

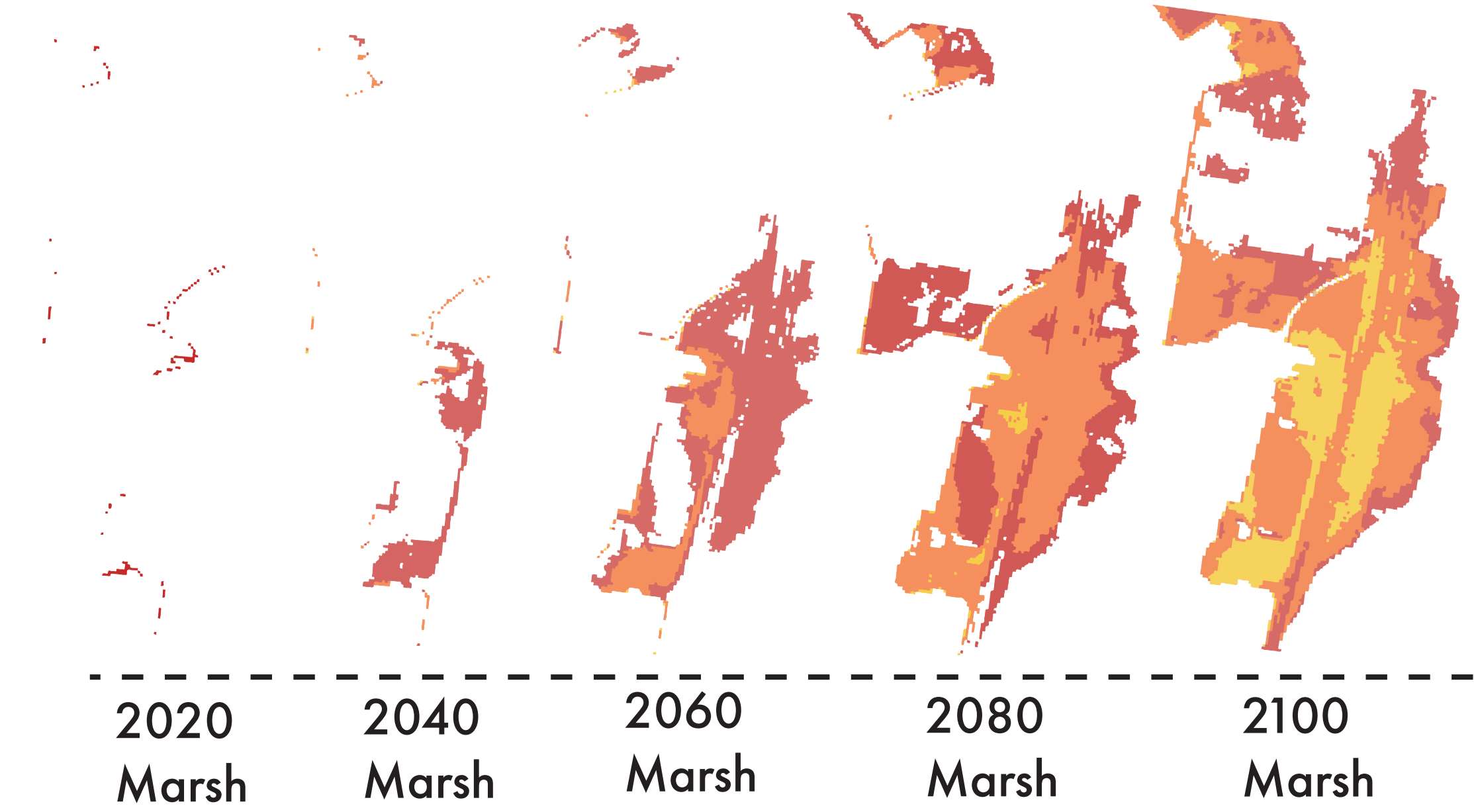
INVITATION FOR CHANGE

Hilary Mulford BSLA '23

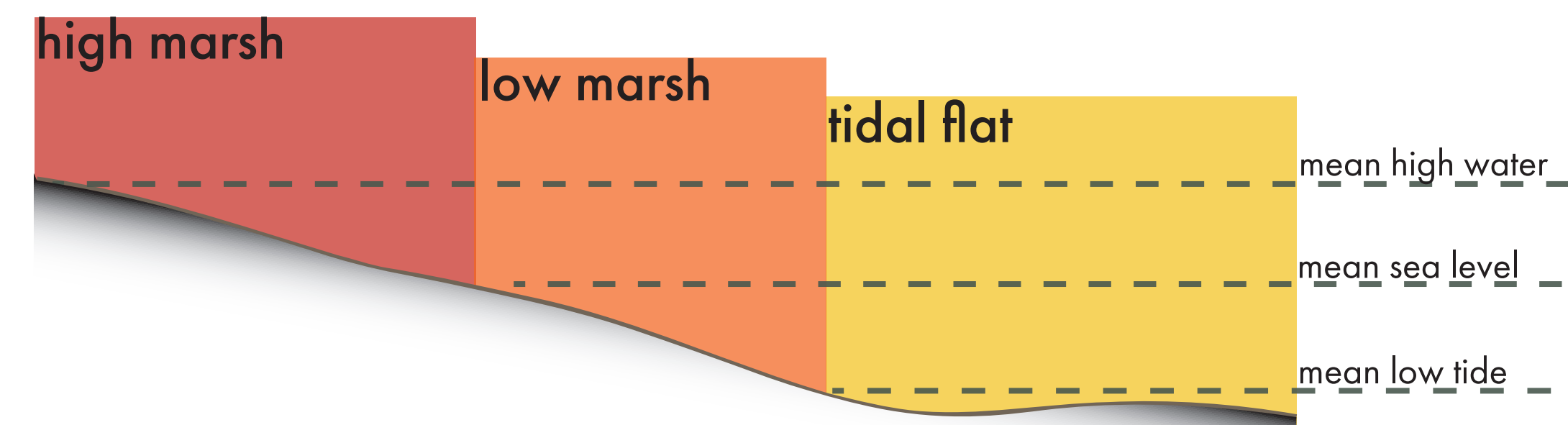
This project aims to utilize sea level rise on the Hudson as an invitation for change in Tarrytown, NY. It acknowledges the reality of the threat of inundation to the livelihoods of both people and businesses in Tarrytown, but it also sees rising seas and changing shorelines as an opportunity for a much needed shift to a more ecological focus. Through a combination of relocation, regrading, and reintroduction of important species, we can reimagine a waterfront that extends an invitation not only to people, but to the plants, animals, and greater ecological system of the Hudson River.



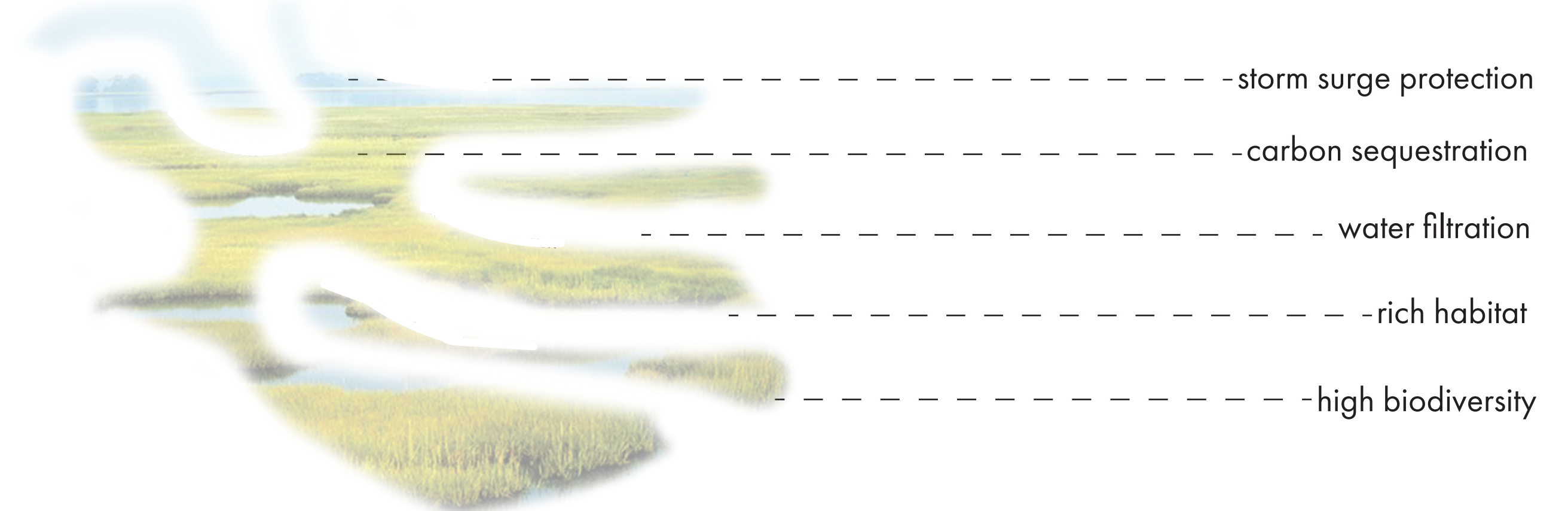
Marsh Migration Potential



Marsh Type Location



Why Are Marshes Beneficial?



Present Day Interventions based on 2020 12" SLR

revegetated shoreline in preparation for marsh migration, storm surge, and an increase in habitat value



implement a marsh 'riprap stone sill' as a process in which to begin the transition from lawn+bulkead to marsh



cohesive pedestrian network for ease of access to the waterfront and surrounding business and recreation



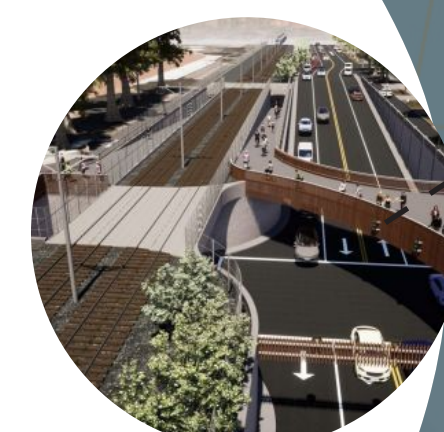
relocation of the Metro North train station & Depot Plaza Recycling Center



increase floodability of Pierson Park, Losee Park and the previous Recycling Center



raising of MNR Railroad in preparation for inundation at its current level



2040s Interventions based on 2050 30" SLR

relocation of the recreation & senior centers



comprehensive regrade and rebuild of Franklin Courts homes which includes relocation assistance for current residents



further increase in floodability of future inundated areas



2070s Interventions based on 2080 60" SLR

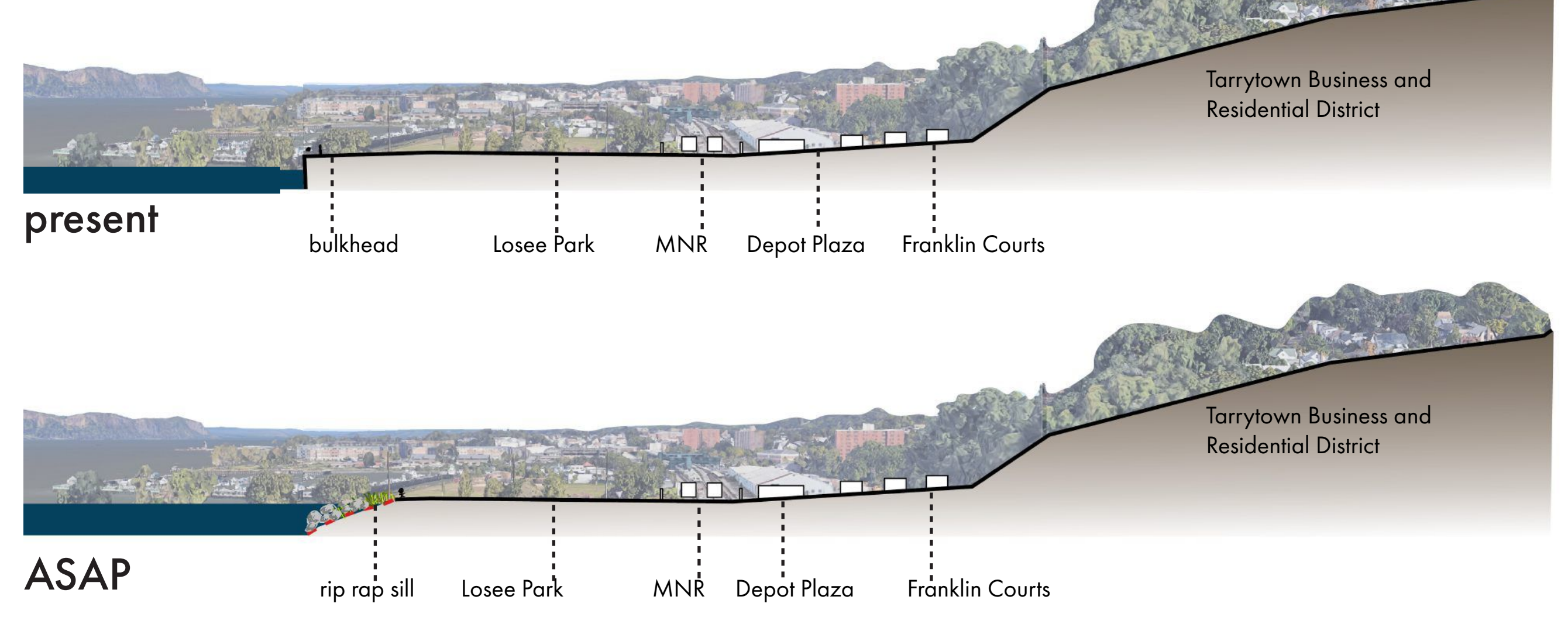
ASAP from bulkhead and rip rap to rip rap sill and tidal flat



Phase one of this project aims to propose changes that can be made in the present day with minimal effort and low cost compared to other possible changes. In order to set up a successful transition to a marsh habitat rich waterfront, the first step is softening of the shoreline. In this case, a rip rap sill will serve this purpose. A rip rap sill is a constructed inter-tidal zone planted with native marsh plants that creates important ecological space as well as serves as a buffer from storm surge.



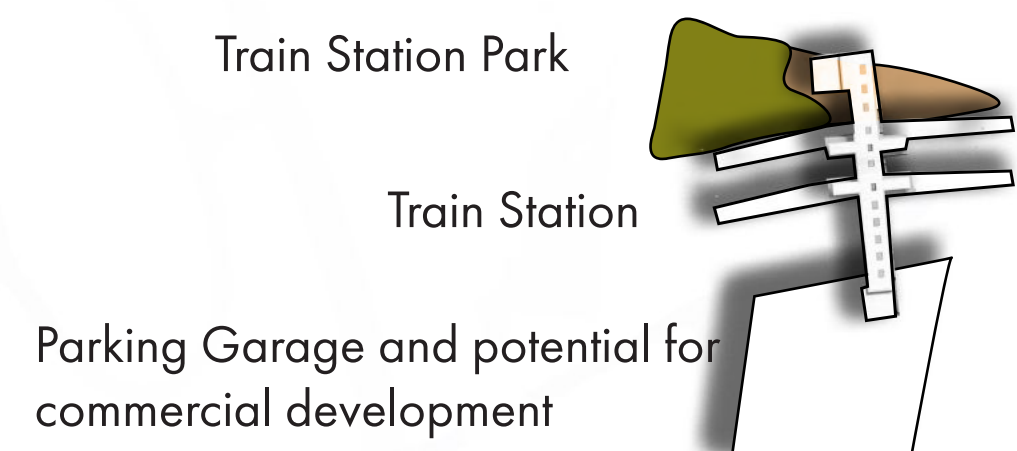
re-vegetated shoreline



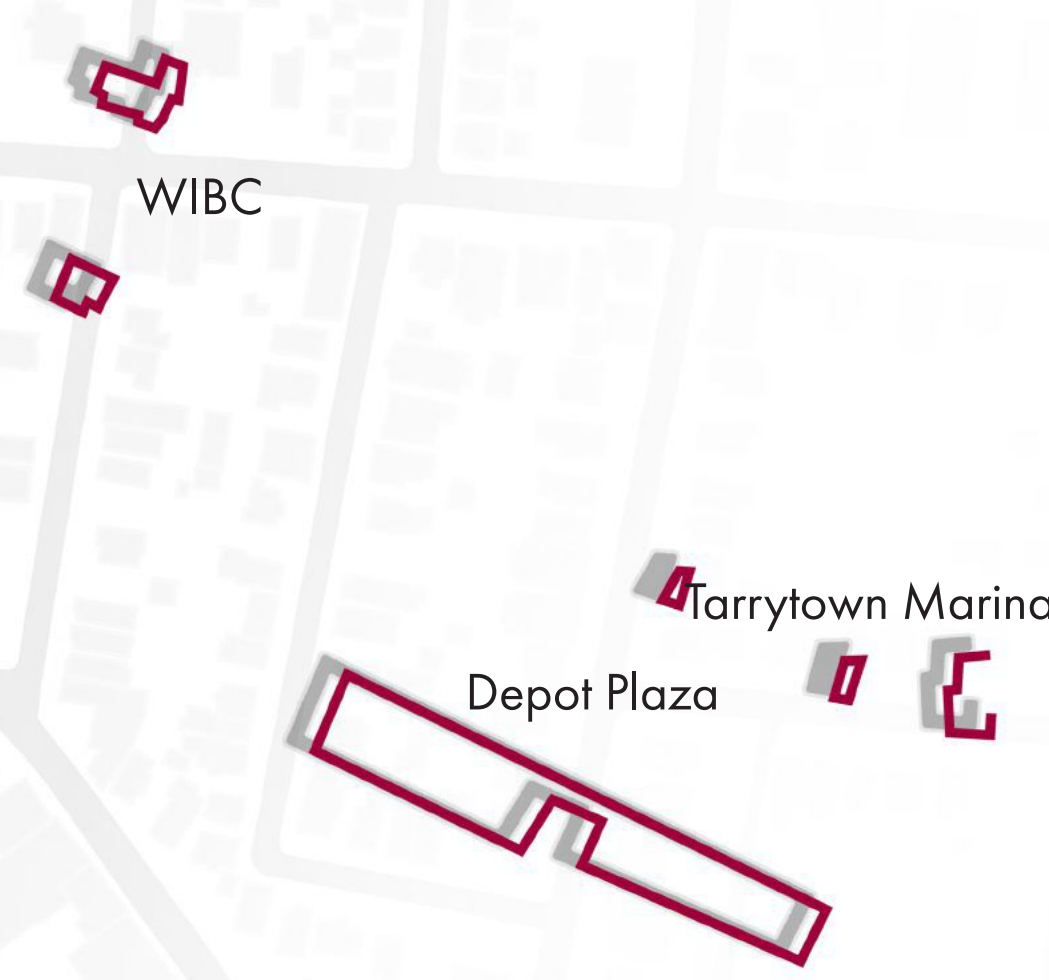
rip rap sill Plant and Animal Species



new buildings and infrastructure



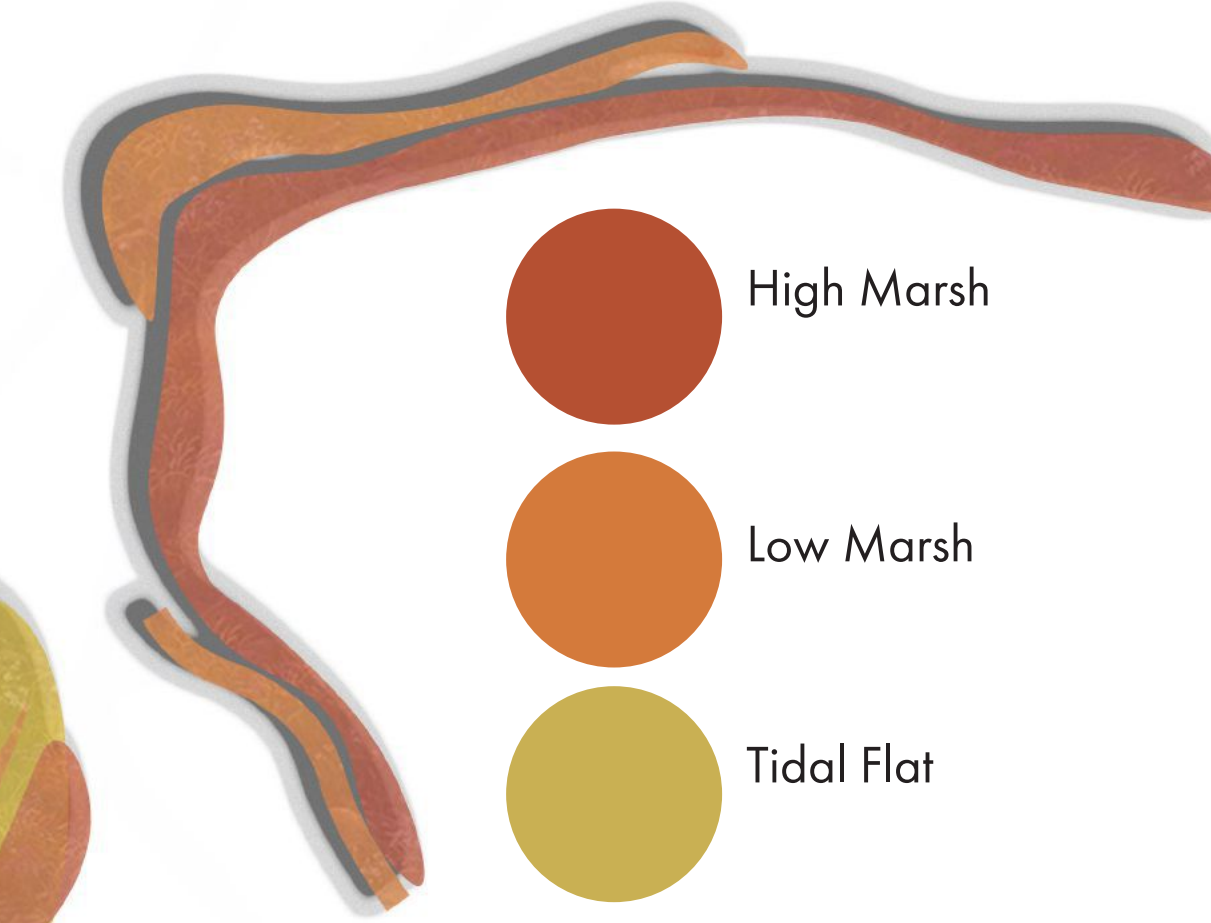
phased out buildings



pedestrian network



marsh type breakdown

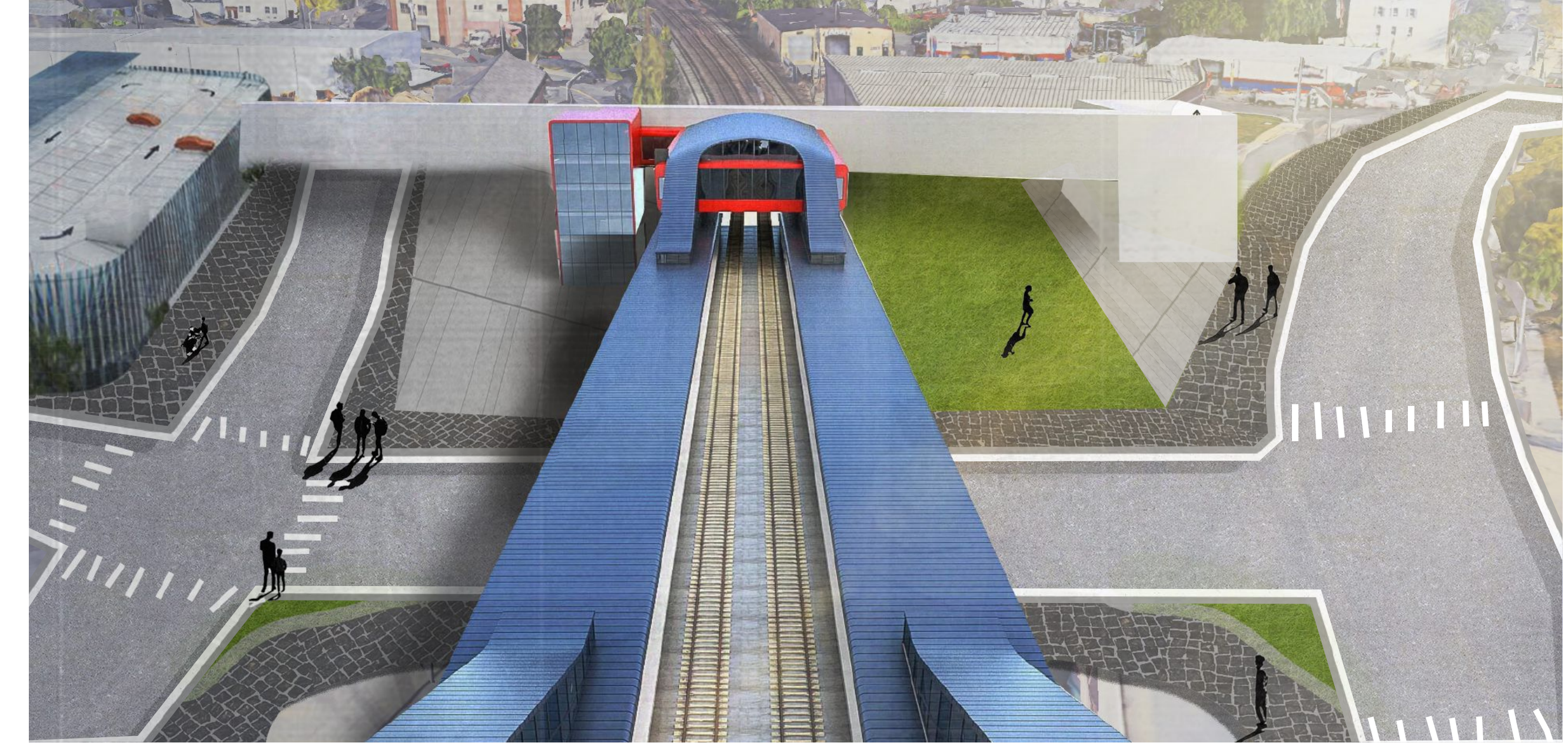


marsh area

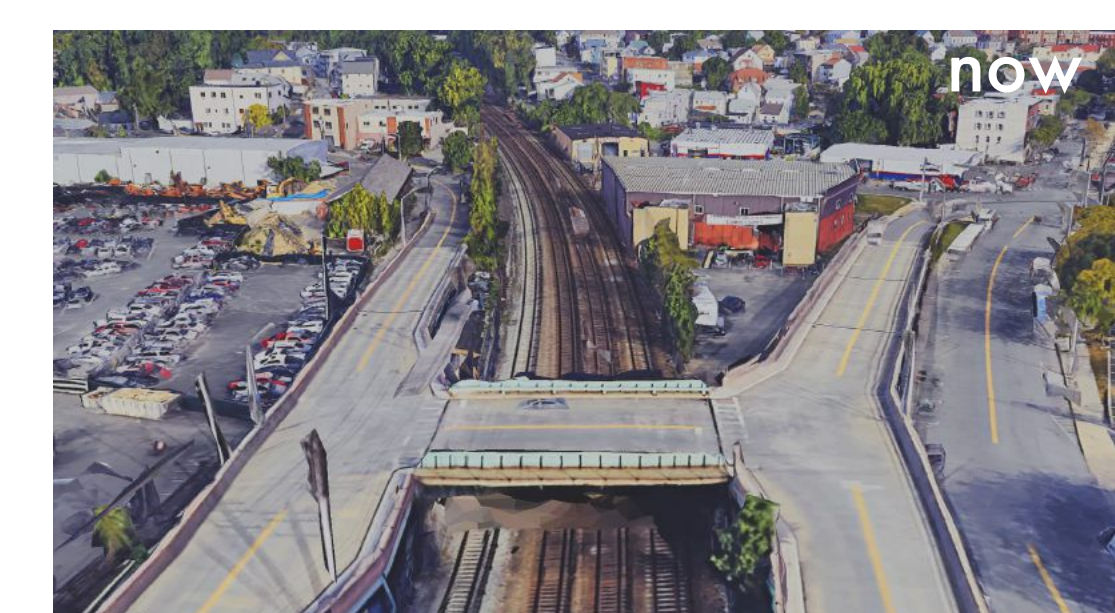


2040s raised MNR, relocated station, fields to flats

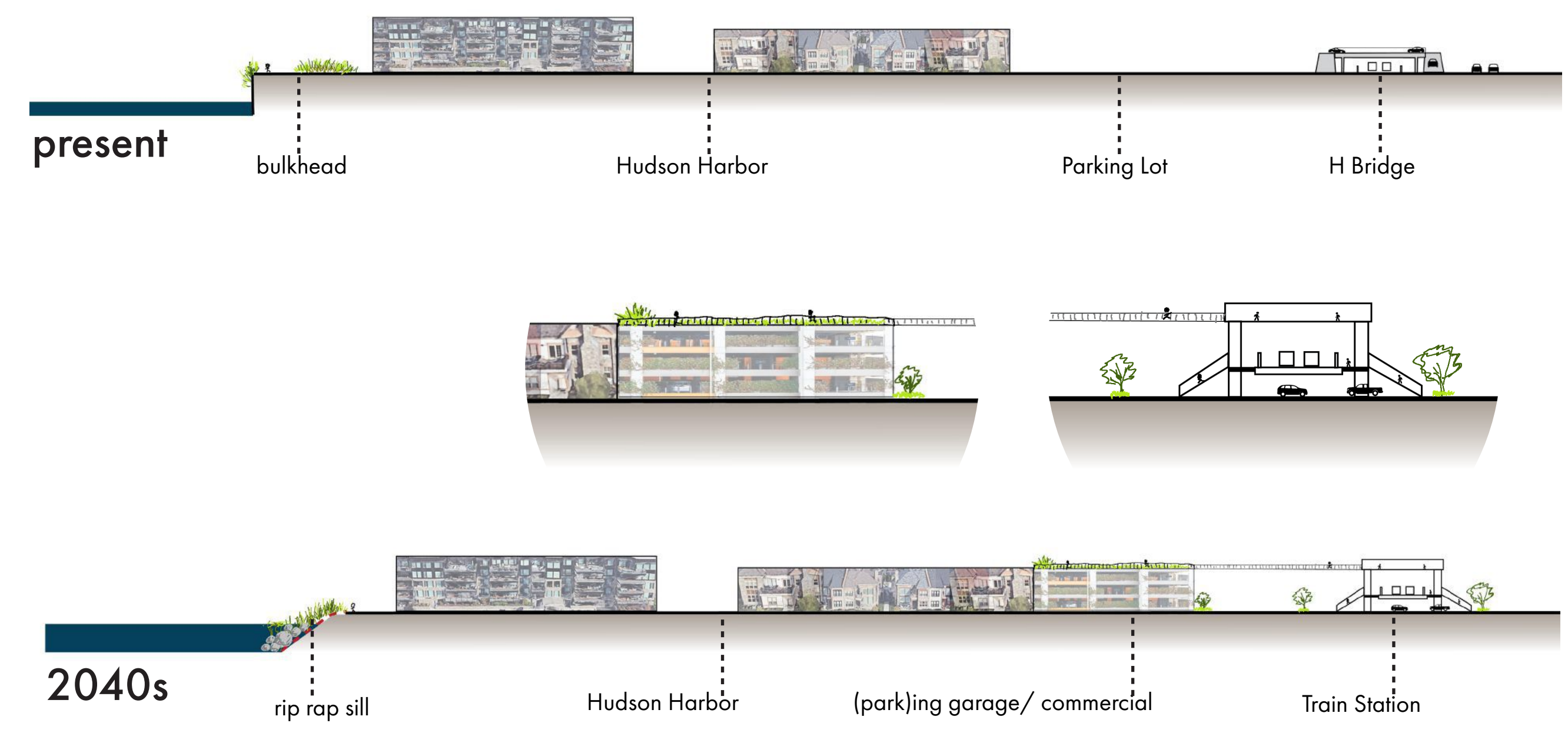
H BRIDGE REPLACED WITH TRAIN STATION AND TRAFFIC UNDERPASS IN THE 2040S



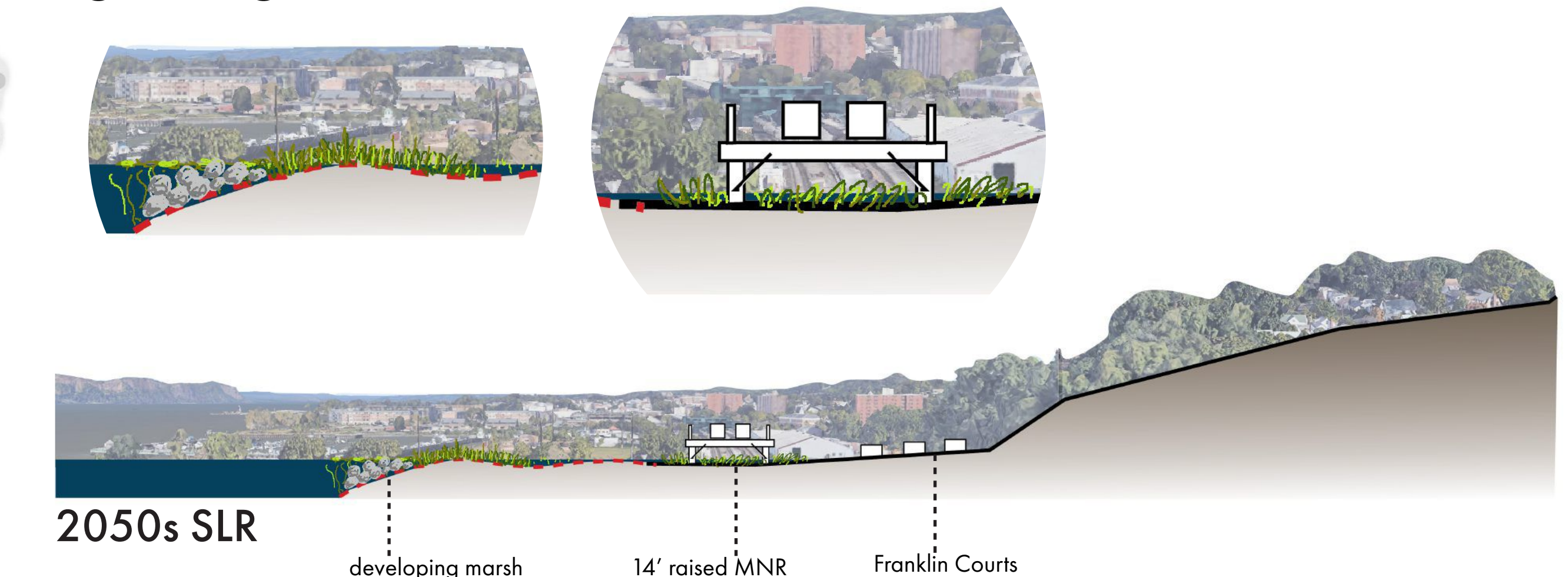
In phase two of this proposal there is an assumption made that the Hudson Line Metro North will be raised to a height of 14 ft as decided by MTA in the next few years. 14 ft is the federal minimum for bridge heights. In Tarrytown, this would allow for easier access to the waterfront and an opportunity for safer pedestrian circulation. This phase also sees the relocation of the train station to higher, more northern ground. This new train station location has the possibility to be a center for economic development and connection between train riders and Tarrytown's waterfront and downtown. Finally, Losee Park, Depot Plaza, and the Marinas will be turned into inter tidal marsh.



regarding of Losee Park and a 14' lift for MNR



regarding of Losee Park and a 14' lift for MNR



new train station and (park)ing garage in unused lot

H bridge demolished and new underpass constructed under 14' raised MNR

Pierson Park marsh moving inland past bioswale and paths adjusted accordingly

raised path for resident interaction with tidal marshland ecosystem

Losee park, WIBC, Tarrytown Marina turned to marshland through topographic variation

2070s Franklin Courts, Terrace, Rec Center Relocation

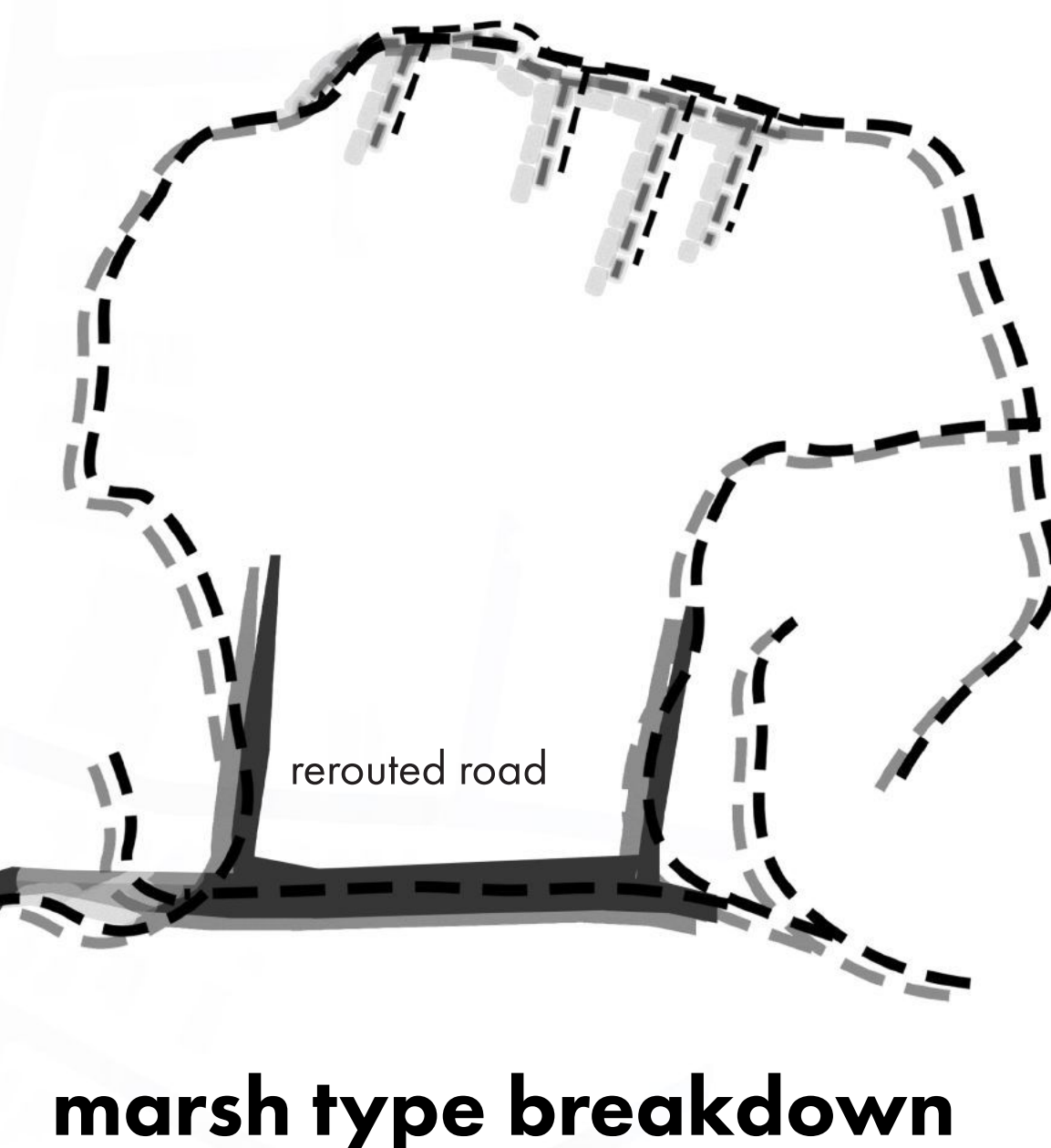
new buildings and infrastructure



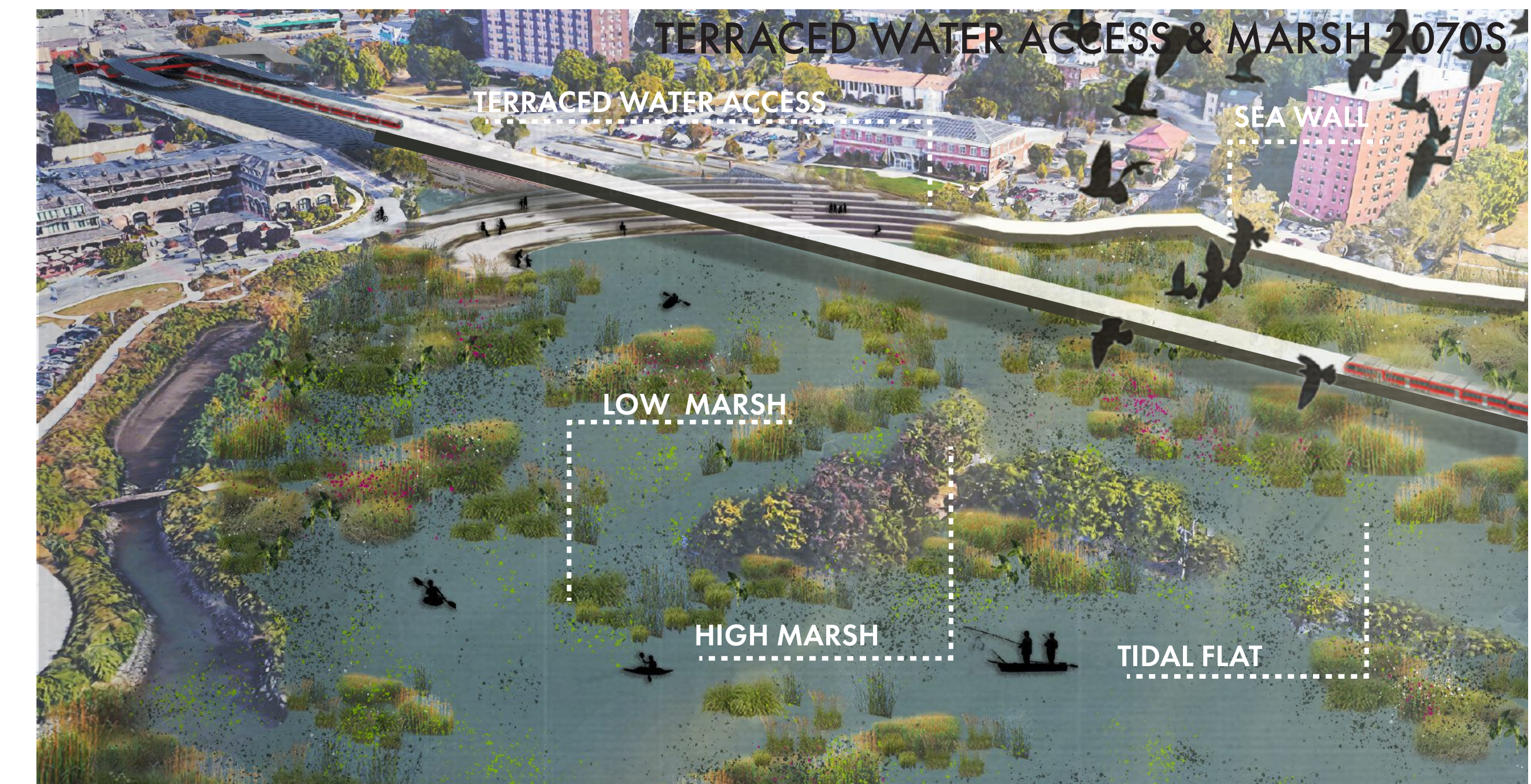
phased out buildings



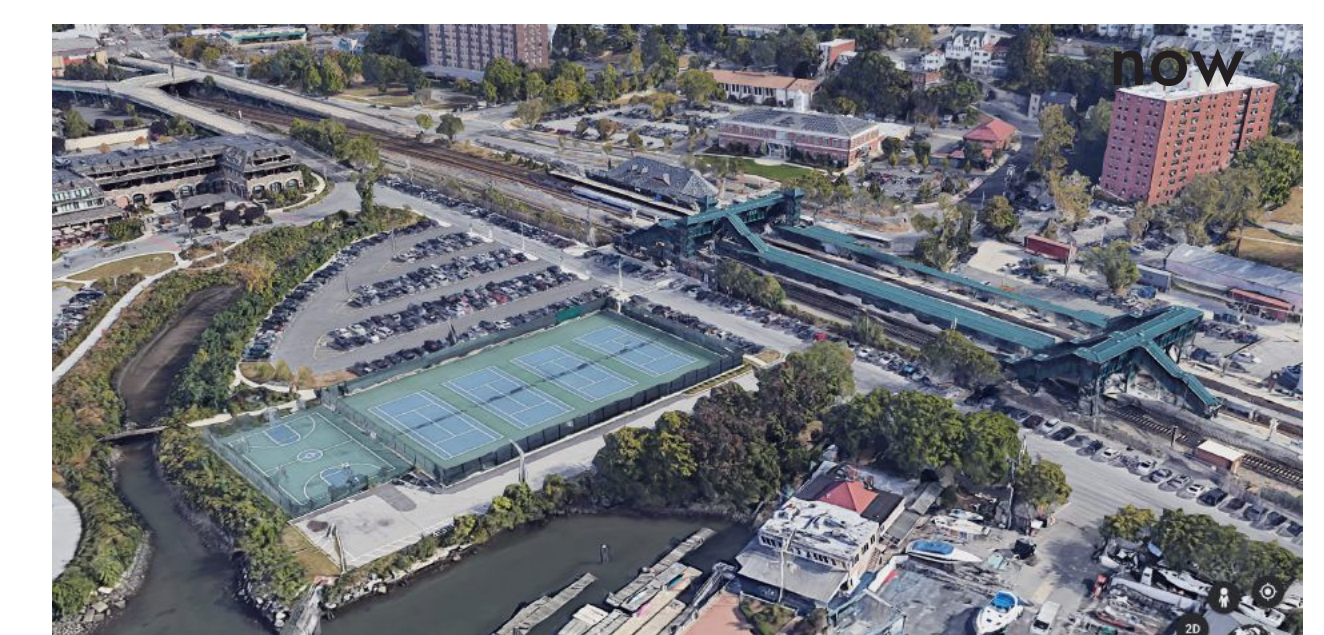
pedestrian network



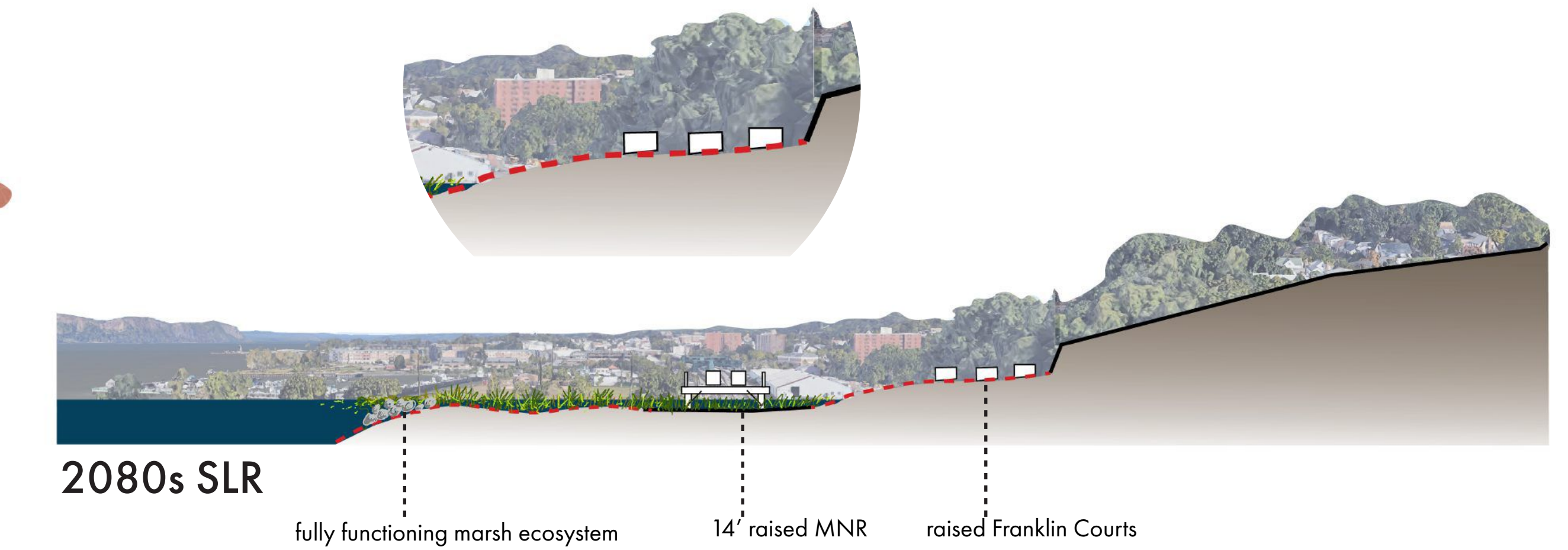
marsh type breakdown



In the final phase of this project is a regrade and redevelopment of the Franklin Courts community in order to protect them from inundation in the future. As part of this plan, I propose that a sea wall combined with terraced steps down to the new water's edge be implemented in order to allow residents access to the new ecologically rich marsh area. Not only will residents have access to this ecosystem for recreation, it will serve as important habitat for wildlife, and will act as a buffer from storm surge protecting the town.



Franklin Courts Regrade and Marsh Development



Loose Park Revegetated Edge

