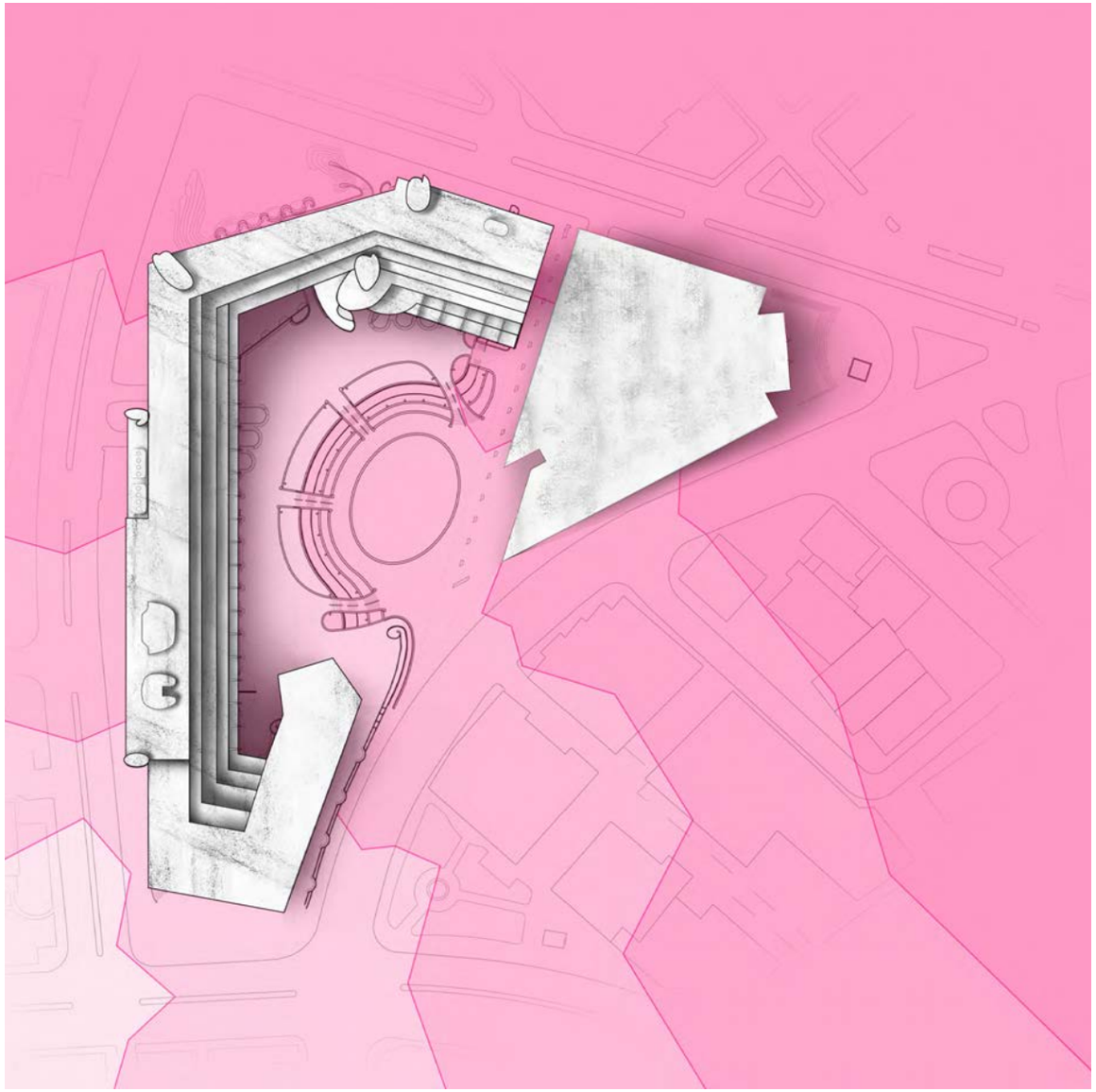


** Completed in collaboration with Pablo Rivera, Greg Jimmie, Anthony Rodriguez and Lisa Angulo*

Original Learning Landscape ^

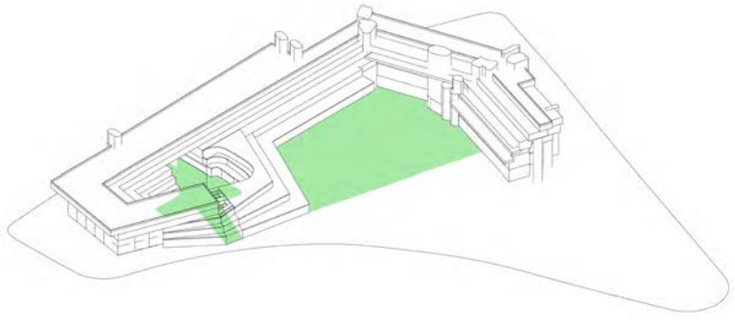


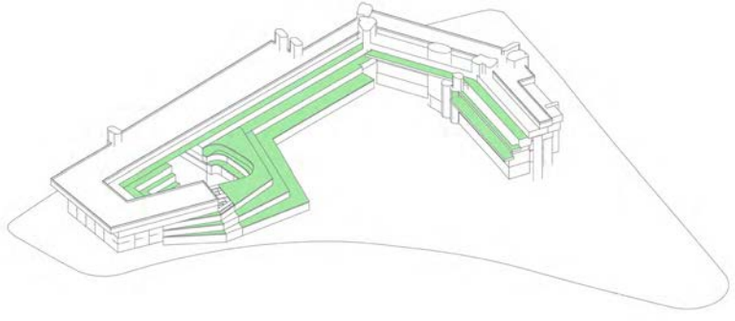
ˆ Site Location

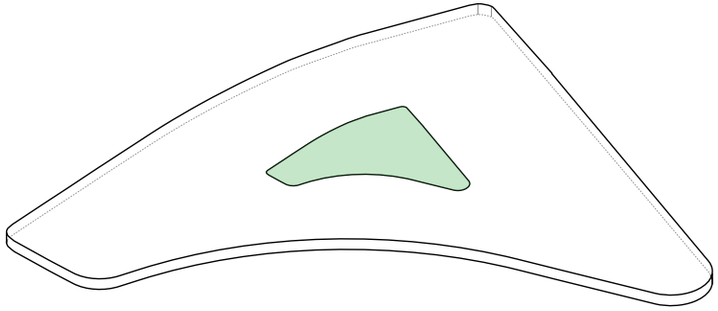


ˆ Direction of Water Flow

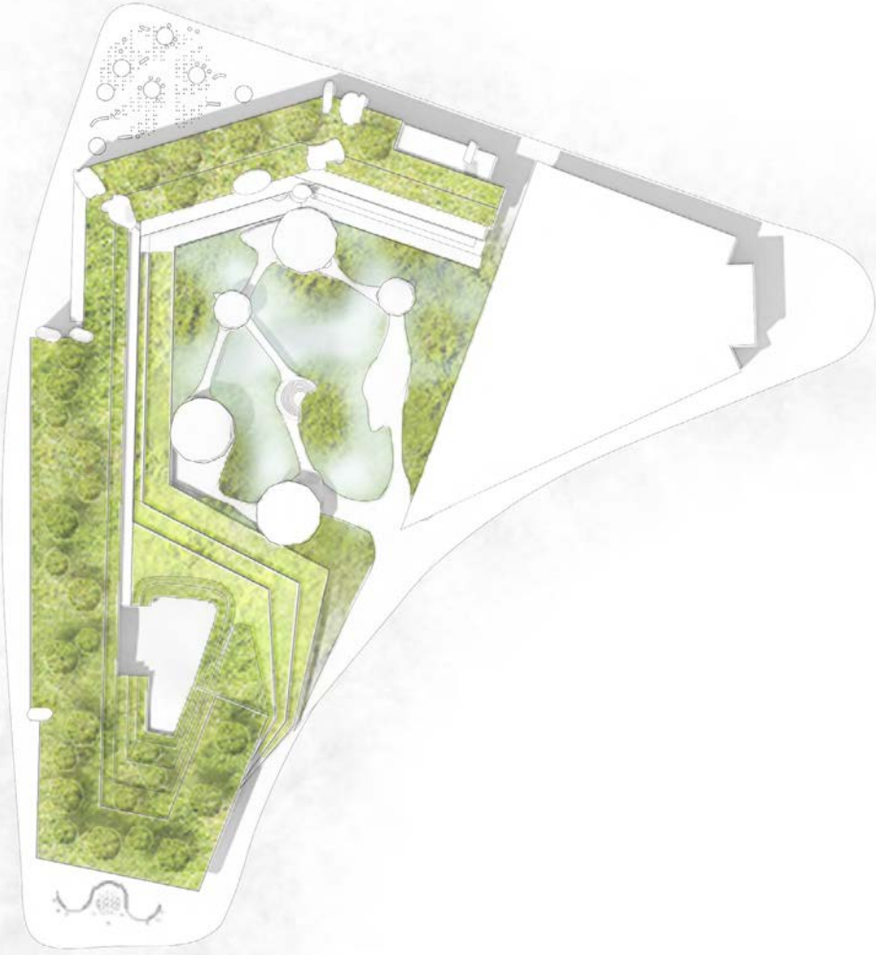
Existing Drain Locations ˆ



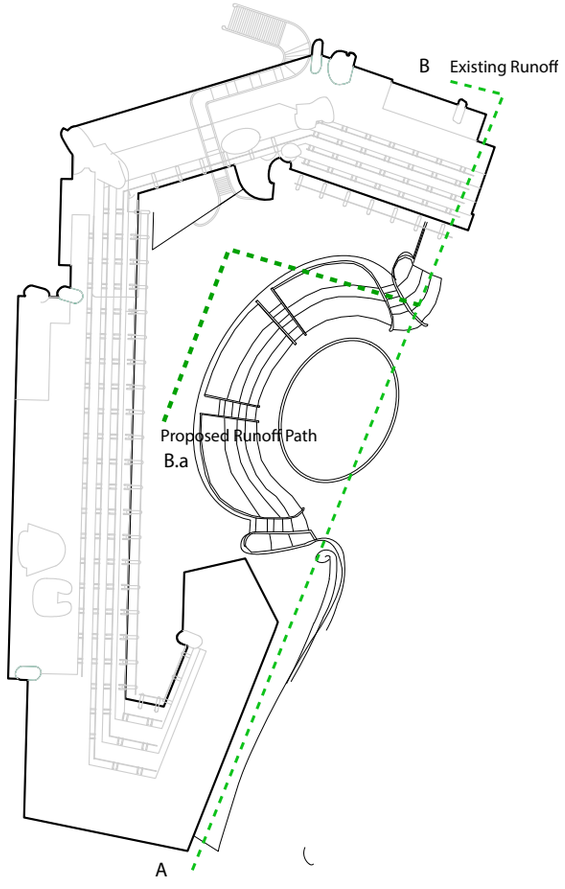


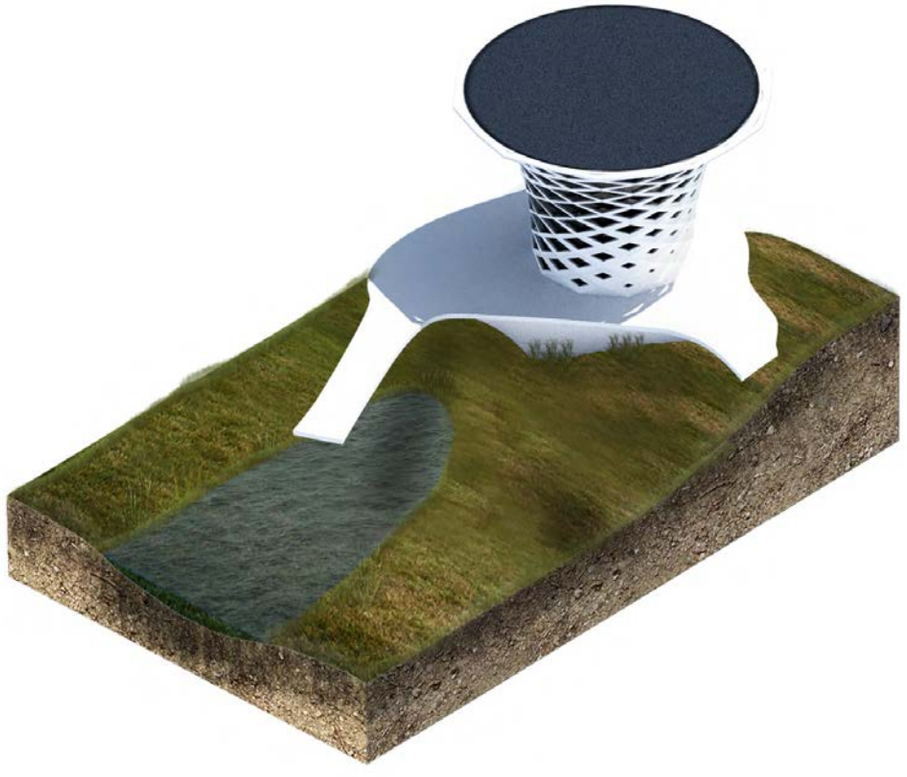


ˆ *High Marsh Requirements*

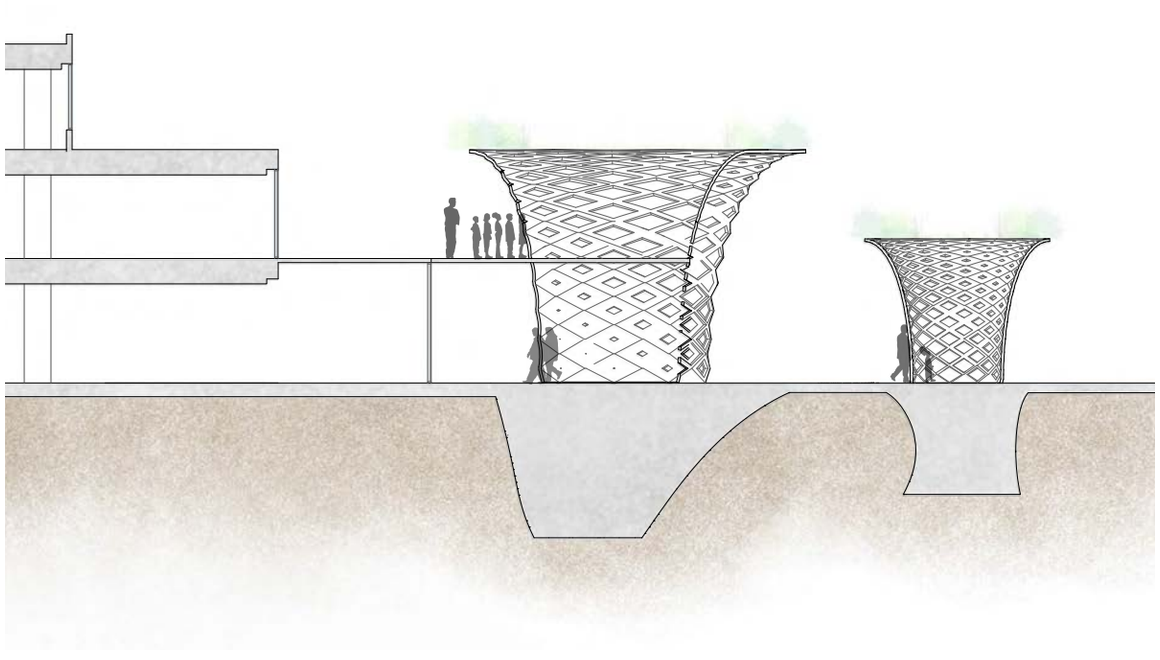


Site Plan ˆ

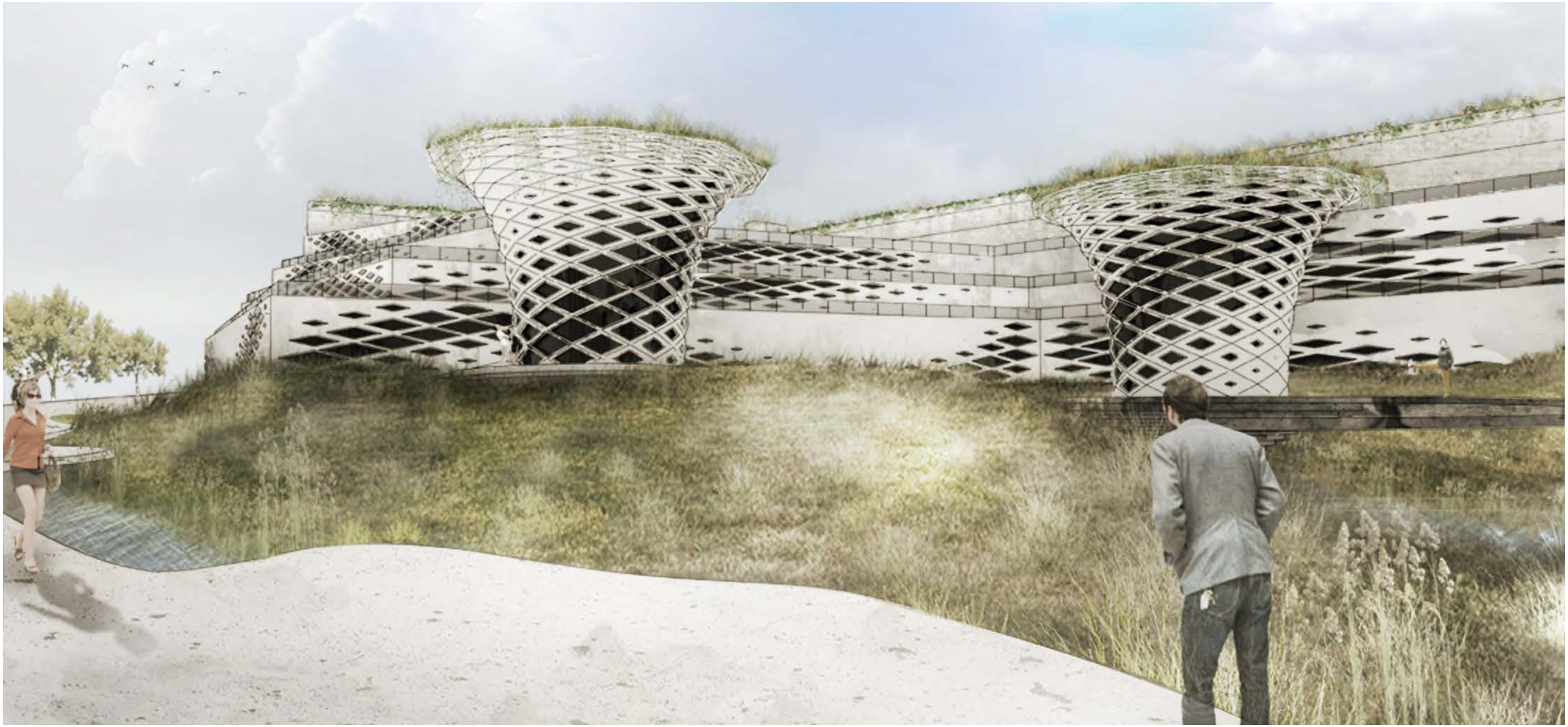

B
Existing Runoff
Proposed Runoff Path
B.a
A

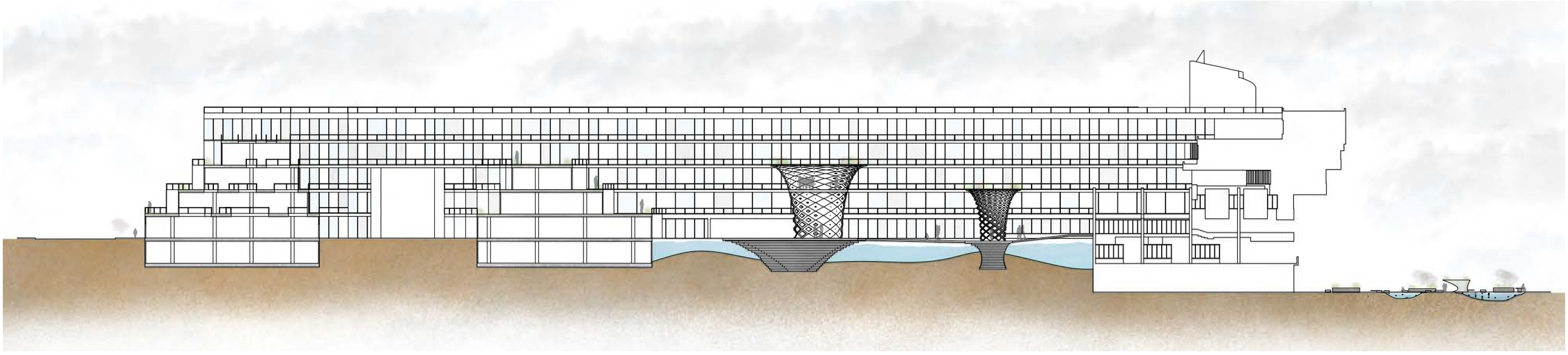


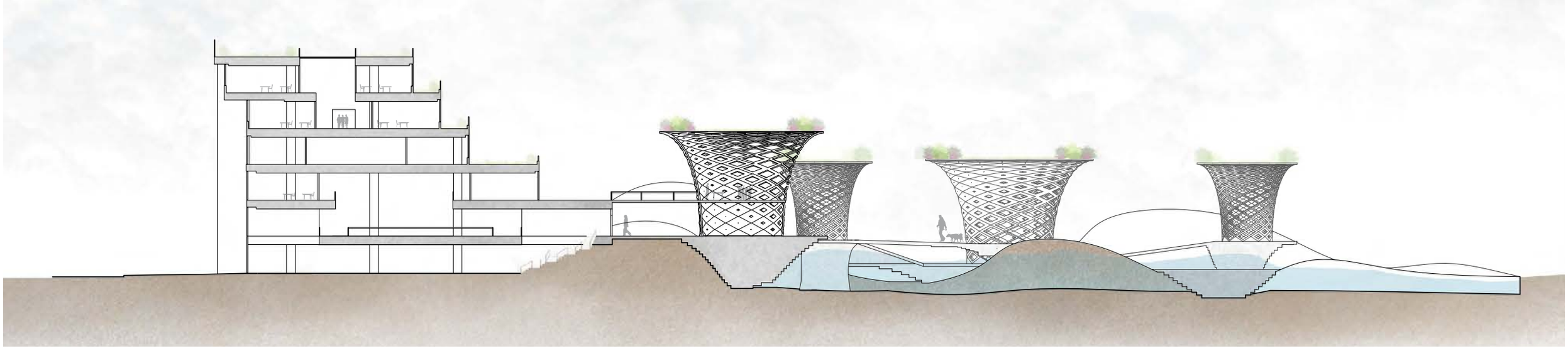
ˆ 3D Printed Nodes



Node Section ˆ







ˆ Longitudinal Site Section / Lateral Site Section ˇ

Roof Garden Concept ^

2016