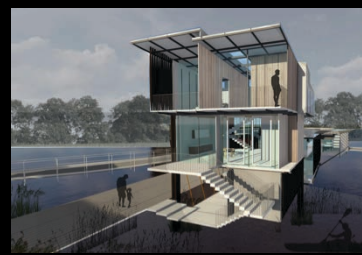
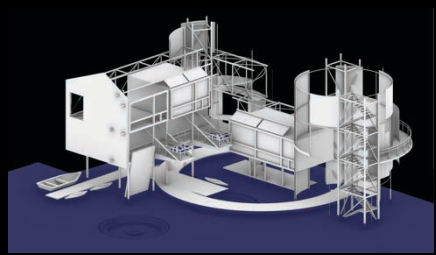
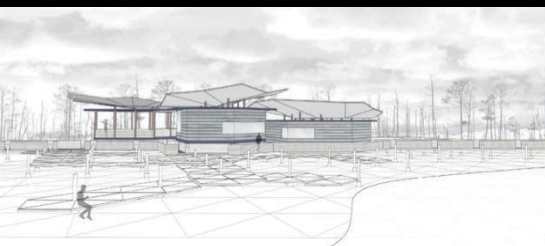
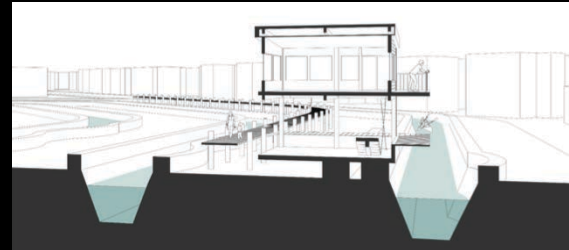
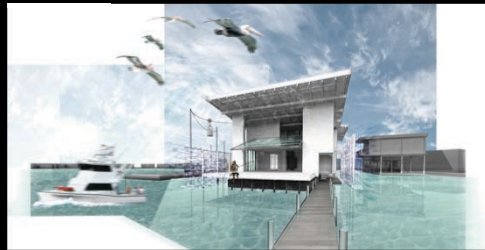


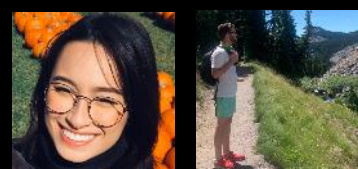
Dwelling on the

University of Florida | Envision Resilience: Nantucket Challenge | Jury Presentation | April 29th, 2021



UF STUDIO D8 TEAM

Ana Hernandez
Gizangely Marrero
Andrea Aristiguieta
Sophia Hernandez
Erika Blandon
Christopher Rubio
Aimee Lawson
Camila Moreno
Moises Villanueva
Eoin Balara
Avery Dunavant
Celine Haddad
Andreina Sojo
Morgan Mulholland
Suzanne Tielemans
Alexander Boucher



Jeff Carney
Associate Professor, School of Architecture
Associate Director, Florida Institute for built Environment Resilience (FIBER)
j.carney@ufl.edu



Carla Brisotto
FIBER Post-Doctoral Associate
c.brisotto@ufl.edu

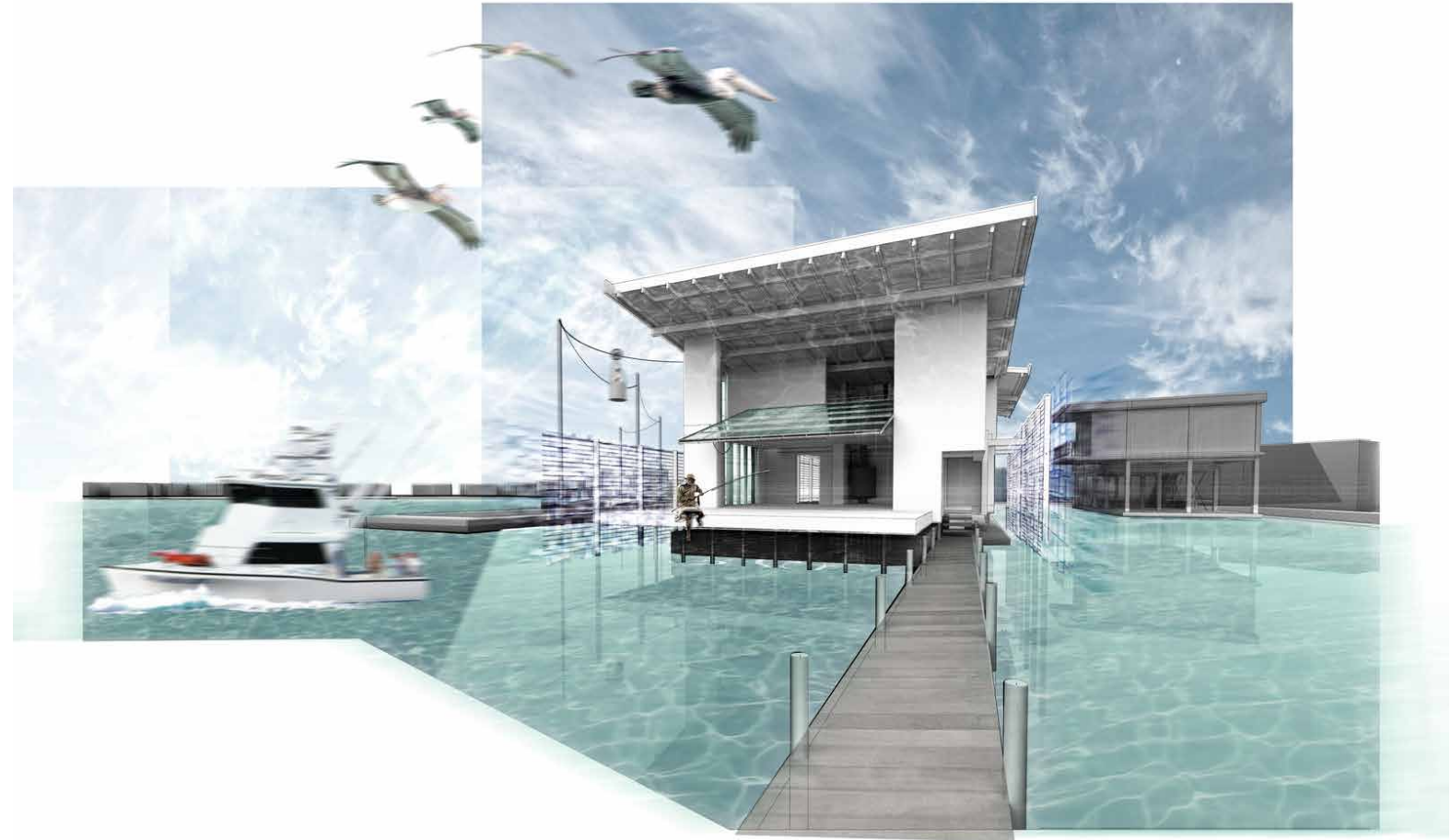
PROJECT OVERVIEW

What are the studio's goals?

The Spring 2021 D8 architecture studio developed a series of tactical approaches to sea level rise adaptation along Nantucket's urban edge.

On the surface Nantucket appears locked in time, but the island community has demonstrated a strong capacity for change since its earliest days.

This studio has searched for, documented, and invented narratives of adaptation, built on what we have learned about Nantucket and what our experience has brought to it.



3rd Generation Transformation – Suzanne Tielemans

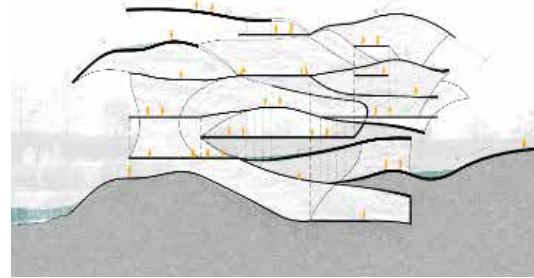
PROJECT OVERVIEW

What did the studio do?

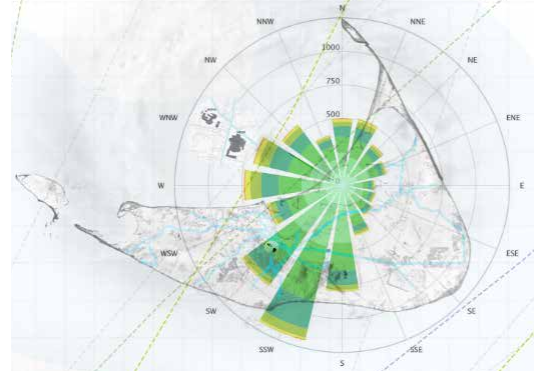
The studio took on the Challenge through three primary inquiries: Making for movement, Reading and Writing Place, and Designing Futures.

The result is 16 accounts of dwelling, tested over 3 generations along Nantucket's coastal edge. We hope that these designs can contribute to an ongoing conversation in the community about adaptation to climate change.

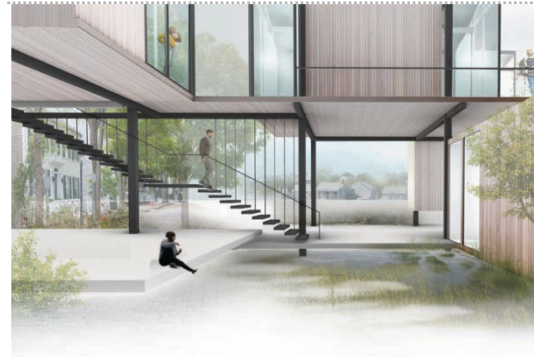
1. Making for Movement



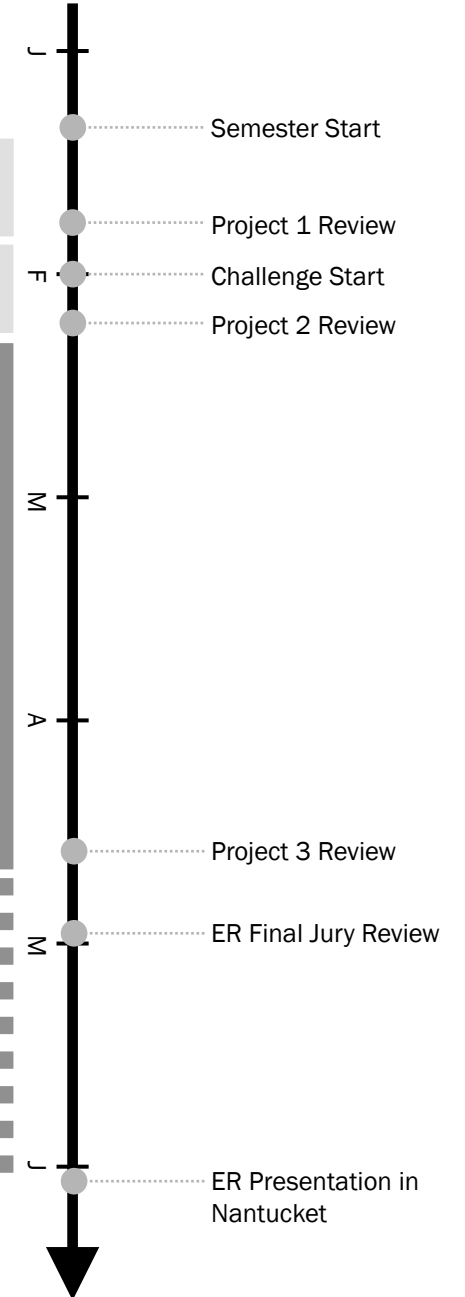
2. Reading and Writing Place



3. Designing Futures



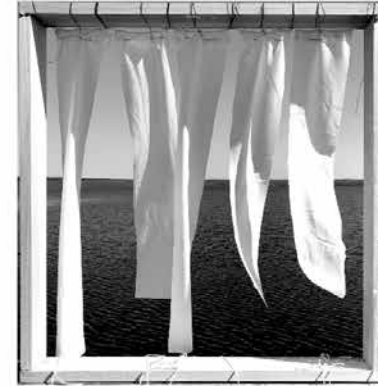
Spring Term 2021



1. MAKING FOR MOVEMENT

How do we occupy the space of change?

It's assumed that buildings shield us from danger, they block the wind, elevate us from conflict. However, architecture can do far more than separate us from a changing world.



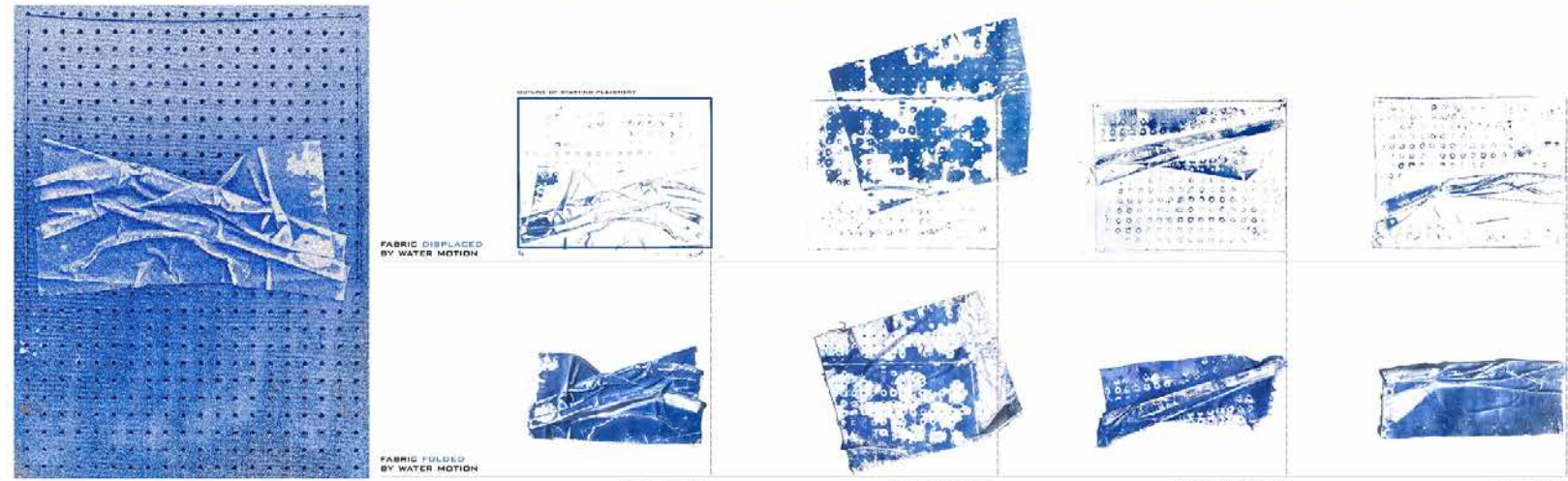
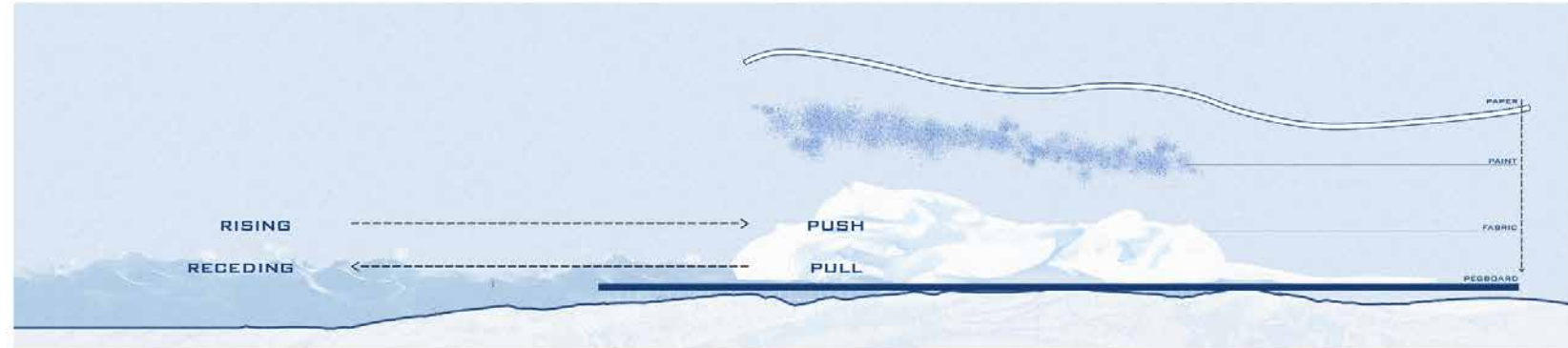
Structure of wind studies - Celine Haddad

1. MAKING FOR MOVEMENT

How do we occupy the space of change?

Buildings can shield us from the world around us, they can block the wind, separate us from water, elevate us from conflict. However, architecture can do far more than separate us from the world around us.

We began by simply inserting ourselves into the environment – first individually, then in built form, not to encroach but to reflect, register, and engage with the systems we observed.



Wave Displacement of Fabric Study – Morgan Mulholland

1. MAKING FOR MOVEMENT

How do we occupy the space of change?

Buildings can shield us from the world around us, they can block the wind, separate us from water, elevate us from conflict. However, architecture can do far more than separate us from the world around us.

We began by simply inserting ourselves into the environment – first individually, then in built form, not to encroach but to reflect, register, and engage with the systems we observed.

As climate change affects our environments, our buildings should actively engage us in dialogue with this process.

Observation



Speculation



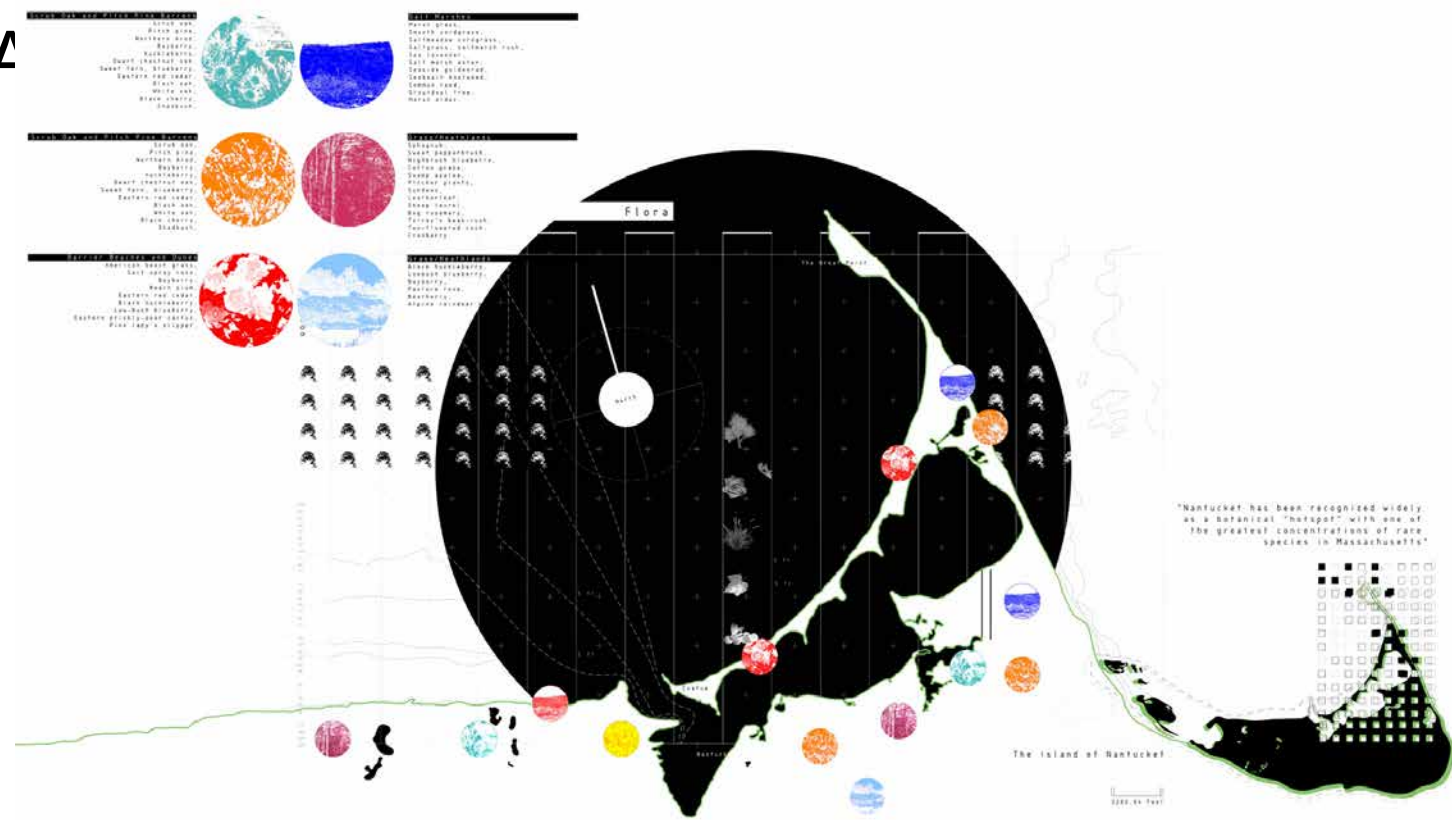
Sand Erosion Study and Speculation - Erika Blandon

2. READING AND WRITING PLA

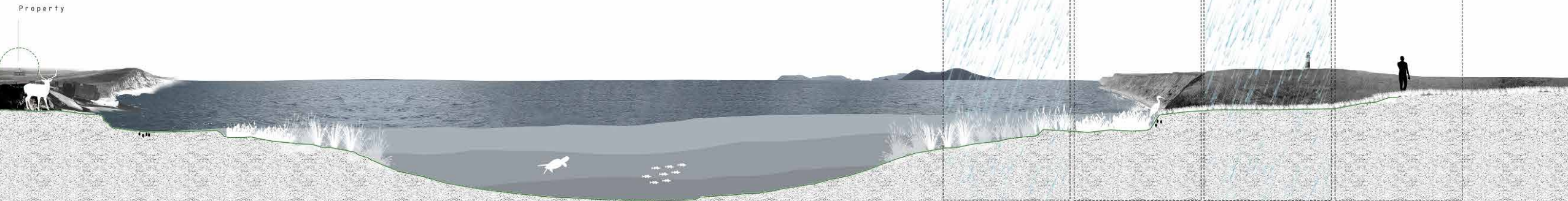
How do we get to know Nantucket?

How can we understand a place without having access to it? Students have worked to balance the analysis of data with creative speculation.

Findings:
Nantucket is a robust yet fragile ecosystem



Coastal Ecosystem: Flora and Fauna
Christopher Rubio, Andreina Sojo

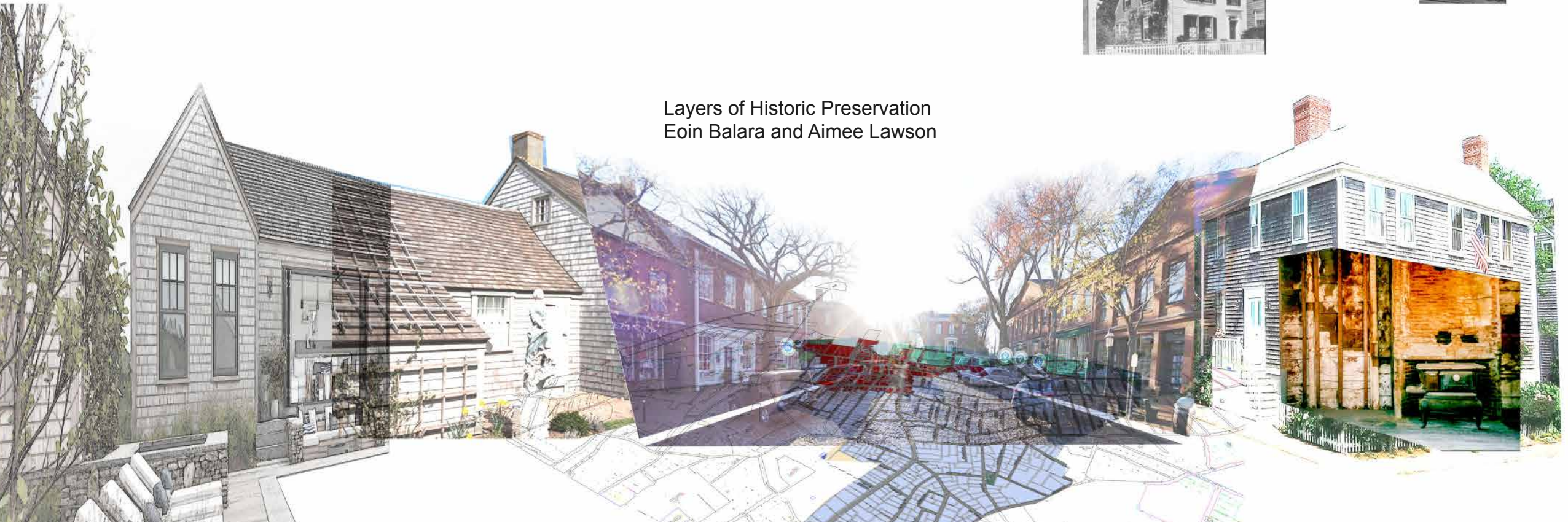


2. READING AND WRITING PLACE

How do we get to know Nantucket?

How can we understand a place without having access to it? Students have worked to balance the analysis of data with creative speculation.

Findings:
Nantucket is a robust yet fragile ecosystem
Nantucket is preserved but it is layered with change



Layers of Historic Preservation
Eoin Balara and Aimee Lawson

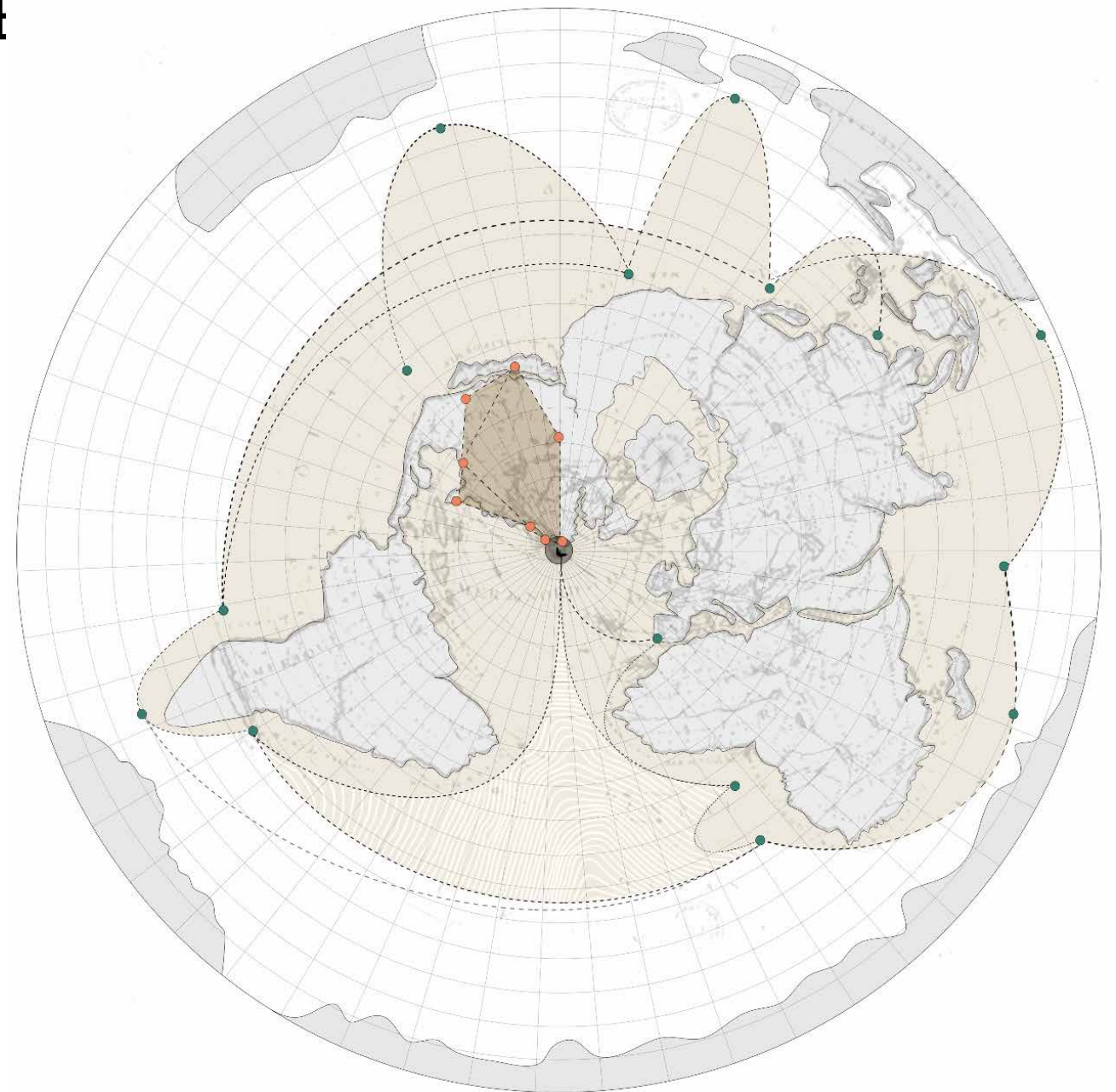
2. READING AND WRITING PLACE

How do we get to know Nantucket?

How can we understand a place without having access to it? Students have worked to balance the analysis of data with creative speculation.

Findings:

Nantucket is a robust yet fragile ecosystem
Nantucket is preserved but it is layered with change
Nantucket has always been both remote and global



Whaling and Tourism: Two Economies – Shared Histories

Celine Haddad and Morgan Mulholland

3. DESIGNING

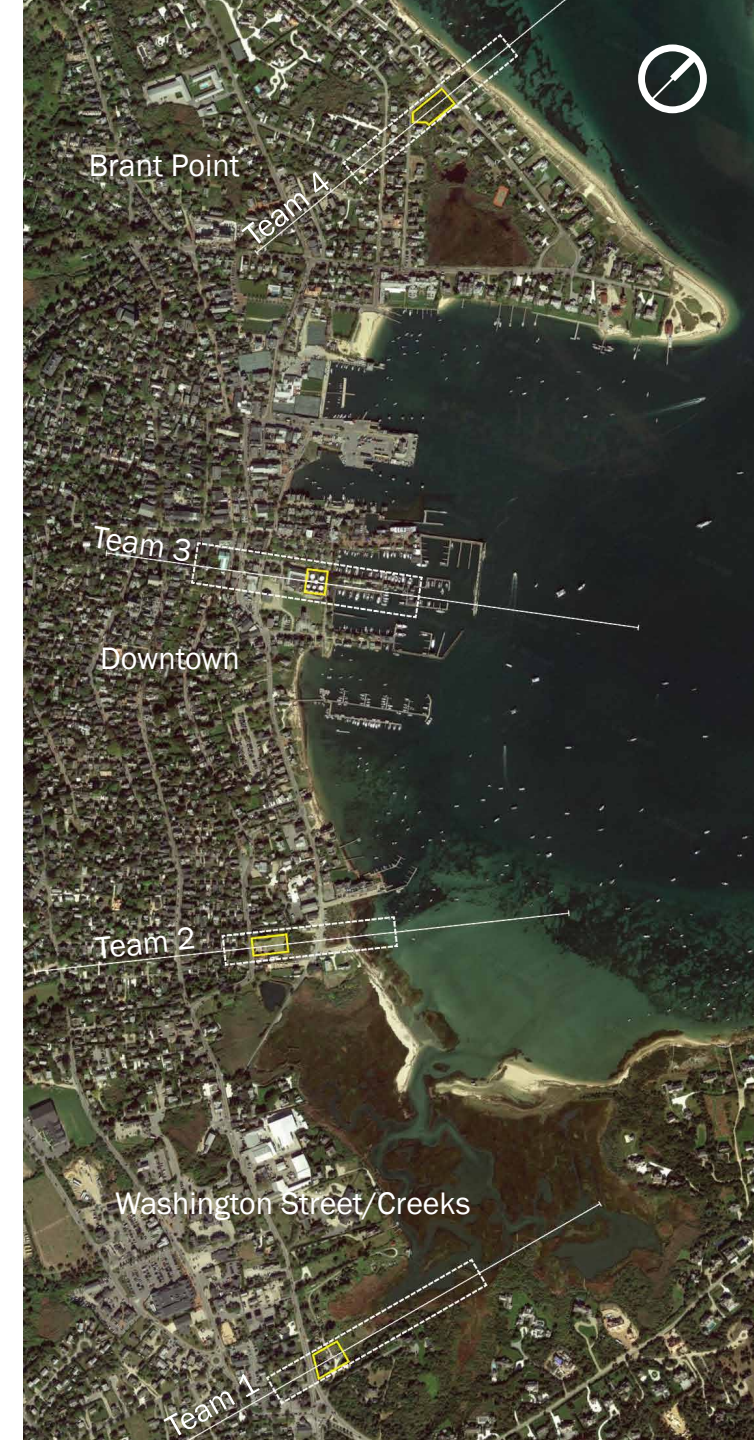
FUTURES

Nantucket must choose a path forward – to accommodate, protect, or retreat.

The primary project of this semester centers our work around how Nantucket's built coastal edge can adapt to the effects of climate change over time.



History of Occupying the Edge
Erika Blandon and Alex Boucher



3. DESIGNING

FUTURES
Nantucket must choose a path forward
– to accommodate, protect, or retreat.

The primary project of this semester centers our work around how Nantucket's built coastal edge can adapt to the effects of climate change over time.

The four chosen sites represent the diversity of Nantucket's built and natural environment.



Team 1



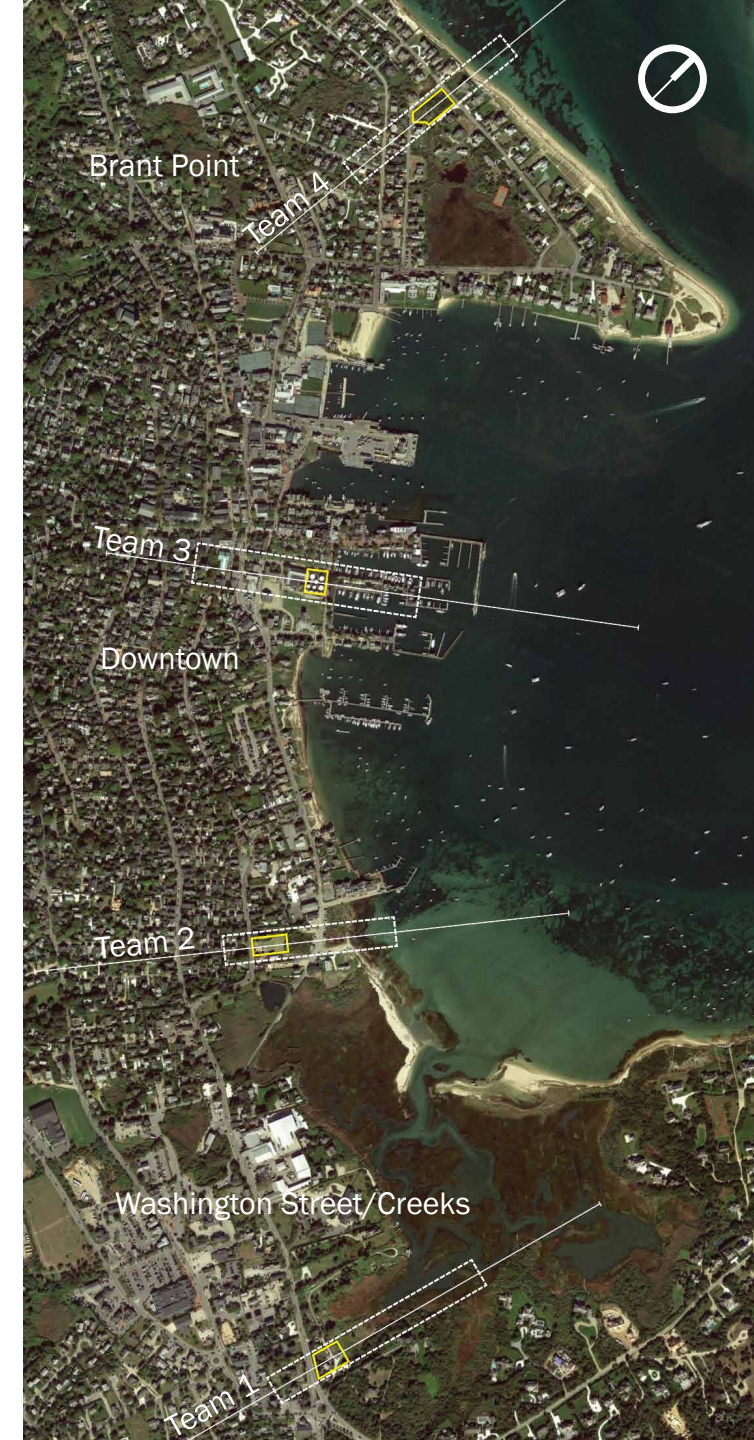
Team 2



Team 3



Team 4



Brant Point

Team 4

Team 3

Downtown

Team 2

Washington Street/Creeks

Team 1

3. DESIGNING

FUTURES

Nantucket must choose a path forward – to accommodate, protect, or retreat.

The primary project of this semester centers our work around how Nantucket's built coastal edge can adapt to the effects of climate change over time.

The four chosen sites represent the diversity of Nantucket's built and natural environment.

Three Scales of Work:

4 Transects:

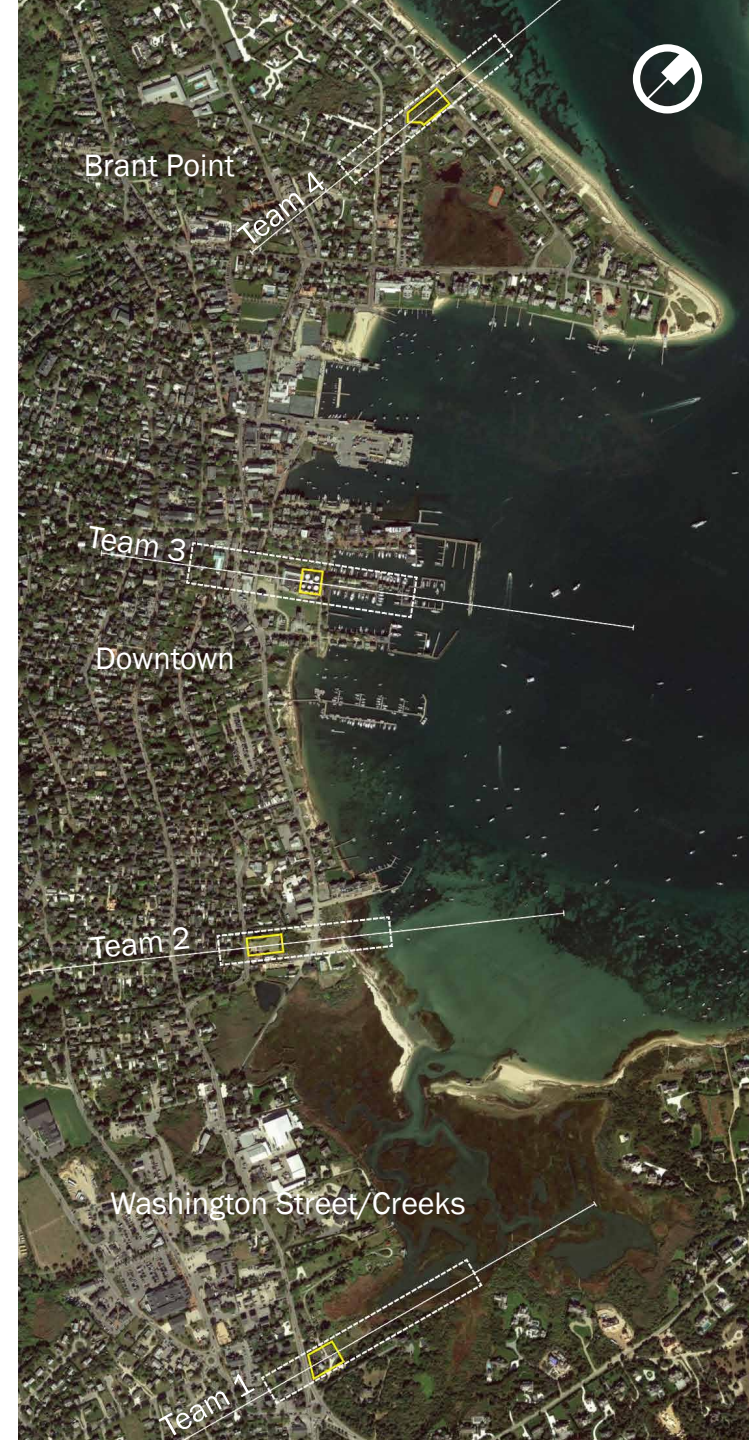
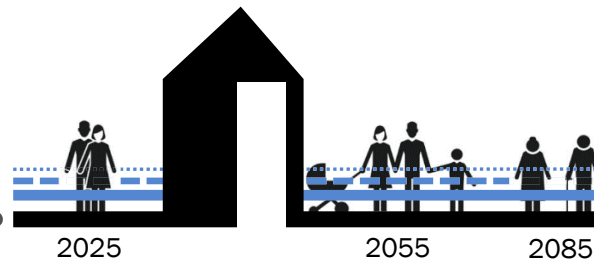
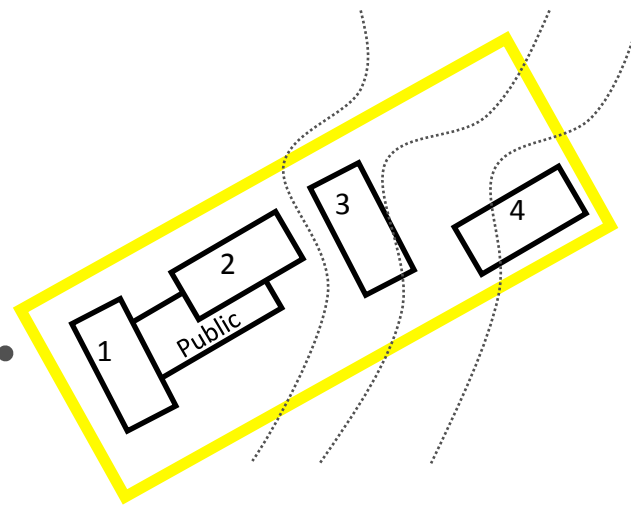
Teams of 4 developed an adaptation approach relevant to the broader urban context.

4 Shared Sites:

Develop "agreements" that frame a site strategy for 4 independent dwellings and 1 shared public/commercial program.

16 Dwellings:

Individual design of 2,000sf dwelling. "Tested" over 3 generations of occupation.

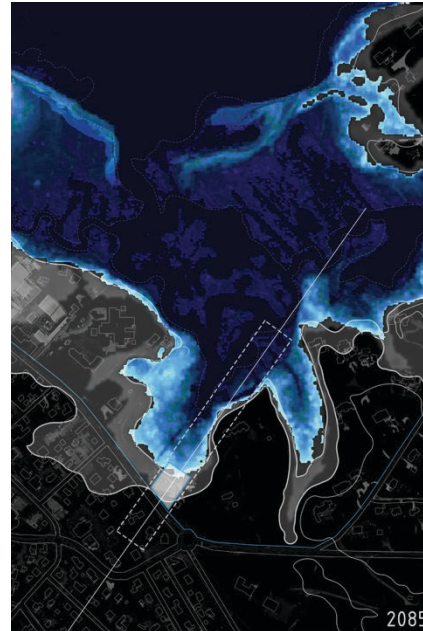
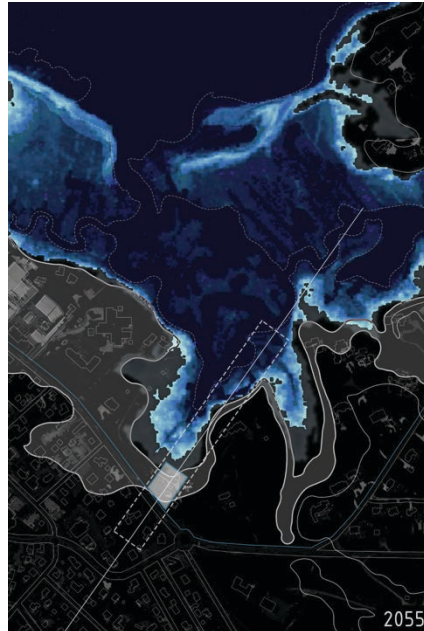


TEAM 1: Marsh Fellows

Celine Haddad
Chris Rubio
Alex Boucher
Ana Hernandez

Observation/critique:

The marsh extends directly off of the harbor, making it very susceptible to immediate flooding and storm surge. Long term projections of sea-level rise show a steady, inland approach of water, although the numbers aren't certain. It is important to design an architecture for this constant state of indeterminacy.

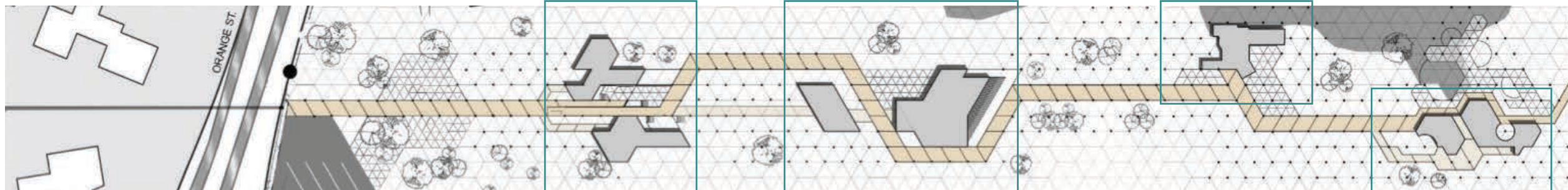


TEAM 1: Marsh Fellows

Celine Haddad
Chris Rubio
Alex Boucher
Ana Hernandez

Thesis/Position:

Our proposal engages the site in order to address the difficulty of sea level rise by preventively establishing a module that is kinetically able to withstand temporary and permanent flooding. Through a unifying elevated boardwalk we have decided to create a new occupational plane in response to sea-level rise which is capable of retreating in-land if necessary.

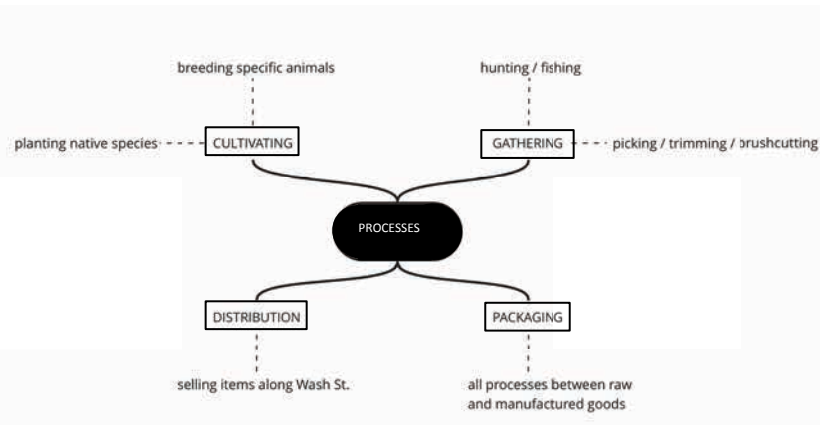


TEAM 1: Marsh Fellows

Celine Haddad
 Chris Rubio
 Alex Boucher
 Ana Hernandez

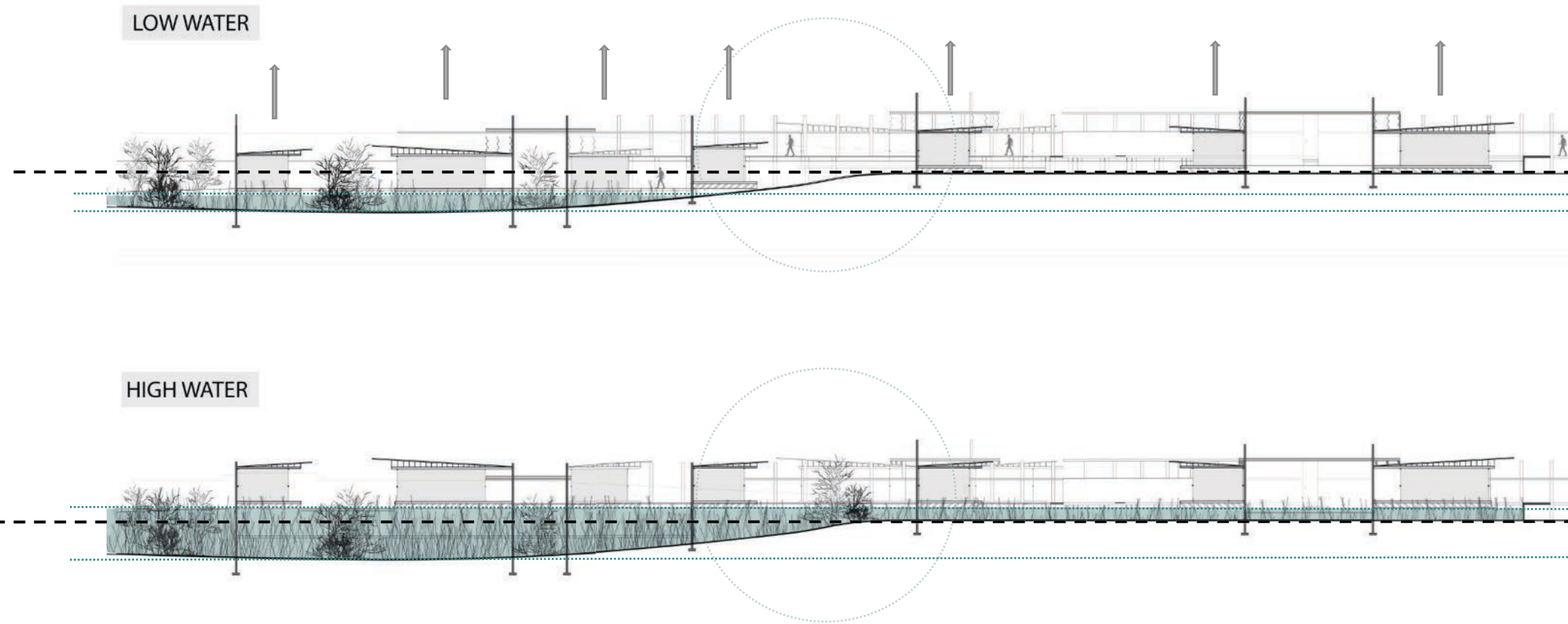


Farm-to-table is a social movement which promotes serving local products at restaurants, preferably through direct acquisition from the producer (which might be a winery, brewery, ranch, fishery, or other type of food producer).



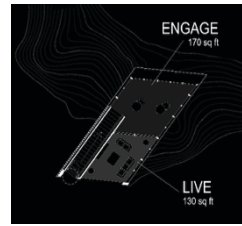
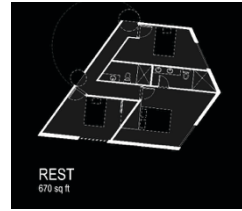
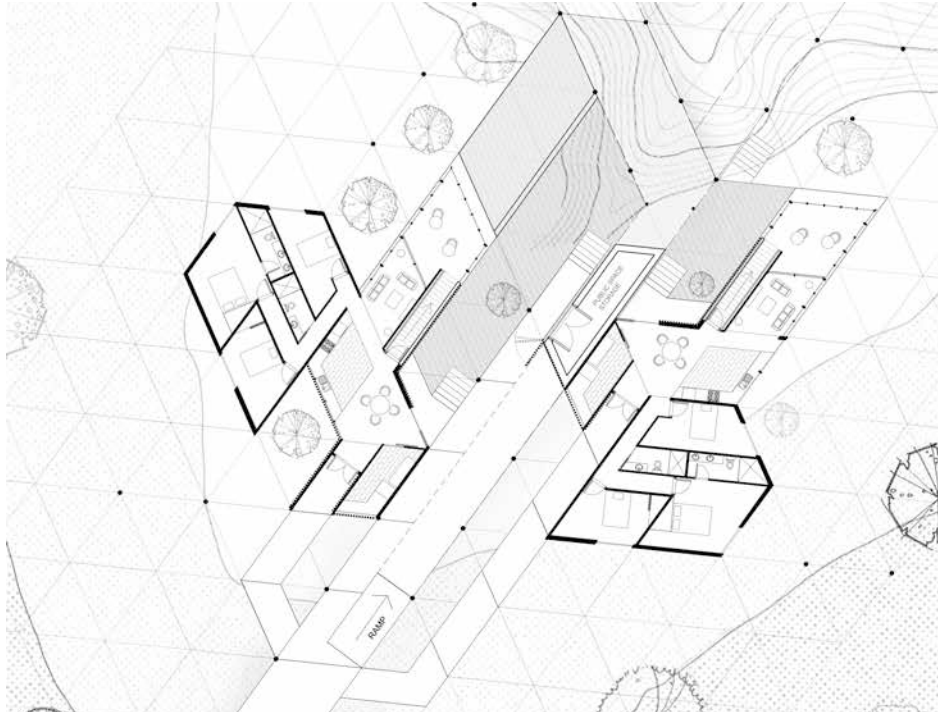
Agreements + Response

- Individual residencies will arise from different configurations of the established module.
- Each residency will come up with a dynamic system to translate vertical change in water to a vertical change in dwelling.
- Each residency will contain some portion of the marsh market program.



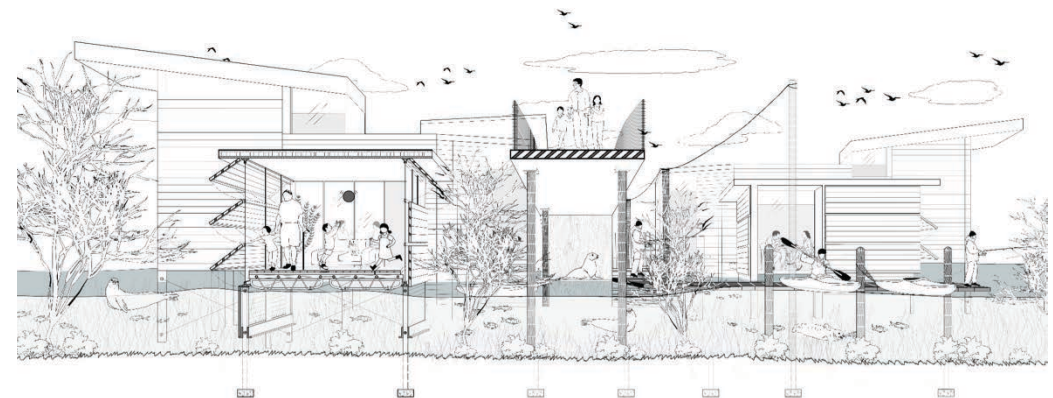
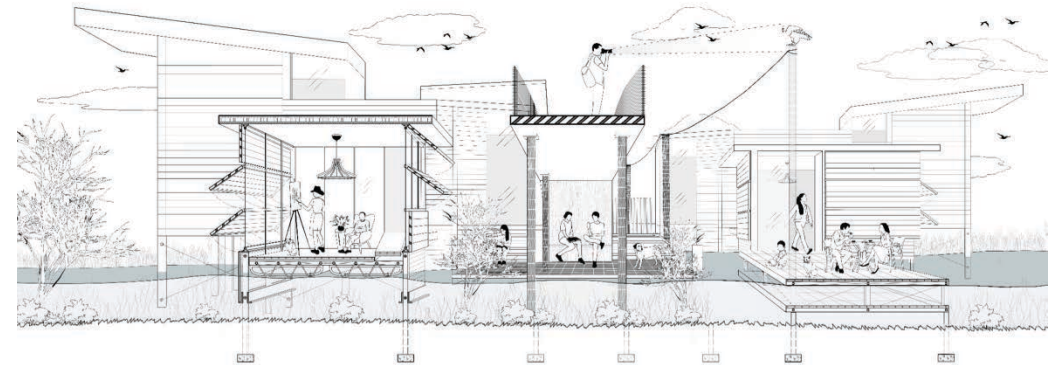
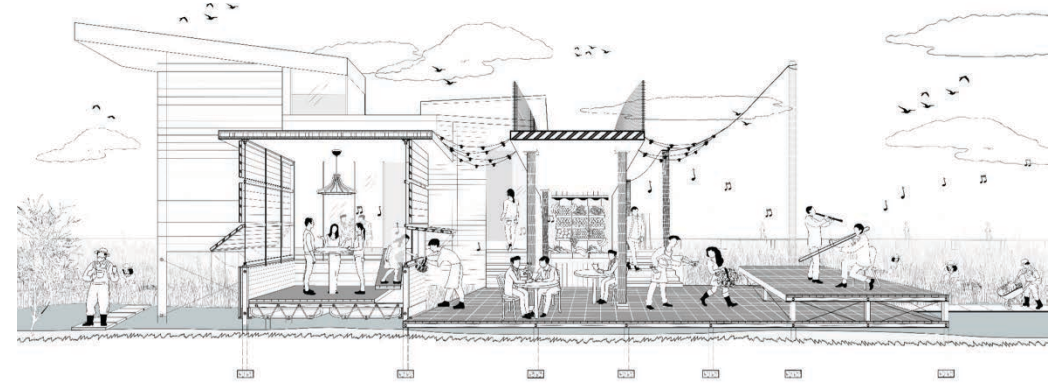
Celine Haddad | The Deconstructed House

exploring modularity through functions of dwelling

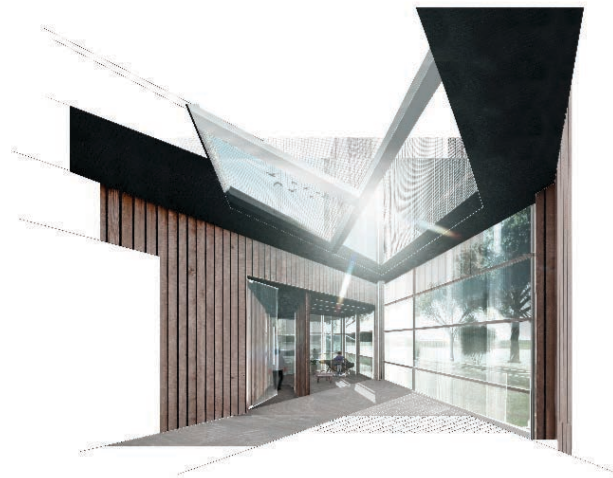


LIVE
130 sq ft

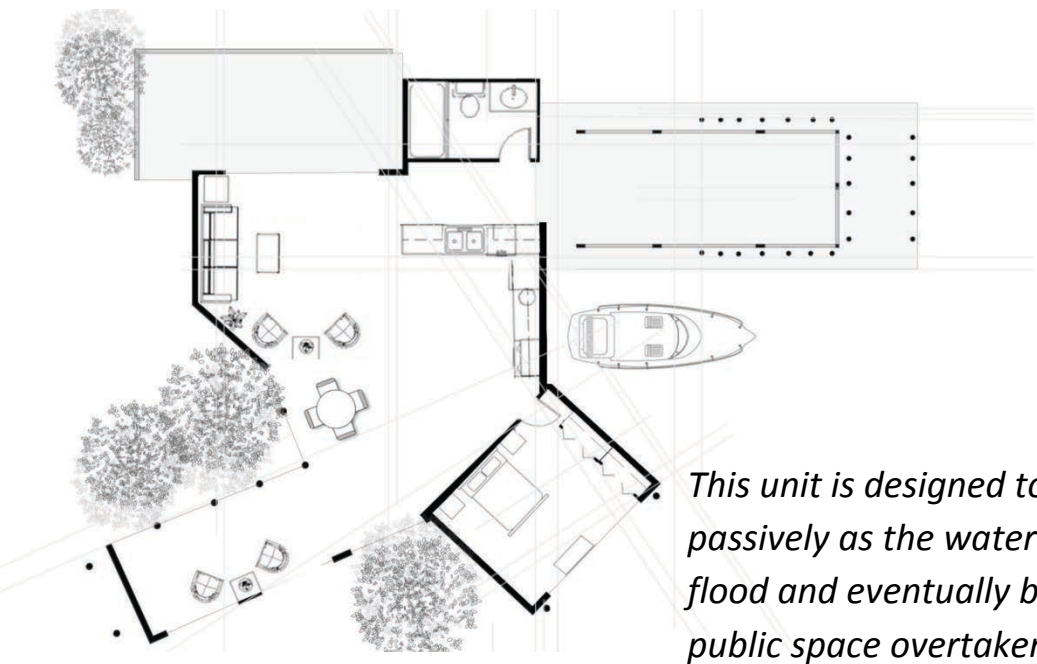
interconnection or separation via changes in water



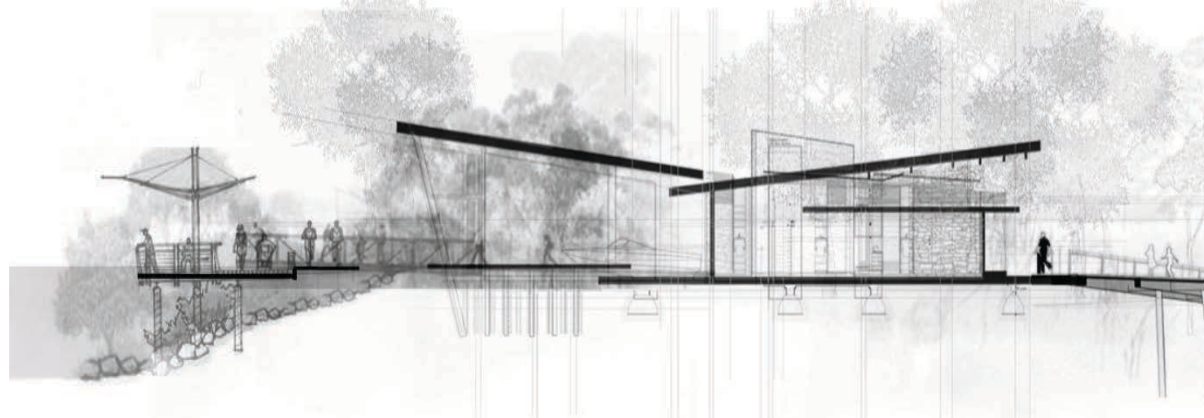
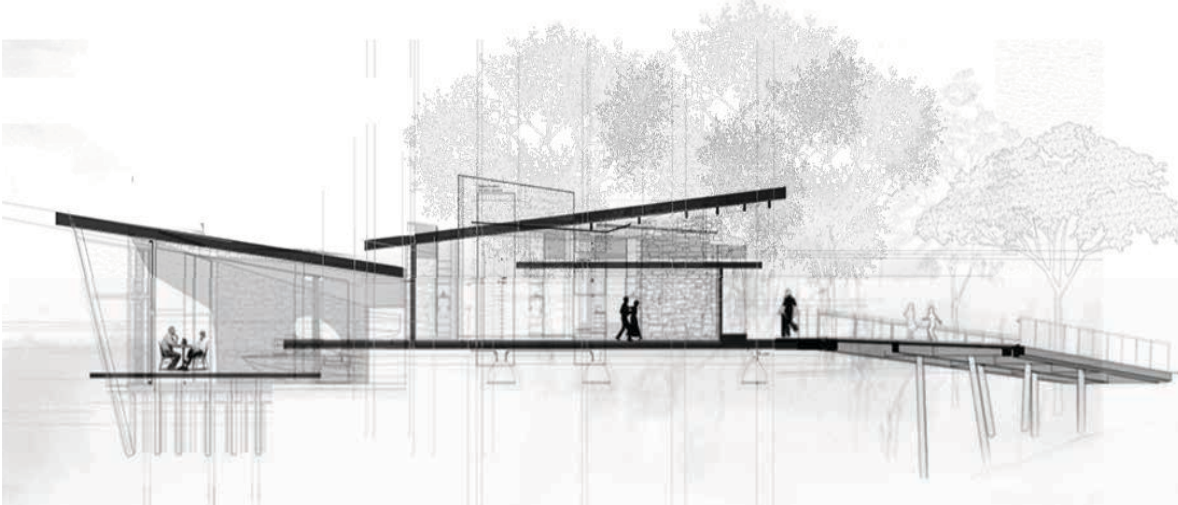
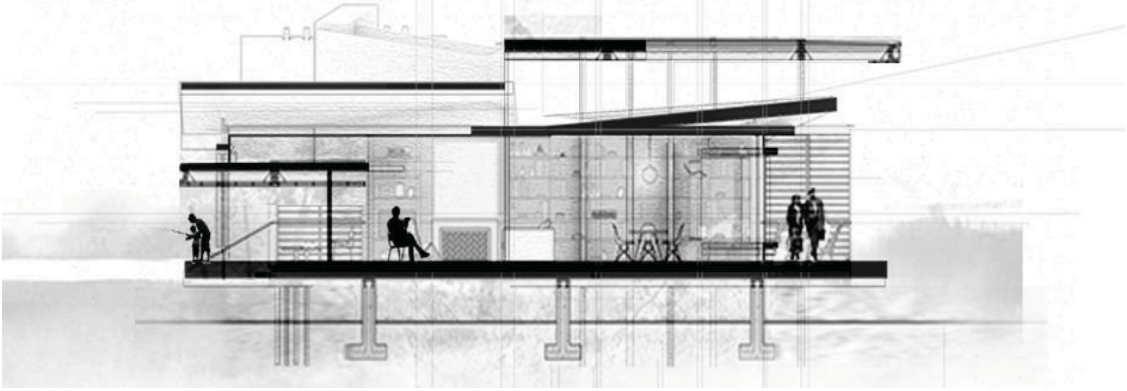
by deconstructing the house into its functional modules, we are able to delegate an active response to SLR for each function



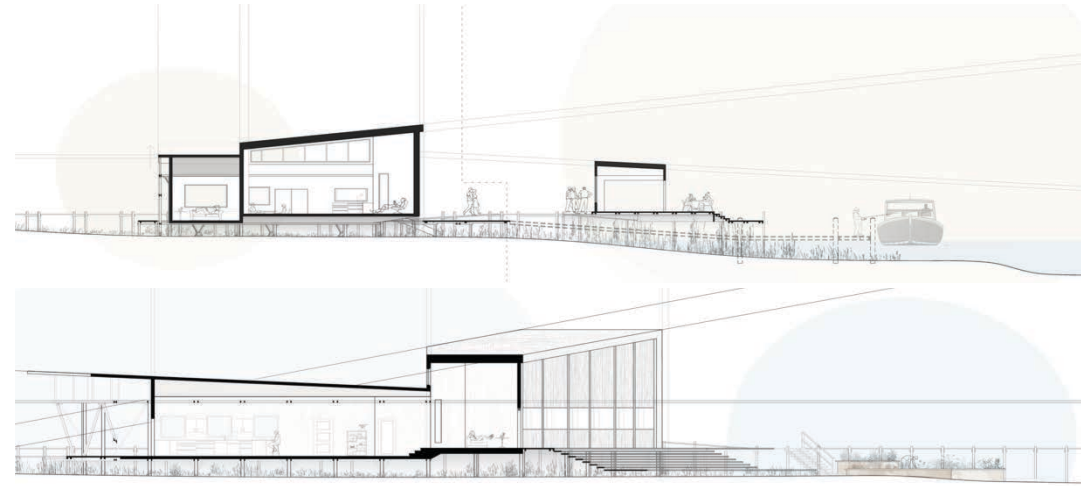
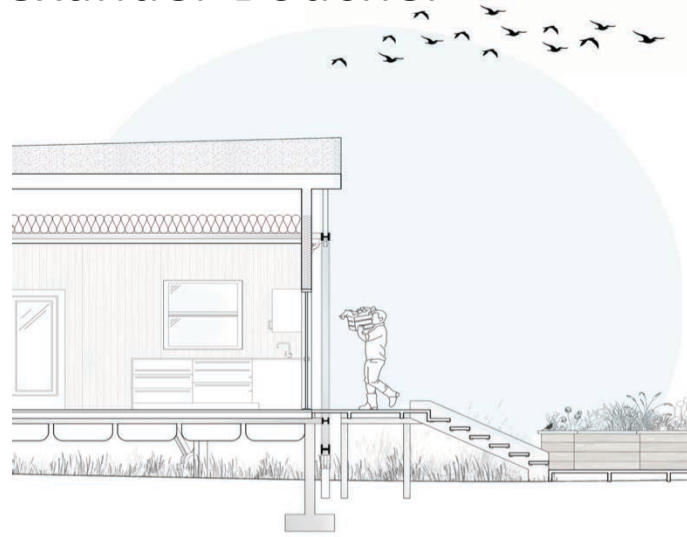
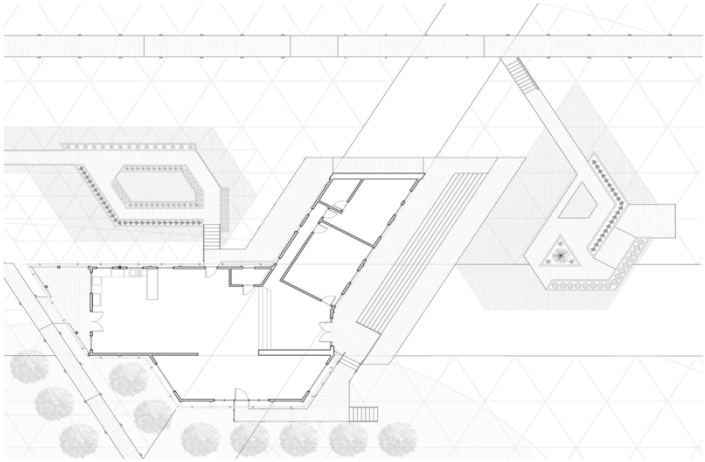
Ana Hernandez | The flood house



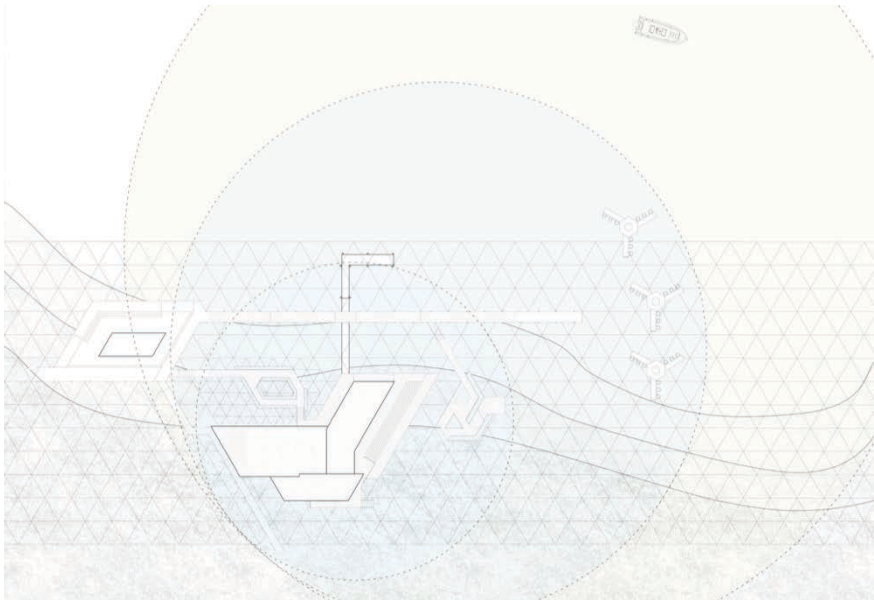
This unit is designed to change itself passively as the water rises, admitting flood and eventually becoming a public space overtaken by nature.



The Caretaker's Home | Alexander Boucher



A study in adaptive land use

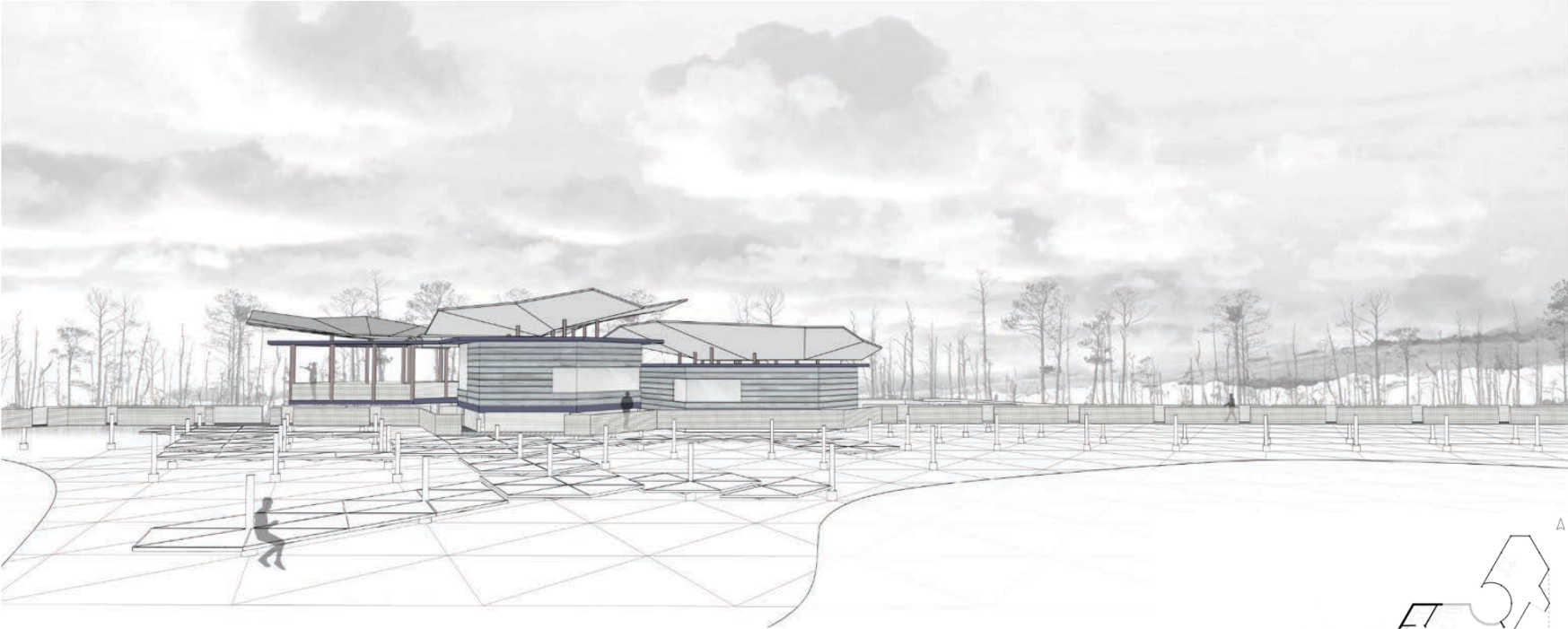
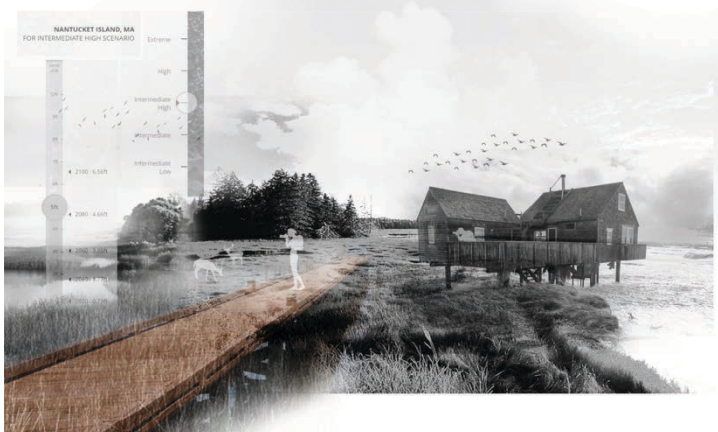


Using sea level rise as an invitation to journey outwards

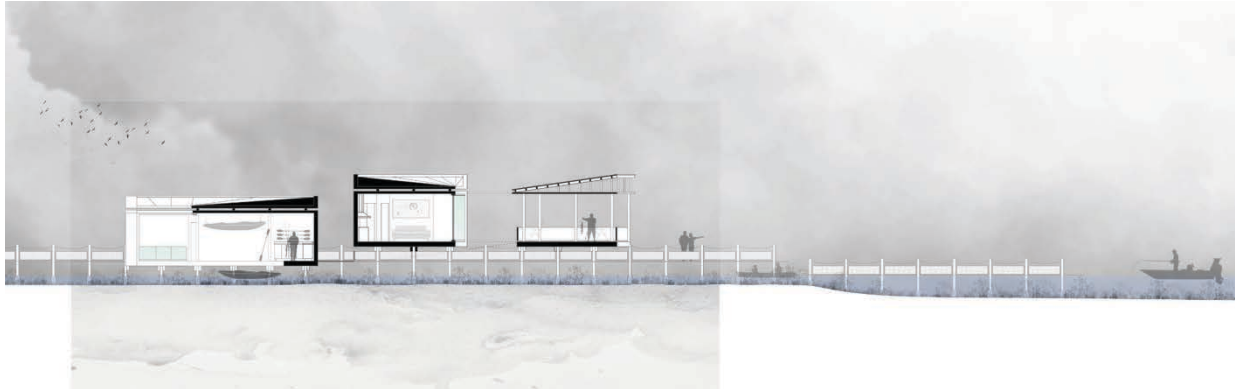


Christopher Rubio | House in the Marsh

Adjusting to the erratically changing weather and island environmental conditions.



The people of Nantucket will have to sacrifice some of their lifestyles to be able to adapt to the water. From these losses come new ways of living. Ties to nature are as strong as ever.



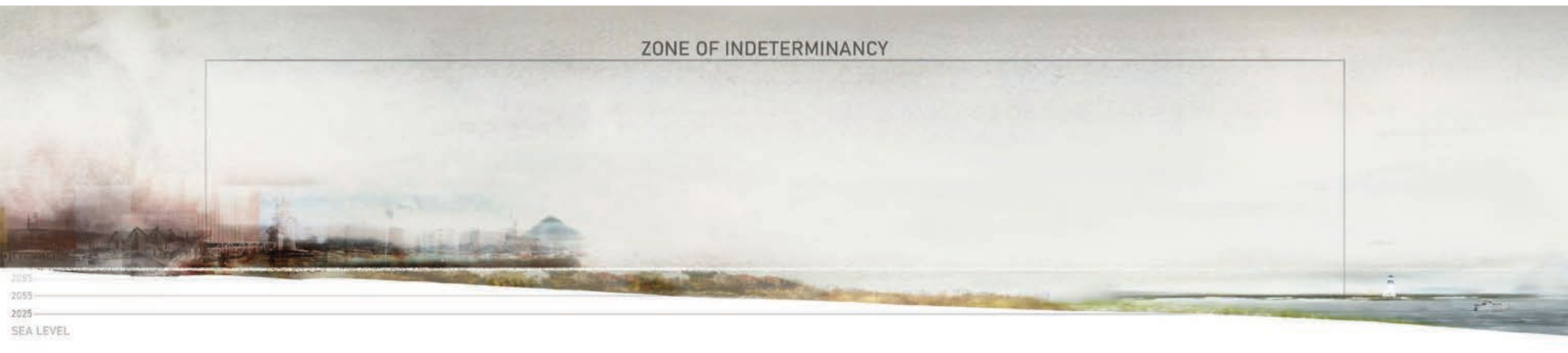
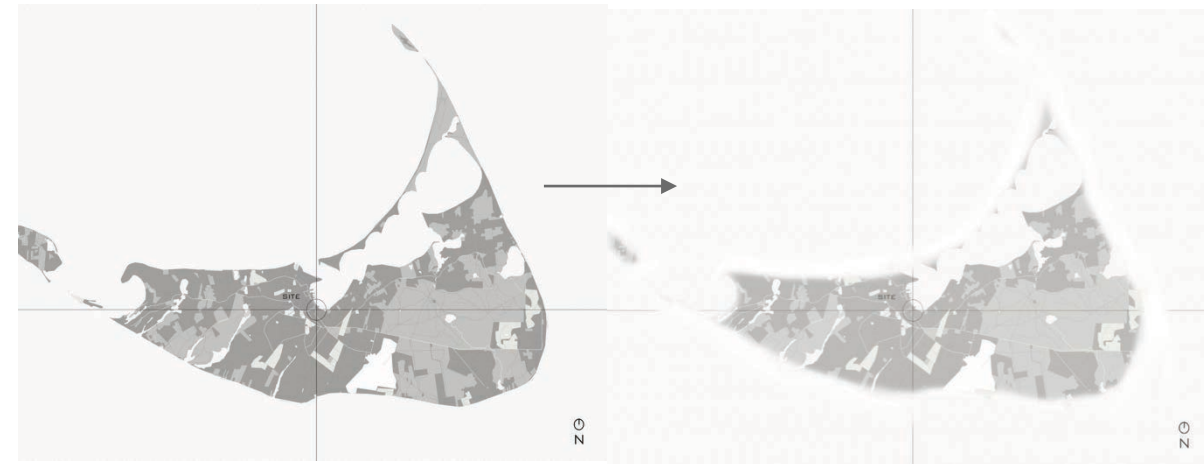
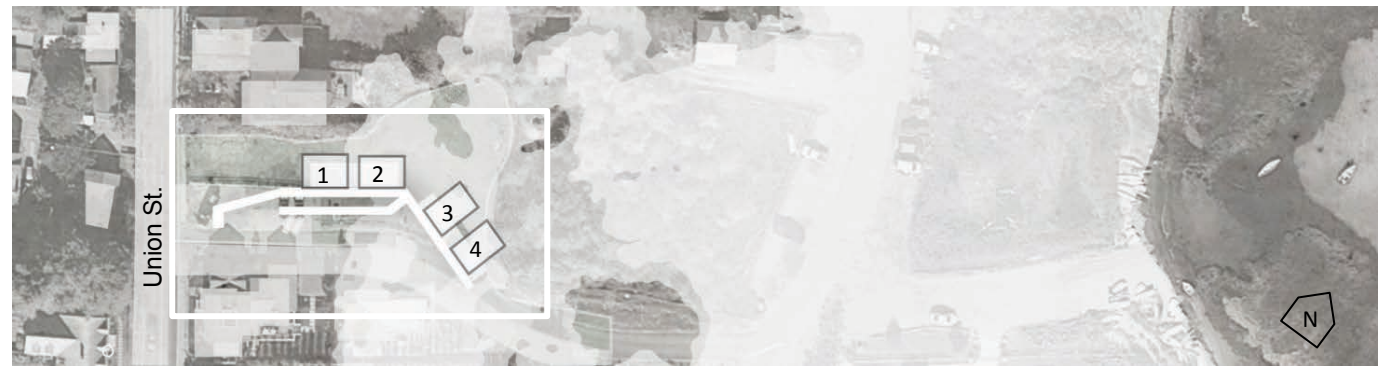
Team 2:

Engaging an Indeterminate Coastal Zone

Andrea Aristiguieta, Andreina Sojo, Gizangely Marrero, Morgan Mulholland

Observation/critique:

The success of Nantucket is strongly tied to its real estate, historic architecture, and its relationship to the ocean. Historically, land and water activities have occurred exclusively to each other. A traditional map distinguishes what is land and what is water by a hard edge at the coast. We believe that between land and water is not an edge but an immensely dynamic and indeterminate zone. Within this zone, natural systems such as salt marshes create a transition and a protective barrier between water and upland. Nantucket's ecosystem is most vibrant and most vulnerable within this changing zone. The urban development along the coast is enriched by housing, commercial, and historic areas. As the sea level is rising, Nantucket's culture and ecology will need to adapt.



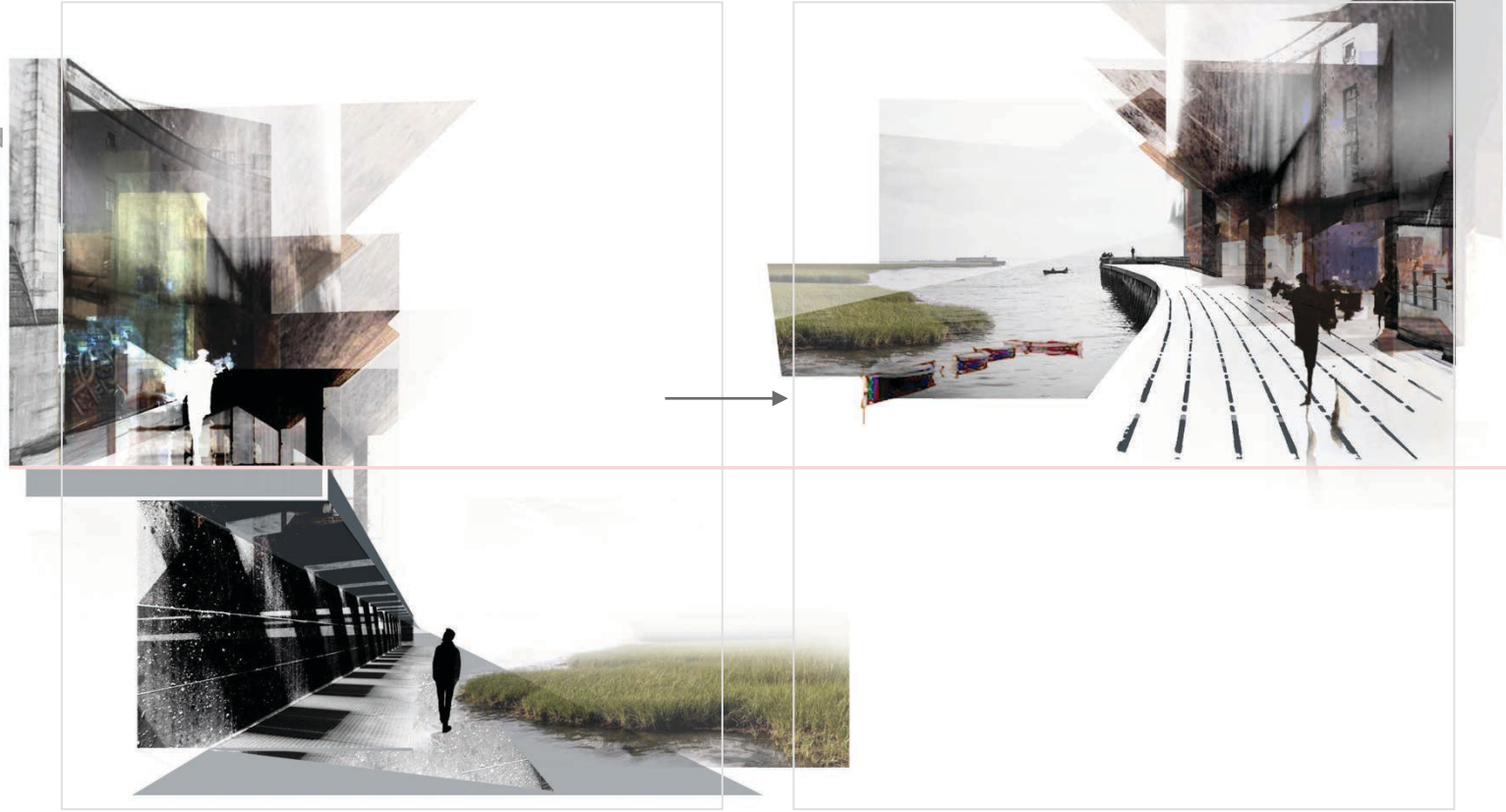
Team 2:

Engaging an Indeterminate Coastal Zone

Andrea Aristiguieta, Andreina Sojo, Gizangely Marrero, Morgan Mulholland

Response/ Team Agreements:

- Allows for the frequent appearance and disappearance of water.
- Shifting program at the ground level.
- Responds to the variety of conditions surrounding the site (infrastructure, commercial, residential, historic architecture, marsh)
- Minimally invasive.



Union St.

Sayle's Seafood Market

Island Art Gallery

Dwelling 1

Dwelling 2

Dwelling 3



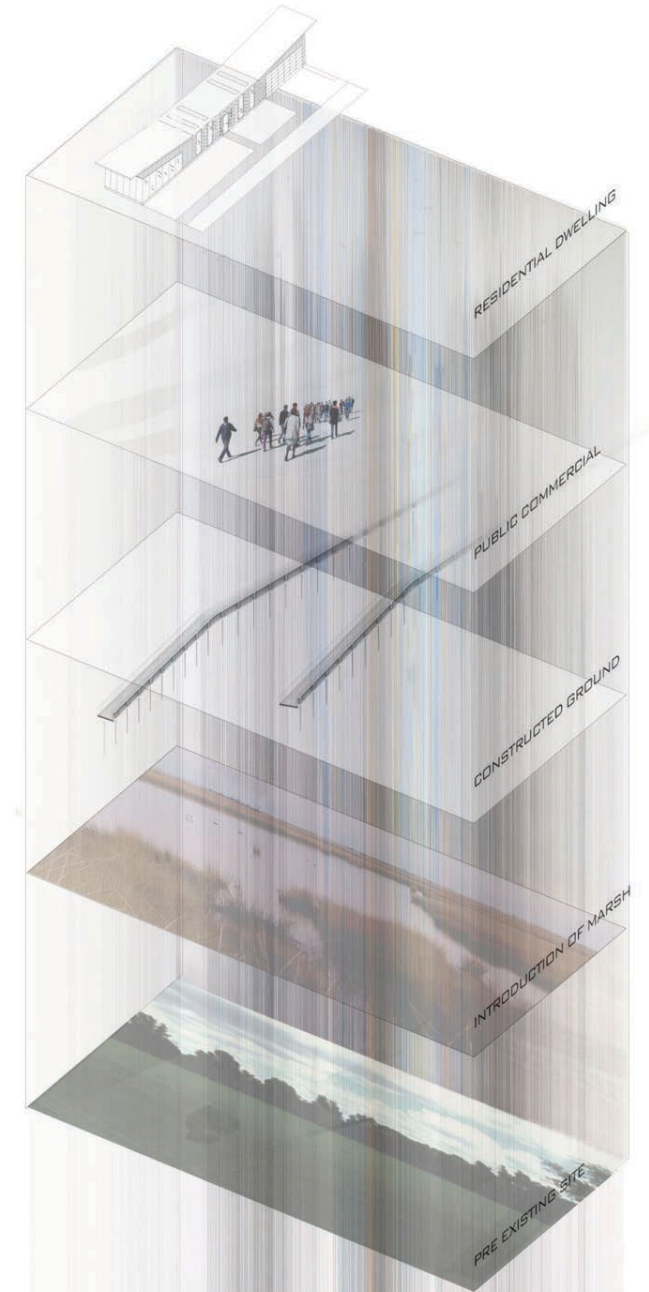
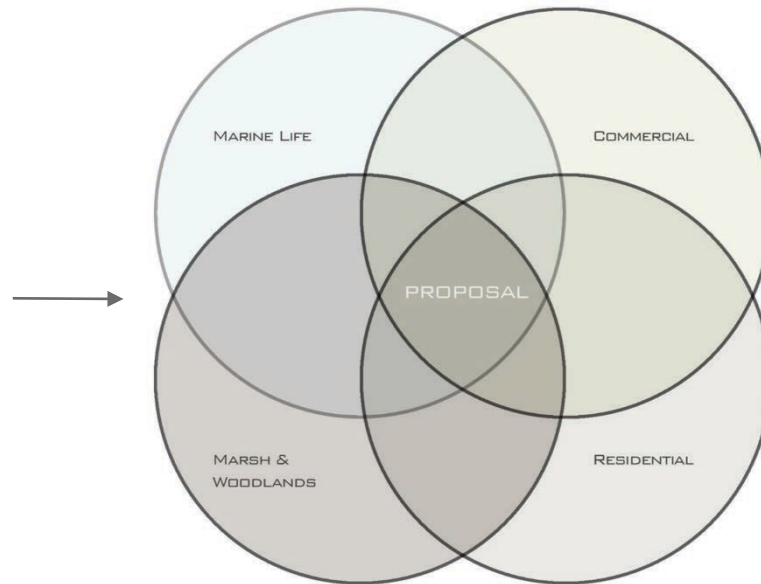
Team 2:

Engaging an Indeterminate Coastal Zone

Andrea Aristiguieta, Andreina Sojo, Gizangely Marrero, Morgan Mulholland

Thesis/Position:

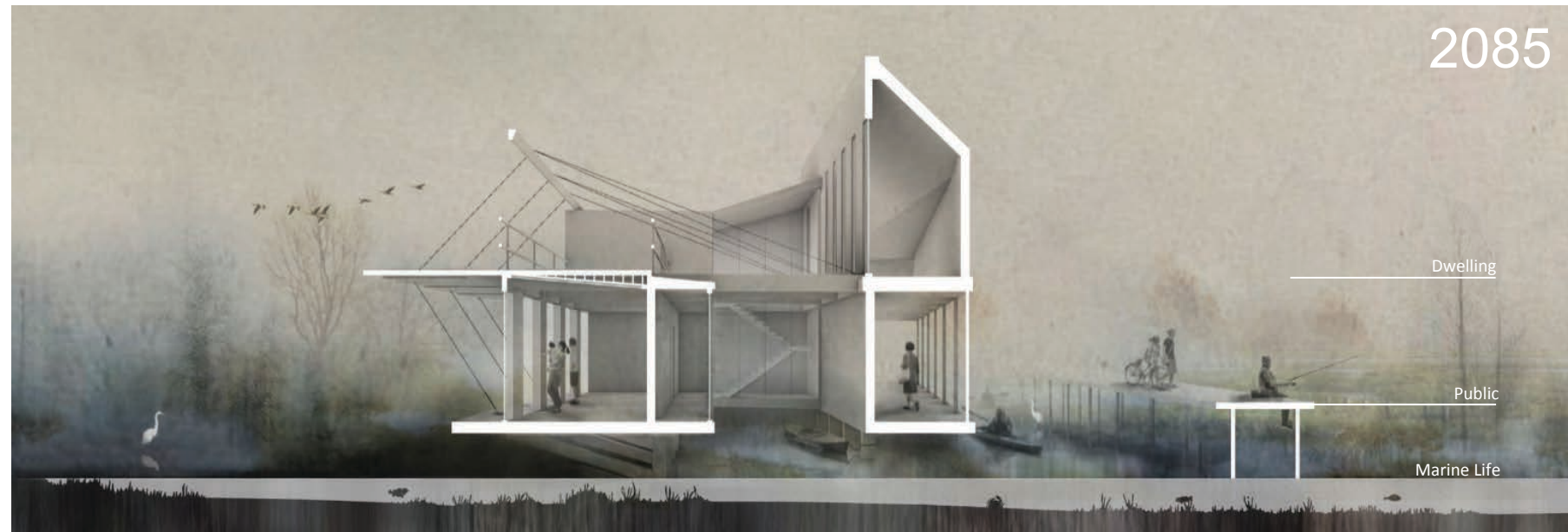
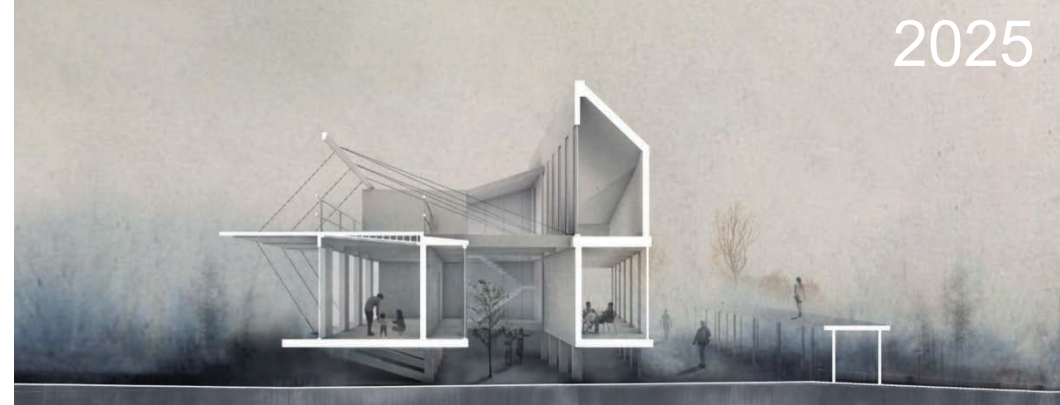
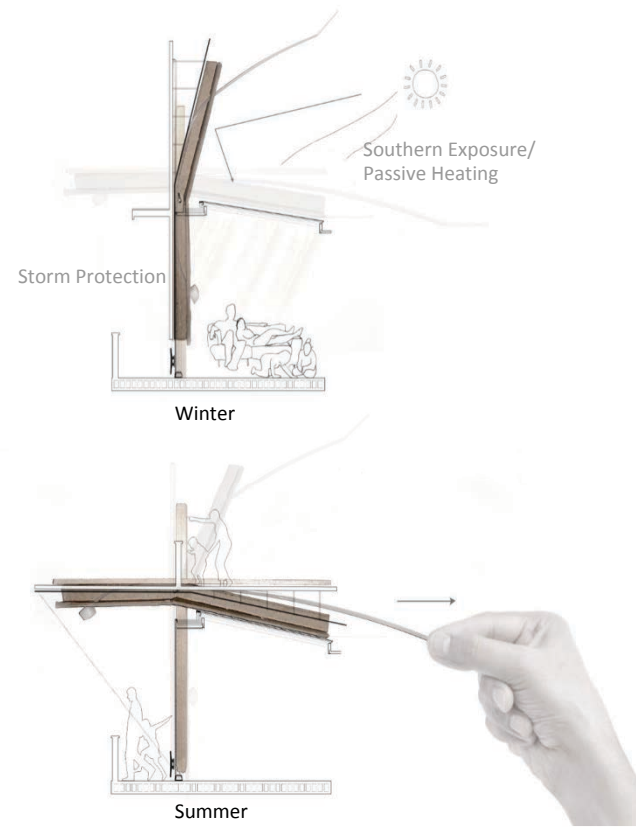
Between Union Street and Washington Street, we are proposing an interface that stitches together the vibrant marine ecosystems with an equally vibrant dwelling community. The proposed community is comprised of the various, pre existing surroundings of the site and is supported by a minimally invasive plinth raised out of harm's way of the projected rising sea level. This proposal serves to allow the continuation of Nantucket's rich culture while celebrating and protecting its natural ecosystems. Over time, the ground level will be taken over and given back to the encroaching seas and it's marine life.



Morgan Mulholland | Dwelling 1

The Heirloom House

This dwelling adapts to an annual seasonal change as well as long term environmental changes through its tectonic systems



- 6. ROOFTOP AREA
- 7. DINING ROOM
- 8. KITCHEN
- 9. LIVING ROOM
- 10. BALCONY

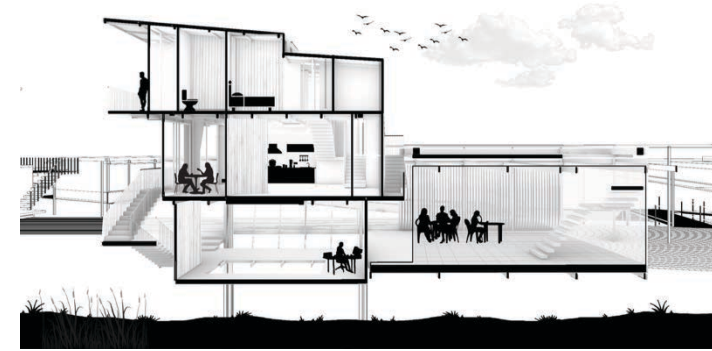
Gizy Marrero | Dwelling 2

Levels of Exposure

The first level of this dwelling is exposed to the natural conditions. This space is intended to allow the dwelling occupants to experience these conditions without needing to exit the dwelling or needing to enter the public space.

By 2085 in the proposed narrative, this dwelling is occupied by a team of marine biologists who are utilizing the exposed first level to access and study the marine life that has taken over the ground level.

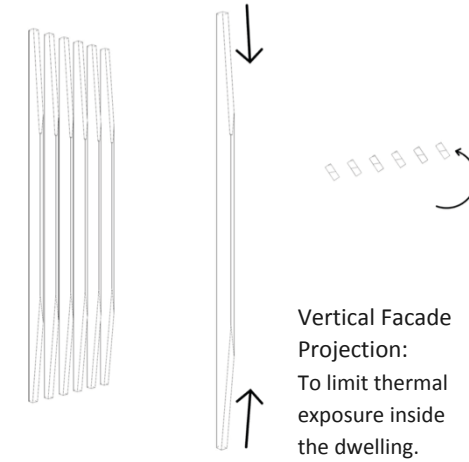
2025



2055



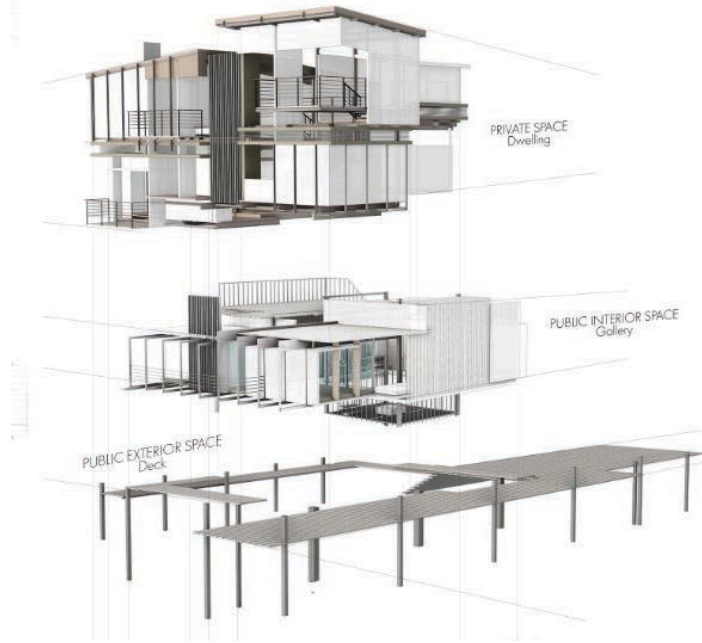
2085



Andrea Aristiguieta | Dwelling 3

Dwelling between Levels

Spaces transition vertically from natural to public to private



Rather than rejecting the changing conditions of the site, this dwelling seeks to create new ways of occupation by seamlessly stitching the constructed to the natural through a vertical layering system.



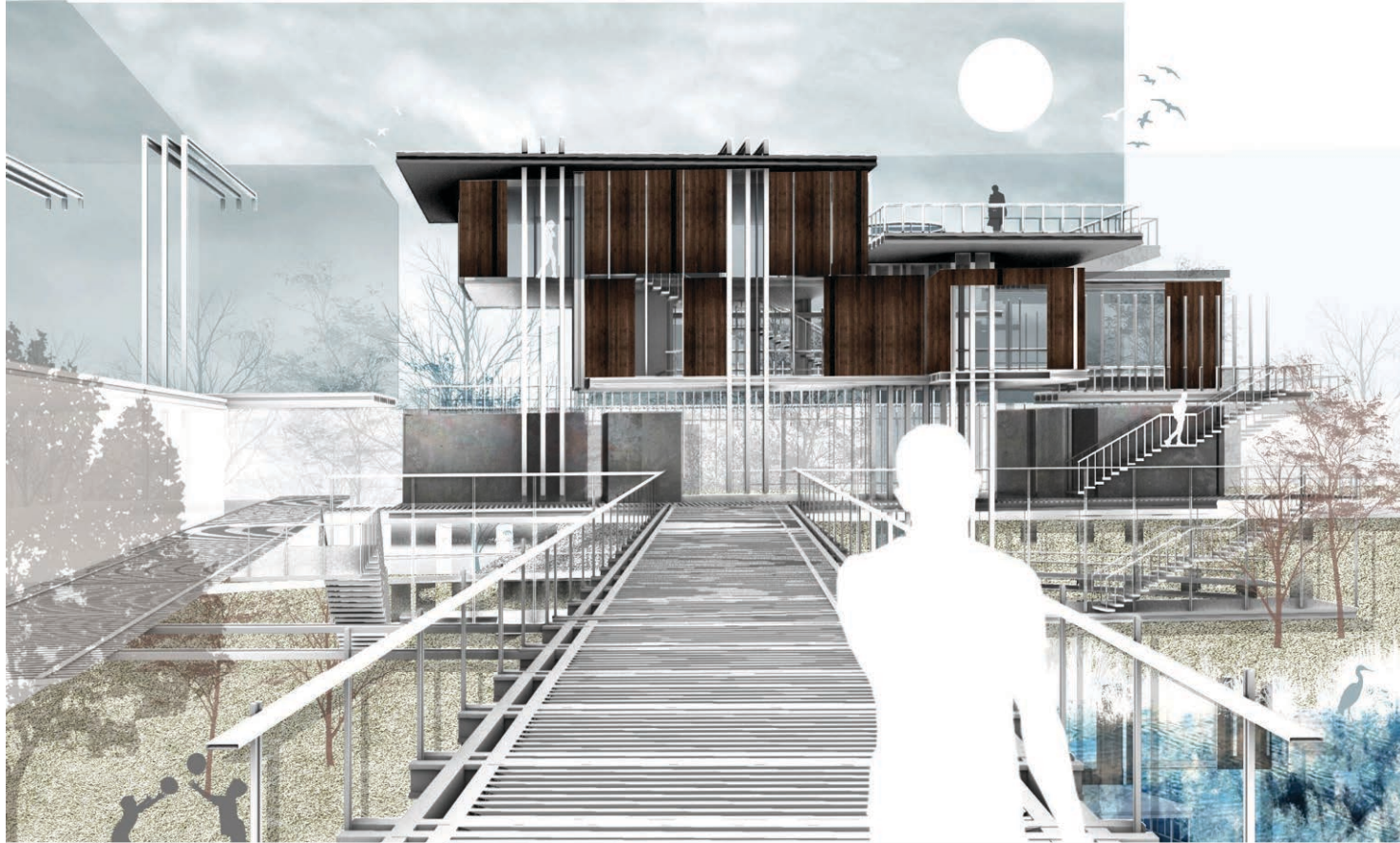
Interior of Dwelling



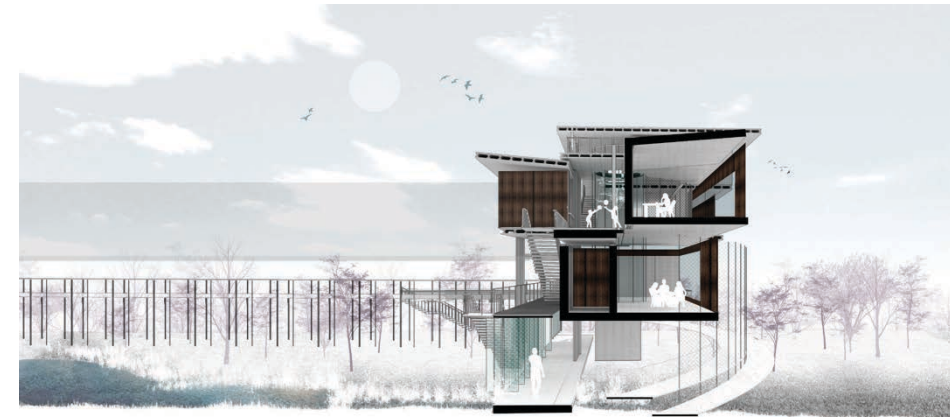
Andreina Sojo | Dwelling 4

The 360 House

Connecting with Nantucket's natural areas and architectural traditions



Winter



Spring



Summer

The housing looks to encourage human interaction with Nantucket's fauna and flora by allowing the occupants to adjust the architectural elements of the dwelling to experience seasons.



First Floor Plan

Team 2:

Engaging an Indeterminate Coastal Zone

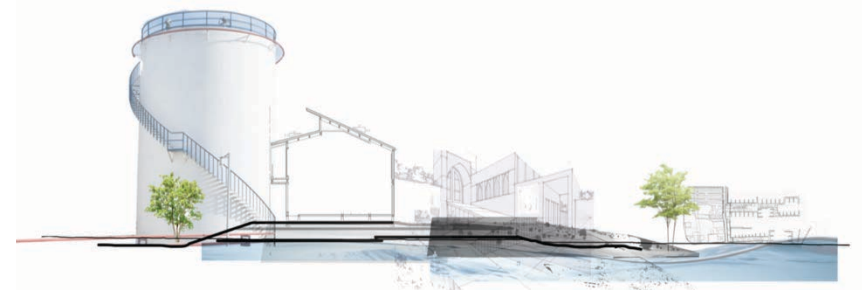
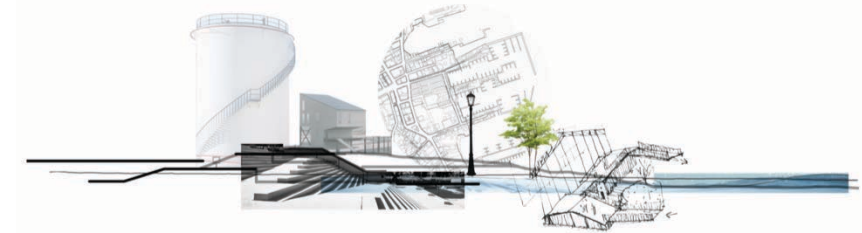
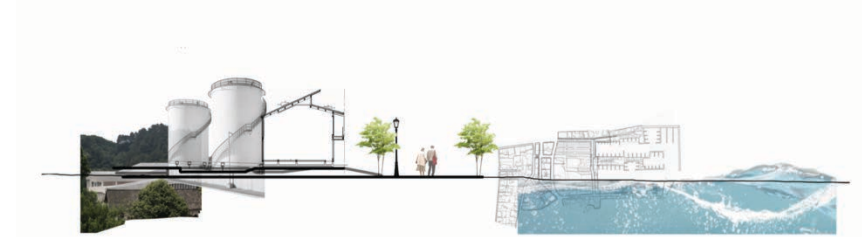
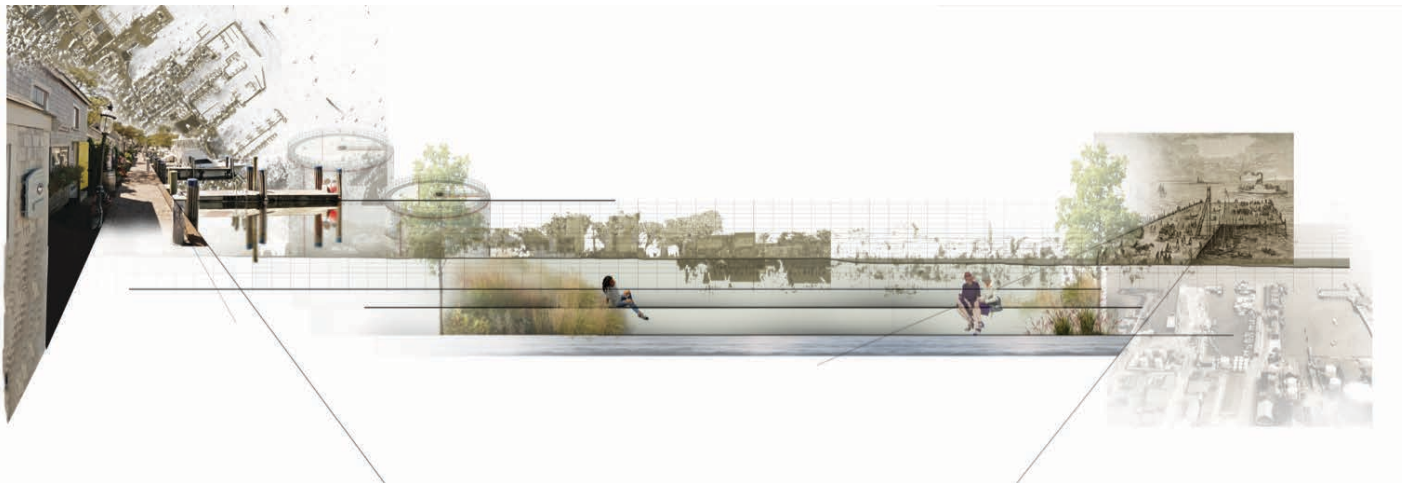
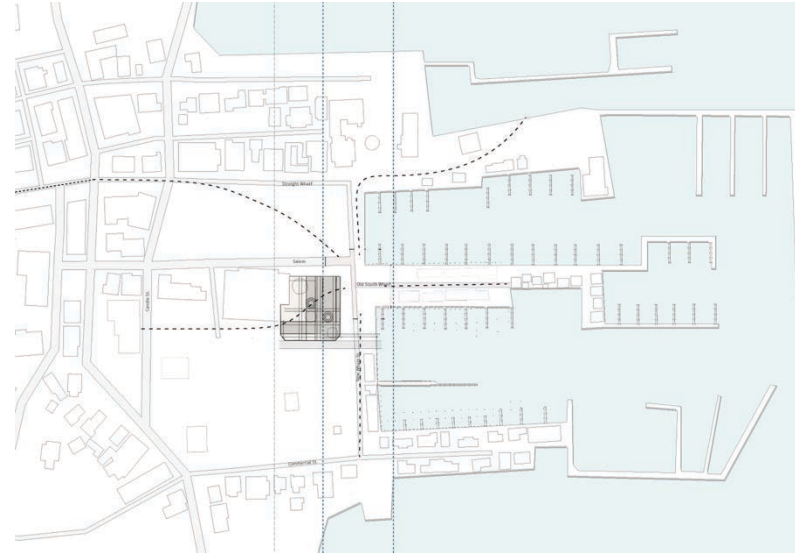
Andrea Aristiguieta, Andreina Sojo, Gizangely Marrero, Morgan Mulholland



TEAM 3: Beinecke Square

Avery Dunavant, Sophia Hernandez, Camila Moreno, Moises Villanueva

The goal of our project is to confront sea-level rise by voluntarily inviting water into the site rather than more traditional methods of using bulkheads to reject water. We plan to use the site as an interface between land, water, and Nantucket's industrial history to restore purpose and reimagine the waterfront as a pivotal public access-site.

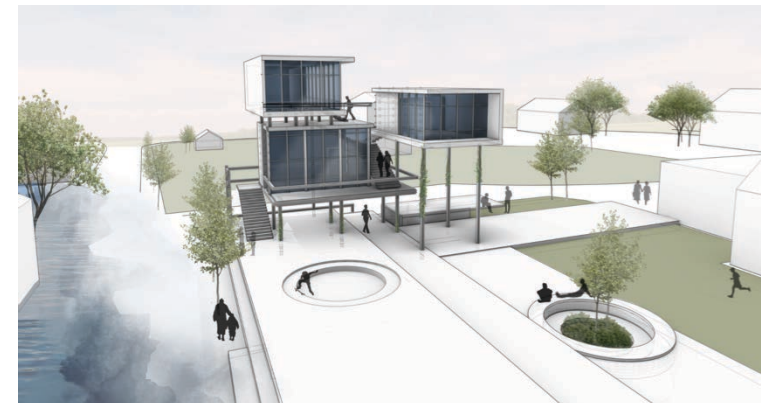
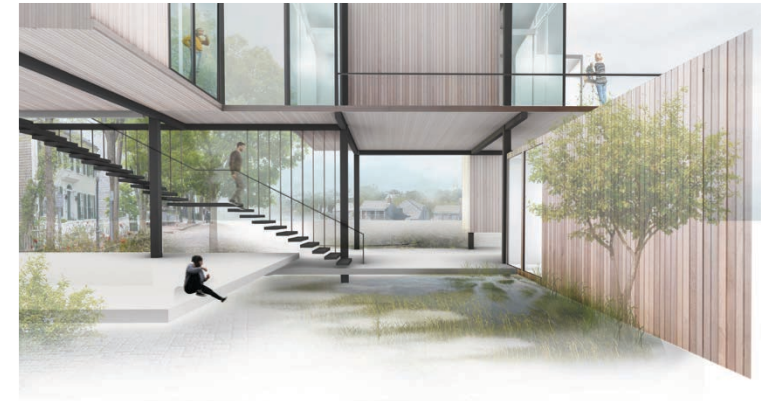


TEAM 3: Beinecke Square

Avery Dunavant, Sophia Hernandez, Camila Moreno, Moises Villanueva

Team Agreements:

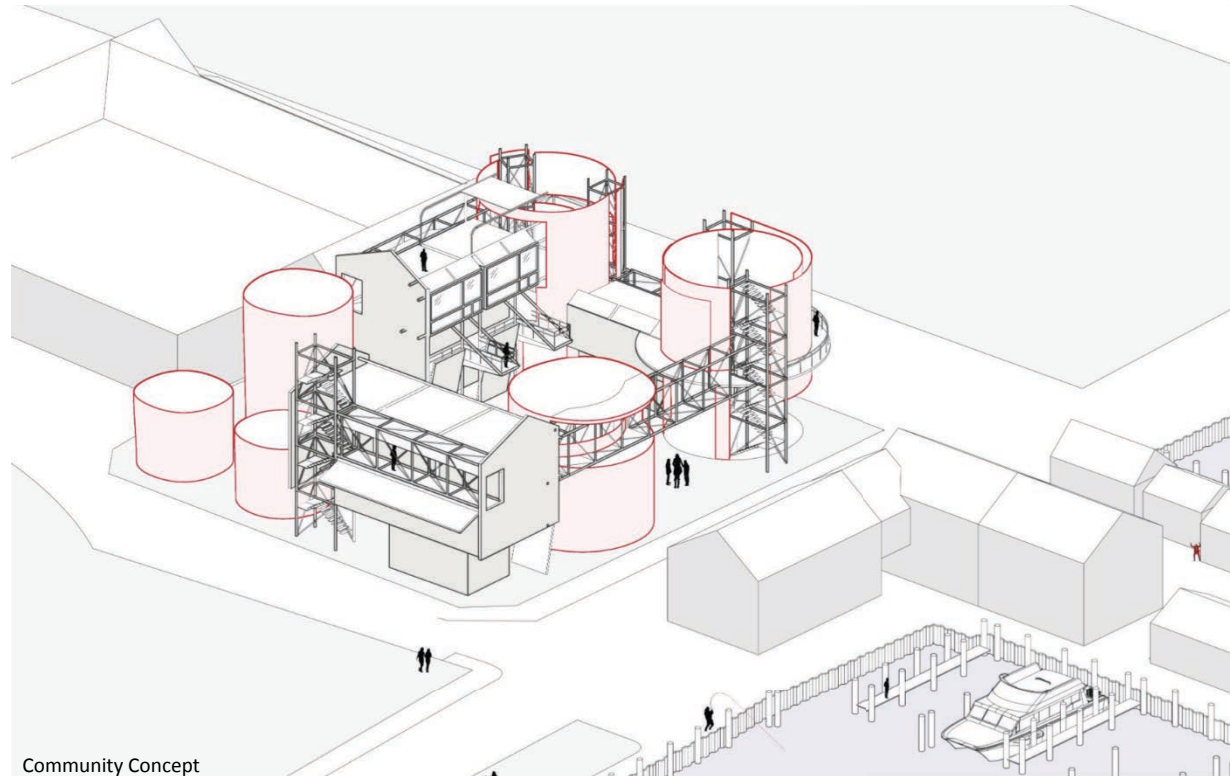
- Use confrontation with water as a way of reconciliation, rather than rejection.
- Have an intentional and designed infiltration of water into the site
- Use the site a convergent hub for pedestrians coming from the surrounding urban context.
- Consider Nantucket's Industrial Era, including consideration of the site's existing oil tanks.
- Employ a three dimensional grid that acts as a facilitator for all agreements.



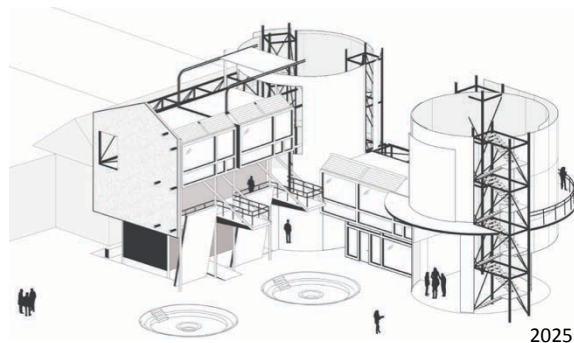
Adaptive Reuse

Avery Dunavant

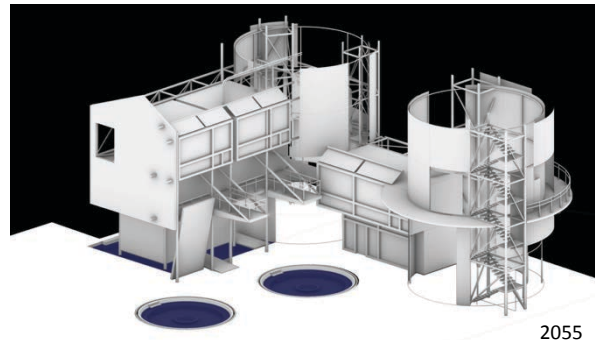
Experimenting with new and unique programs and opportunities for dwelling and space making beyond traditional means of construction. While more formal development proposals like Harbor Place provide more of the same architectural character and aesthetic that Nantucket is known for, the exiting tanks provide ample opportunity for provocative and intriguing design that celebrates the past while planning for a resilient future.



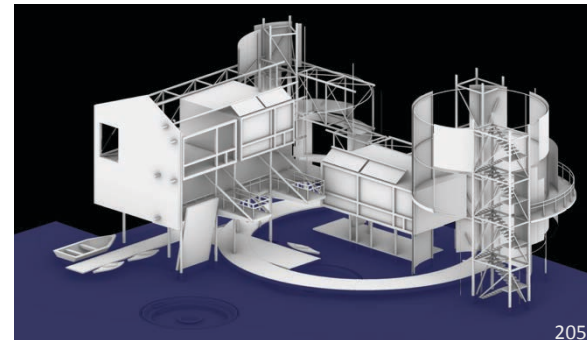
Community Concept



2025

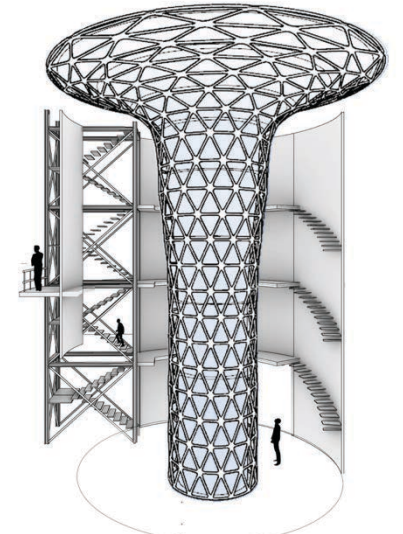


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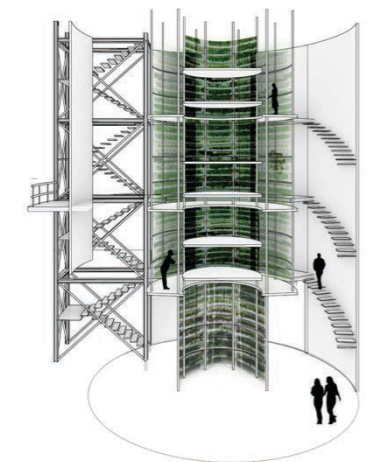


2055

Generational Disassembly



Water Harvesting

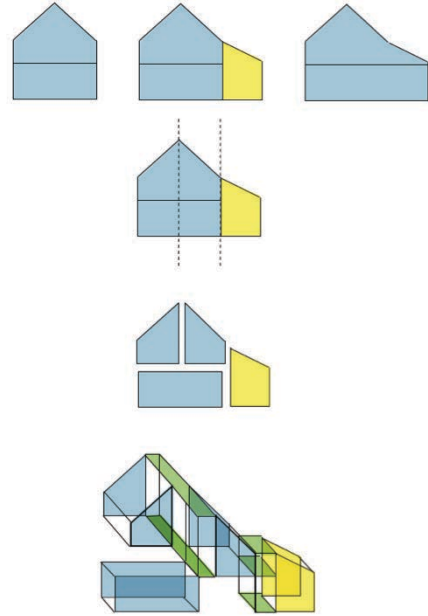


Vertical Farming

Reintegration of Industrial Character with Nantucket Tradition

Sophia Hernandez

The project is an operation of transformation via deconstruction in which the industrial memory, and the possibly unintentional tradition founded by change on the island are integrated into a proposed grid language. The transformative process of the Salt Box form was imitated and deconstructed once again into volumes to format and orchestrate movement upon entrance to the southeast corner of the site. The lifted dwelling forms derived from this deconstruction are bracketed by the structural system so that they act as an overhead condition that guides public space and pedestrian movement below.



Transformation via Deconstruction

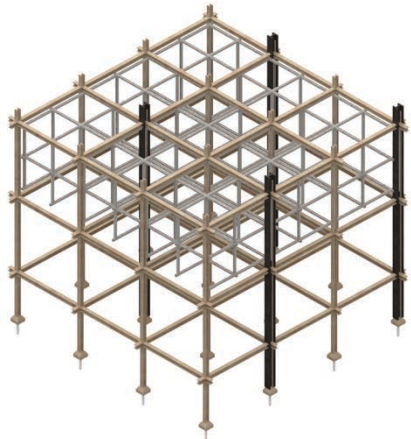
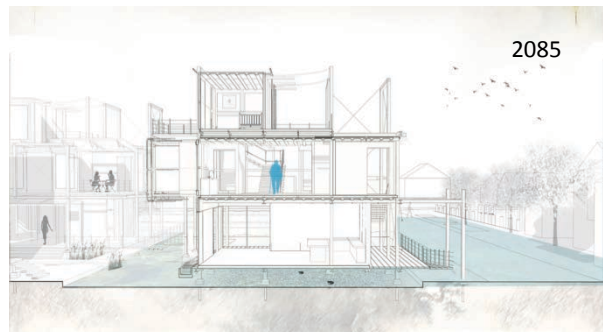
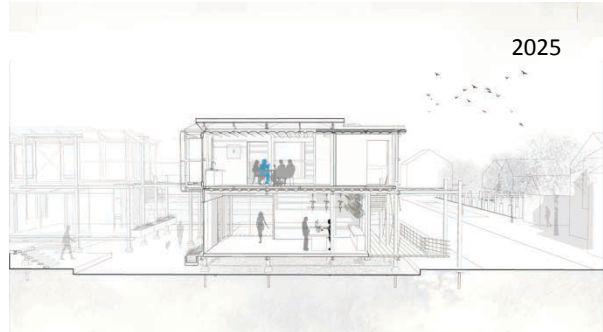
Salt Box Transformation Diagram



Industrial Organized Decay of Man and Land

Moises Villanueva

The use of the industrial grid system allows for the opportunity to create a shared spaces that unite public and private space through the use of multiple programs with different proposed intended inhabitants, creating a sense of intangible heritage and sense of community within the heart of Downtown Nantucket. The ability for a evolving structure allows for a the appreciation of Nantucket's historical footprint as well creating a permanent footing for future applications.



Collectivism



Individualism



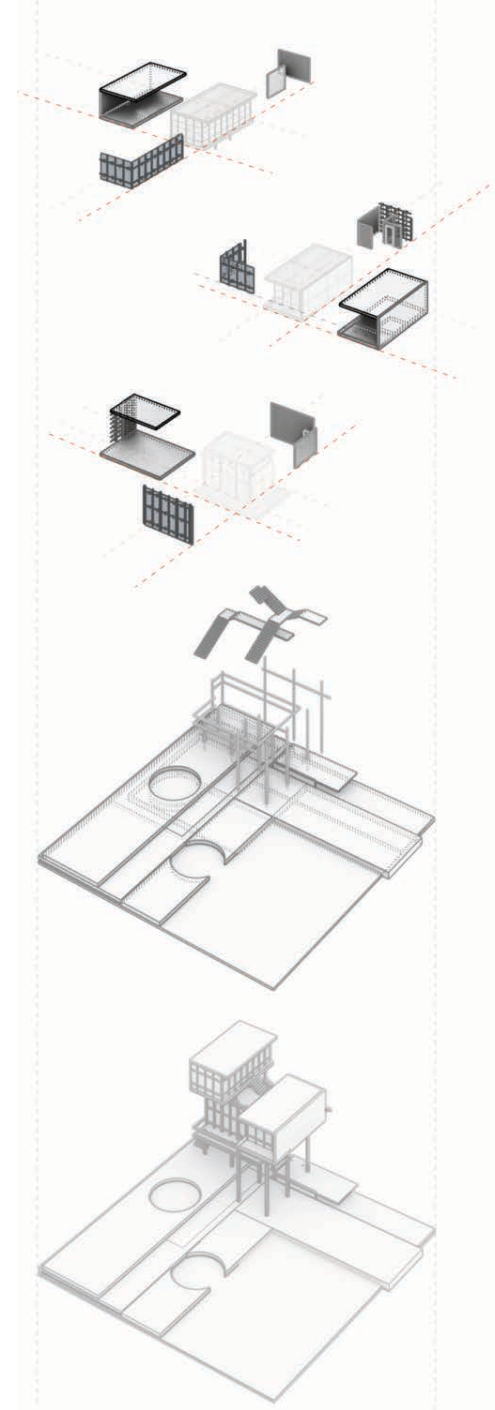
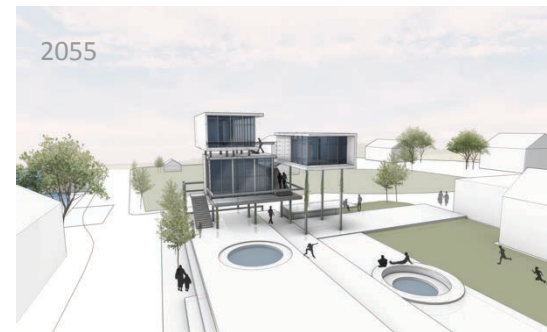
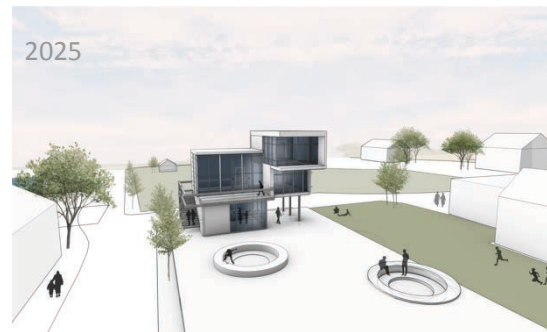
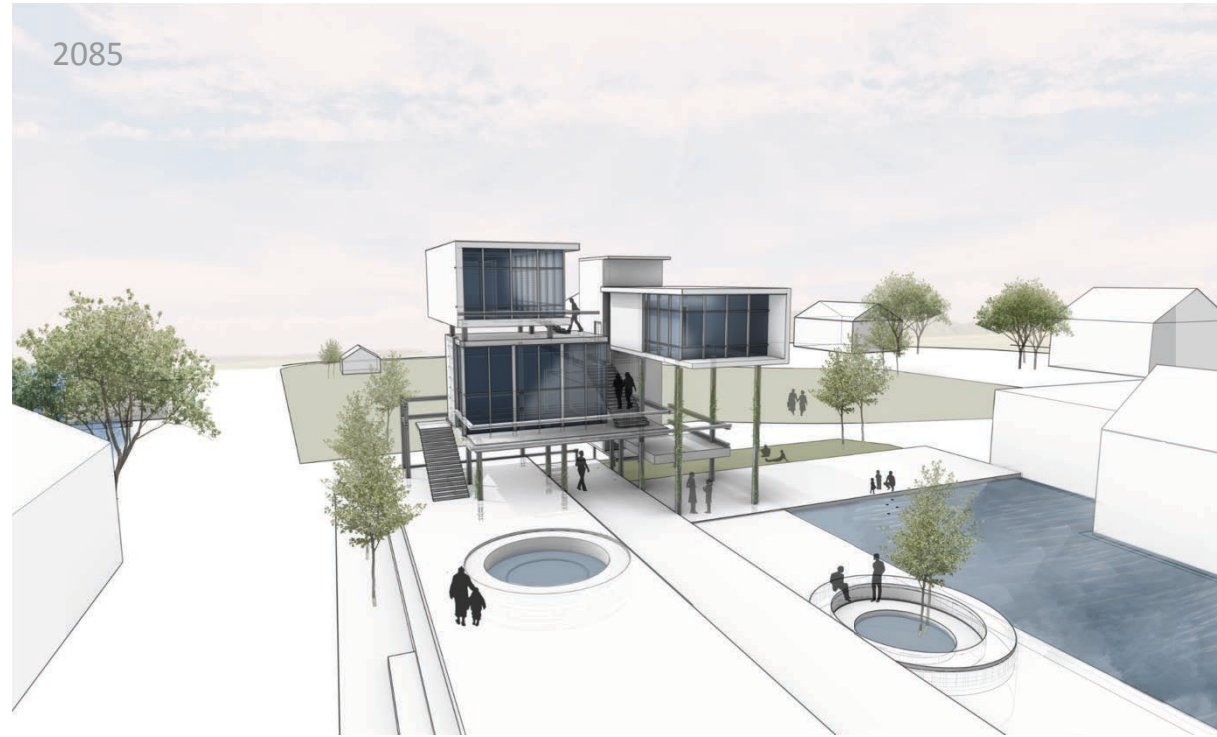
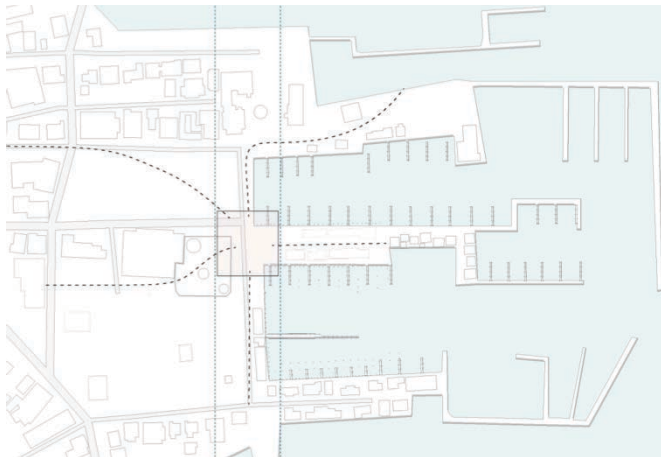
Degeneration



Modular Stratification

Camila Moreno

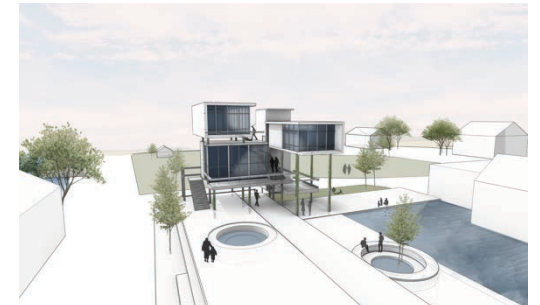
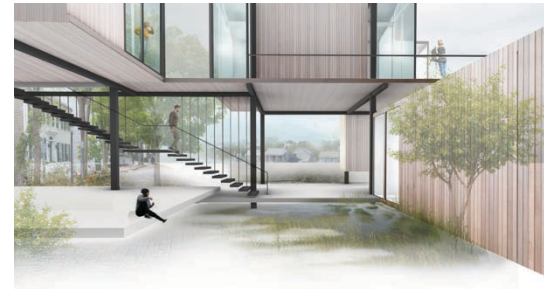
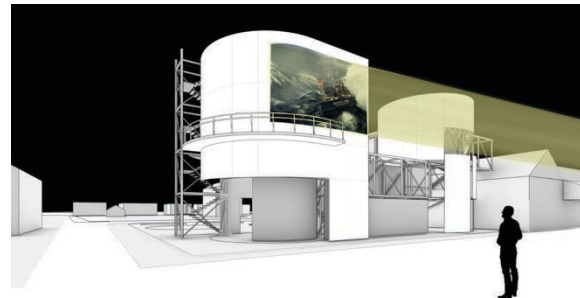
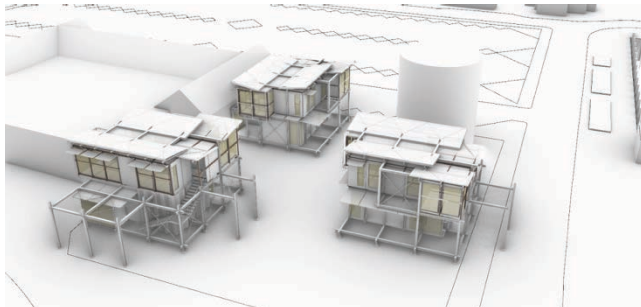
This project uses modular arrangements within the units and ground along an overarching grid system. The units shift and grow over time while the ground lets in water from the harbor at specific points in time as sea level changes. The incoming water becomes a purposeful interaction with site occupants and the units shift over and stack to make room for the next generational inhabitants.



TEAM 3: Beinecke Square

Avery Dunavant, Sophia Hernandez, Camila Moreno, Moises Villanueva

The design strategies used within each dwelling employ an important scheme for the preservation of the industrial waterfront. The projects showcase snapshots of the area when subject to sea-level and public usage change by intentionally redirecting incoming water and human circulation for the maintenance and continuation of the constantly evolving site.



TEAM 4 Brant Point: “The Progressing Village”

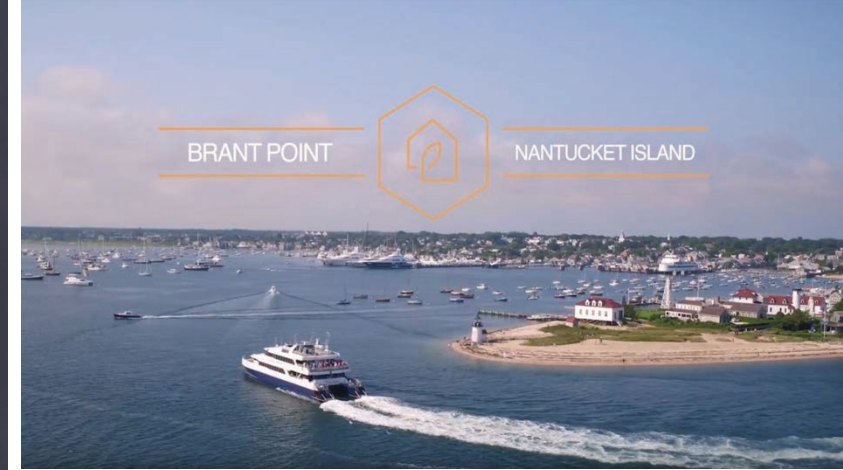
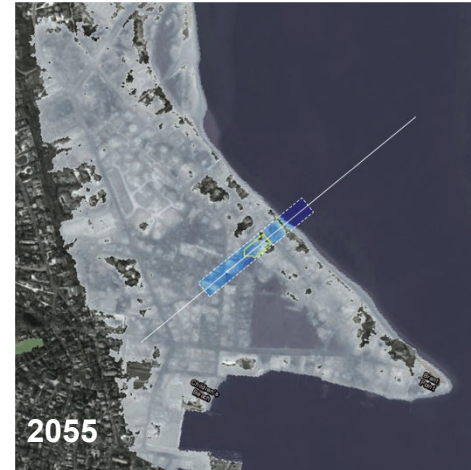
Eoin Balara
Erika Blandon
Aimee Lawson
Suzanne Tielemans

Observation/critique:
Brant Point is going to go through huge changes in the coming generations--flood water will invade our site as sea level rises and the land is at high risk of erosion. Our site is situated in between the beach and salt marsh. Natural characteristics we observed in this area were *natural dune accumulation*, and *natural sand buildup around the Brant Point lighthouse* ripraps over time.

Brant Point Lighthouse over time



*Flood projection
over time*

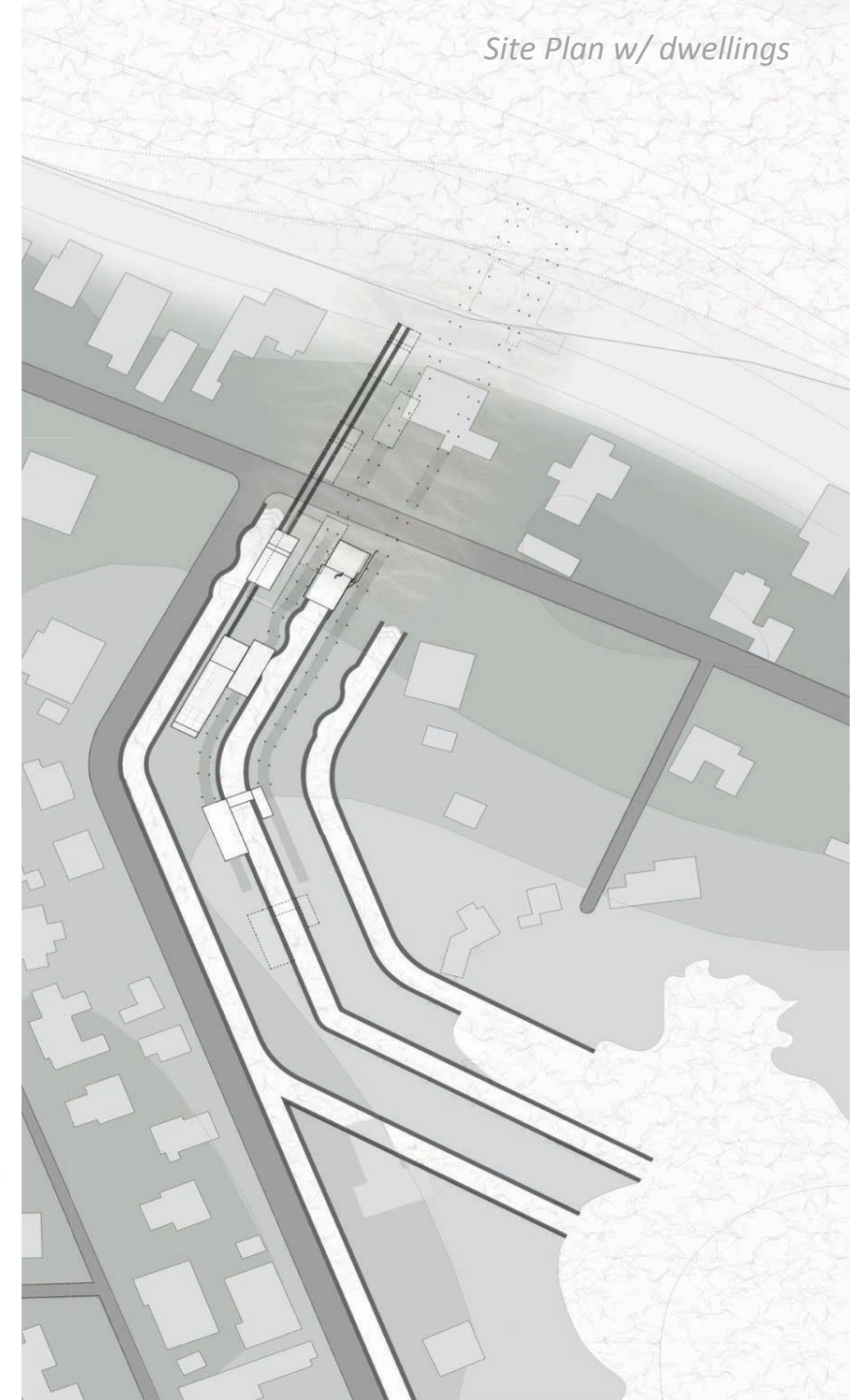
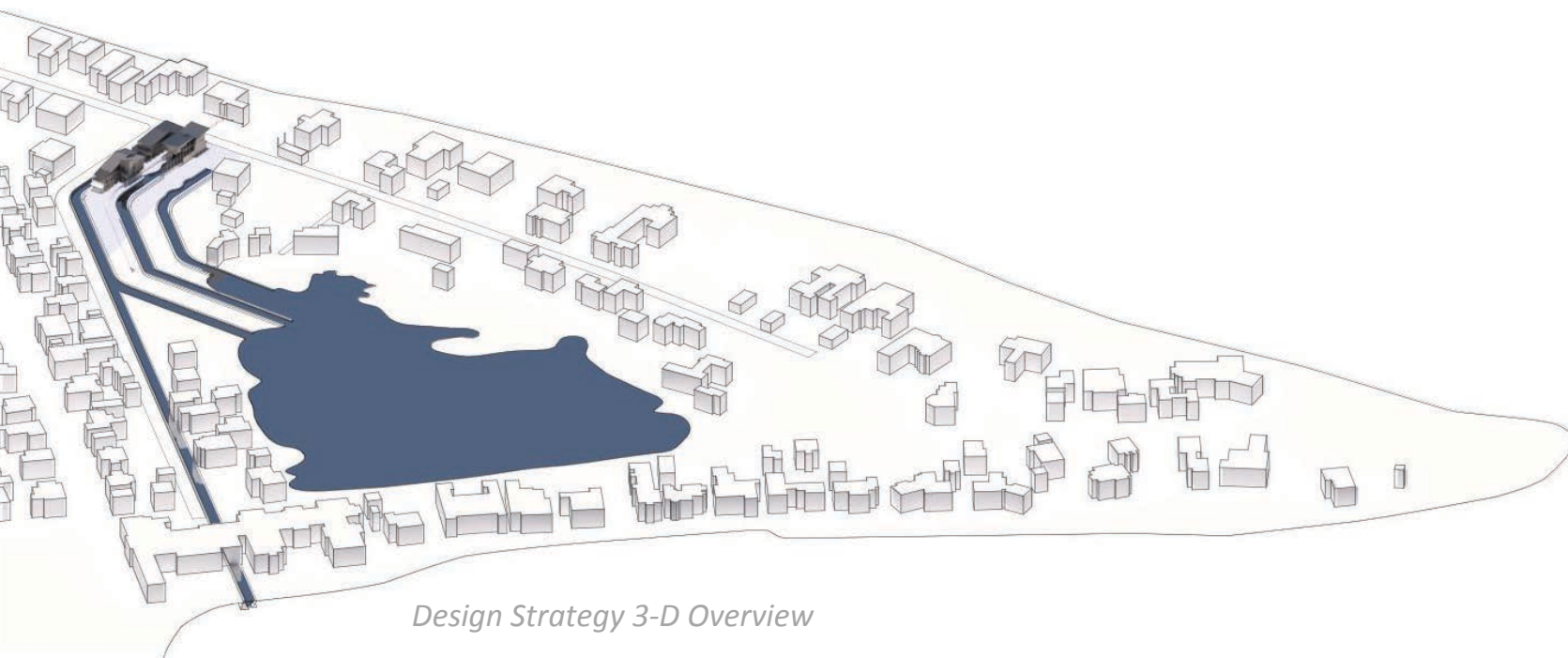


TEAM 4 Brant Point: “*The Progressing Village*”

Eoin Balara
Erika Blandon
Aimee Lawson
Suzanne Tielemans

Thesis/Position:

The goal of our project is to redirect and channel the floodwater from sea level rise into a canal system, and using the natural systems of our site to accumulate land over time. These methods would help slow the loss of land due to sea level rise.



TEAM 4 Brant Point: “*The Progressing Village*”

Eoin Balara
Erika Blandon
Aimee Lawson
Suzanne Tielemans

Response/ Team Agreements:

- A series of canals will cut through the initial site
- Walls of the canals as well as other oyster gabions will serve as tracks for the dwellings
- Boardwalks will become informal connections between dwellings and canals
- Dwellings have the opportunity to move away from the site over time



Oyster shell gabions



Rotation of Indiana Bell Building

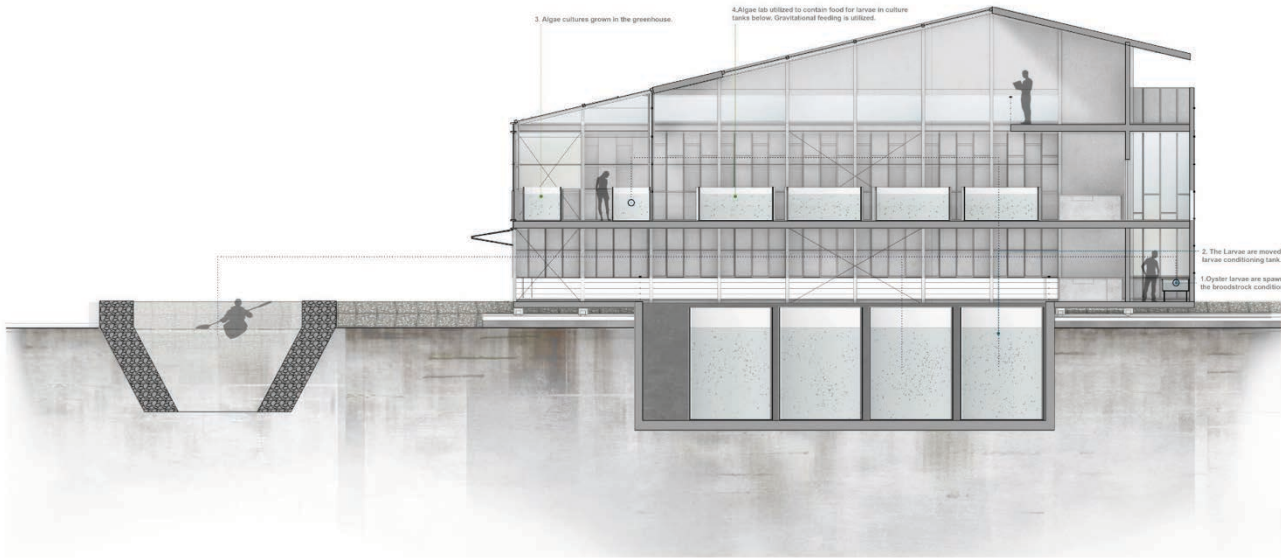


Incan irrigation system

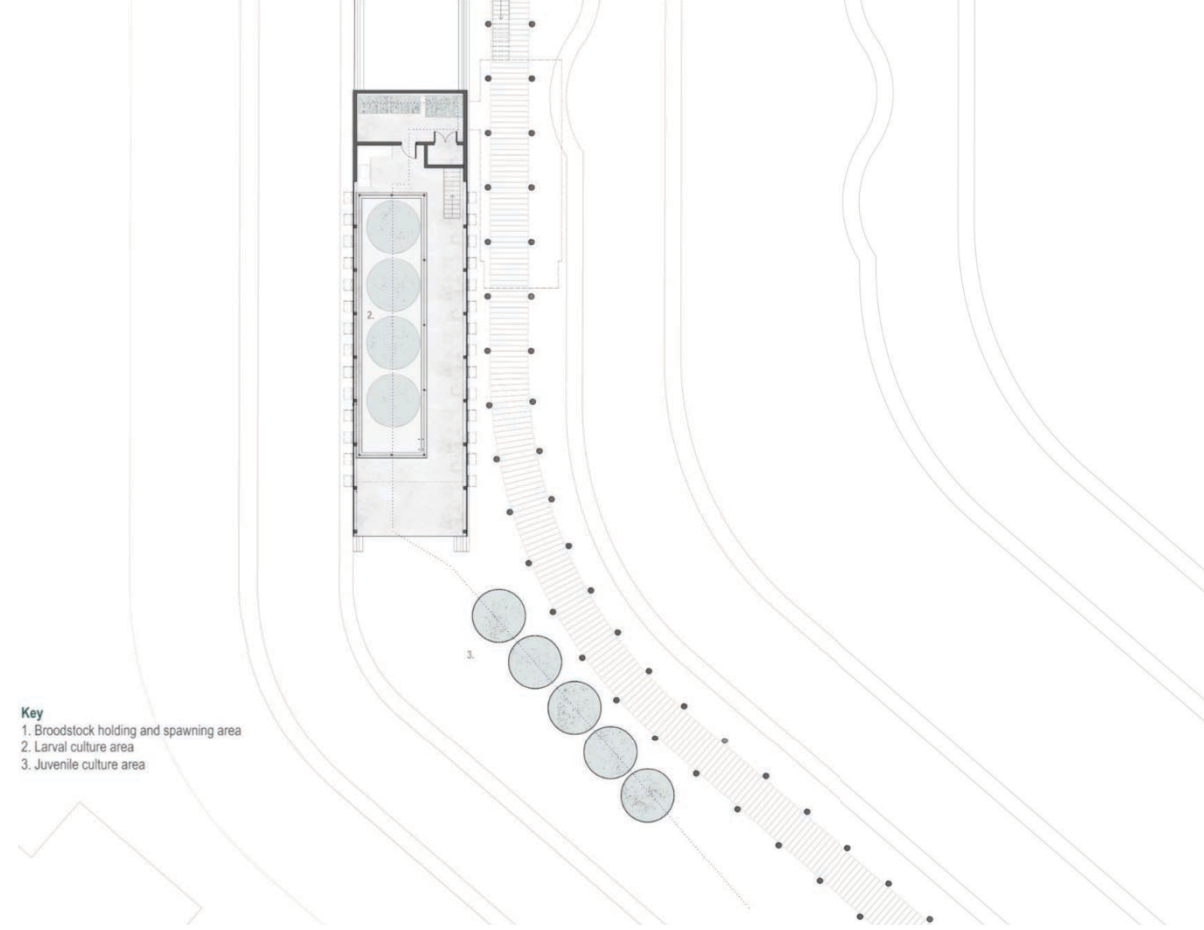
PRECEDENT STUDIES

Dwelling 1: "The Cultivated Canal: Human Habitation + Oyster Habitat"

Erika Blandon



Key
1. Broodstock holding and spawning area
2. Larval culture area
3. Juvenile culture area



2025



2055



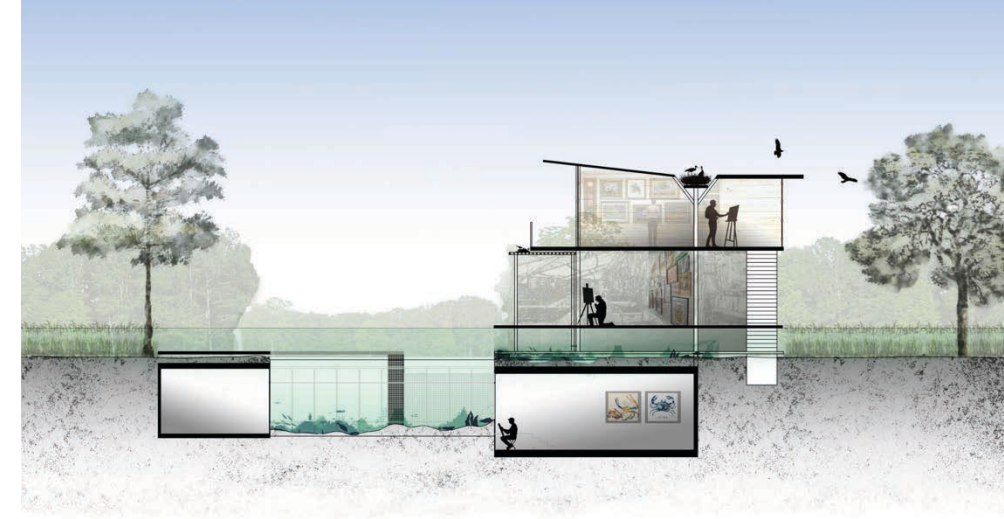
2085



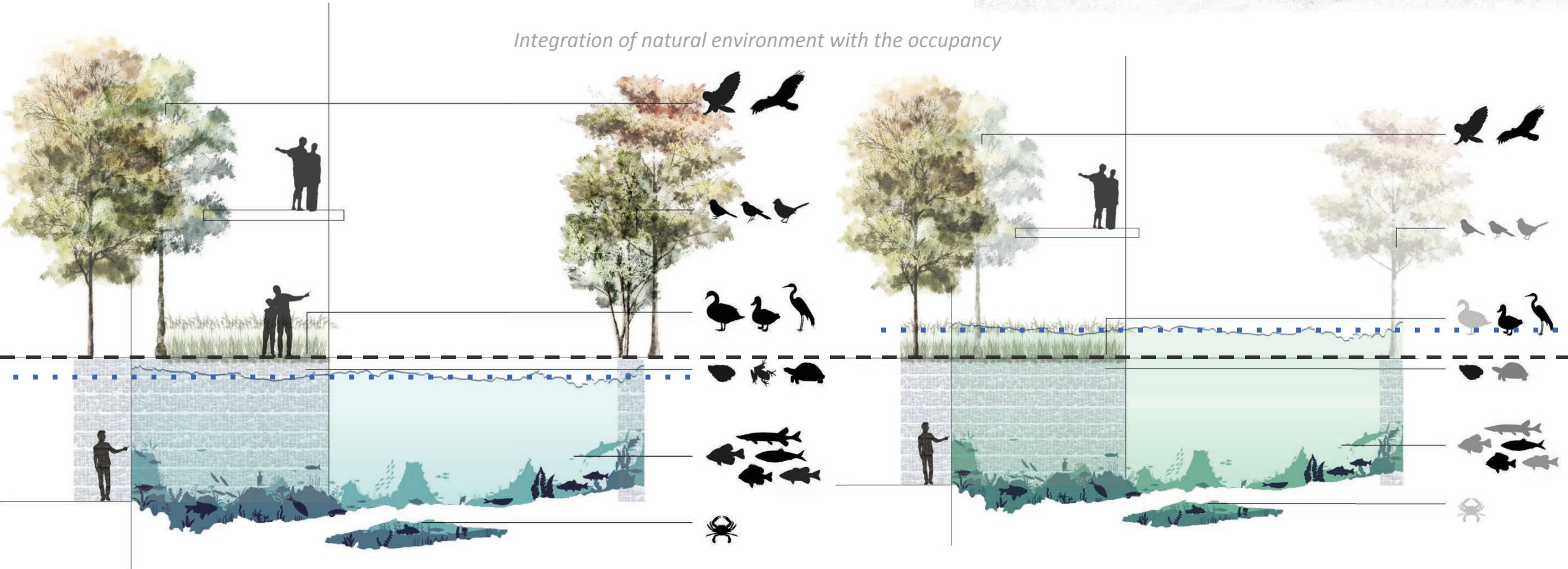
Dwelling 2: "Estuary Envelope"

Aimee Lawson

As Brant Point begins to flood, the species that occupy this estuary space will gradually change to saltwater creatures. This space creates a place to observe and experience the progression of species in the evolving environment.



Integration of natural environment with the occupancy



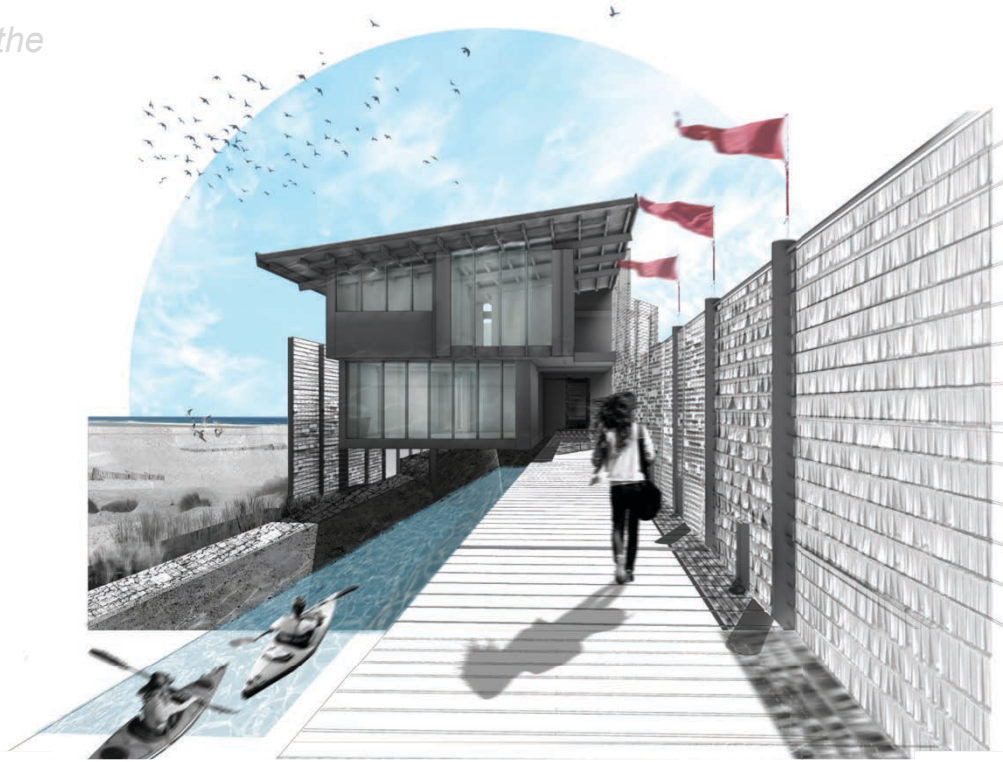
Dwelling 3: "Generational Metamorph"

Suzanne Tielemans

Capturing ephemerality of Brant Point within the dwelling

- 2025: focused on openness, receiving wind
- 2055: focused around core of dwelling
- 2085: connection to exterior occupation

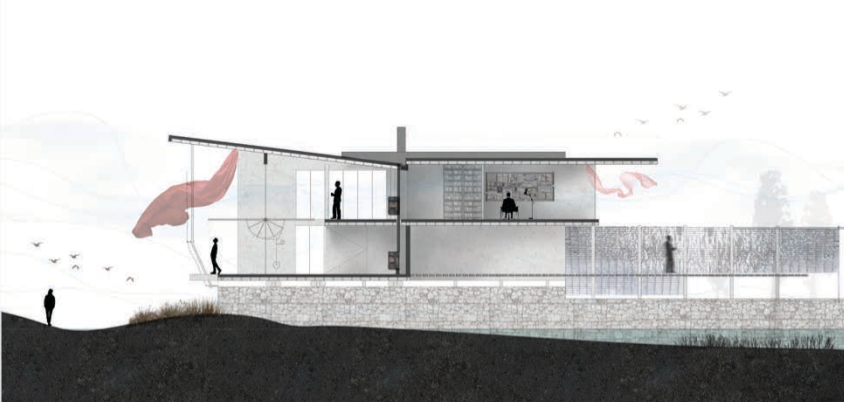
2025 vignette



Wind integration diagram



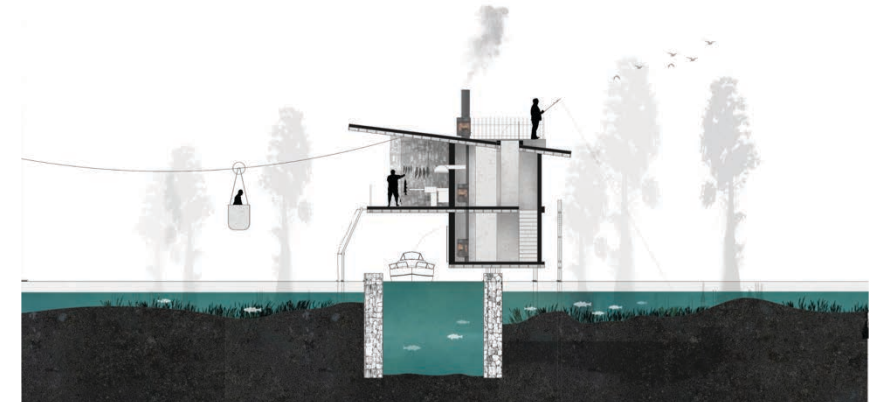
2025



2055



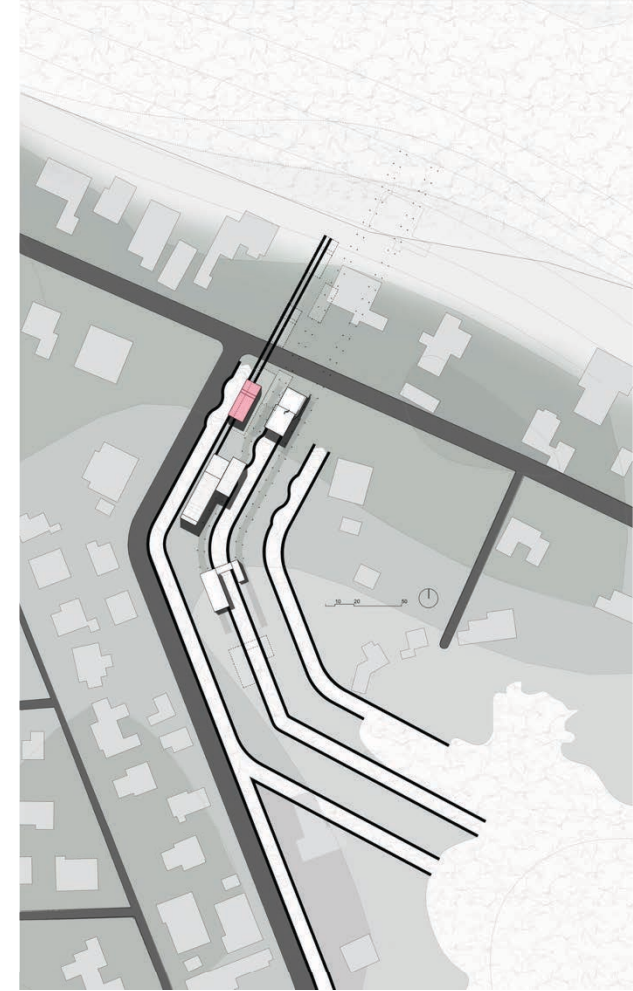
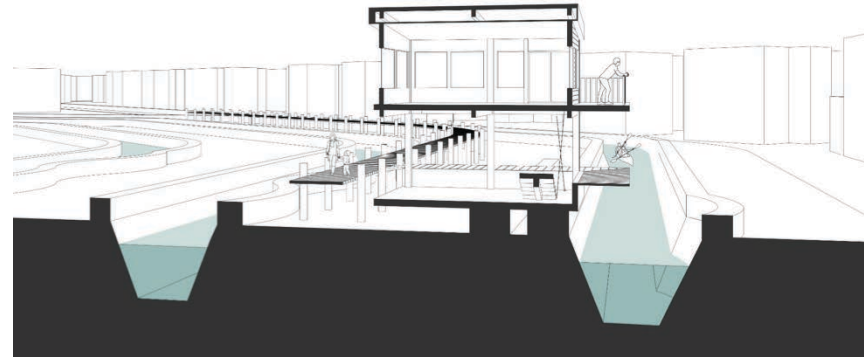
2085



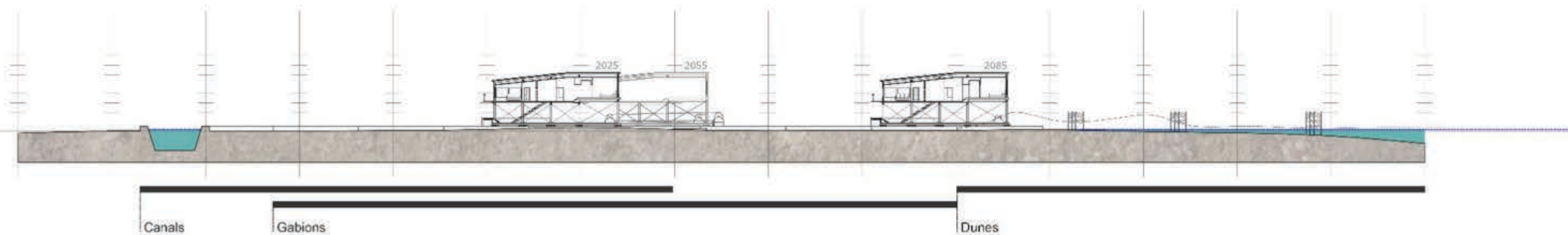
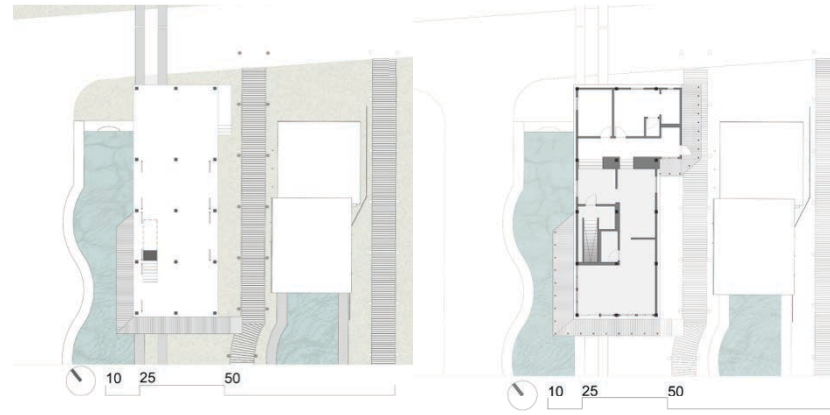
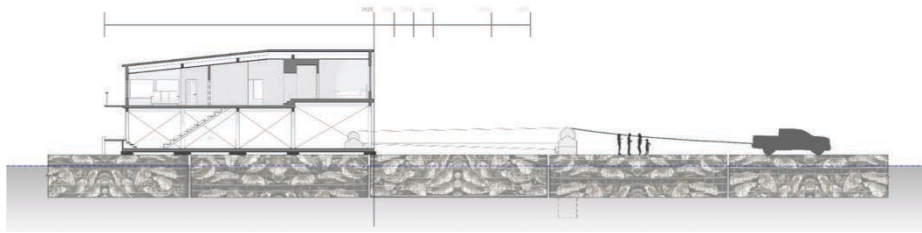
Dwelling 4: "Worker's House"

Eoin Balara

As water levels rise in Brant Point, the surrounding community must work together to maintain the canals and build out the beach. The Workers' house will be the first dwelling to be pushed toward the beach. The space will be reserved for the workers of the land

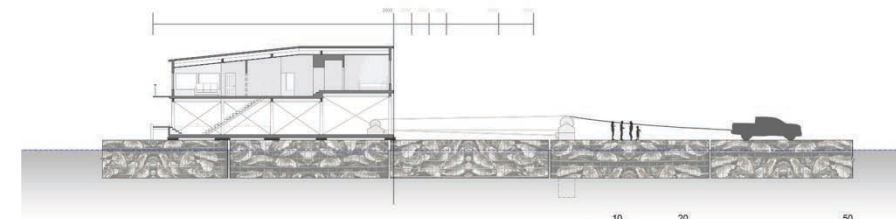
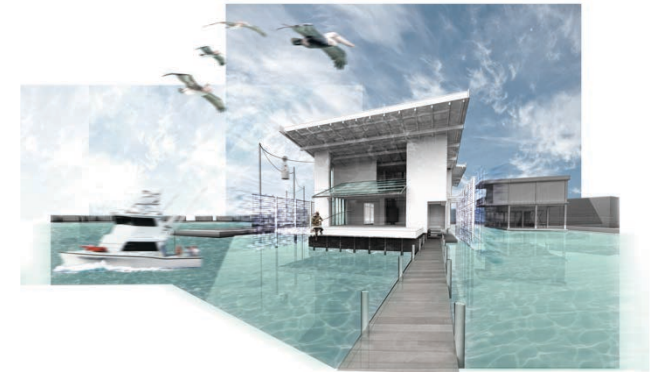
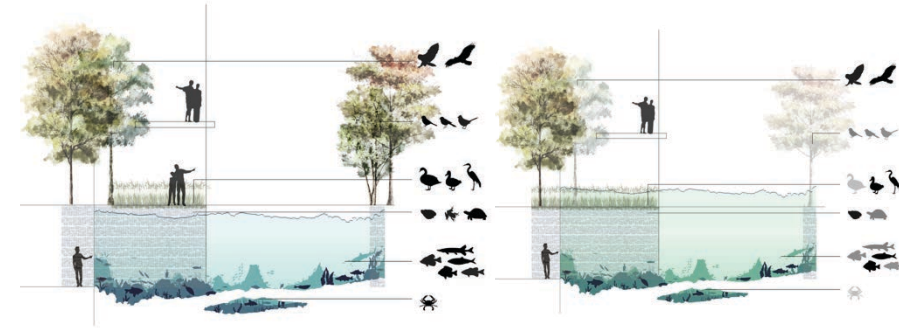
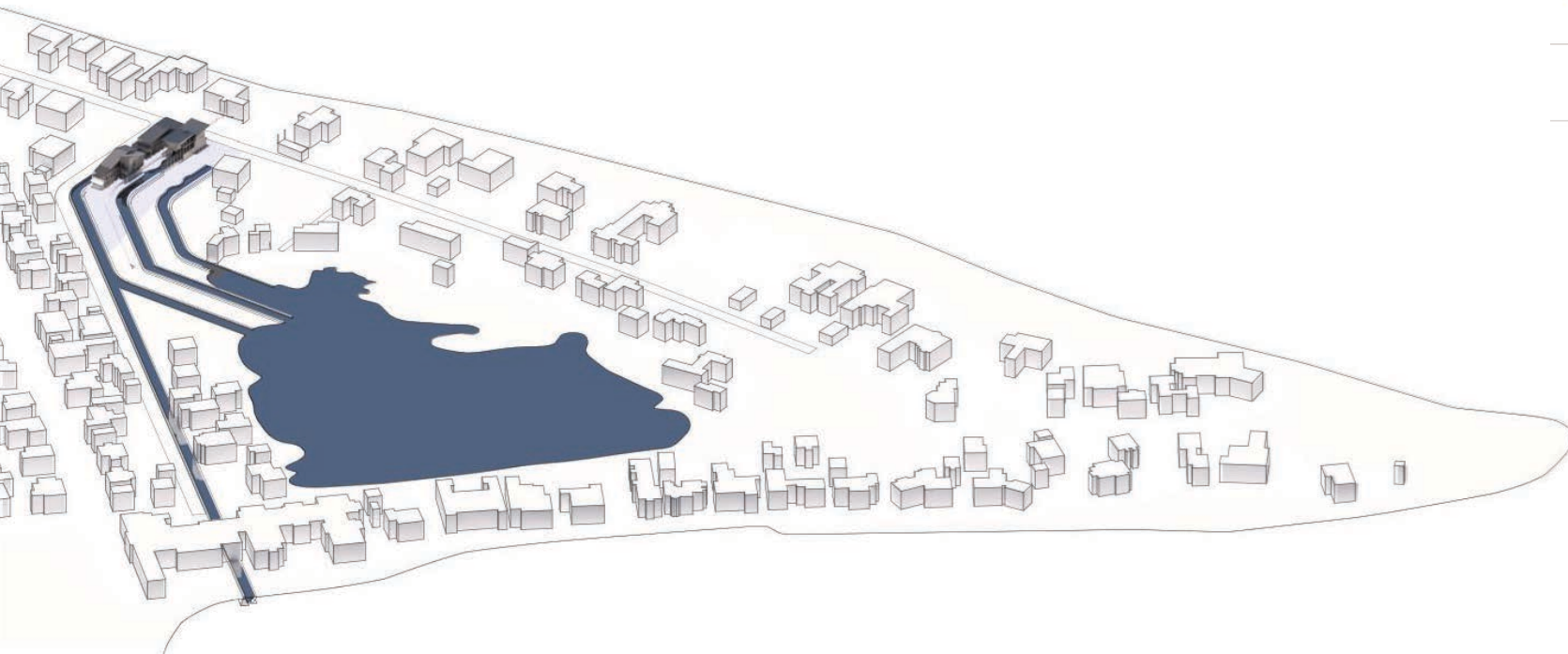


Community interaction around the change in Brant Point



Team 4 Conclusion

In conclusion, these dwellings and design strategies that each project propose give an insight on what this area would be like if floodwaters were intentionally redirected in order to adapt to this constantly changing area.



Conclusions:

New and innovative housing typologies are essential to adaptation to climate change.

- Water is an advantage, not something to fear
- Adaptation will require shared infrastructure to support shared responsibility.
- Nantucket lives here! It might look different, but that can be good.

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Questions?

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