TRACES OF CHANGE

CO-EVOLVING WITH THE LANDSCAPE

The tensions between the extent of the water in the past and its imminent encroachment over land in the future provide an opportunity to blur the hard boundaries between land and water. In this concept, water is treated as a precious resource and is invited into the landscape as a central element of the experience of place. Urban development is pushed towards the margins of the flood zone, liberating the chore of the waterfront so the landscape is ready to accept the new conditions of wetness. In this concept, a large portion of the waterfront becomes a regional park by the 2080s which contributes to the resilience of the Village of Tarrytown resiliency against climate change, and provides wildlife habitat, beautiful and functional public spaces for Tarrytown residents and a destination for visitors.

Restored connection to the river

Citizens help establish and monitor the health of the evolving ecosystem

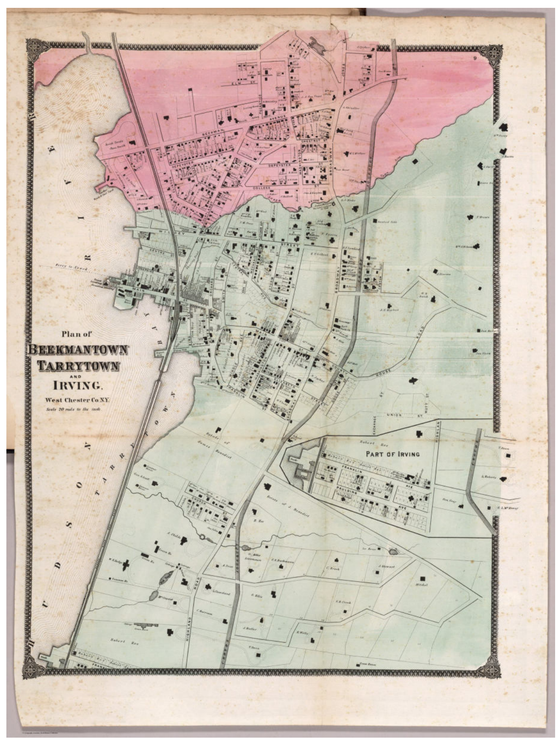
The salt marsh, like the water migrate inland over time

Room for the water

Multi-use trails for an inclusive and healthy community

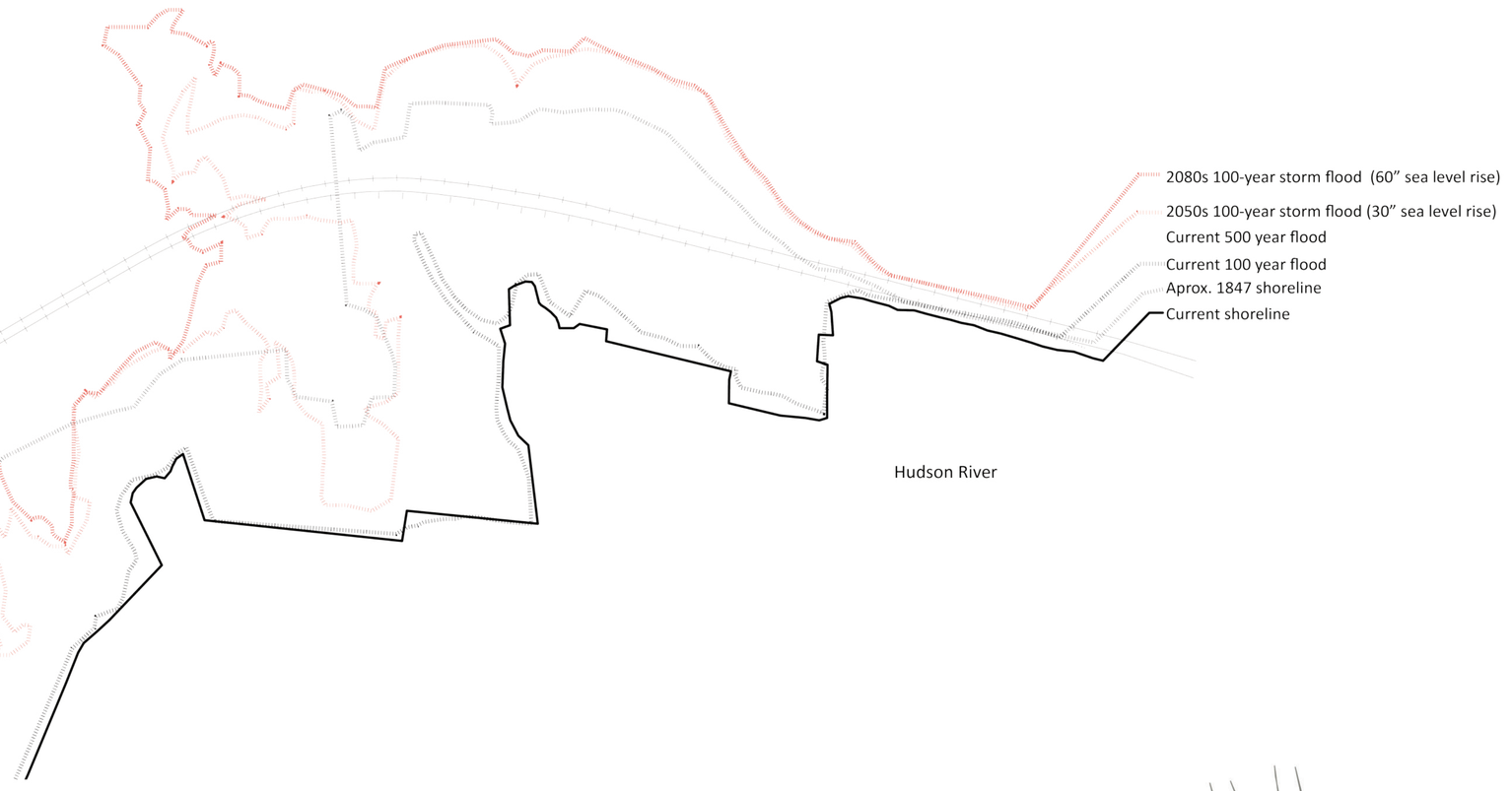
Higher grounds serve as gathering and recreation spaces for the community

Vanessa Dikuyama Zapata
LA 7010 CAD Studio Fall '22
Tarrytown, NY

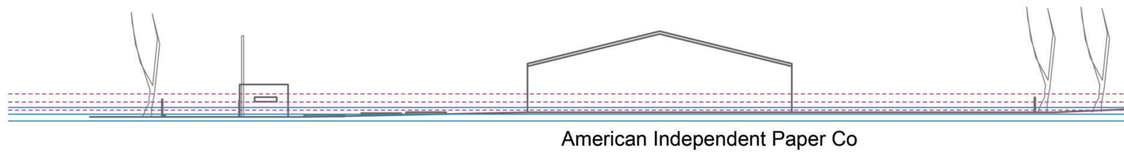


1867 Plan of Beckmantown, Tarrytown and Irving, Westchester, New York. Source: David Rumsey Historical Map Collection.

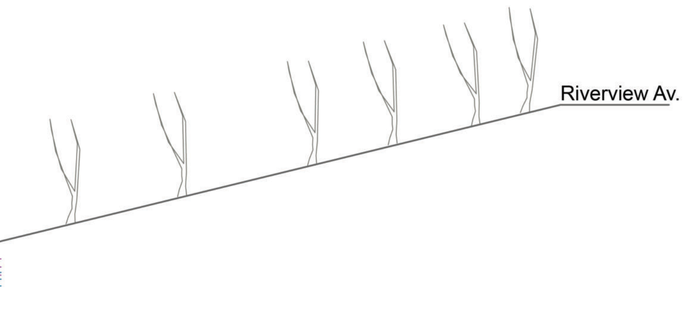
The Village of Tarrytown grew on filled land claimed from the river. As sea level rises with climate change, the Hudson River will extend its domain over much of what constitutes Tarrytown's waterfront today. The diagram on the right overlays the current shoreline with a historical waterfront and future flood projections to reveal the dynamic nature of the waterfront in Tarrytown. The waterfront is a dynamic entity. In Tarrytown, the tensions between the historical extent of the river and its imminent encroachment over the town in the future, highlight the dynamic tension between land and water through time. These tensions invite us to reconsider the relationship between land and water as a fluid one.



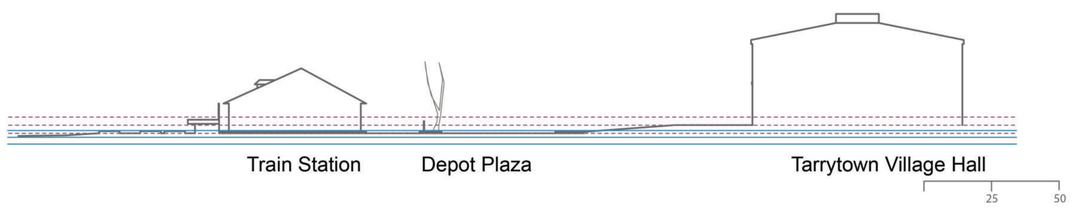
TRAIN TRACKS BY PAPER RECYCLING FACILITY



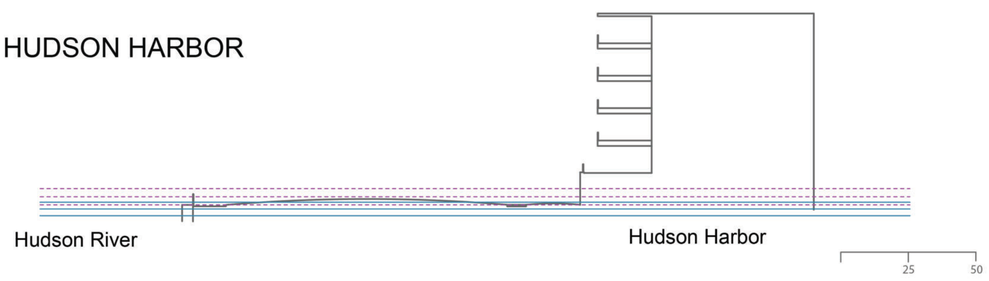
FRANKLIN COURTS



TRAIN STATION AND VILLAGE HALL

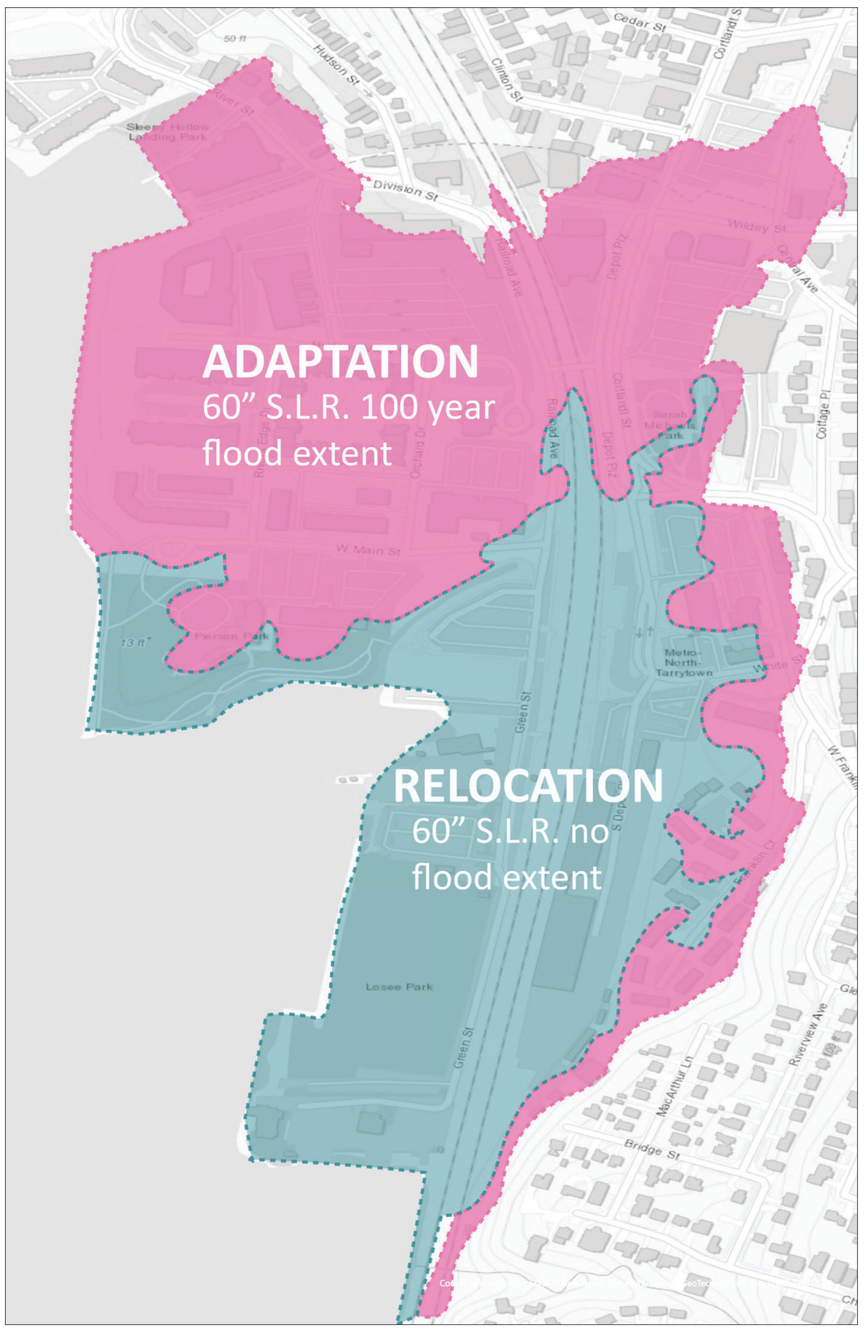


HUDSON HARBOR



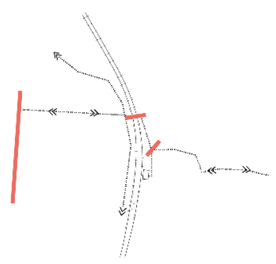
Sections showing key areas close to the Tarrytown waterfront today and predicted water levels for a 100 year storm event in the 2020s, 2050s and 2080s.

RESILIENCY STRATEGIES

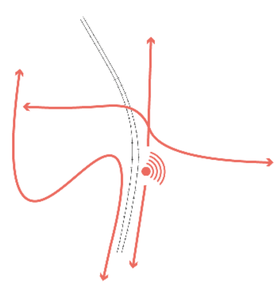


Left: This concept proposes two climate adaptive responses in the Tarrytown waterfront: 1. Relocation of existing residential buildings and a freeze on new development in the area that will be permanently inundated by the 2080s (60” sea level rise) projection. 2. Adaptation of new and existing building and landscape developments within the 2080s’ 100-year storm floodplain to be flood tolerant.

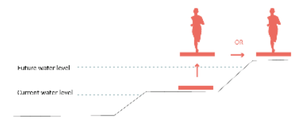
Actions



Remove barriers and create connections to, from and along the waterfront.



Re-think under-utilized prime waterfront land that is currently occupied by surface parking and other non-water dependent uses.

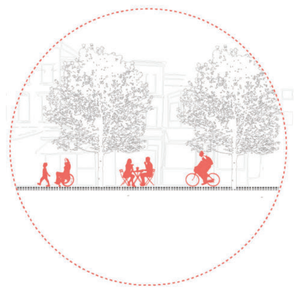


Adapt infrastructure in response to sea level rise and flood risk projections.

Visions

Restored connection to the river

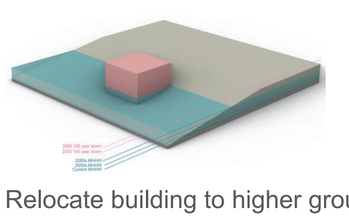
Quality public spaces to play and gather



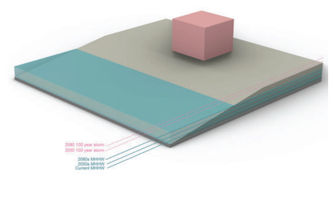
Vibrant urban edge

Community involvement in the evolution of the landscape

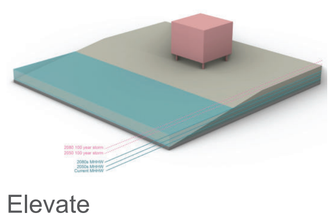
Buildings



Relocate building to higher ground

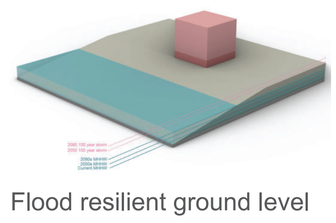


AND

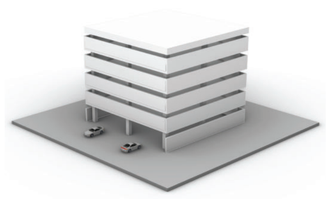


Elevate

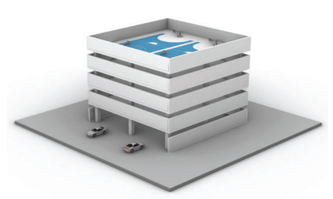
OR



Flood resilient ground level



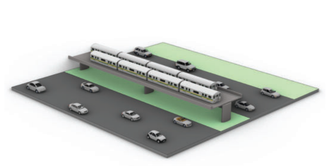
Replace surface parking with ramps



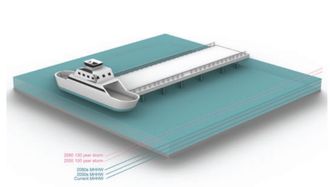
Relocate waterfront courts to new parking ramps and other strategic inland areas

Transportation

This concept projects the MTA line along the Hudson to phase out as a consequence of the imminent flood risk in several areas along the train line and the high cost of protecting the train tracks in its current location. The train may be relocated to existing highways or replaced with alternative land-based or water-based transportation systems to meet regional transportation needs in the coming decades.

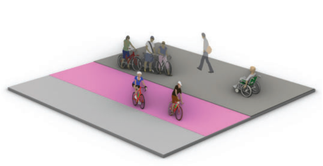


Train re-routed along existing highways*



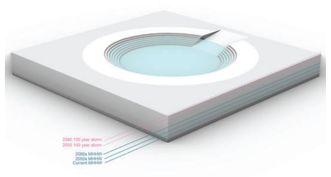
Regional water-based transportation systems*

Highly efficient and compact local public transit systems like autonomous shuttle buses*

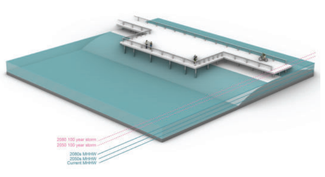


Improved pedestrian and bicycle connections*

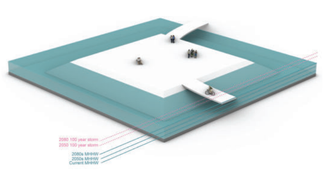
Landscape



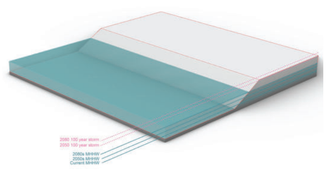
Flexible flood performing landscape elements (e.g. amphitheater/ice rink/detention basin)



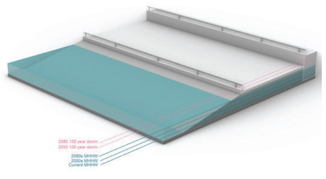
Elevated paths and overlooks*



Elevated park areas *



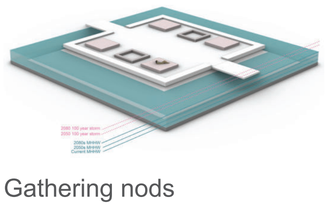
Create higher ground above flood levels, balancing cut and fill in flood zone



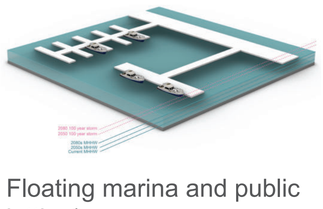
Intermediate spaces

Water access

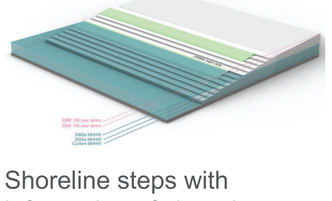
Canoe/kayak launches*



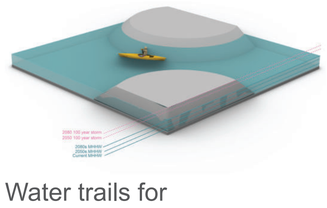
Gathering nods



Floating marina and public jetties*



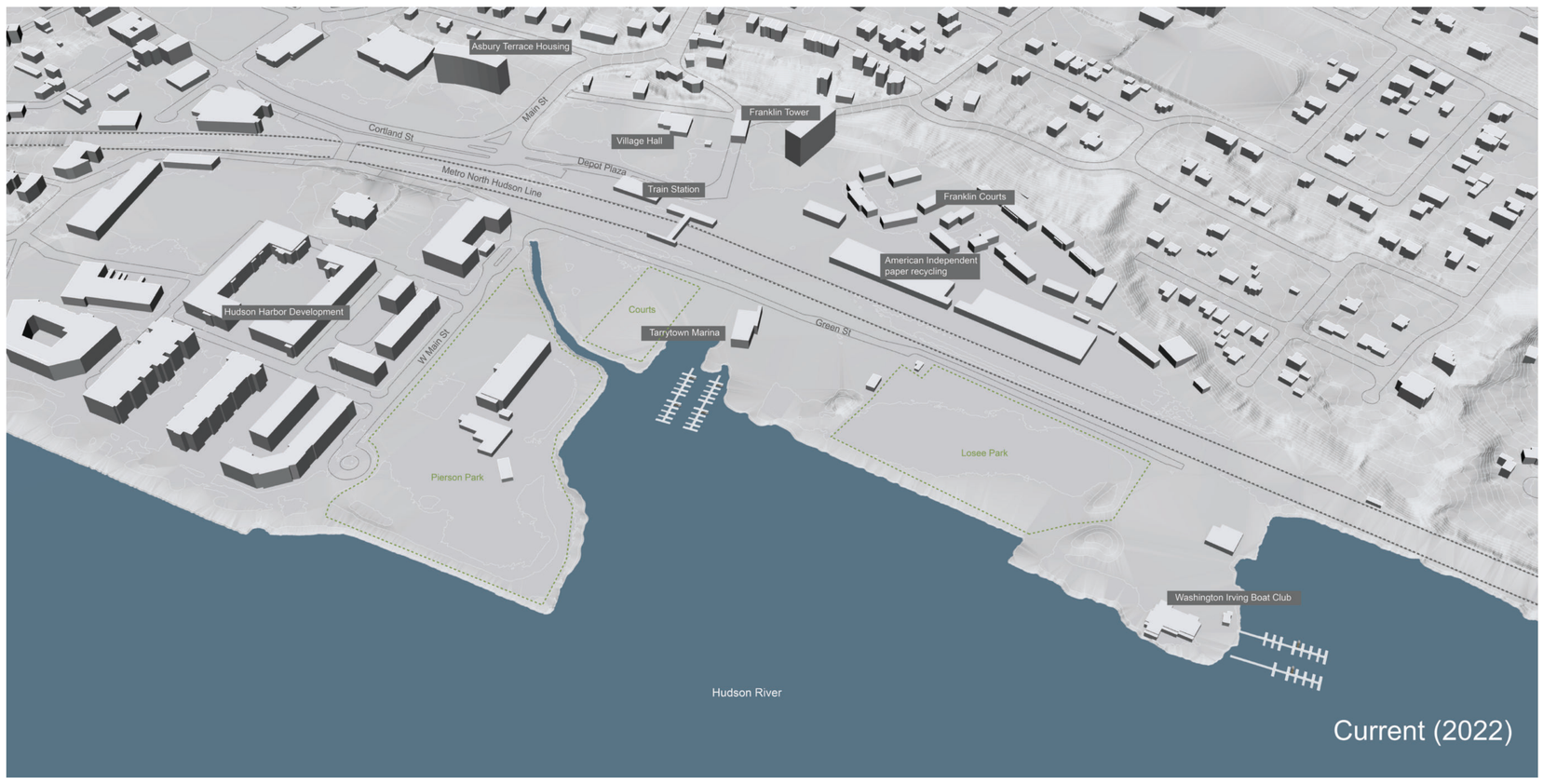
Shoreline steps with information of changing water levels



Water trails for non-motorized boats*

*Diagrams include models downloaded from SketchUp 3D Warehouse.

PHASING

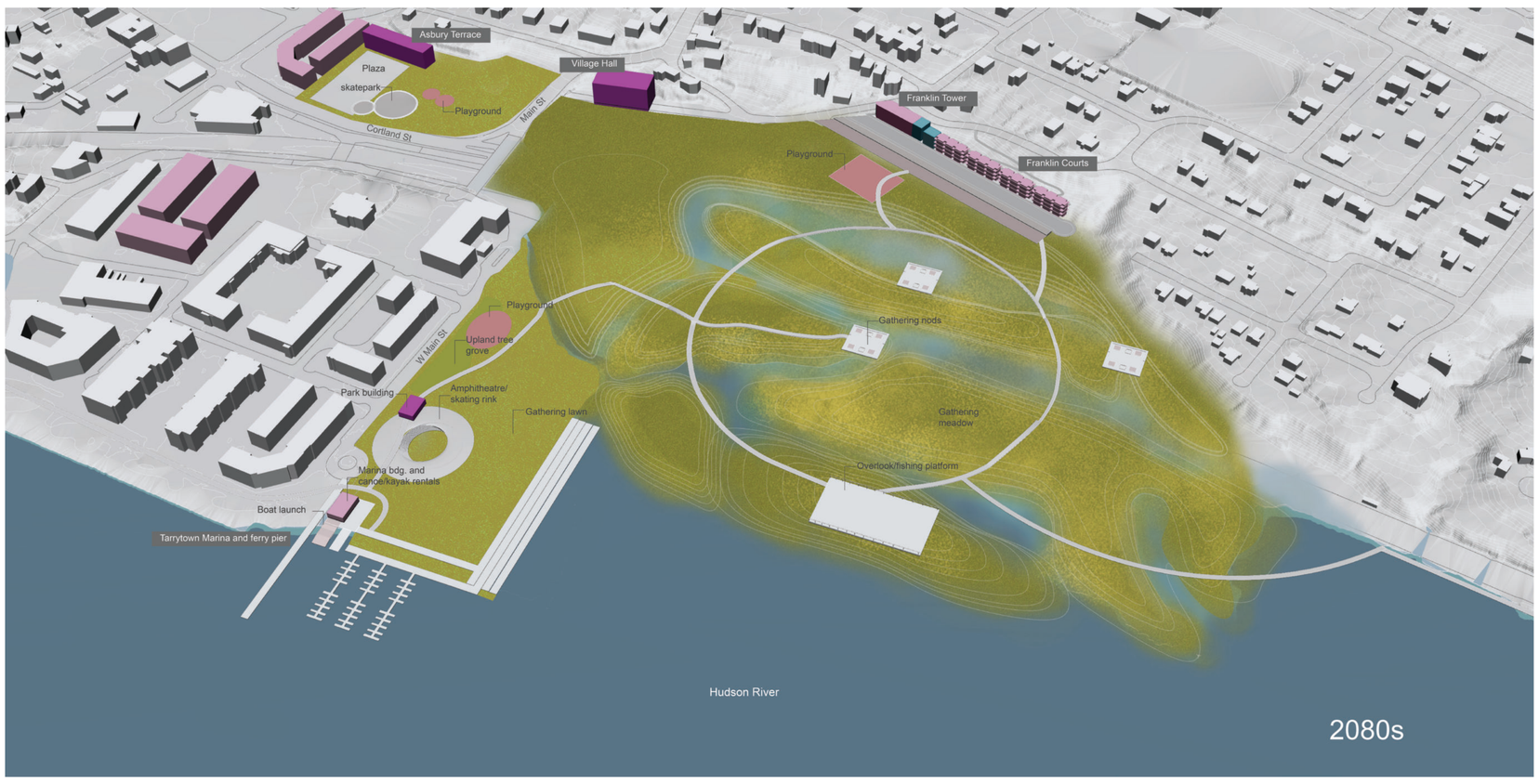


2020S-2030S SUMMARY

- Freeze on new developments on current floodplain.
- Minor renovations of the Franklin Tower, Washington Irving Boat Club and Tarrytown Marina buildings in place.
- Rebuild Franklin Courts on higher ground in the back end of the same parcel. Provide parking ramp(s), public open spaces and playgrounds.
- New mixed-use developments on Train Station Plaza (the Walgreens parcel) and the Carriage house property in the northeast corner of Hudson Harbor.

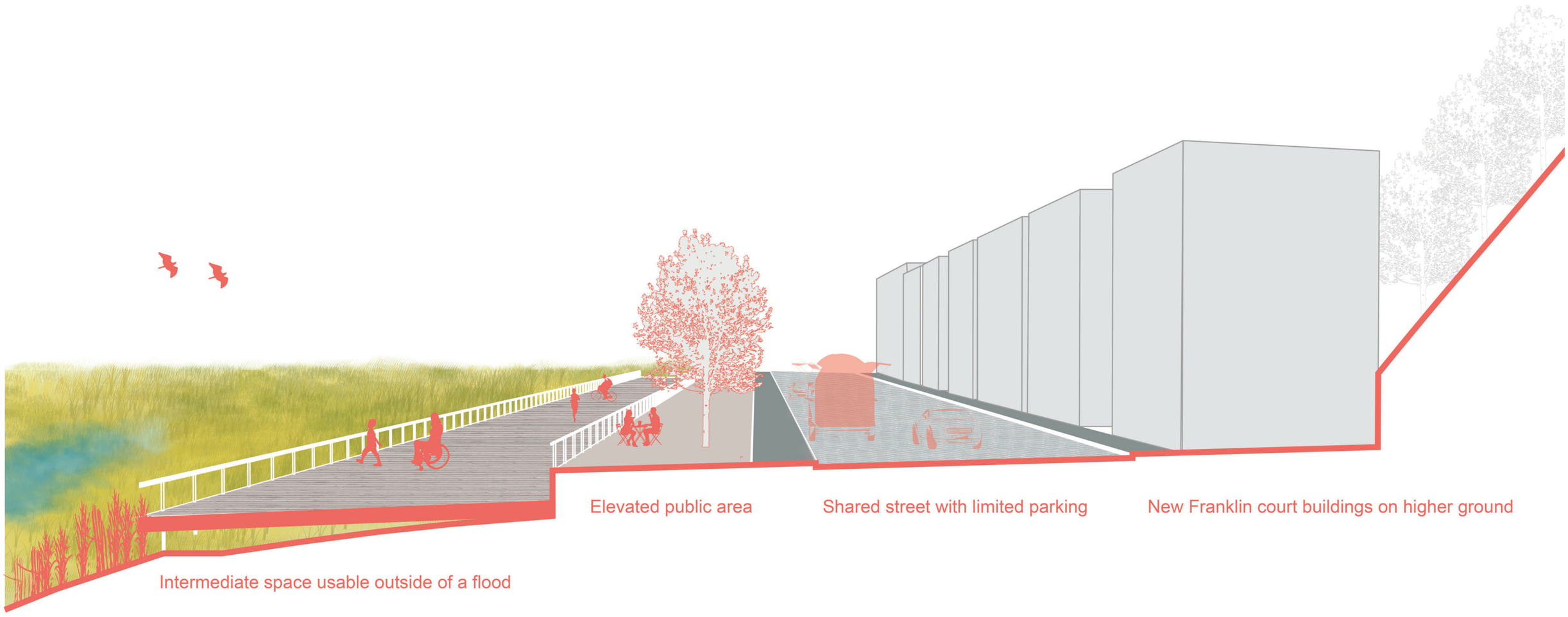
2050S SUMMARY

- Rebuilding Franklin Tower on higher ground on the back end of the parcel. Provide parking ramp(s) for residents.
- MTA train is relocated or replaced with land-based or water-based high-capacity regional transportation systems.
- New large marina by Pierson Park with a regional ferry station
- New plaza, skate park, playgrounds and multi-generational fitness park in current-day Sarah Michaels Park by Asbury Terrace.
- Start making space for water in waterfront
- Start building space for raising water levels, balancing cut and fill to create elevated areas in the park that can host various recreational uses.

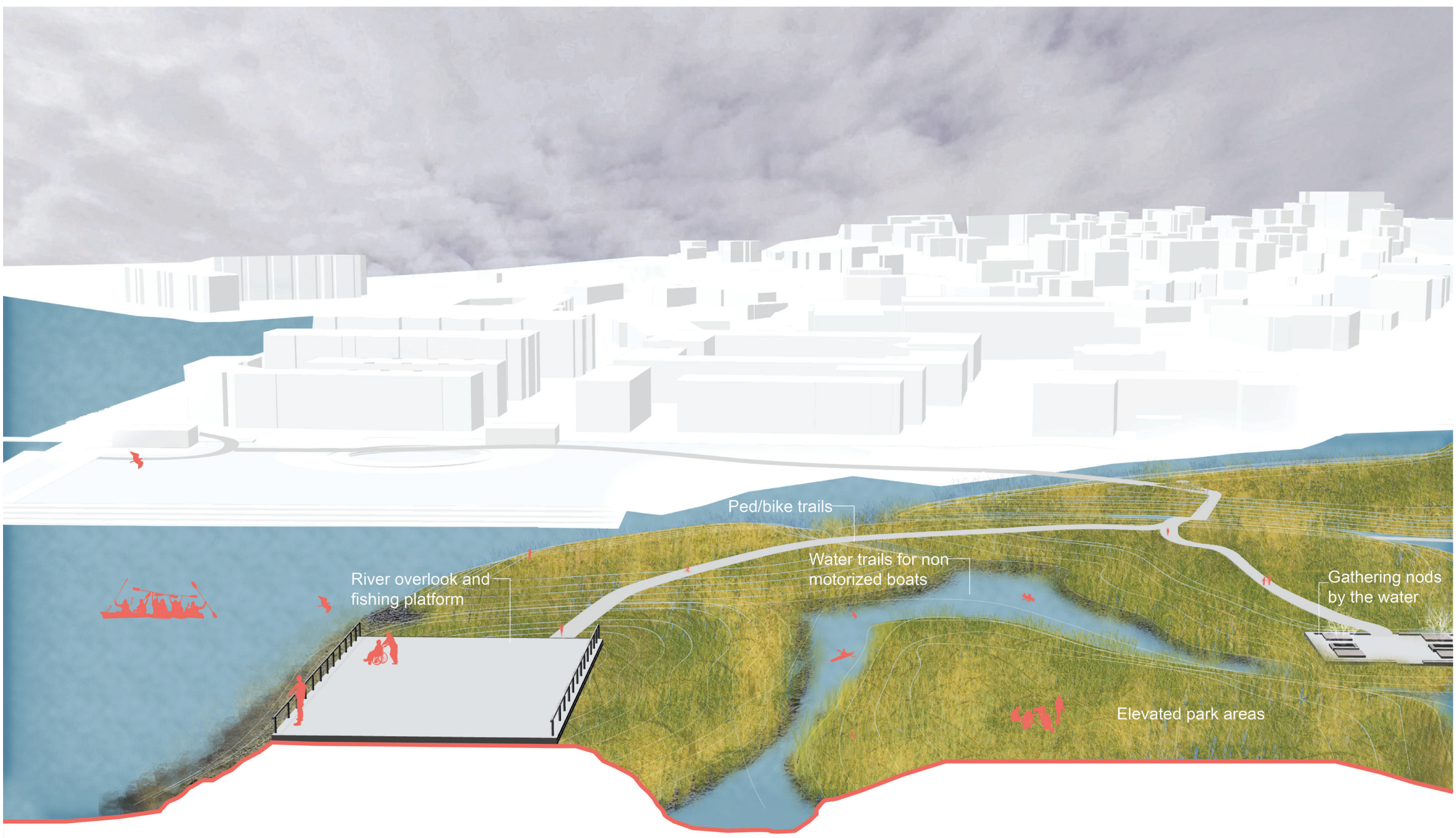


2080S SUMMARY

- Relocate and rebuild Asbury Terrace outside of permanently inundated zone.
- Relocate and rebuild Village Hall outside of permanently inundated zone.
- Regrading of Pierson Park to respond to sea level rise and new flood tolerant park amenities, including a flood-resilient park building.
- Build water channels and islands to receive additional water as the sea level rises. The new water trails provide recreation opportunities on land and water, and wildlife habitat. Elevated areas in the park that can host various recreational uses like camp sites, gathering lawns and sports fields.



Proposed Franklin Court re-development. This scheme proposed to rebuild the complex on the same parcel but further inland on higher ground and create public spaces above projected flood levels and intermediate spaces that are flood tolerant.



Section perspective illustrating the system of islands and channels in the proposed park by the 2080s.