

> PRELIMINARY MASTER PLAN

Recommendations to increase the Port District's recreational activities, improve access and safety, spur economic growth, and preserve the coast's critical natural resources are grouped into **nine** project areas (A-I).



PROJECT AREAS:

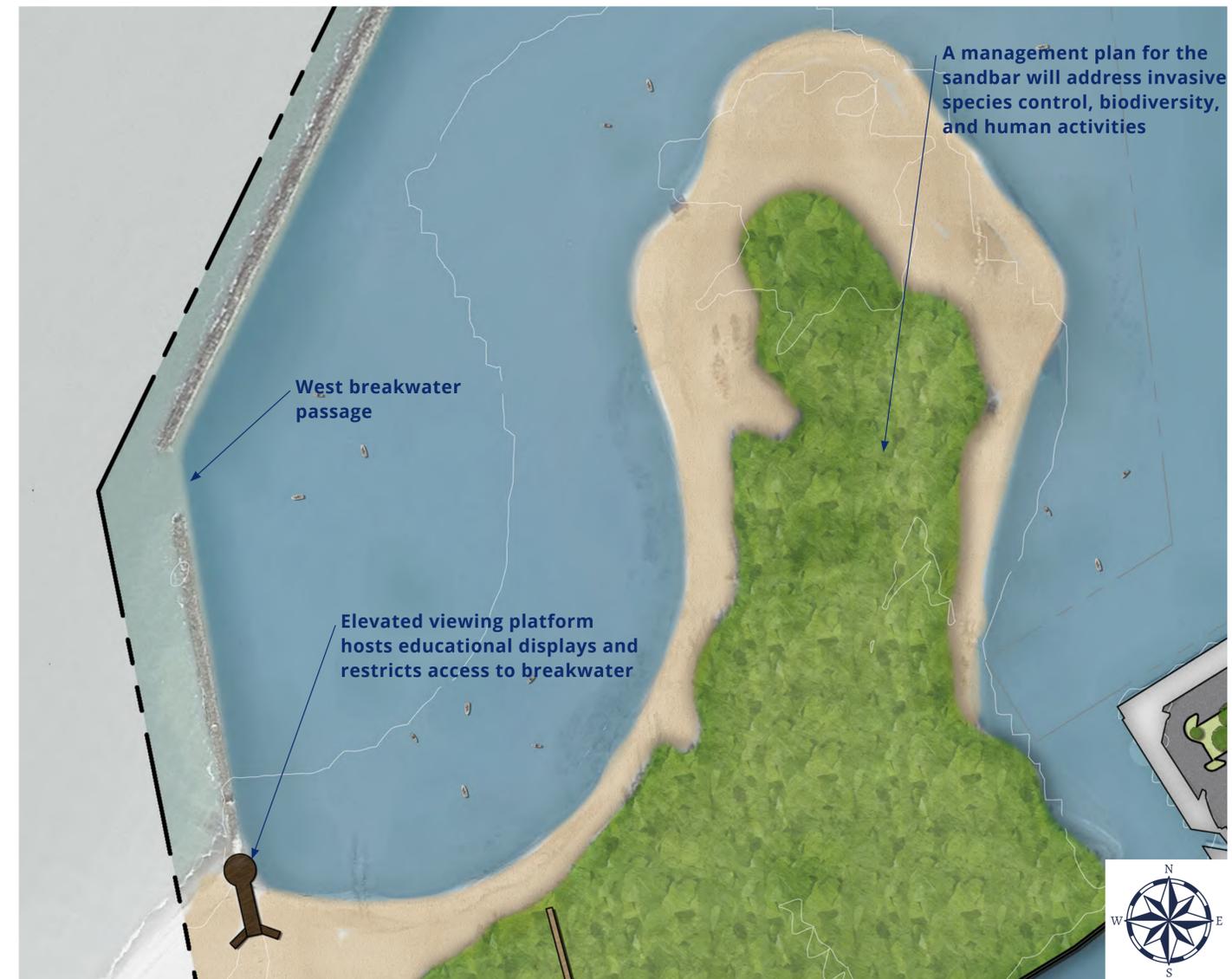
(A) BREAKWALL PLATFORM, (B) COASTAL MARSH REHABILITATION, (C) WETLAND PARK & BOARDWALK, (D) MARINA & NAYLOR DRIVE EXPANSION, (E) WATERFONT LOTS, (F) MARINA REDEVELOPMENT, (G) MARINA DRIVE RECONSTRUCTION & CONSTRUCTED WETLAND, (H) LIVING SHORELINE, (I) BEACH REPLENISHMENT EAST OF PORT

(A) BREAKWALL PLATFORM

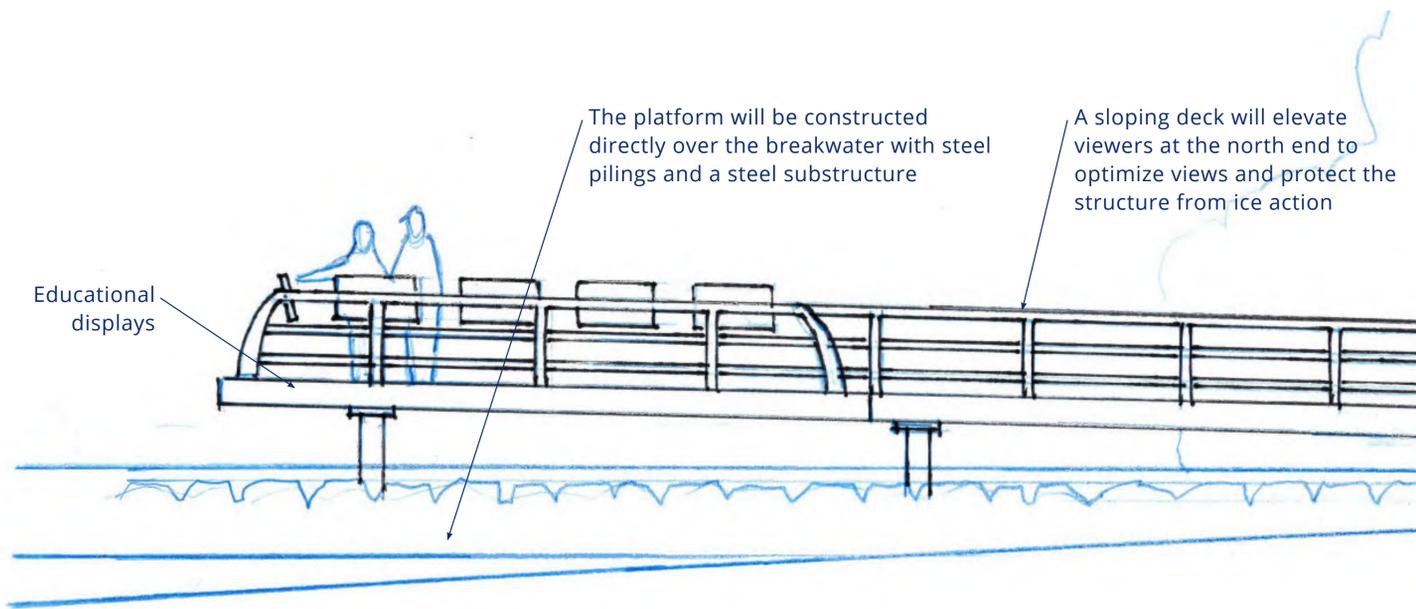
An elevated deck will offer a safe place to view the breakwall, sandbar, and lighthouse. Guardrails surrounding the deck will deter access to the dangerous conditions around the breakwall. They will also support signage that will interpret the history of the lighthouse, the ecology of the sandbar, and the dangers of the currents at the breakwall passage.

(B) COASTAL MARSH REHABILITATION

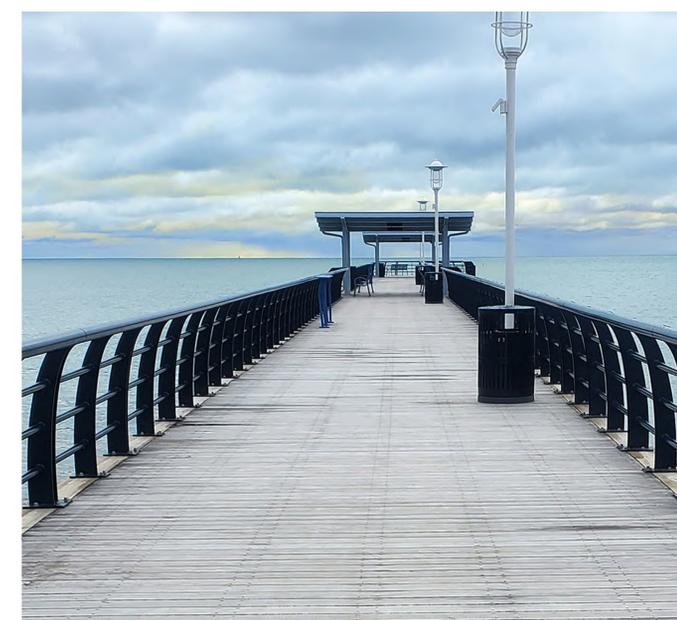
A management plan will be developed with the goal of accommodating historical activities on the sandbar, while maximizing the biodiversity of native plant and animal life. The plan will address impacts related to invasive plants (primarily Common Reed), fluctuating lake levels, visitor impacts, and wave action from recreational boating. Near-term and long-term goals will be established along with metrics for evaluating performance. Strategies for management may include weed control, soil stabilization, exclusionary measures, and re-planting measures. Likely costs and funding sources will be identified.



Enlargement of the Breakwall Platform and Coastal Marsh project areas



Elevated Viewing Platform at West Breakwater



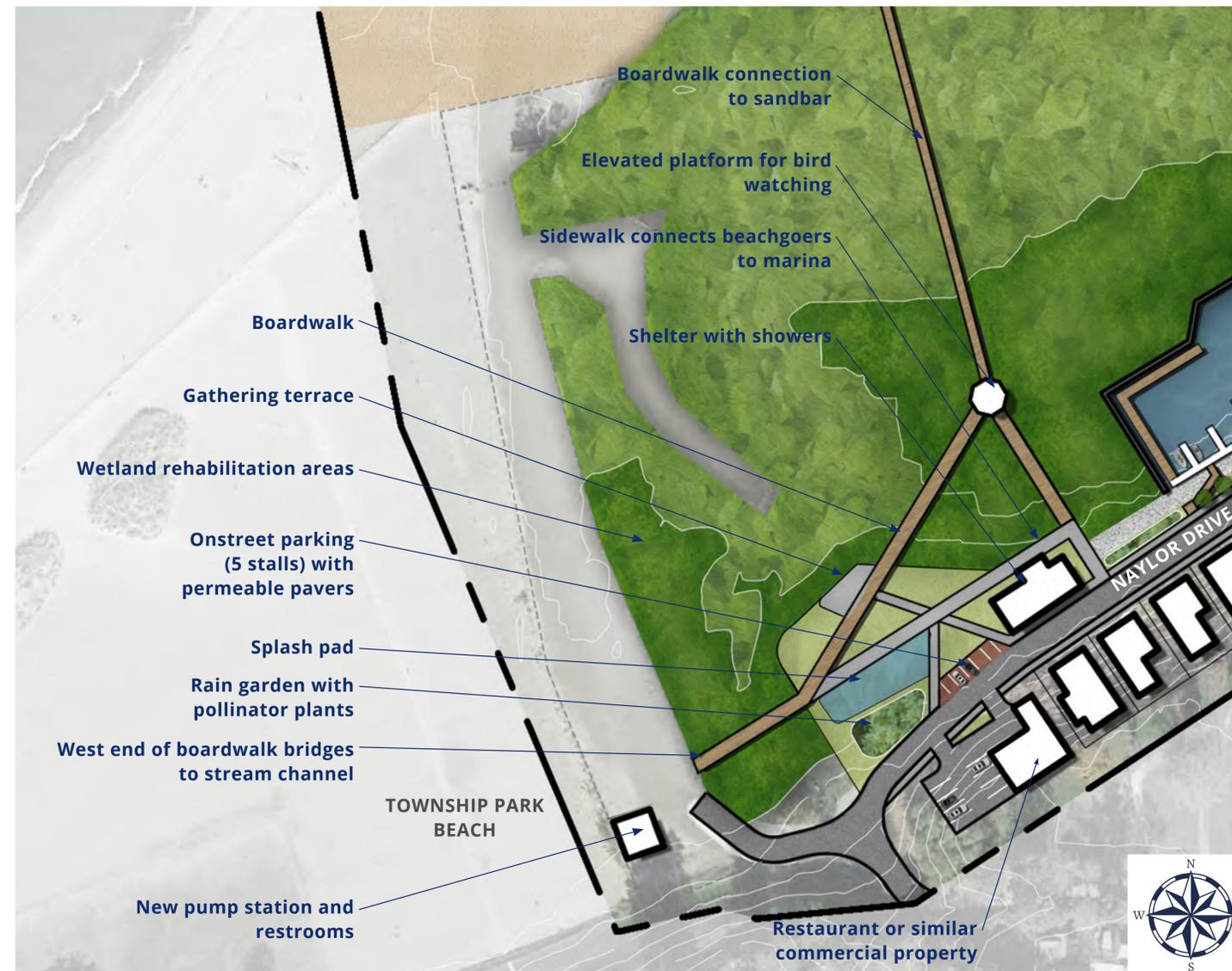
A recently constructed pier in St. Clair Shores, MI features an elevated substructure to protect from ice damage



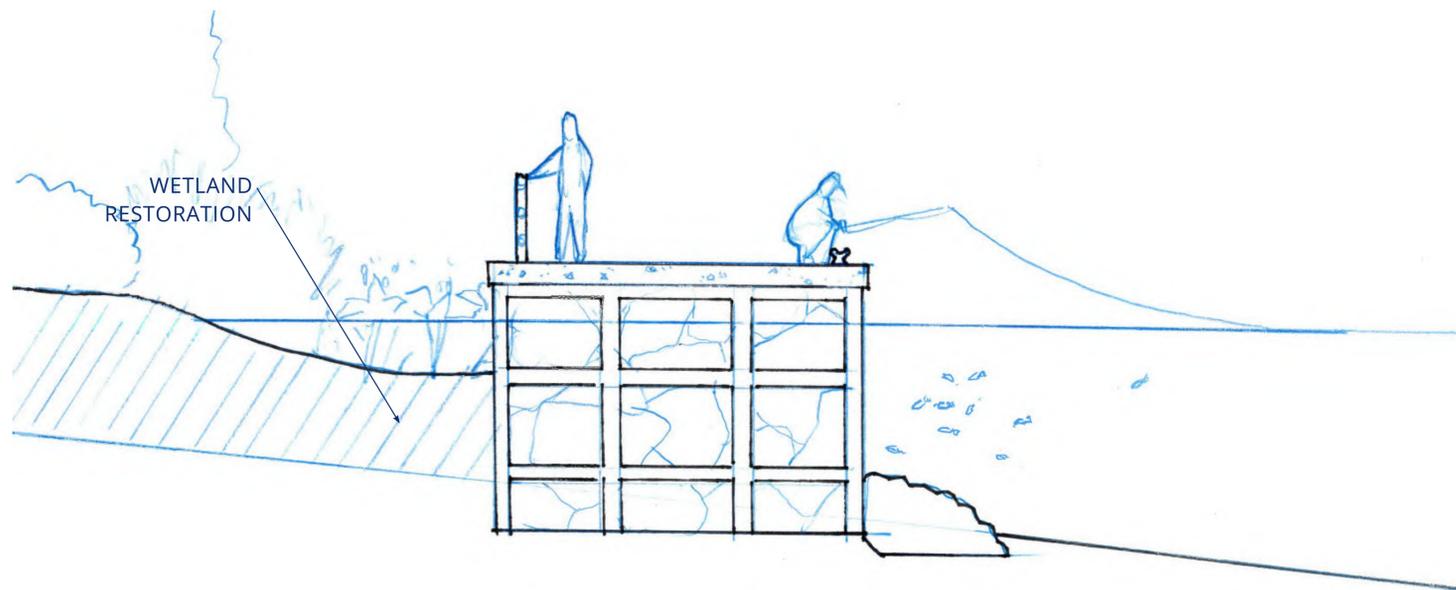
Educational displays can be made with porcelain enamel coatings for durability in even the harshest environments

(C) WETLAND PARK AND BOARDWALK

A new parklet will anchor the west end of the Naylor Drive redevelopment. A primary feature of the park will be a boardwalk that connects Conneaut Township Park with the sandbar. At the west end of the park, the boardwalk will replace the narrow plank bridge. It will offer direct access to the new marina areas from the beach. Visitors that use it to access the sandbar will encounter an elevated viewing platform which will offer excellent views of the coastal marsh along with educational signage. The degraded drainage ditch and the shallow areas between the shore, sandbar, and marina breakwall will be restored with native wetland plants. A small splashpad will offer water play for small groups. The park will be serviced with a new recreational building housing restrooms, showers, and storage. Parking will be accommodated with several onstreet accessible stalls as well as a larger off-street lot built into the hillside.



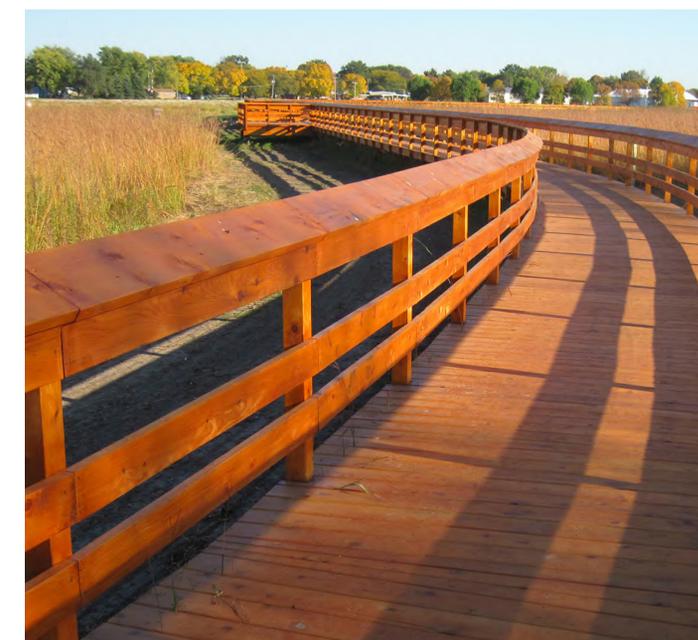
Enlargement of the Wetland Park and Boardwalk project area



Structures installed to create an expanded marina can be used to assist with wetland restoration and can also offer future fishing opportunities



A splash pad, which offers safe and economical water play, would be an enticing feature for beachgoers



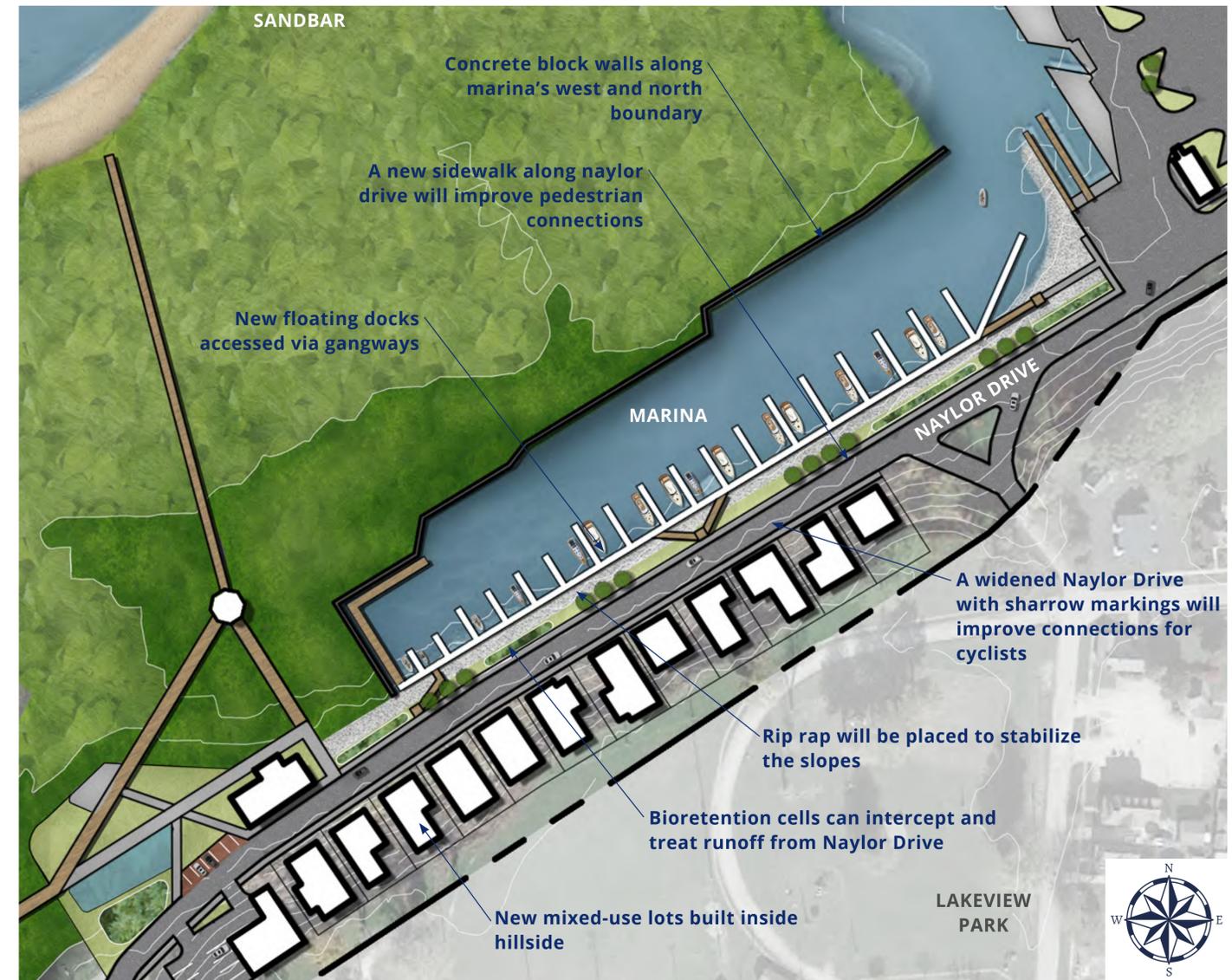
A cedar boardwalk through a wetland in Oregon, IL

(D) MARINA & NAYLOR DRIVE EXPANSION

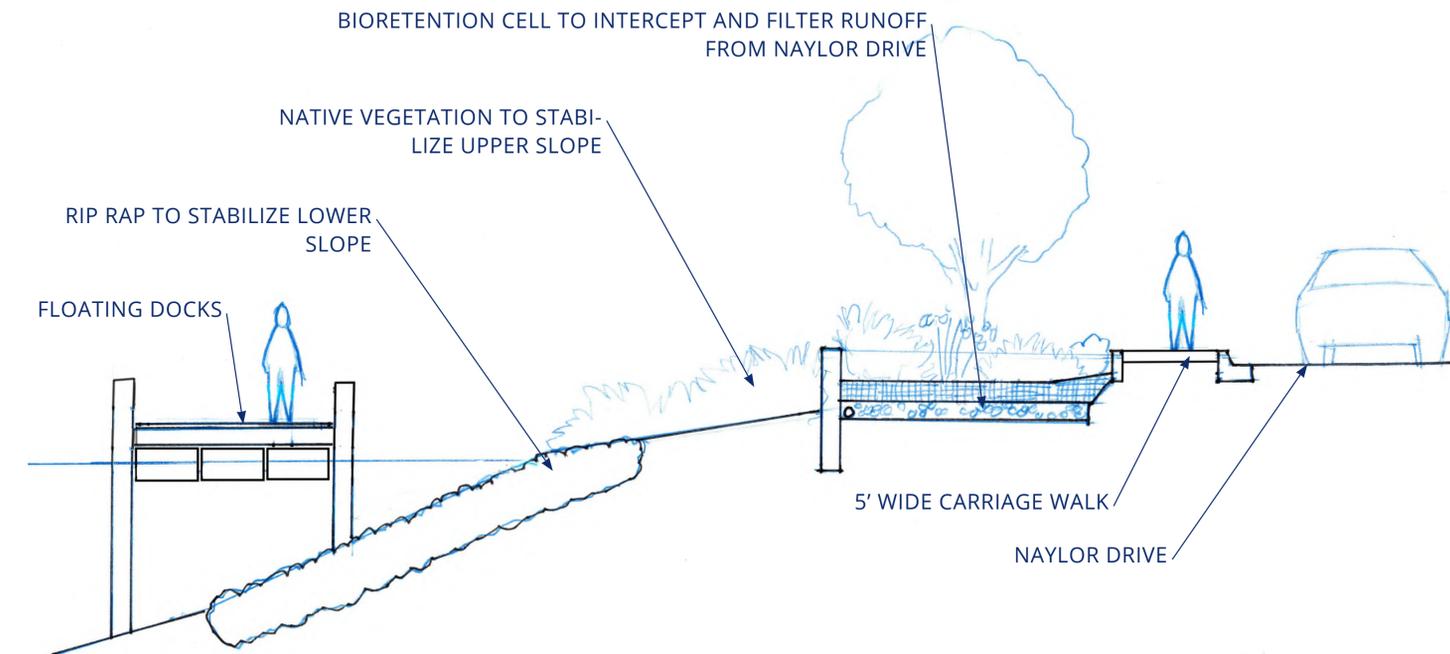
A new marina with floating docks will be bound by concrete block walls on the north and west sides. The expanded marina will provide dockage for eight 30-foot vessels, eight 40-foot vessels, twelve 50-foot vessels, twelve 60-foot vessels, and a side-berthing dock for vessels up to 100 feet in length. The marina will be constructed in the shallow basin at the west end of the harbor and will require excavation of approximately 50,000 cubic yards of material. The banks on the south side of the basin will be stabilized with stone placed at a slope of 1.5 horizontal feet to 1 vertical foot. Gangways will allow visitors to access the docks from a new sidewalk built along Naylor Drive. Rainwater runoff from the Drive will be treated by permeable paving and/or bioretention cells planted with native and adapted plants. Sharrow markings will be added to the street to make access safe for cyclists.

(E) WATERFRONT LOTS

A mixture of residential and retail commercial lots will be carved into the existing hillside to take advantage of the Naylor Drive frontage and views of the marina and lake. It is anticipated that a planned development would be negotiated with the City that would permit two-story structures with narrow side, front, and rear yards. Heights would be capped to preserve views from the adjacent Lakeview Park.



Enlargement of Marina/Naylor Drive Expansion and Waterfront Lots



Section through floating docks and Naylor Drive Expansion



Dense development along Naylor Drive could consist of mixed-use two-story buildings on 50'x100' lots



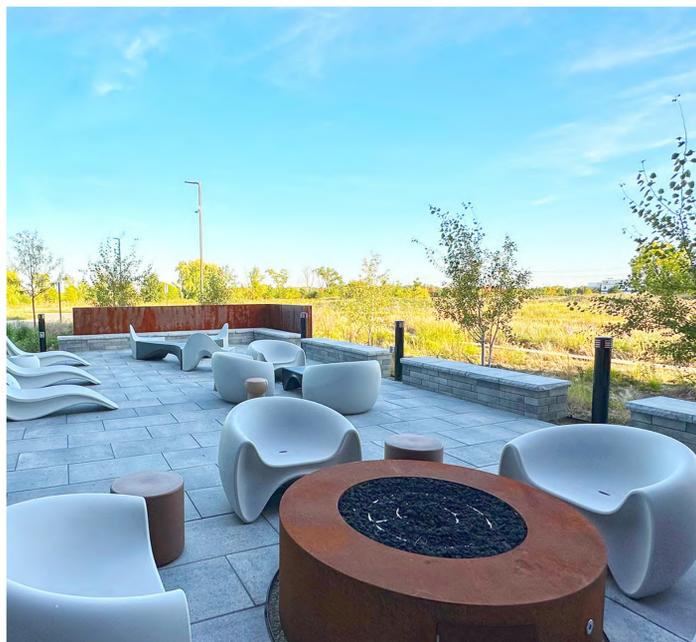
A mix of permeable paving and bioretention practices will detain and treat runoff from the expanded Naylor Drive

(F) MARINA REDEVELOPMENT

A new marina clubhouse will anchor the development where the current Fish House is located at the prominent corner of Lakeside and Marina Drive. Amenities will include restrooms, showers, laundry, a lounge, and office space. Reconstructed onstreet and offstreet parking will optimize access for drivers while a pedestrian promenade connects pedestrians and cyclists to a new iconic pier shelter. Connections to the expanded marina are improved with a landscaped walk through the parking lot. The portside marine repair business is moved a block east to a more appropriate lot.



Enlargement of Marina Redevelopment



Amenities such as seating and an outdoor firepit will be added to the marina



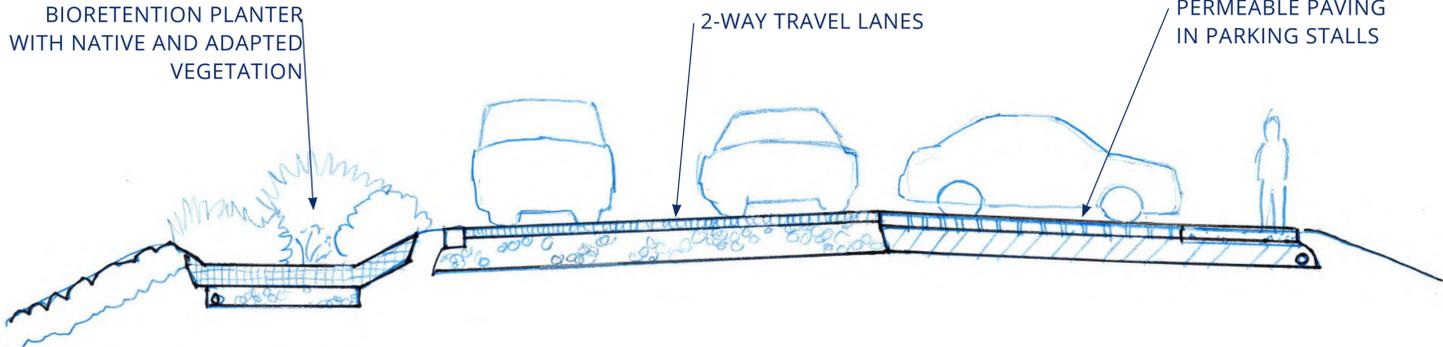
An iconic shelter will anchor the end of the promenade and frame views to the lake beyond



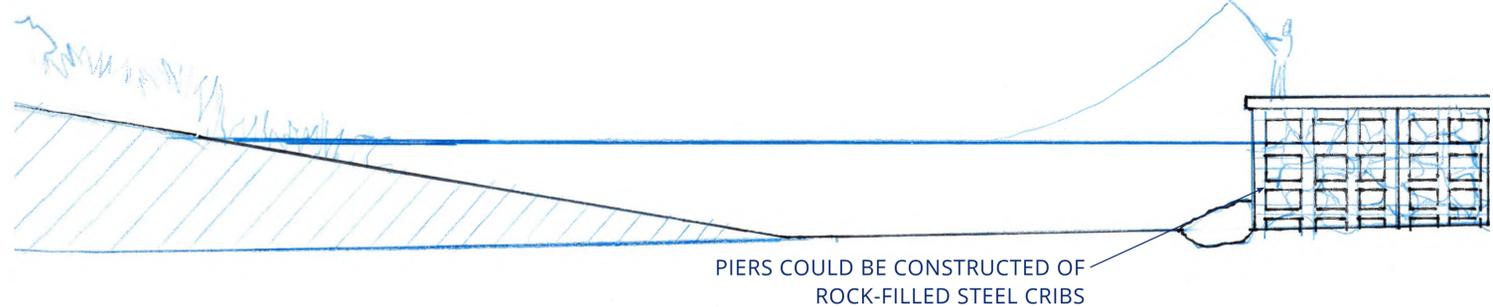
The main buildings in the marina will be arranged around a central lawn

(G) MARINA DRIVE RECONSTRUCTION & CONSTRUCTED WETLAND

Damaged paving will be replaced with a more durable concrete surface. Rain water runoff will be treated with a combination of bioretention planters and permeable paving. Constructed wetlands will shelter the drive and the adjacent marina from powerful storms and will be constructed in part from dredge material. Piers constructed of rock filled steel cribs will provide access for anglers. Clearly marked parking spaces will greatly increase the number of available spaces and make pedestrian access safer.



A section through Marina Drive



PIERS COULD BE CONSTRUCTED OF ROCK-FILLED STEEL CRIBS

Fishing piers will provide fully accessible fishing opportunities



Enlarged view of Marina Drive reconstruction and constructed wetland



Constructed wetlands could add important coastal marsh habitat and protect adjacent infrastructure from erosion

(H) LIVING SHORELINE

The shoreline in front of the Canadian National property will be stabilized using living shoreline techniques. This approach will utilize soft-engineering that relies primarily on soil and vegetation to control erosion. Soil will be imported from off-site with some material coming from dredging activities in the harbor. Native plant communities will be established to create habitat for native plants, fish, and animals.

(I) BEACH REPLENISHMENT EAST OF PORT

Dredge material meeting the requirements for beach replenishment will be placed in the near-shore zone east of the east breakwall (1,500 feet to the east of the east breakwater, between -11 and -8 feet mean low water). A plan for placement of sand will be created that will address the following steps:

- Assessing the Beach: Before any sand is placed, the shoreline will be assessed to determine where it's needed most.
- Sourcing the Sand: Likely sources of the new material will be evaluated including an assessment of material pulled from Conneaut's harbor areas.
- Transporting the Sand: Once the sand has been sourced, it needs to be transported to the beach where it will be placed.
- Placing the Sand: This may involve placement using hydraulic pipes or with heavy equipment like bulldozers or excavators to move the sand into place. The sand is typically placed in a way that mimics the natural shape of the beach, with a gentle slope leading down to the water.



Enlargement of the Canadian National Railroad and Beach Replenishment project areas

