HUDSON RIVER PK TRUST

SAGE & COOMBE ARCHITECTS

ehdd

MNLA

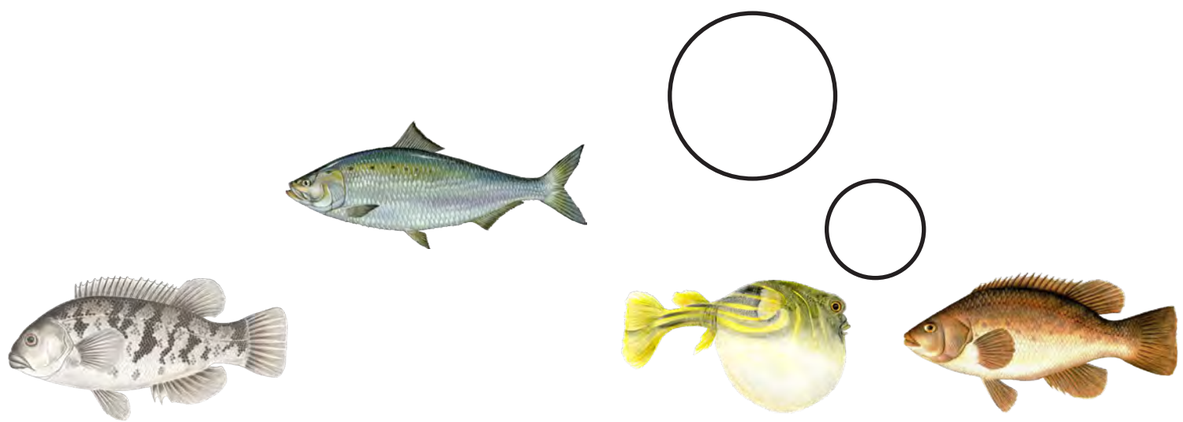
SPACE HAUS

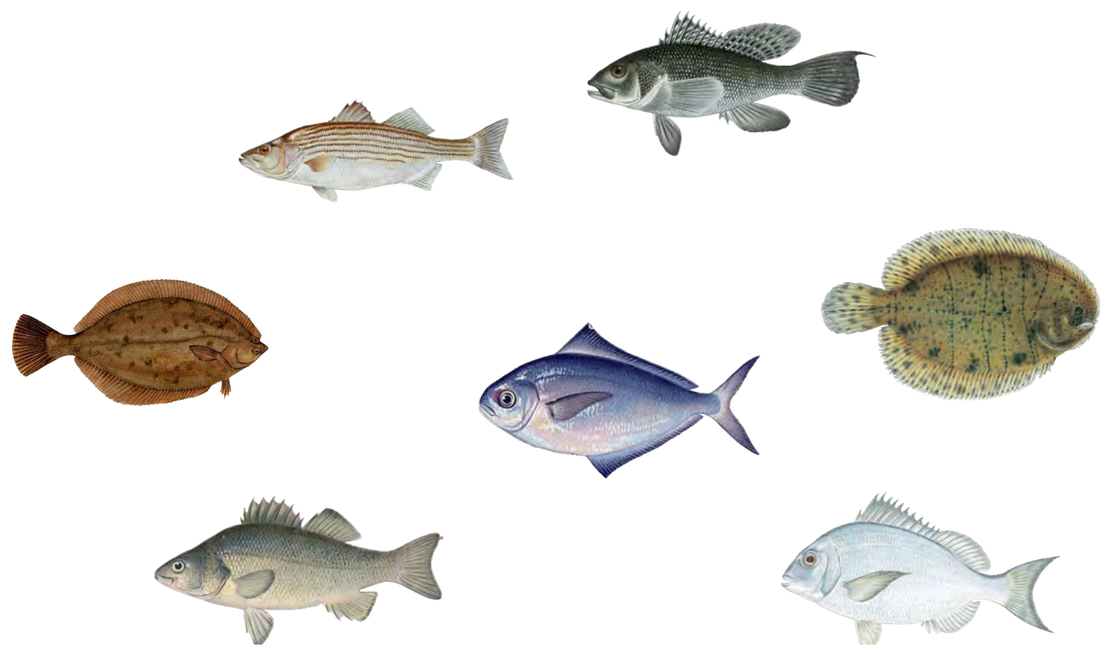
TJP INC ENGINEERING

HUDSON RIVER PARK ESTUARIUM

Community Meeting

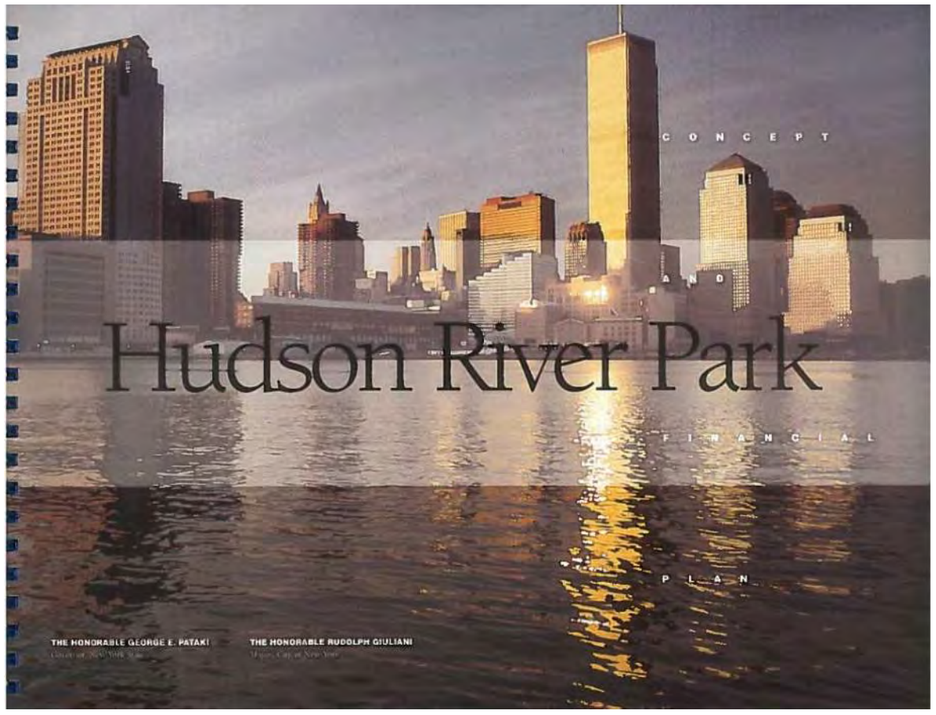
October 30, 2023





Estuarium

"An educational and research center devoted to the Hudson River, the fifth largest estuary in the United States… Visitors will find interpretive science exhibits as well as two classrooms that can be used by students from all over the city and region." 1995 Concept and Financial Plan



The Park's River Project

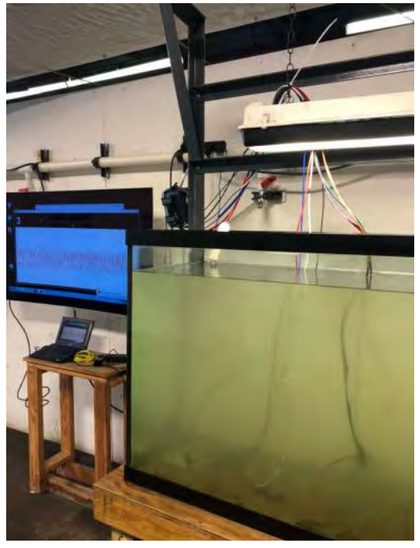
The Park's River Project is the education and research department of the Park. Our small team of dedicated staff oversee a variety of projects and programs to study the Hudson River Estuary and foster public understanding and connection to the River.

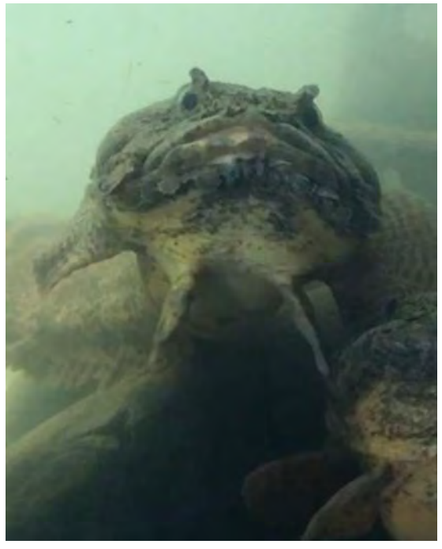
Research

STEM Education

Community Science

Pier 40 Wetlab





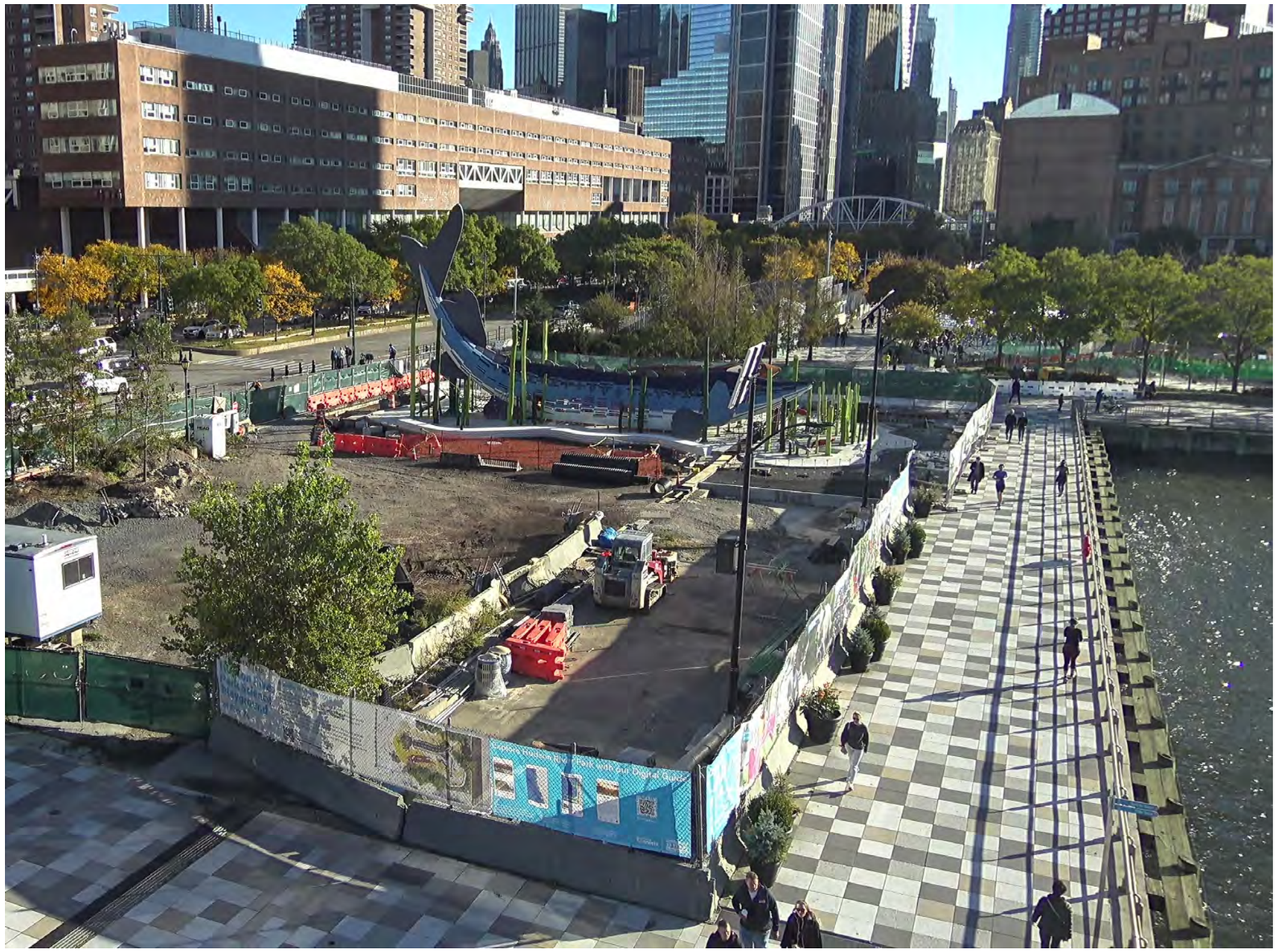
SITE LOCATION

SITE LOCATION

PARK USES


Tide Deck
Sports Court
Pier 26
Pier 26 Boathouse
City Vineyard
Dog Run
Maintenance Building
Hubert St.
West Street / Route 9A
Estuarium Site
SCIENCE PLAY AREA
Lilac
Synthetic Turf Field
Beach Volleyball
Mini Golf
Playground
Pier 25
North Moore Building
Skate Park
North Moore St.

VIEW FROM CITY VINEYARD ROOF AT PIER 26



KEY PLAN

VIEW FROM 9A (WEST STREET)

KEY PLAN

VIEW FROM NORTH MOORE STREET

KEY PLAN

VIEW FROM BMCC

KEY PLAN

VIEW FROM PIER 26 TIDE DECK

KEY PLAN

VIEW FROM THE SITE

KEY PLAN

This is what we heard when we last met...

COMMUNITY MEETING

What would be a missed opportunity?

What else do we need to know?

What are the opportunities for the community?

(local, regional, environmental, scientific)

What does the Estuarium mean to you?

What should it mean to us?

COMMUNITY MEETING THEMES

REVEAL THE RIVER AND ECOLOGY
- Ecosystem of organization
- Making evident life of the river--reverse periscope
- Window into river life! re: reverse periscope.
- Connectedness, impact on ecosystems, stewardship
- Opportunity to see underwater life
- Reminder that NYers live on an island; invitation from locals to learn about the environment.
- Revealing the river to pedestrians and others who might not know / have taken the time to go to current location at Pier 40
- Learn about environment.
- Speci city to this estuary and location

ADVOCATE FOR THE RIVER
- Making clear why protecting the river is valuable.
- Estuarium is a very visible part of Trust's e orts.
- Realizing the continuing vision of the River Project (as an observer of river/engager of community/space for children)
- Publicity on Earth Day; Estuarium as a point of hope in relation to past state of estuary
- Not deeply exploring the natural setting/o erings of the site. a rare gem in such a dense urban area.
- Develop Future generations of invested, interested users.

INCORPORATE THE RIVERS HISTORY
- Human interaction with the water/river
- Information about past state and how much the river has improved.
- Opportunity for understanding/approach t ood concerns and active water considerations.
- Past/present/future of river
- Include the history of the original Inhabitants of the area (the Lenapes)

PROVIDE A DIRECT CONNECTION TO THE RIVER
- Great place to touch the water.
- Space for events, outdoor space
- Physical space for community and learning
- Love of the River and water, approach from water
- Water access (directly at river level), accessibility of river life
- Access to the waterfront from the water
- Physical connection from estuarium to the water
- Direct connection to river--immediate experience. authentic connection.
- Swimming/water access
- Kayaks + harbor
- Access for boaters

THINK LONG-TERM (DURABILITY SUSTAINABILITY)
- Not ensuring what we do can/will be modernized.
- Not addressing bird safety concerns. extents, types of glazing, etc.
- Everything can operate in a salt-heavy environment / deal with salination.
- Green + Solar technology
- Need for adequate restroom facilities.
- Careful lighting
- Create fully engaging space for those with disabilities.

EDUCATE
- The River Project/HRPT is a staple and leader to our nonformal education community with this new space, they will be able to continue developing those relationships further.
- Educational center partnered with advocacy.
- Emphasis on education of river
- Educational component could be a revenue driver for the
- Trust (eco-tourism/next generation of tourism); how can it work.
- with Trust's existing programming?
- Public-facing spaces; potential for informative graphics

SUPPORT AND REVEAL SCIENCE
- Importance of good science
- Opportunity to help reveal all the great science that HRPT is advancing in the sanctuary.
- Support River Project Lab's water testing works.
- Connect with other scienti c research.
- Showcasing, making event other work/research at/on the river.

CREATE COLLABORATIONS AND ENGAGE
- Engagement with local community colleges (e.g. biology classes)
- , make estuary compelling.
- Integrate work of the Harbor School + other educational spaces
- Opportunities for engagement from community

INTERACTIVE, FLEXIBILE, NOT A MUSEUM, NOT PRECIOUS
- 'gritty sensuality' is key.
- Feeling of welcome-ness - not big tourist attraction
- Hands-on; not precious. workshop atmosphere
- Not a museum.
- Interactiv eld station - touch the water, sta nteraction.
- Smell the river! feel lik sh! expand wet lab experience and characteristics.
- Love the morgue area of the wet lab to understand number of species of wildlife.
- Present tanks without changing the ambiance of the site.
- Site is a respite--a rare space where nature is possible, experiential.
- Slow tourism; unique experience
- Project/programming should grow with the students and audiences that interact with what is o ered. Retain interest over time.
- Acknowledge scale of city + capacity of audience

TAKE INTO ACCOUNT
- Construction interference with local building operation
- Site access and traffic/bike congestion, bike way crossings
- Consider size and logistics for school groups.
- Safe interaction of all groups in the neighborhood
- Ease of language access (lack of English should not be a barrier)
- Need to no more about scheduling/programming
- Site Lighting and Animals

QUESTIONS TO BE ANSWERED
- Will the Estuarium become year round?
- What is anticipated scope for growth? di erent audiences, communities served, etc?
- Will structure be used for organized groups, heavily public-facing, or a hybrid?
- Spaces in the park - can Estuarium be a central hub?
- Consider other locations as satellite locations for the estuarium (classrooms/data sensors)

High Level Goals

- Expand on the ongoing legacy and programs of the original River Project and the WetLab.
- Provide a place for year-round, hands-on **educational programming and exhibits** that communicate the ecological importance of the Park's 400-acre Estuarine Sanctuary for both students and Park visitors.
- Provide facilities to support the Trust's **ongoing scientific research and monitoring.**
- Provide space for the Trust to **collaborate with local experts** that are conducting marine research.
- Provide opportunities for **community and student participation** in ongoing scientific research and monitoring efforts.
- Continue to **prioritize education programs** that serve Title I schools

Design Goals

- Make something new and exciting, full of **surprise and delight** -- but don't lose the WetLab's authentic, scrappy, MacGuyver quality

- Create something that is **part of the Park** and Tribeca, not a tourist destination or attraction; provide continuity with the park both programmatically and physically.

- Create a high quality, contextual and responsive design that is functional, **low-maintenance**, and sensitive to the needs of its animal inhabitants.

Sustainability and Resilience Goals

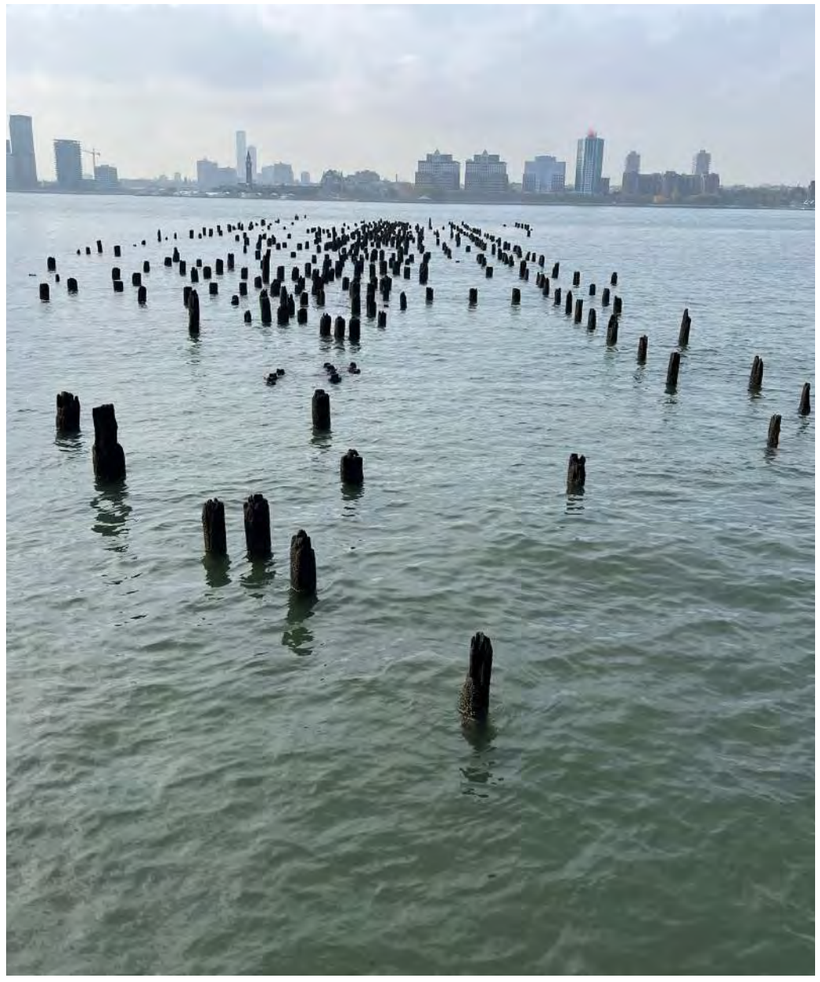
- Address sustainability in a meaningful way

- Explore sustainable building technologies both as best practice and as part of the educational experience and mission

- Anticipate and address flood resiliency concerns and requirements including hardening utilities

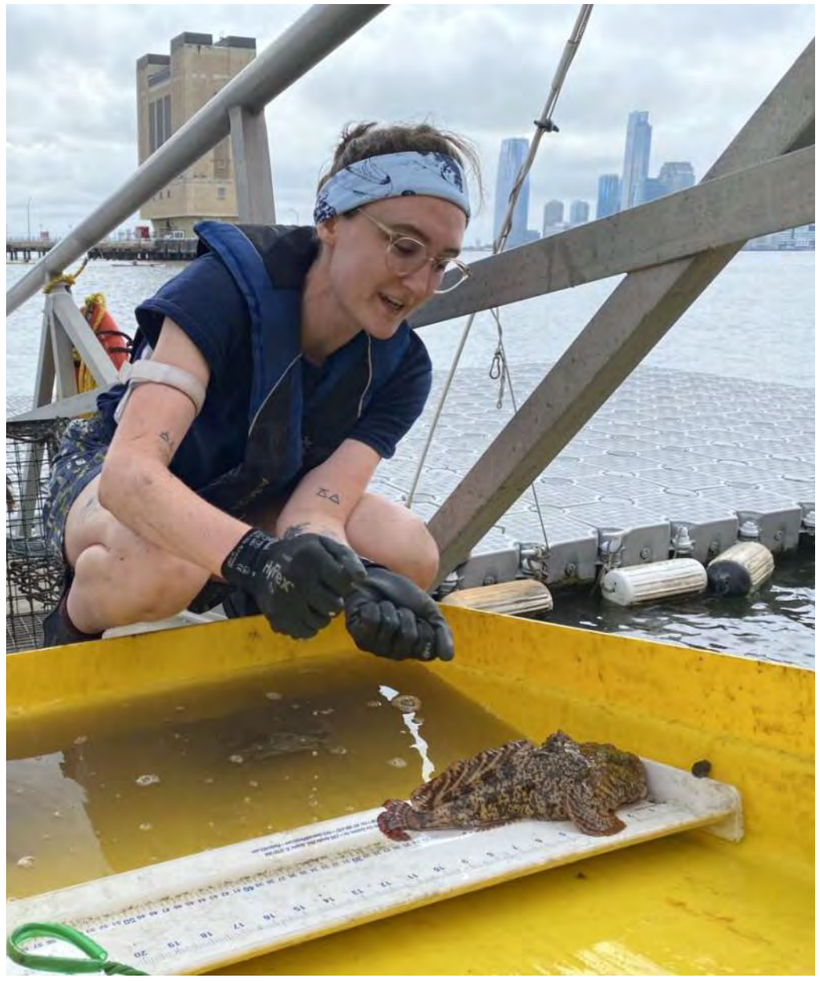
The Estuarium is...

...informed by the estuary



...inspired by the life in the river

...built upon the River Project legacy in Tribeca



...designed for interaction and learning

The Estuarium is NOT...

- **An immersive aquarium**
- **A stand-alone tourist destination**
- **A static museum**

This is what we have learned...

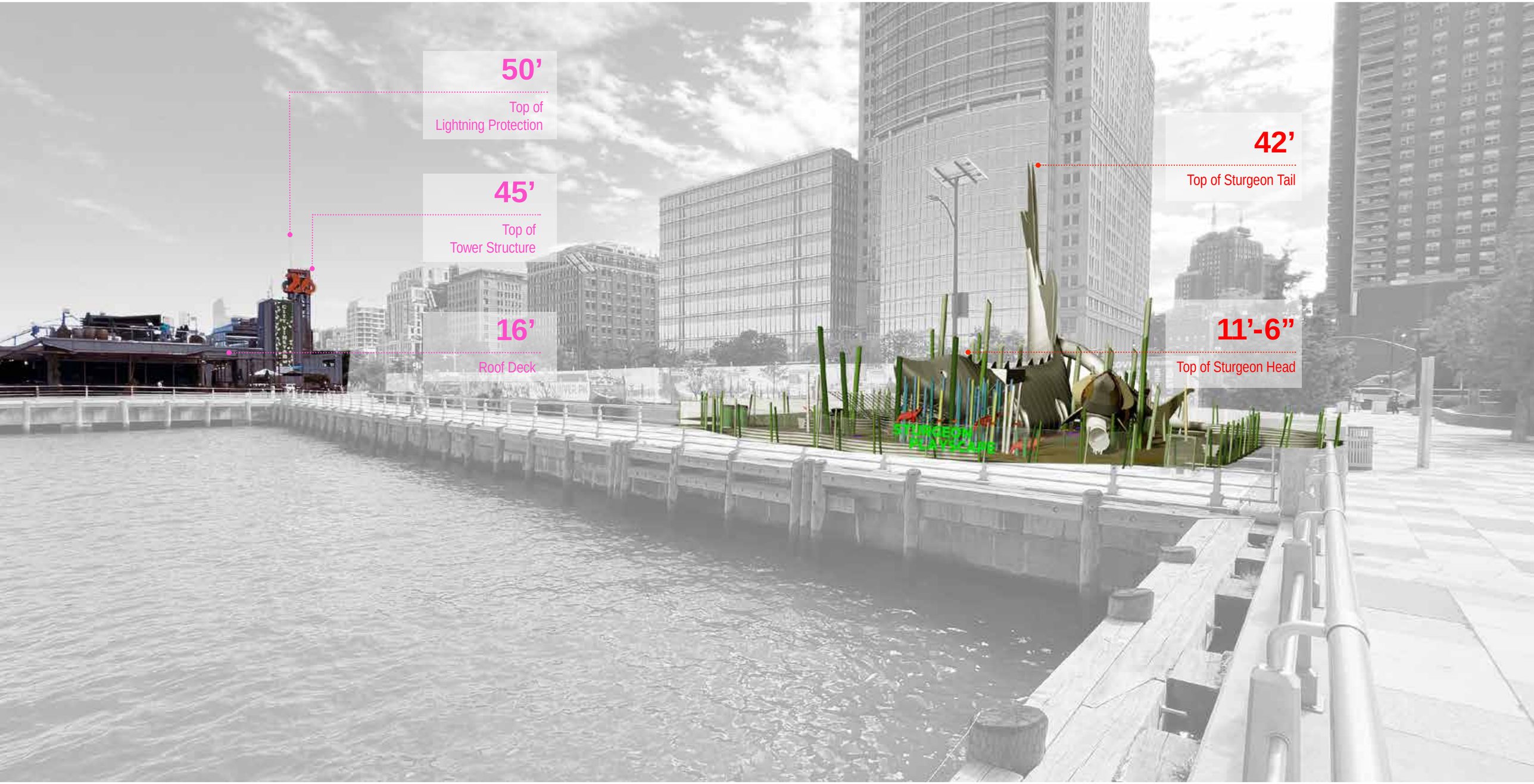
WHAT WE HAVE LEARNED SINCE WE LAST MET...

- **The site is small and very complicated**
- **Using river water is an added challenge**
- **Integration with the Park landscape is critical**
- **We are learning to be more efficient with the space available**

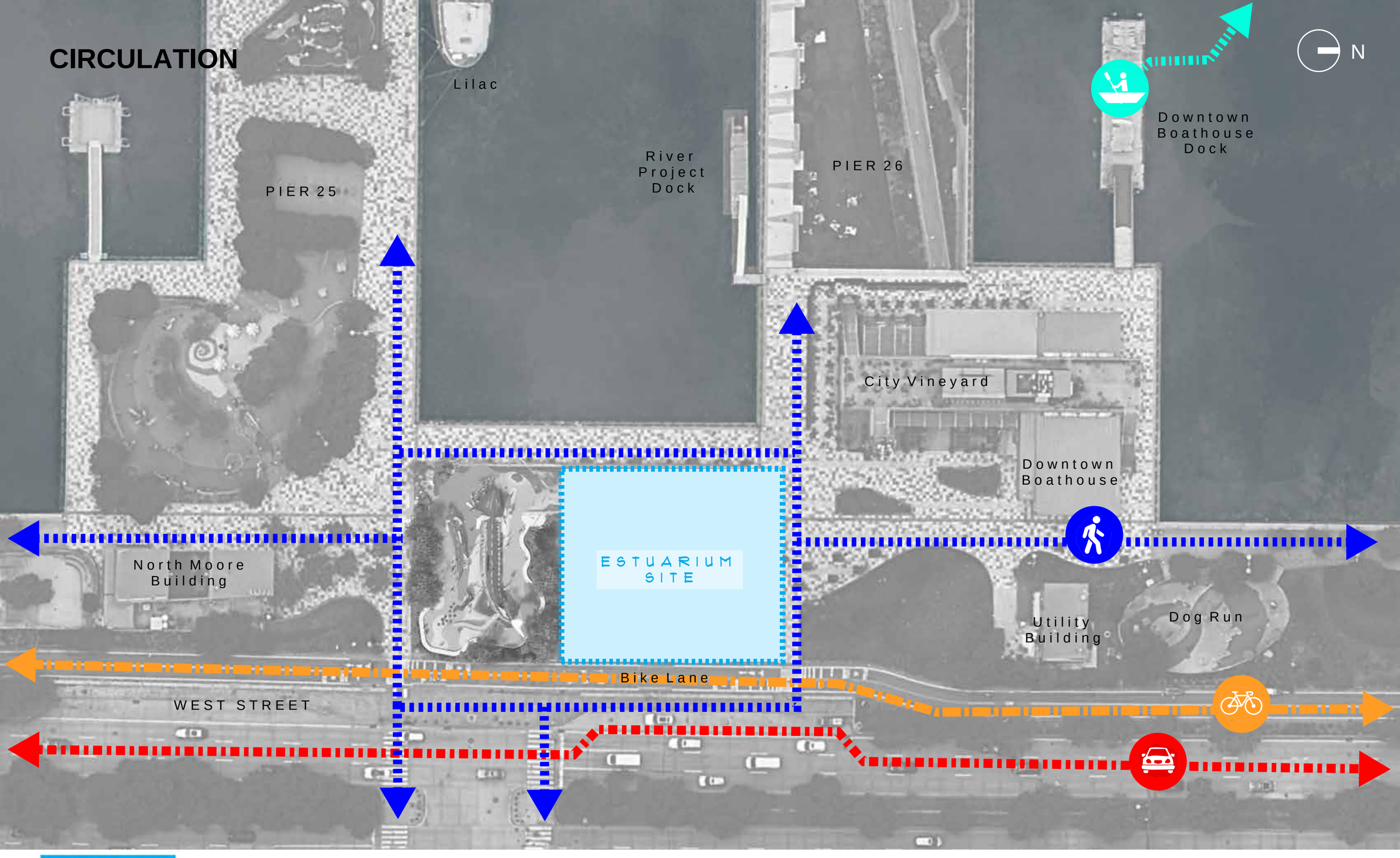
SURROUNDING USES

HUDSON RIVER PK TRUST

SURROUNDING STRUCTURES



CIRCULATION



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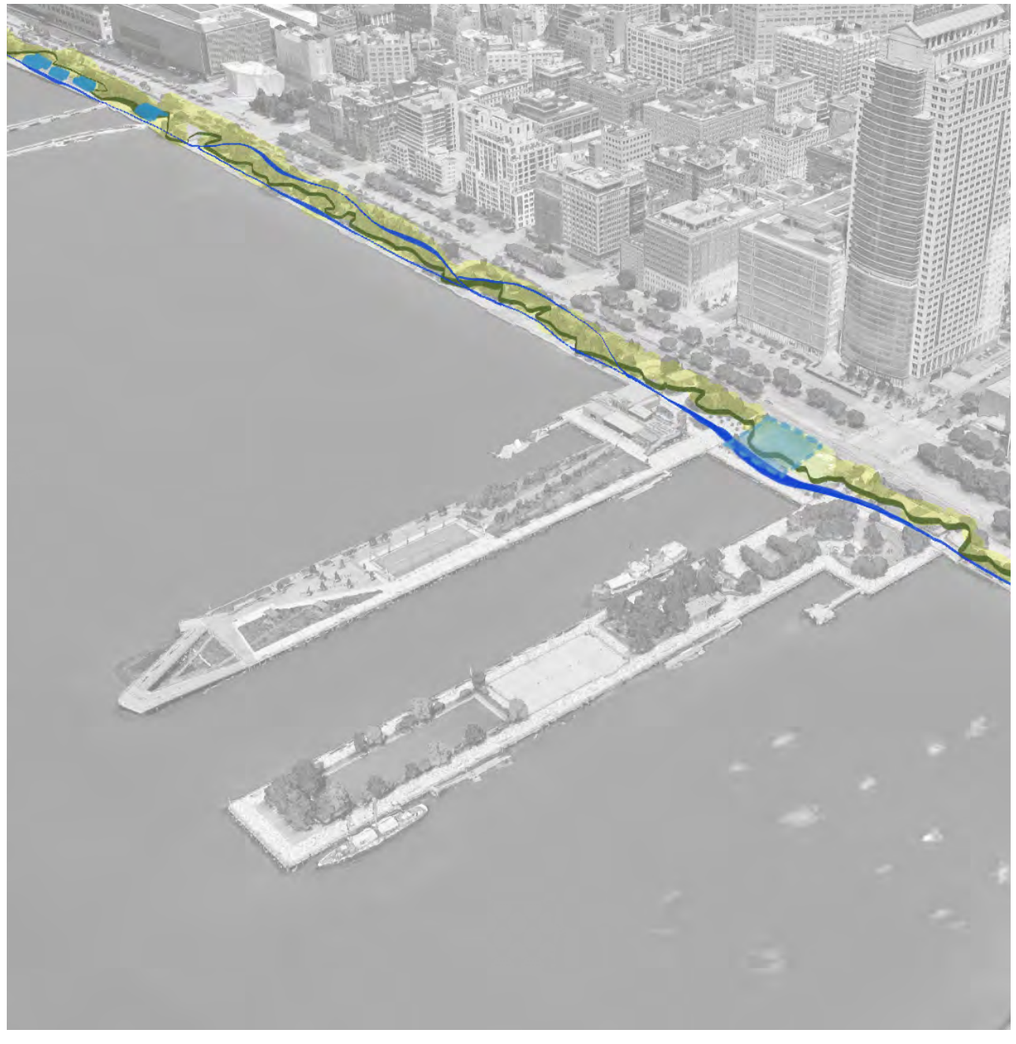
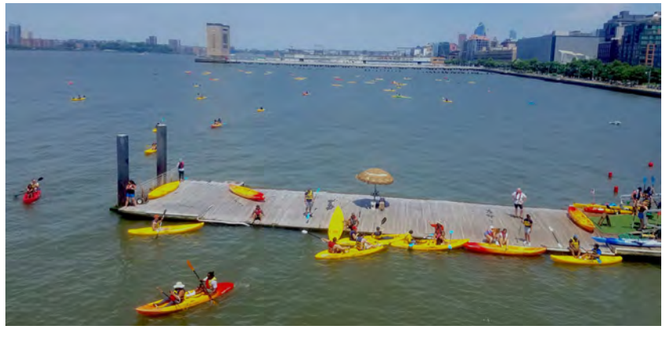
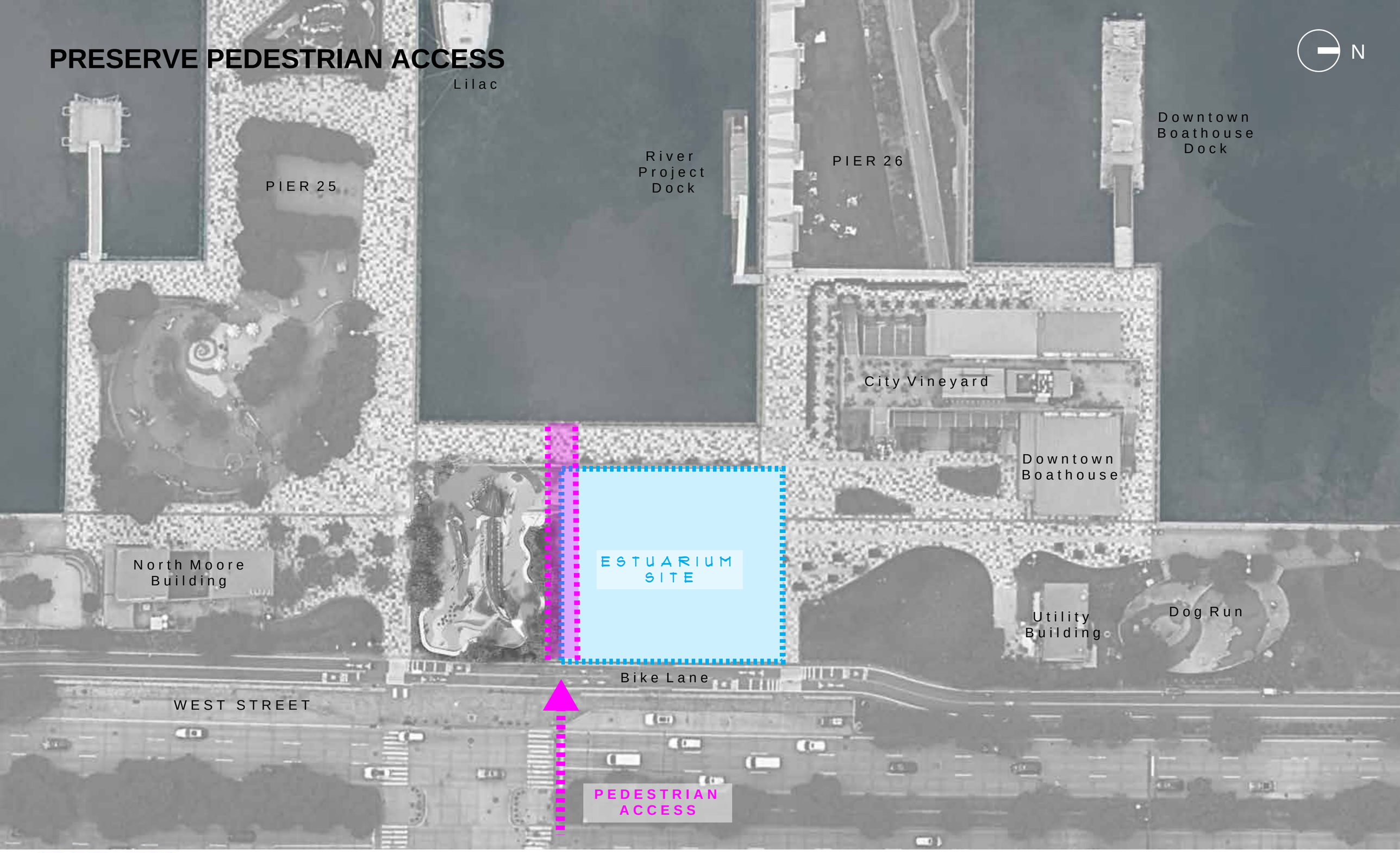
SURROUNDING PARK CONTEXT





PRESERVE PEDESTRIAN ACCESS



HUDSON RIVER PK TRUST

BULKHEAD + PLATFORM

N

Lilac

PIER 25

River
Project
Dock

PIER 26

Downtown
Boathouse
Dock

City Vineyard

ESPLANADE

Downtown
Boathouse

EXPANSION JOINT

BULKHEAD

ESTUARIUM
SITE

North Moore
Building

Utility
Building

Dog Run

Bike Lane

WEST STREET

HUDSON RIVER PK
TRUST

EXISTING UTILITES

N

Lilac

PIER 25

River
Project
Dock

PIER 26

Downtown
Boathouse
Dock

City Vineyard

Science
Playground

Downtown
Boathouse

North Moore
Building

STORM

GAS

TEL

ELEC

ASSUMED MH 23

ASSUMED MH 23

GAS

WATER

SANITARY

WATER

ESTUARIUM
SITE

Utility
Building

Dog Run

WEST STREET

barrier one gate

HUDSON RIVER PK
TRUST

NEW UTILITY CORRIDOR

N

Lilac

PIER 25

River
Project
Dock

PIER 26

Downtown
Boathouse
Dock

City Vineyard

Downtown
Boathouse

North Moore
Building

ESTUARIUM
SITE

Utility
Building

Dog Run

8-10FT WIDE
UTILITY CORRIDOR

WEST STREET

HUDSON RIVER PK
TRUST

FLOOD ZONES

N

Lilac

PIER 25

River Project Dock

PIER 26

Downtown Boathouse Dock

City Vineyard

Downtown Boathouse

VE Zone 16

AE Zone 13 (coastal)

AE Zone 12

ESTUARIUM SITE

North Moore Building

Utility Building

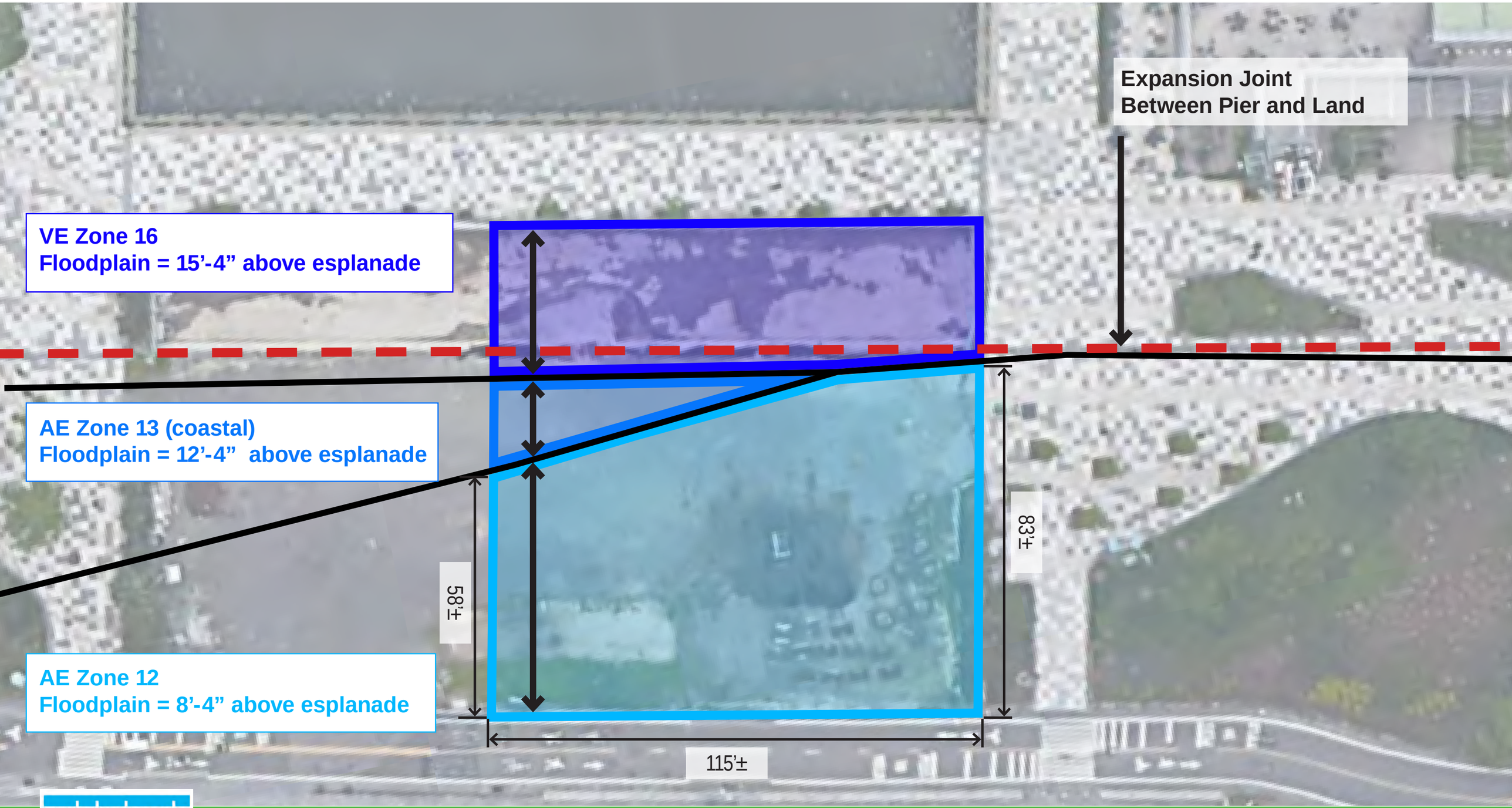
Dog Run

Bike Lane

WEST STREET

HUDSON RIVER PK TRUST

FLOOD ZONES

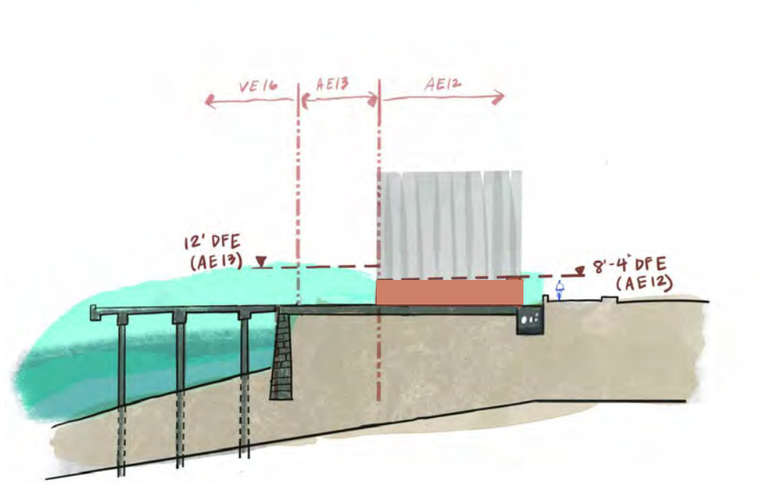


HUDSON RIVER PK TRUST

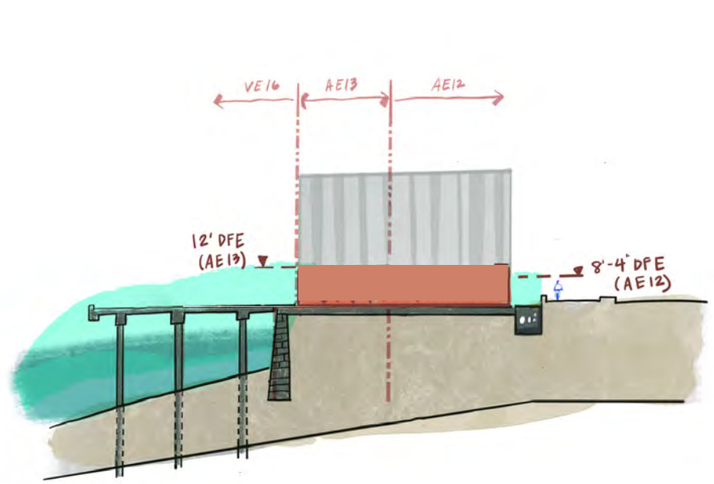
POTENTIAL FLOODPROOFING OPTIONS

POTENTIAL FLOODPROOFING OPTIONS

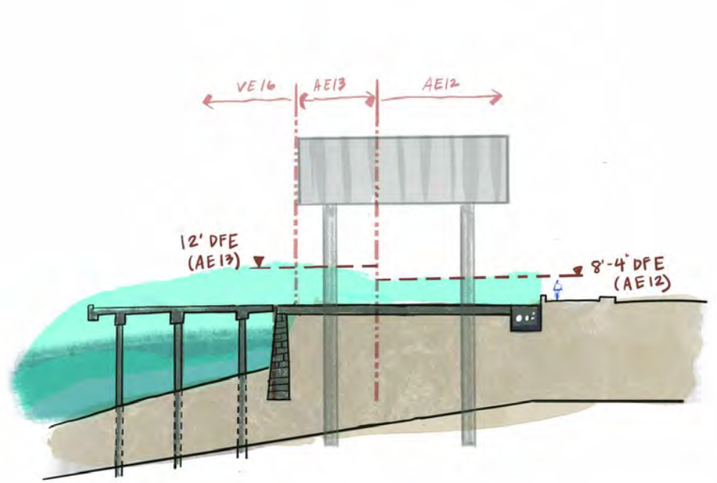
PRELIMINARY APPROACHES TO FLOOD RESILIENCY



AE Zone 12 Only
Dry floodproofing up to 8'-4"



AE Zone 12 and AE Zone 13
Dry floodproofing up to 12-4"



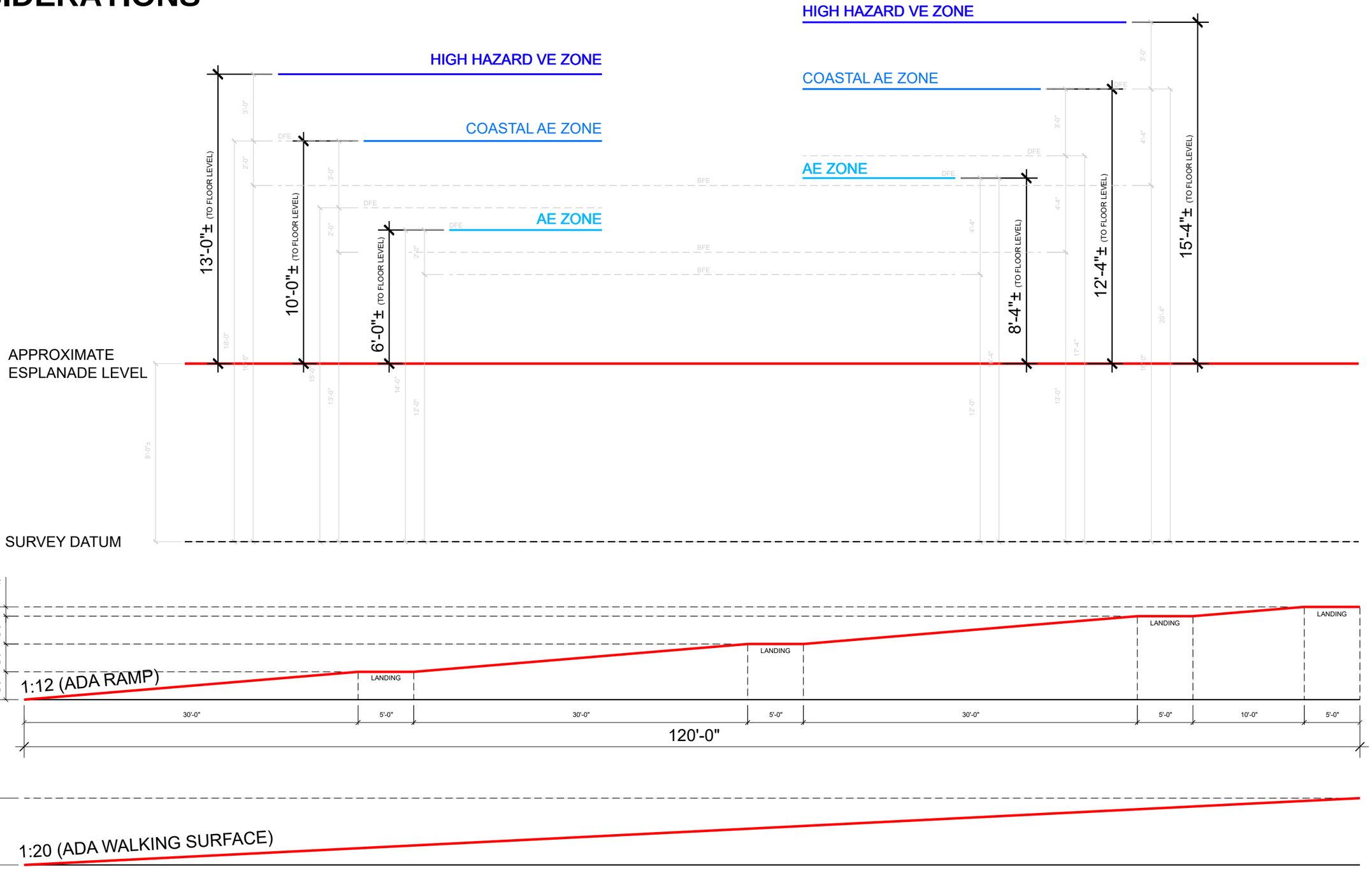
AE Zone 12 and AE Zone 13
Elevated Building to significantly reduce dry floodproofing

+ minimizes the height of dry floodproofing
- resulted in a smaller site foot print

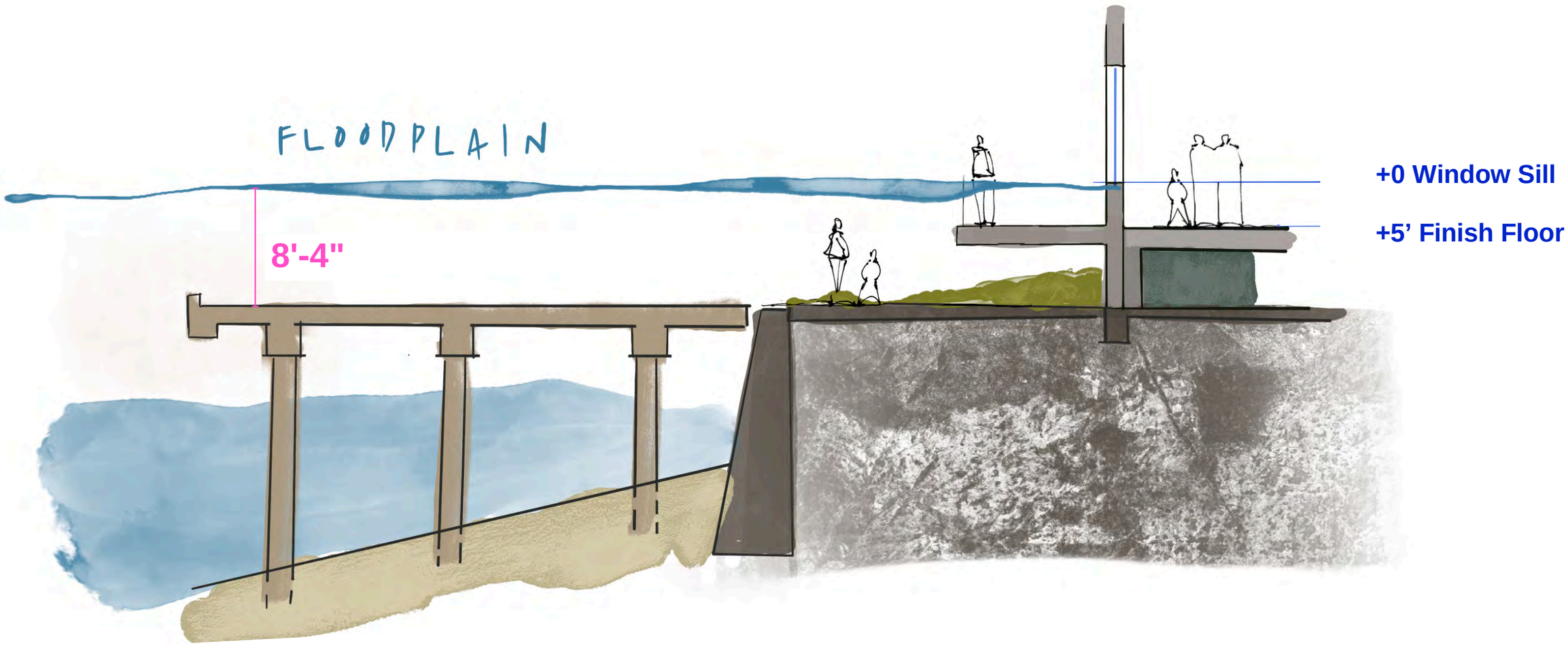
FLOOD ZONE AND RAMP / ADA CONSIDERATIONS

NYC BUILDING CODE
APPENDIX G

MAYOR'S OFFICE OF CLIMATE AND ENVIRONMETAL JUSTICE
CLIMATE RESILIENCY DESIGN GUIDELINES



FLOODPLAIN STUDIES
WITH FLOOR HEIGHTS



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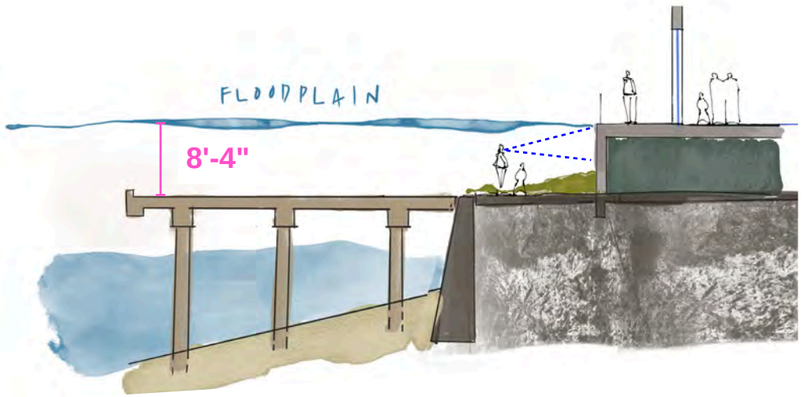
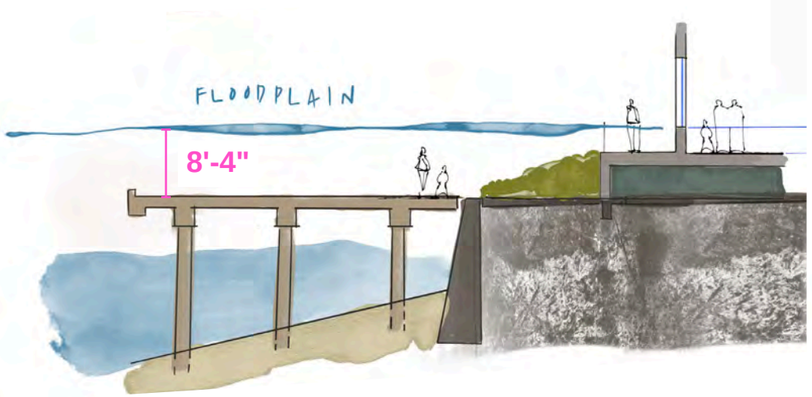
WITH FLOOR HEIGHTS



+8’-4" Finish Floor

+0’ Window Sill

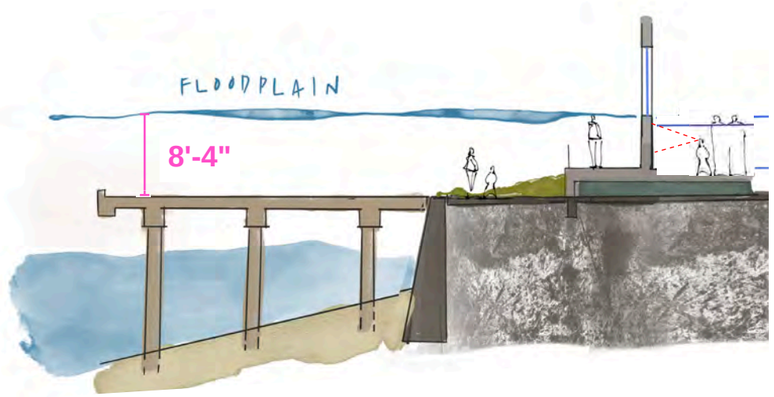
8’-4" Floodplain



+5' Finish Floor

+3’-4" Window Sill

8’-4" Floodplain



+3' Finish Floor

+4’-4" Window Sill

8’-4" Floodplain

FLOOD ZONES

N

Lilac

PIER 25

River
Project
Dock

PIER 26

Downtown
Boathouse
Dock

City Vineyard

Downtown
Boathouse

North Moore
Building

ESTUARIUM
SITE

Utility
Building

Dog Run

AE Zone 12
Floodplain = 8’-4” above esplanade

Bike Lane

WEST STREET

HUDSON RIVER PK
TRUST

ESUARIUM SITE

Lilac

PIER 25

River Project Dock

PIER 26

Downtown Boathouse Dock

City Vineyard

Downtown Boathouse

North Moore Building

ESTUARIUM SITE

Utility Building

Dog Run

Bike Lane

WEST STREET

8-10FT WIDE UTILITY CORRIDOR

PEDESTRIAN ACCESS

HUDSON RIVER PK TRUST

Upland Transition

sedges
Juncus gerardi black grass
joint grasses
fiddler crabs

Shoreline

insects
birds
grasses
horseshoe crabs

Salt Marsh

High Marsh

fiddler crabs, diamond back terrapins, clams, ribbed mussels

Low Marsh

cordgrass *Sparta alterniflora,* clams, juvenile fish, invertebrates

Tidal Flats / Mud Flats

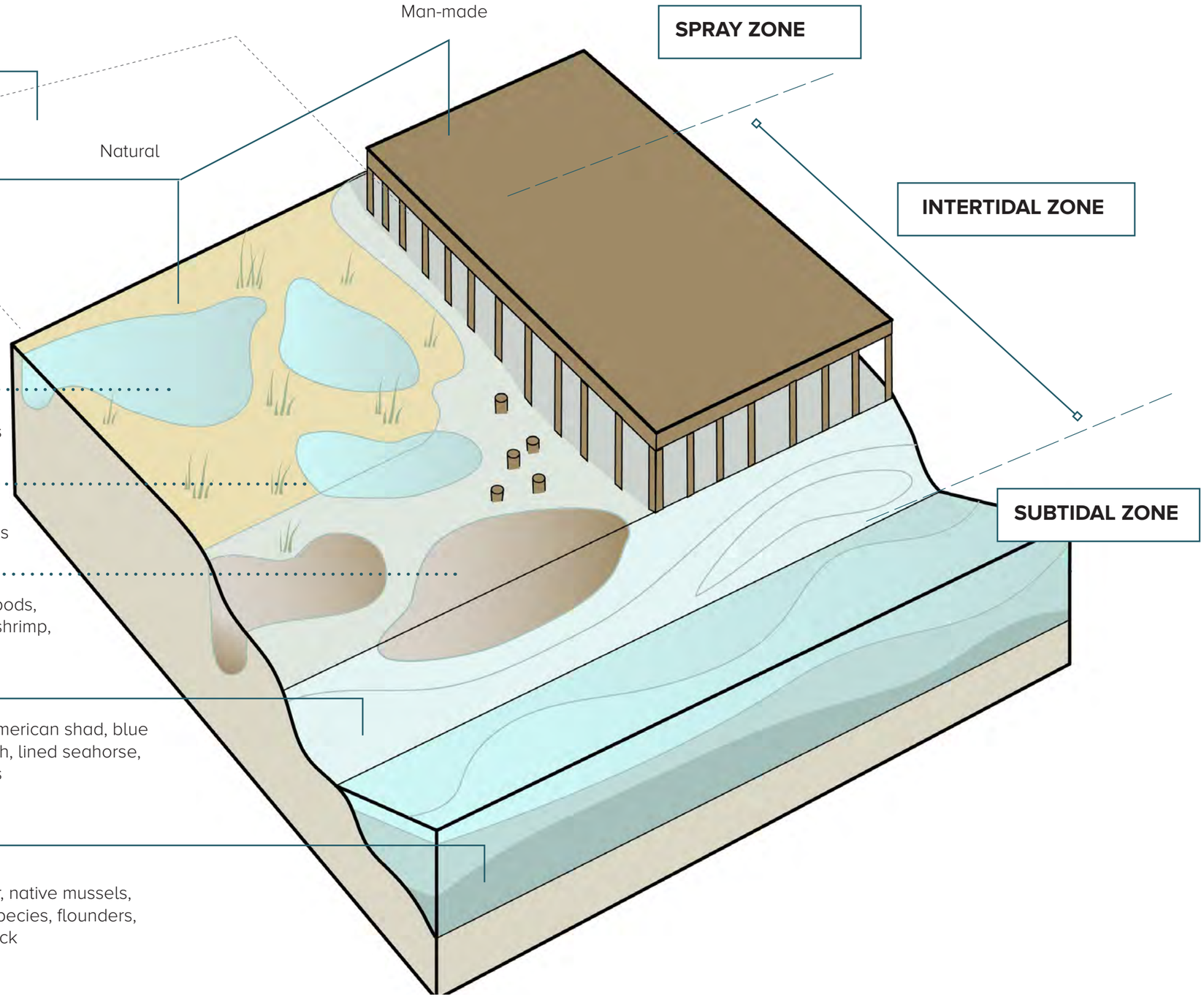
mud dog whelk, mud crabs, isopods, oyster drills, spider crab, grass shrimp, hermit crab

Shallows

white perch, striped bass, American shad, blue crab, bait fish, oyster toadfish, lined seahorse, smooth dogfish, comb jellies

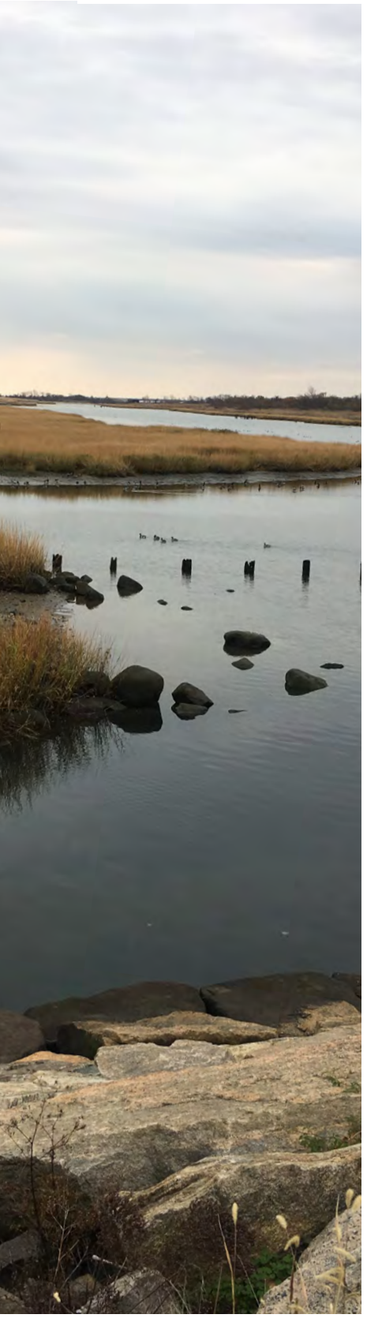
River Bottom : Benthic Zone

Atlantic tomcod, hogchoker, native mussels, oysters and other sessile species, flounders, sturgeon, grubby, stickleback

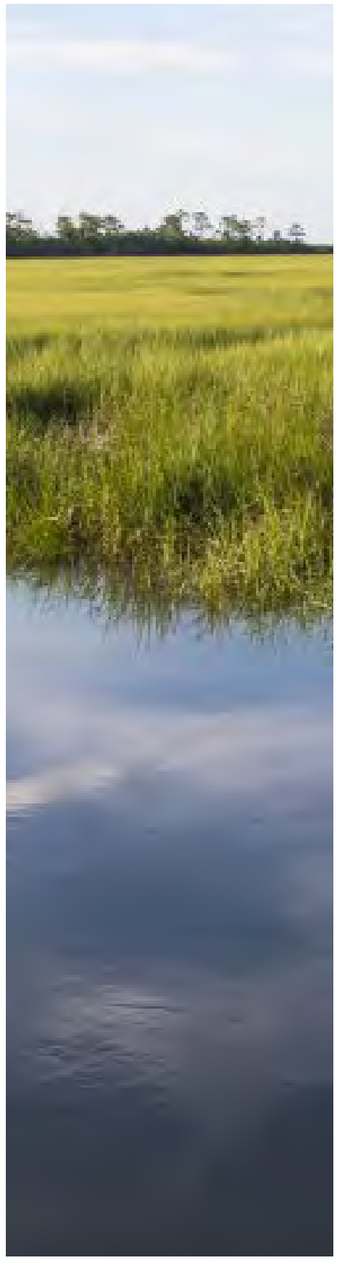


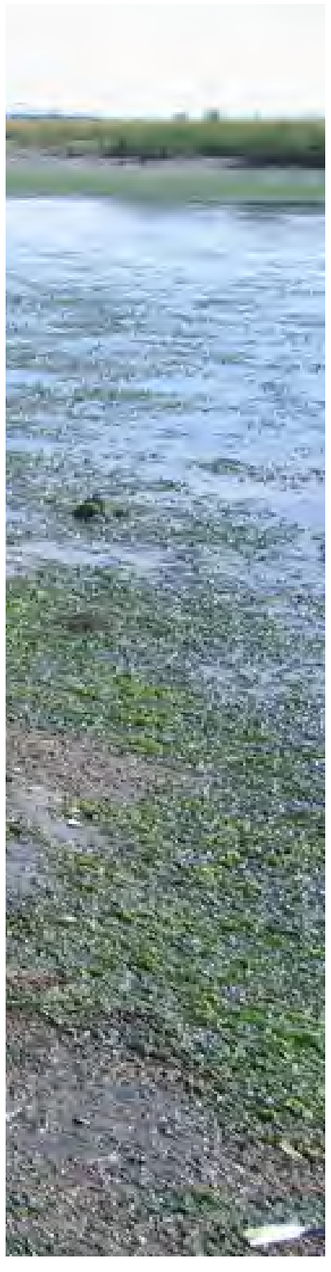
Estuary Habitats

ESTUARY HABITATS



Shorelines





Salt Marsh

High Marsh

Low Marsh

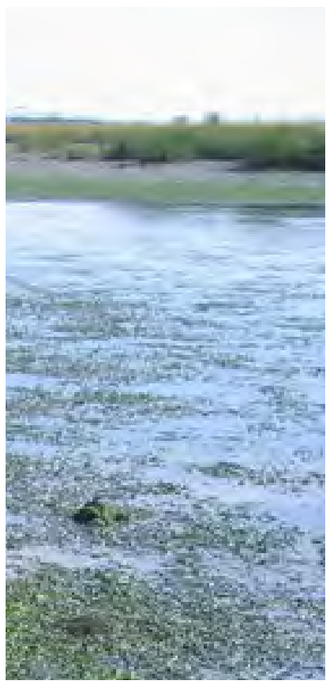
Intertidal Mudflats

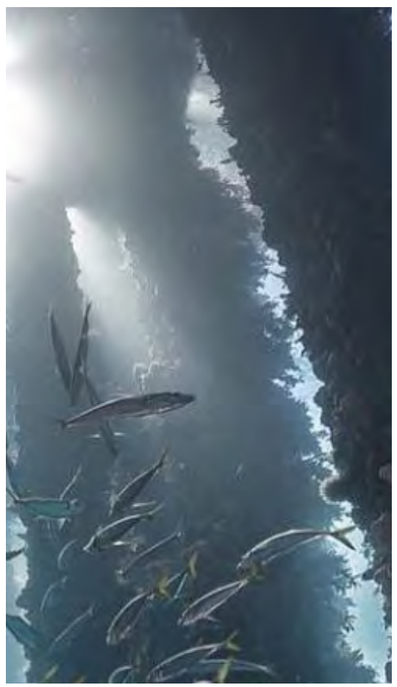
Seagrass Beds

Shallows

Benthic Zone

ESTUARY HABITATS AND ANIMALS





Horseshoe crab

Mussels

Invertebrates

Isopods

Lined seahorse

Striped Bass

Atlantic tomcod

Fiddler crab

Mud crab

Blue crab

Oyster drill

Grass shrimp

White Perch

Stickleback

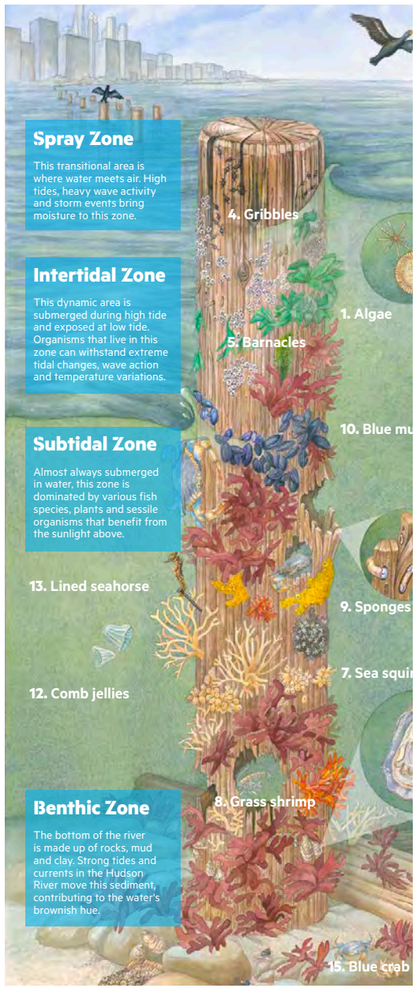
Shorelines | **High Marsh** | **Low Marsh** | **Intertidal Mudflats** | **Seagrass Beds** | **Shallows** | **Benthic Zone**

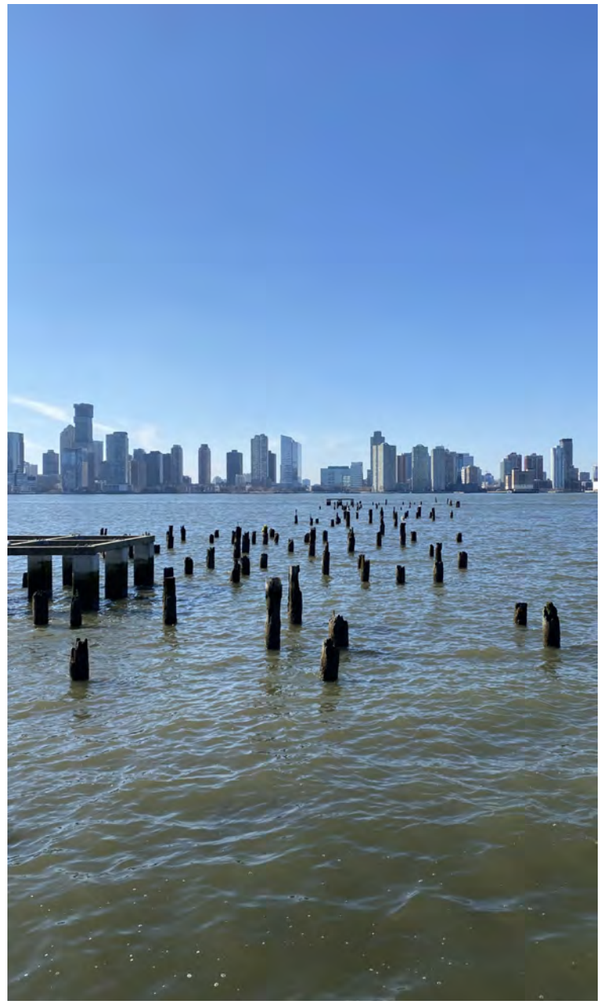
HUDSON RIVER PK TRUST

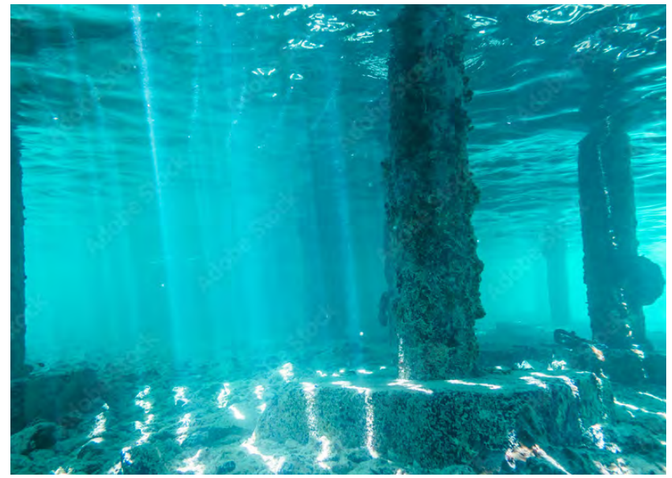
what	*The Big Idea*	Surprising animals depend on the Hudson estuary's dynamic habitats.
how	*The Experience*	Go behind the scenes to discover the diverse animals and habitats of the Hudson Estuary.
why	*The Purpose*	To raise awareness about the Hudson's estuary ecosystem and its animals, sparking concern for this unique urban environment.

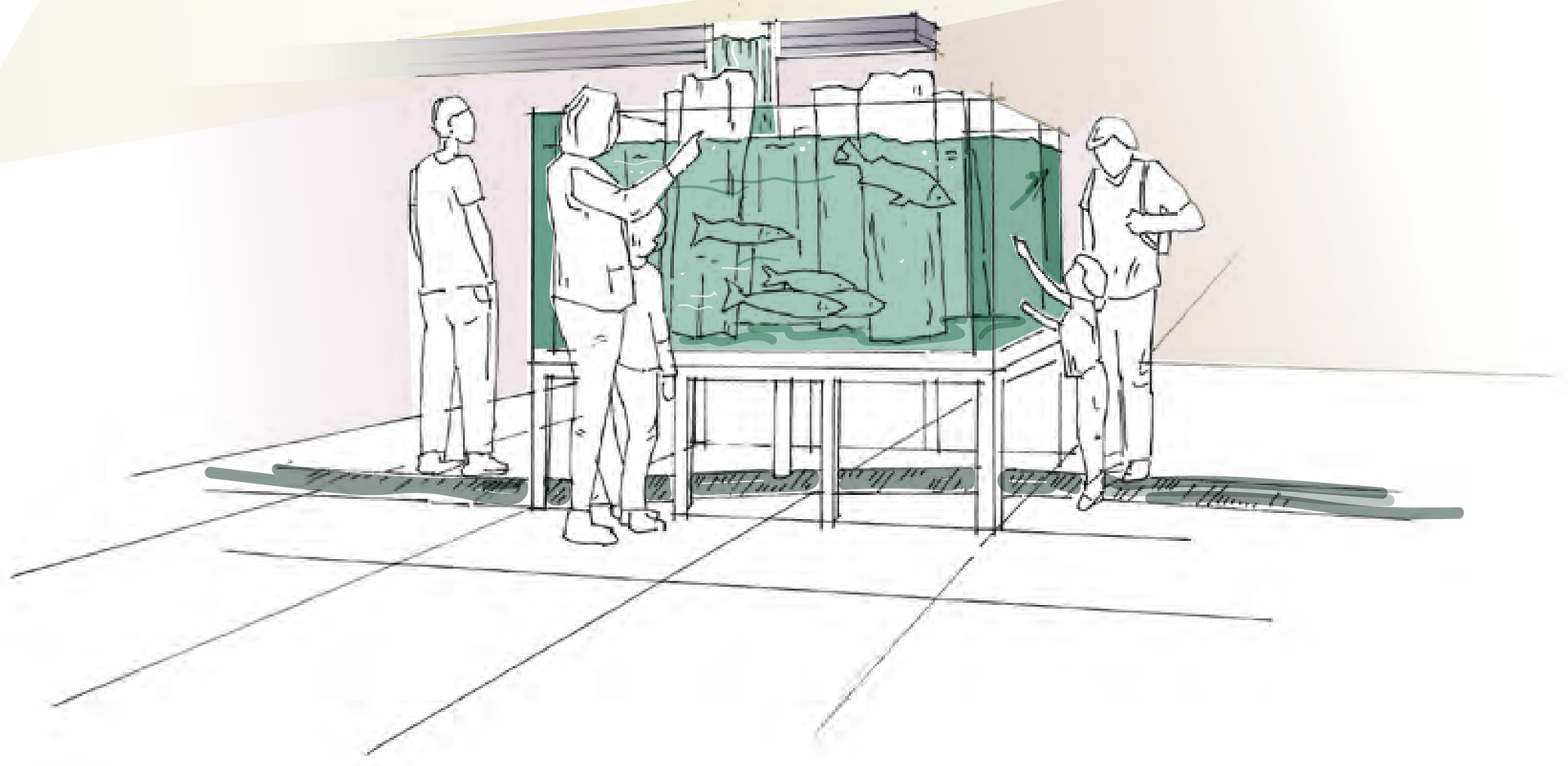
The Big Idea

HABITATS AROUND PILES









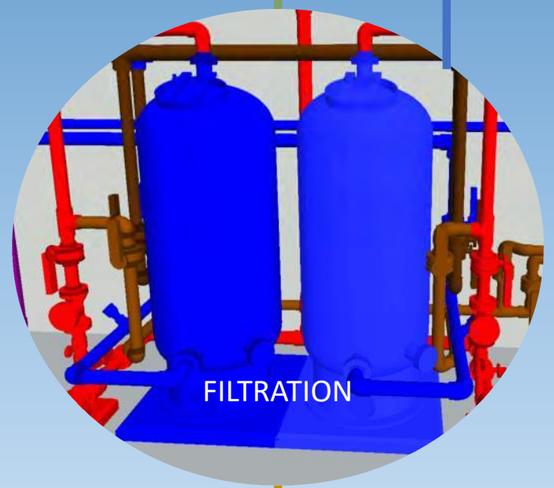
Focus tanks provide opportunities to display surprising animal species.

Enclosed space provides acoustic and light control to enhance media exhibits and special lighting.

FILTRATION SYSTEM

RAW RIVER WATER (300 GPM MAX)

SUPPLY RESERVOIR



RAW WATER FLOW THROUGH ONLY

RAW OR FILTERED WATER FLOW THROUGH ONLY

RAW OR FILTERED WATER FLOW THROUGH OR RECIRCULATION

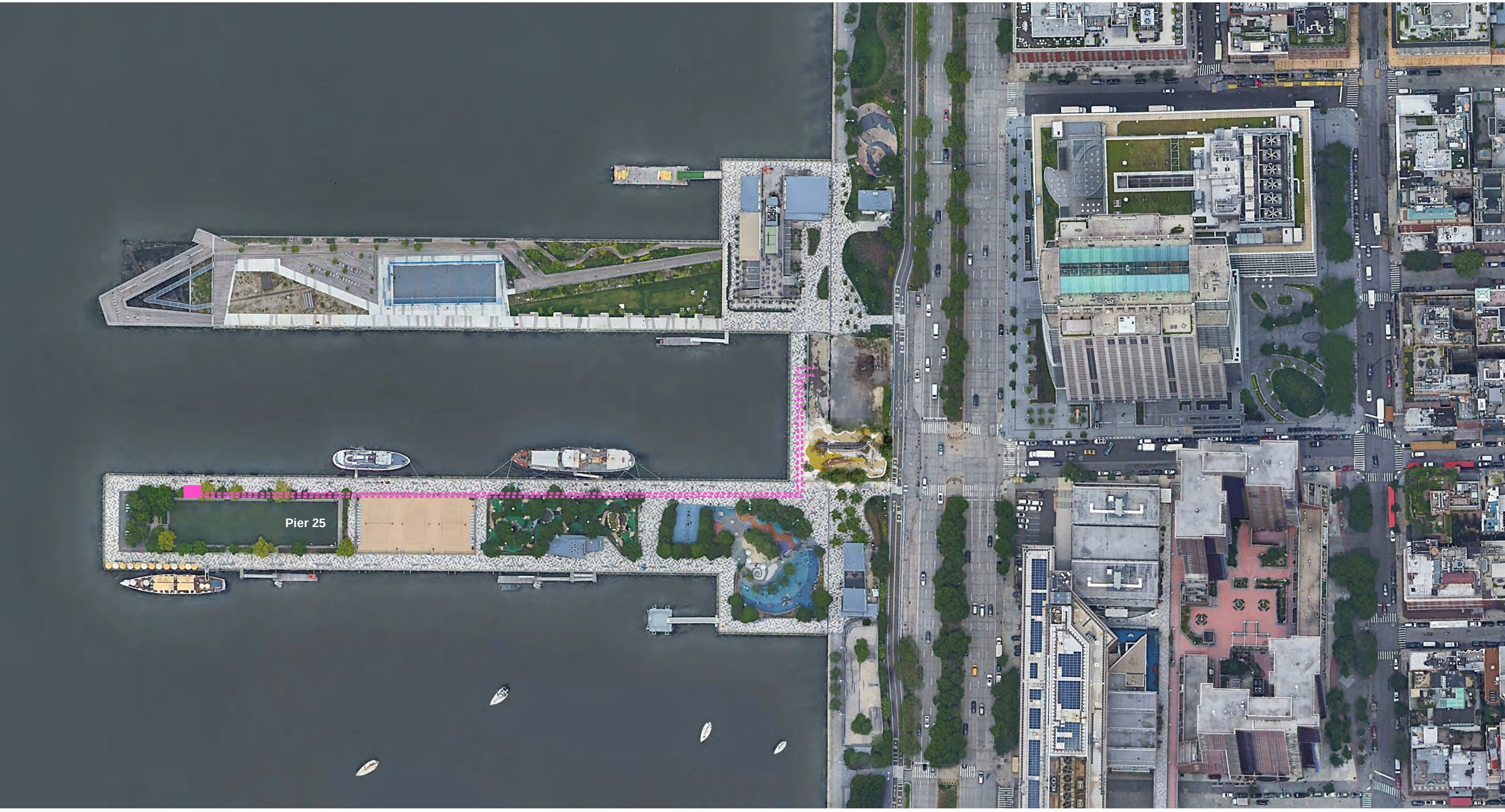
RECIRCULATION IS ONLY UTILIZED WHEN RIVER WATER IS UNSUITABLE FOR FLOW THROUGH. WHEN IN RECIRCULATION MODE THE FILTERS ONLY PULL FROM THE RECIRCULAITON RESERVOIR (NO FILTRATION OF RAW RIVER WATER). RECIRCULATION CONSISTS OF FILTRATION, CHILLING, AND ULTRAVIOLET STERILIZER

RECIRCULATION RESERVOIR

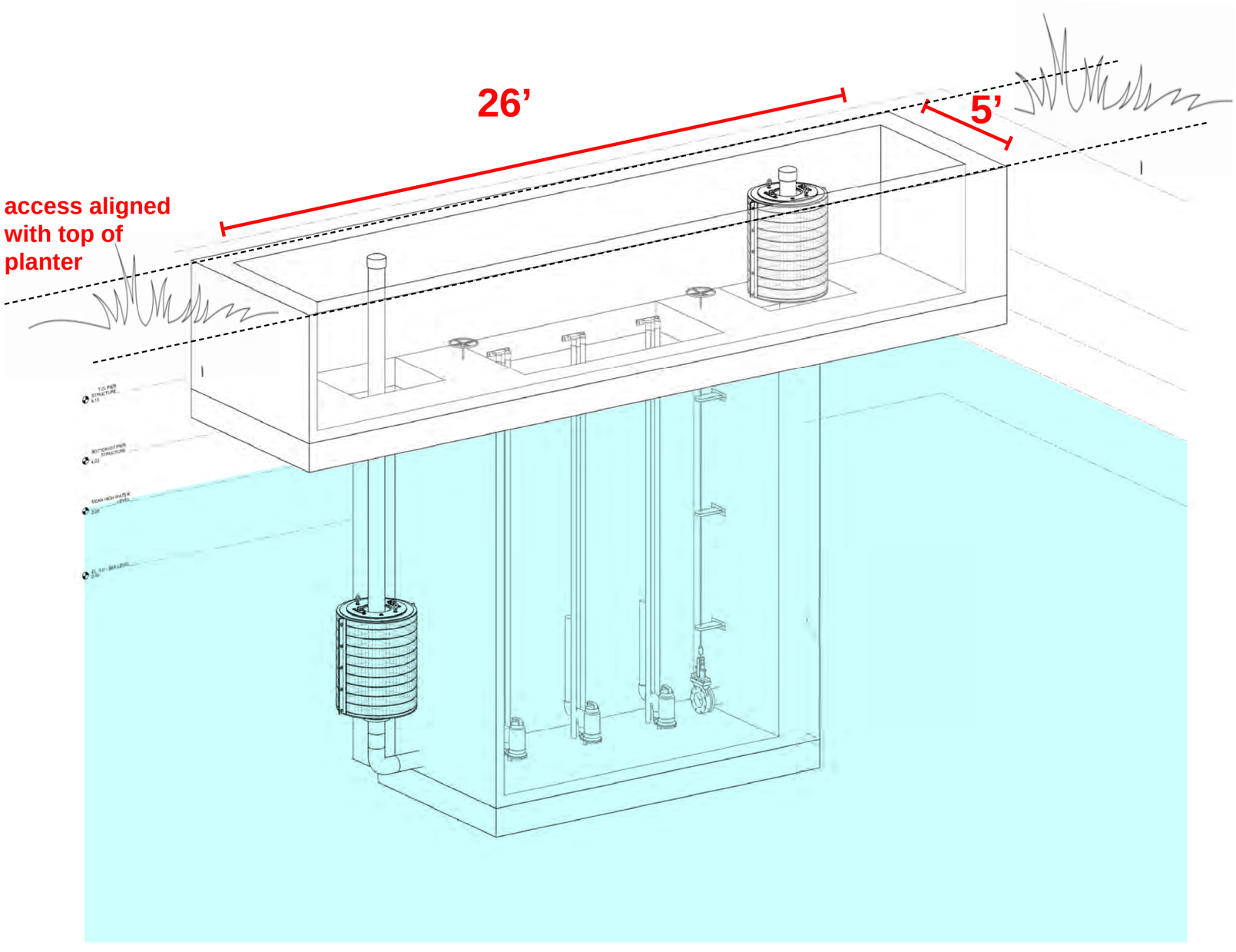
TO RIVER (300 GPM MAX)

BRINGING IN RIVER WATER

POTENTIAL INTAKE LOCATION



PRELIMINARY RIVER WATER INTAKE CONCEPT



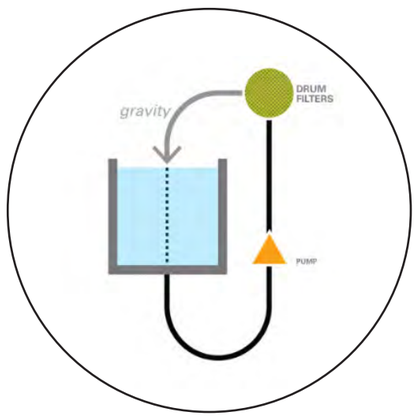
PIER 25

POTENTIAL GREEN BUILDING STRATEGIES

All Electric
Building System

Low embodied carbon
building materials

Green Roof



Gravity-fed
Life Support Systems

PV Panels

ESTUARIUM PROGRAM WHERE WE STARTED...

PUBLIC SPACES

Lobby	380
Cloak / Back- Pack	20
Gallery	2,000
Classroom 1	1,500
Classroom 2	1,500
Restroom (W)	200
Restroom (M)	200
Gender Neutral Restroom	70
Subtotal	**5,870 sf**

STAFF SPACES

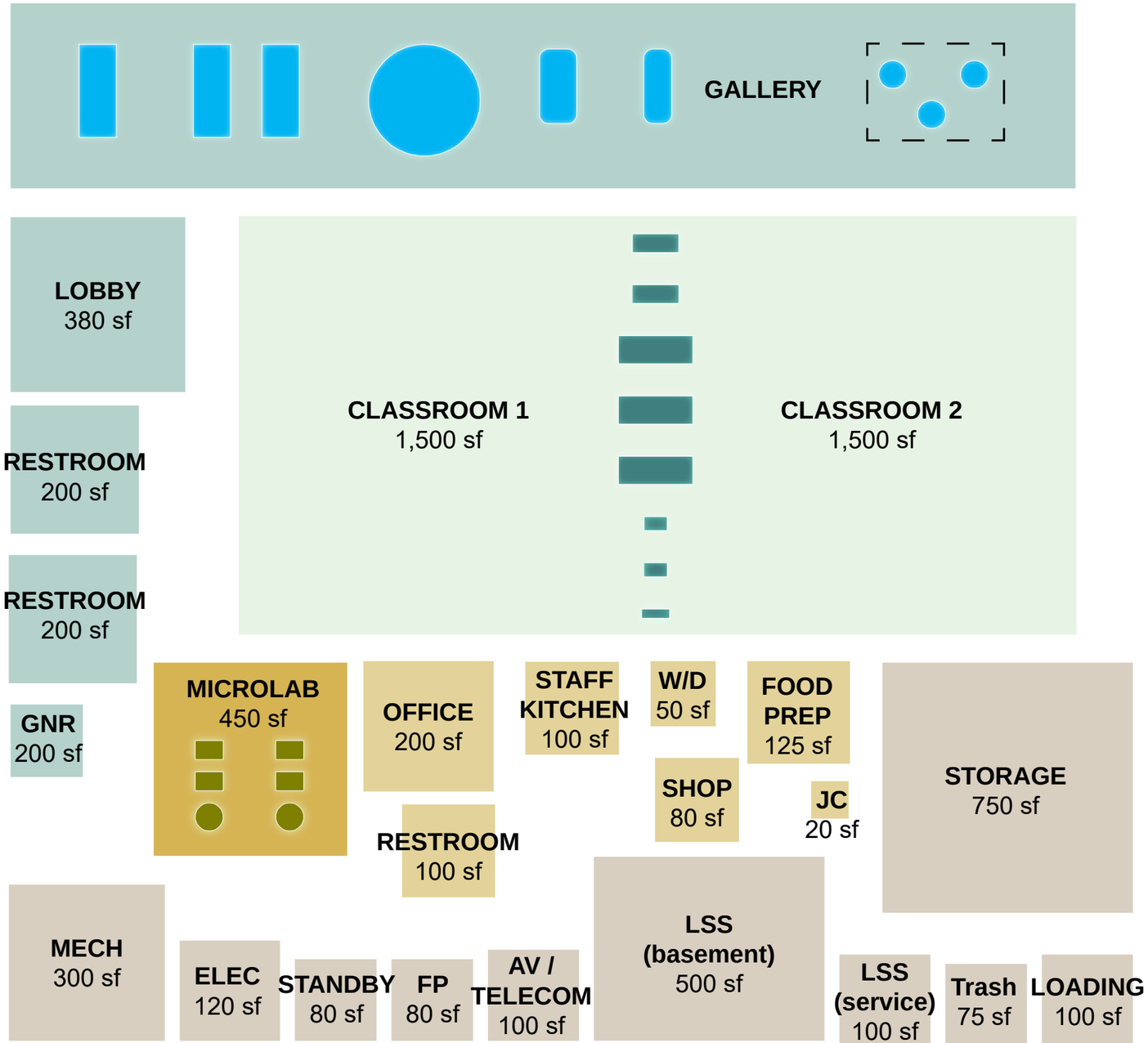
Microlab	450
Office	200
Sta itchen	100
St Restroom	100
Laundry	50
Animal Food Prep	125
Storage	750
Shop	80
Custodian	20
Subtotal	**1,875 sf**

MISC

Mech. Room	300
Water (with Mech. Room)	
Electrical Room	120
Standby Power Room	80
Fire Protection Room	80
AV/Tel Room	100
LSS Room	350
Trash Room	75
Loading Area	100
Subtotal	**1,205 sf**

Circulation (15%)

Total 10,000 sf



LESSONS LEARNED:
DISCOVERY TANK AT PIER 57

ESTUARIUM PROGRAM WHERE WE ARE NOW...

PUBLIC SPACES

~~Lobby~~	~~380~~
Cloak / Back- Pack	20
Gallery	2,000
Classroom 1	1,500
~~Classroom 2~~	~~1,500~~
Restroom (W)	200
Restroom (M)	200
Gender Neutral Restroom	70
Subtotal	**5,870 sf**

STAFF SPACES

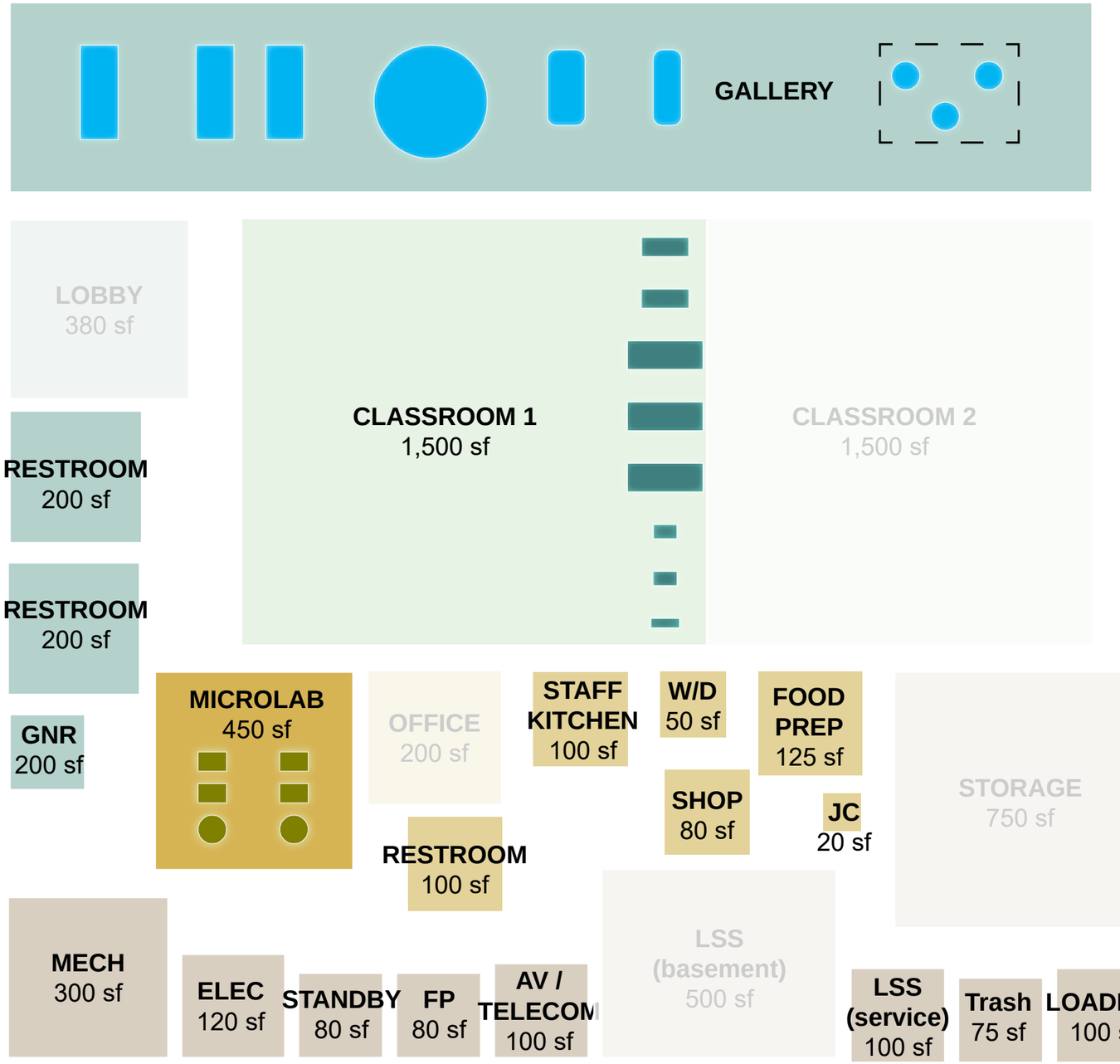
Microlab	450
~~Office~~	~~200~~
Sta itchen	100
St Restroom	100
Laundry	50
Animal Food Prep	125
~~Storage~~	~~750~~
Shop	80
Custodian	20
Subtotal	**1,875 sf**

MISC

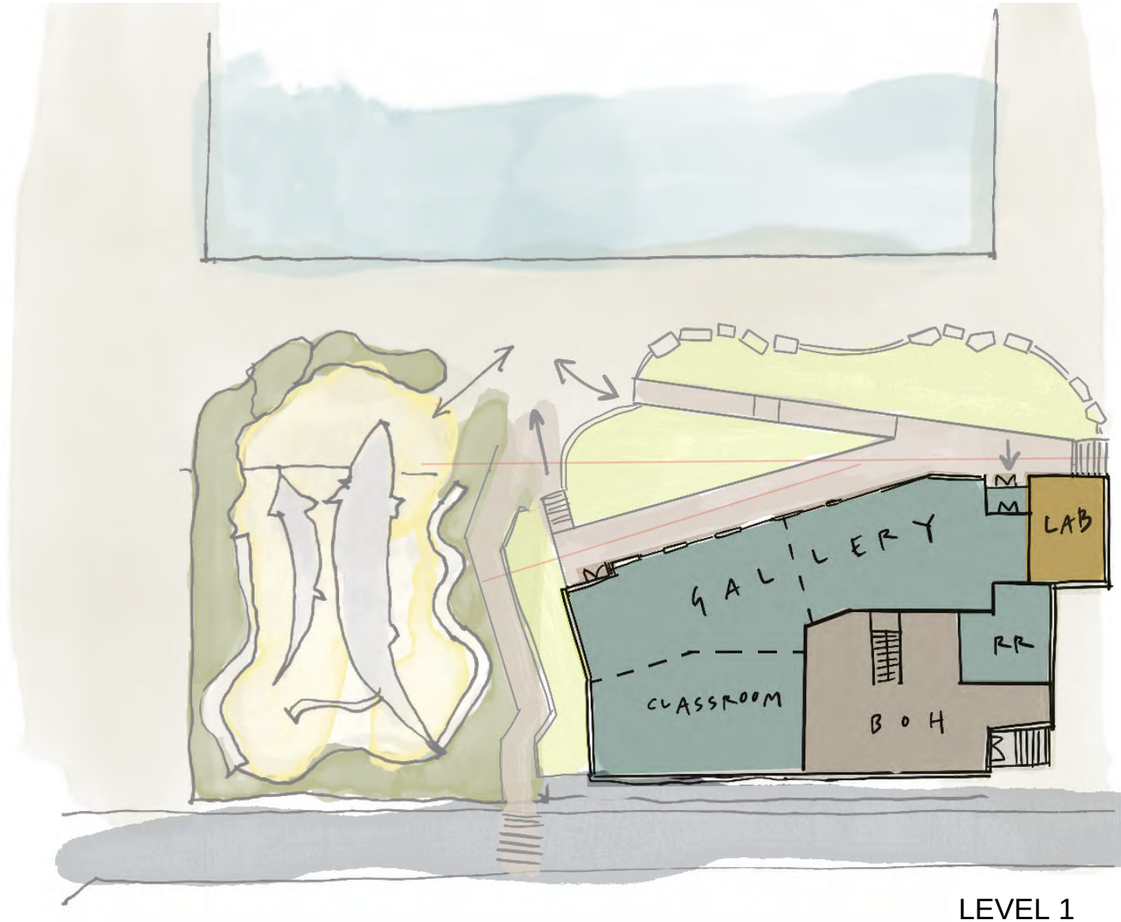
Mech. Room	300
Water (with Mech. Room)	
Electrical Room	120
Standby Power Room	80
Fire Protection Room	80
AV/Tel Room	100
LSS Room	350
Trash Room	75
Loading Area	100
Subtotal	**1,205 sf**

Circulation (15%)

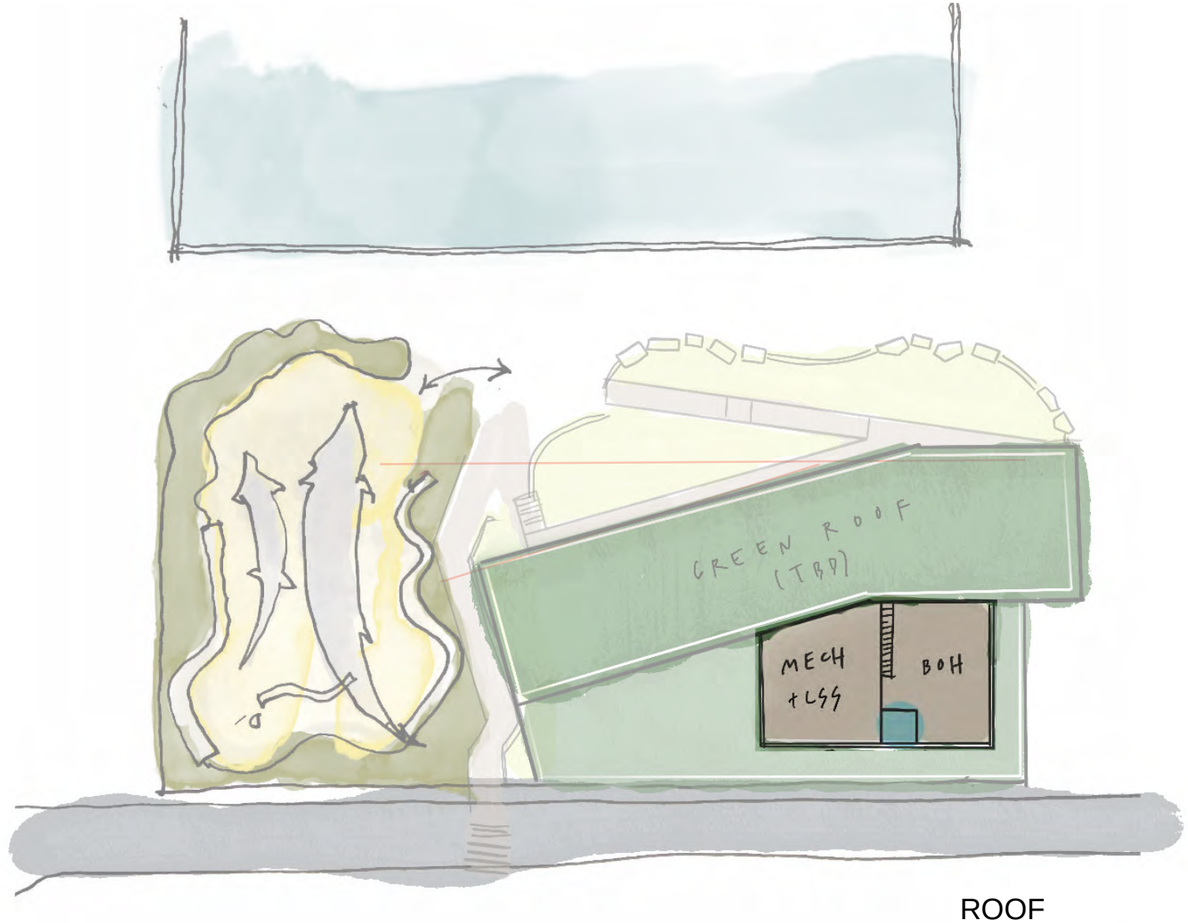
Total 7,500 sf



CONCEPTUAL LAYOUTS



LEVEL 1



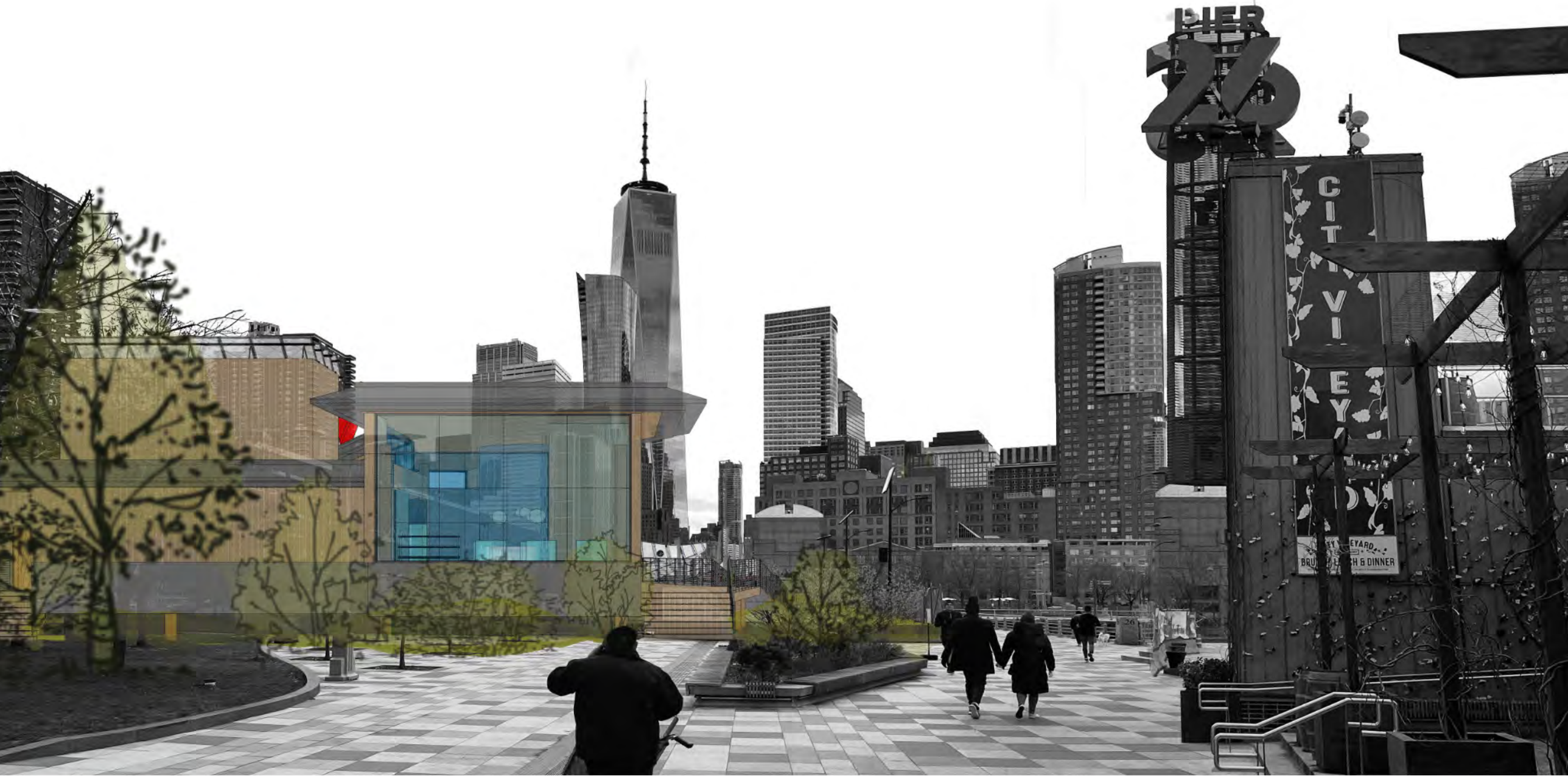
ROOF

PRELIMINARY LANDSCAPE STUDIES

PRELIMINARY INTERIOR LAYOUT

VIEW FROM 9A (WEST STREET)

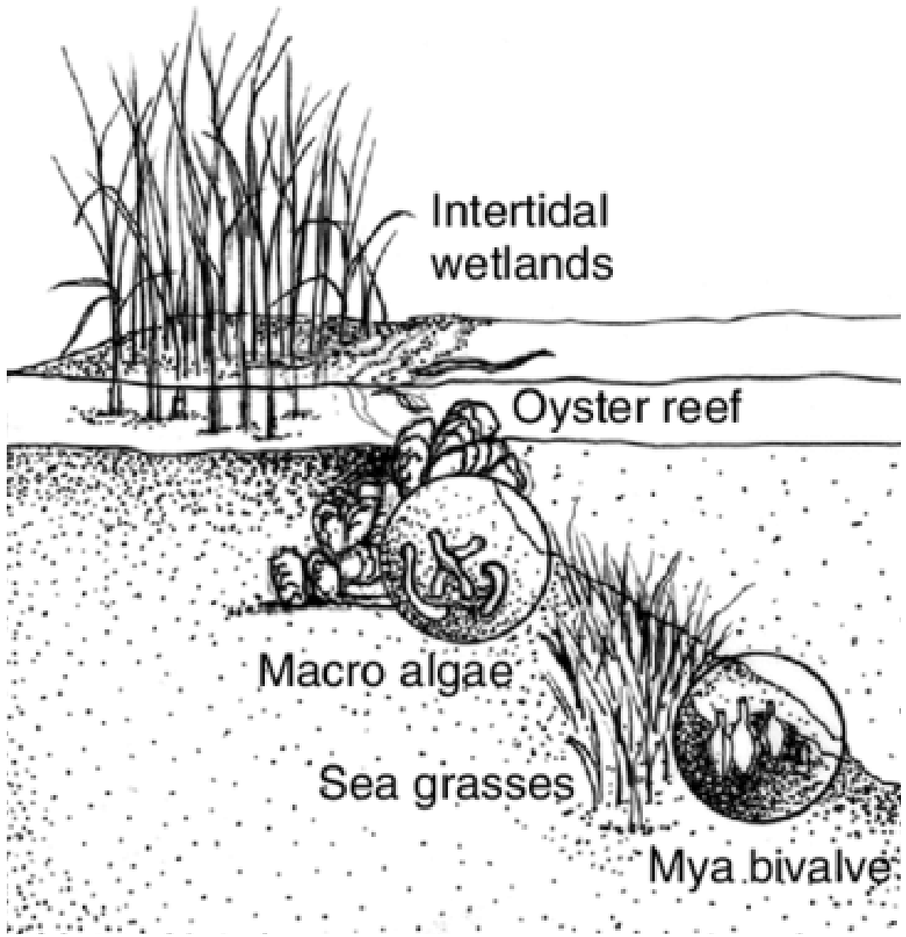
VIEW FROM ESPLANADE

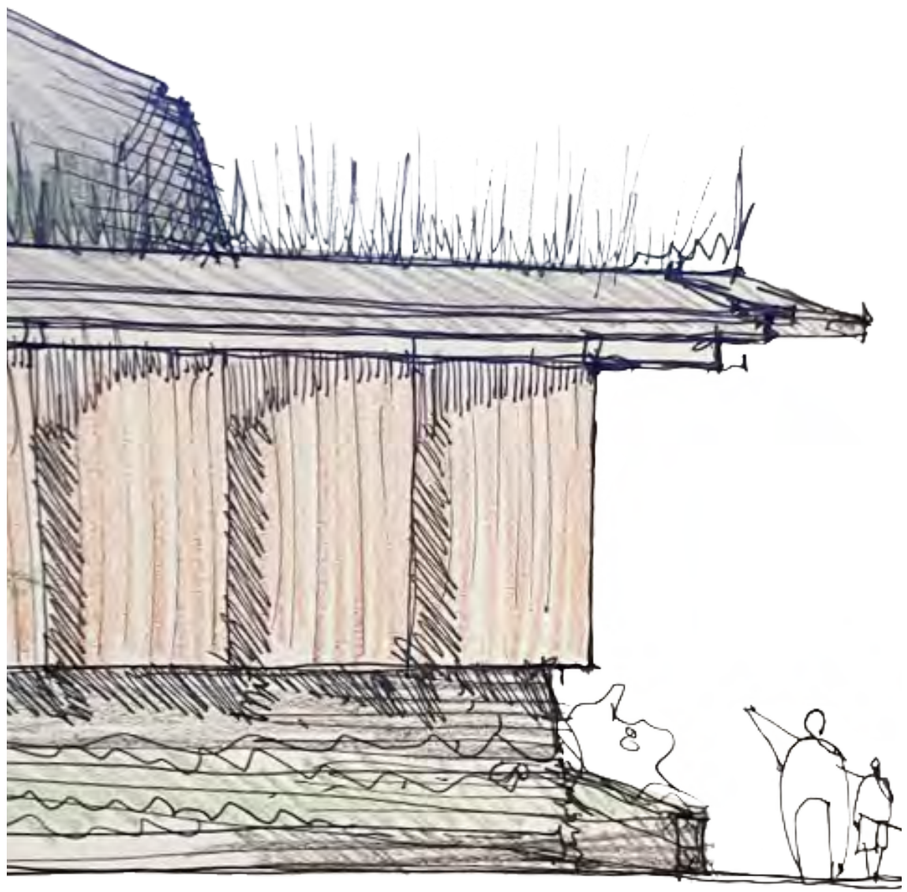


VIEW FROM
PIER 26 TIDE DECK

HUDSON RIVER PK
TRUST

IDEAS ABOUT MATERIALS



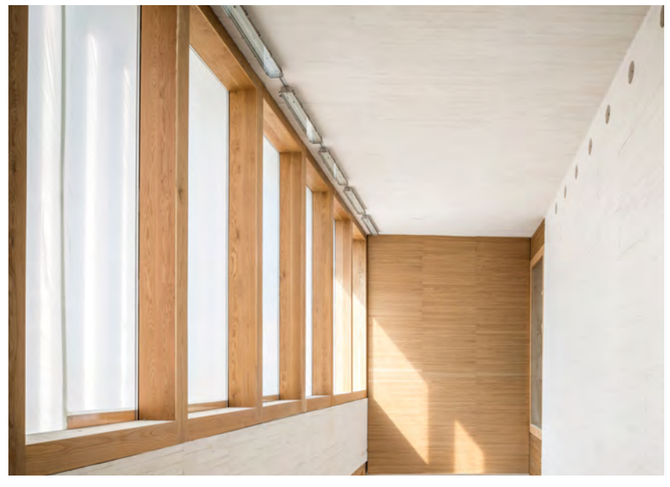


Roof: Landscape

Body: Acetylated Wood

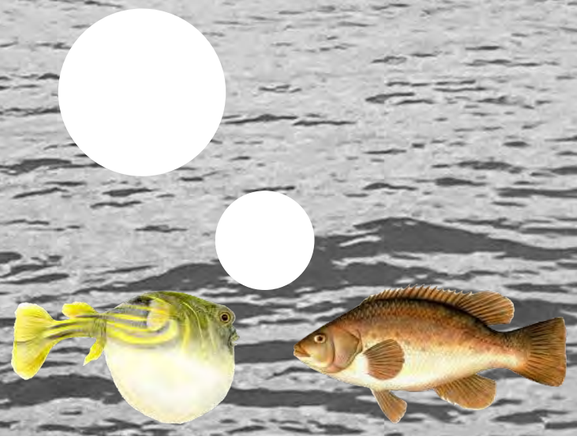
Base: Reclaimed Granite


Staff Only
Beyond this point



Please give us your feedback!

Thank you!



HUDSON RIVER PARK TRUST