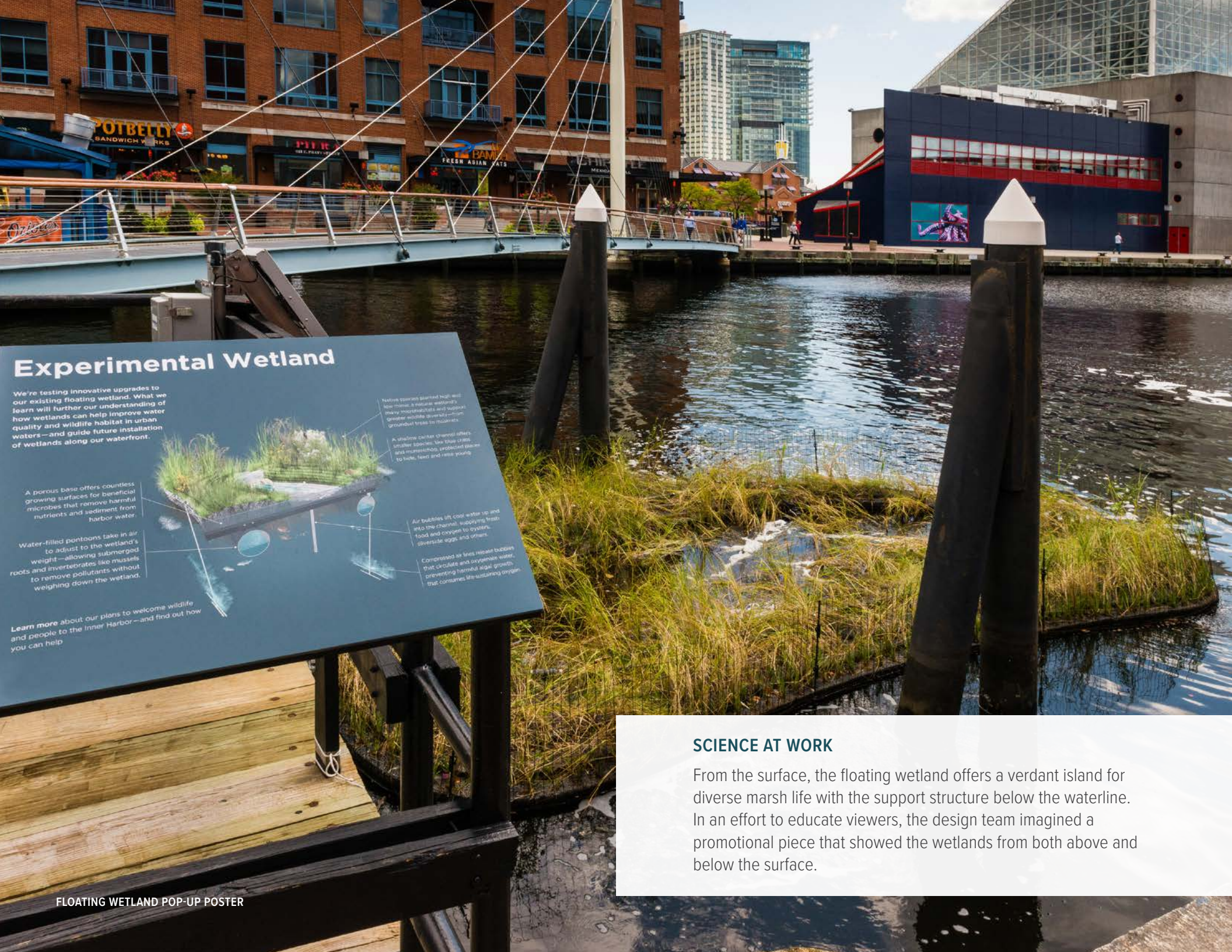


FLOATING WETLAND POP-UP POSTER

The team worked closely with the local aquarium to design and implement new technology to create a resilient floating wetland. The project is a complex custom structure aimed at creating a dynamic ecological environment in places that none currently exist. After a successful installation, a custom illustrated and die cut educational poster was produced to communicate the project.





Experimental Wetland

We're testing innovative upgrades to our existing floating wetland. What we learn will further our understanding of how wetlands can help improve water quality and wildlife habitat in urban waters—and guide future installation of wetlands along our waterfront.

A porous base offers countless growing surfaces for beneficial microbes that remove harmful nutrients and sediment from harbor water.

Water-filled pontoons take in air to adjust to the wetland's weight—allowing submerged roots and invertebrates like mussels to remove pollutants without weighing down the wetland.

Learn more about our plans to welcome wildlife and people to the Inner Harbor—and find out how you can help



Nature's porous planted high and low channel. A natural wetland's many microhabitats and bottom greater wildlife diversity—from groundnut trees to muskrats.

A shallow darker channel offers smaller species like blue crabs and murex shells, protected space to hide, feed and raise young.

Air bubbles lift cool water up and into the channel, supplying fresh food and oxygen to oysters, silverside eggs and others.

Compressed air lines release bubbles that circulate and oxygenate water, preventing harmful algal growth that consumes life-sustaining oxygen.

SCIENCE AT WORK

From the surface, the floating wetland offers a verdant island for diverse marsh life with the support structure below the waterline. In an effort to educate viewers, the design team imagined a promotional piece that showed the wetlands from both above and below the surface.

FLOATING WETLAND POP-UP POSTER

3D CAPABILITIES

In order to illustrate the floating wetland from above and below the surface, the team imagined a physical paper horizon and utilized folds and “punch-outs” to transform a flat poster into a 3-D “pop-up” model. Rich, technical information below the folds complements an illustrative nature scene above.



FLOATING WETLAND POP-UP POSTER

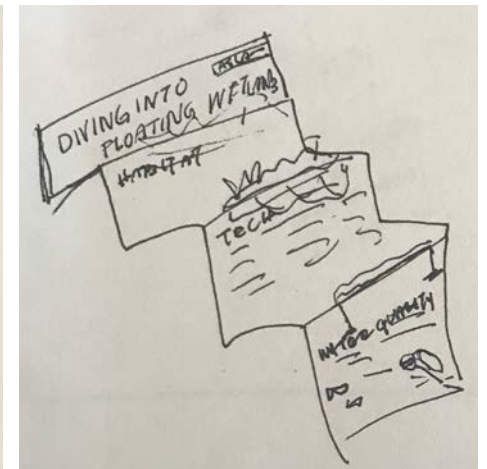
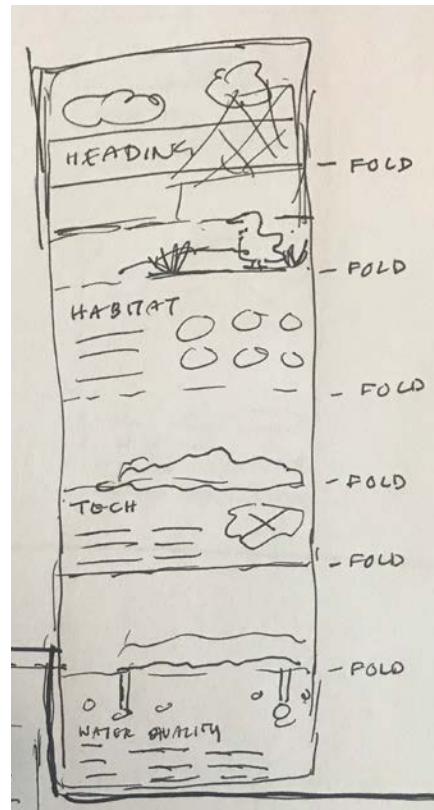
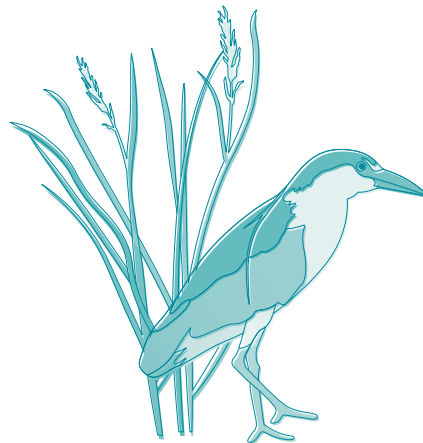




ILLUSTRATION RESEARCH

The project's chosen illustration style plays an important role in keeping the piece approachable and friendly while maintaining an accurate representation of the species. Careful consideration was made to vary the graphic style between the pop-up's collapsed view and the expanded view's technical information.



BUILDING A BETTER FLOATING WETLAND

Firm Name collaborated with the aquarium to design a sustainable floating wetland that improves urban water quality and biodiversity. The result is a prototype wetland that utilizes innovative technologies to extend a floating wetland's lifecycle by up to 30 years. The knowledge gained through this research is a major step toward realizing long-term improvements in habitat creation, wetland resiliency, and water quality in urban environments.



PLANTING ZONES

The prototype planting design utilizes native Chesapeake Bay species and organizes them by inundation level. Four vegetation zones create a diversity of habitats for the wetland plants and animals that once thrived in the Inner Harbor.

FLORA BY PLANTING DEPTH

- ① WETLAND CHANNEL (-6" DEEP)
 - SMOOTH CORDGRASS (*Spartina alterniflora*)
- ② SHALLOW SUBMERGED LOW MARSH (-6" TO -1")
 - SMOOTH CORDGRASS (*Spartina alterniflora*)
- ③ NON-SUBMERGED LOW MARSH (1" TO 5")
 - SMOOTH CORDGRASS (*Spartina alterniflora*)
 - SEASIDE GOLDENROD (*Solidago sempervirens*)
 - CRIMSON-EYED ROSE MALLOW (*Hibiscus moscheutos*)
- ④ NON-SUBMERGED HIGH MARSH (5" TO 8")
 - SALTMEADOW CORDGRASS (*Spartina patens*)
 - EASTERN BACCHARIS (*Baccharis halimifolia*)
 - MARSH ELDER (*Iva frutescens*)

OBSERVED SPECIES

TERRESTRIAL SPECIES

- MALLARD DUCK (*Anas platyrhynchos*)
- AMERICAN COOT (*Foca americana*)
- BLACK-CROWNED NIGHT HERON (*Nycticorax nycticorax*)
- GARNER DRAGONFLY (*Zostera pumila*)
- RED-WINGED BLACKBIRD (*Agelaius phoeniceus*)
- DOUBLEDAY'S BLUE (*Erythronium albidum*)
- MONARCH BUTTERFLY (*Danixia plexippus*)

SHALLOW MARSH SPECIES

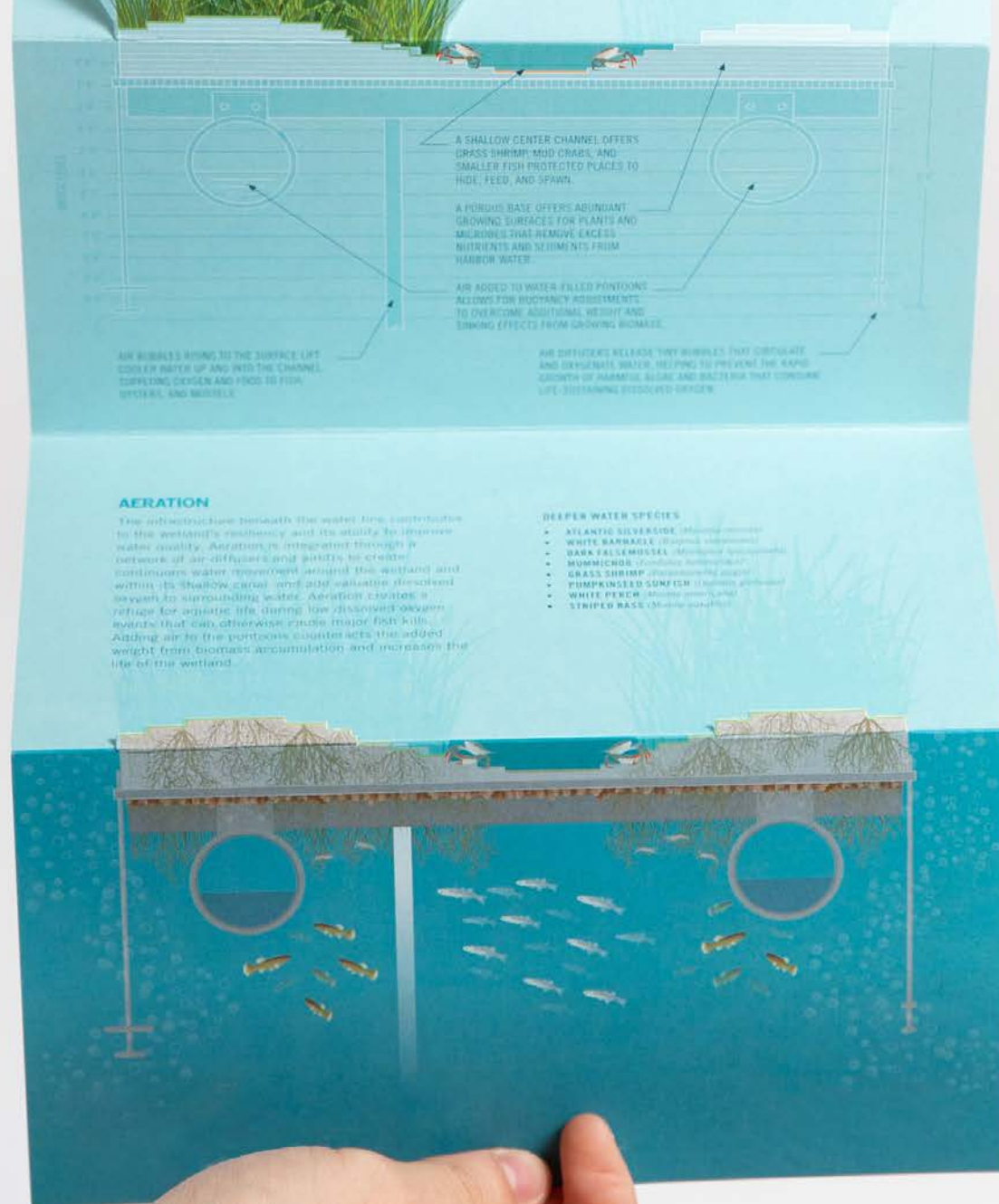
- NORTHERN WATER SNAKE (*Nerodia sipedon*)
- BLUE CRAB (*Callinectes sapidus*)
- STRIPED KILLIFISH (*Fundulus majalis*)
- GRASS SHRIMP (*Palaemonetes pugio*)
- WHITE-FINGERED MUD CRAB (*Rithropanopeus hysidus*)
- MUMMICHOG (*Fundulus heteroclitus*)
- DARK FALSEMUSSEL (*Mytilopsis leucophaea*)



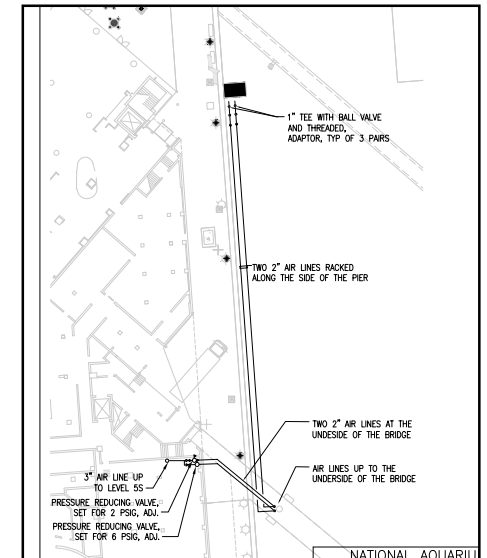
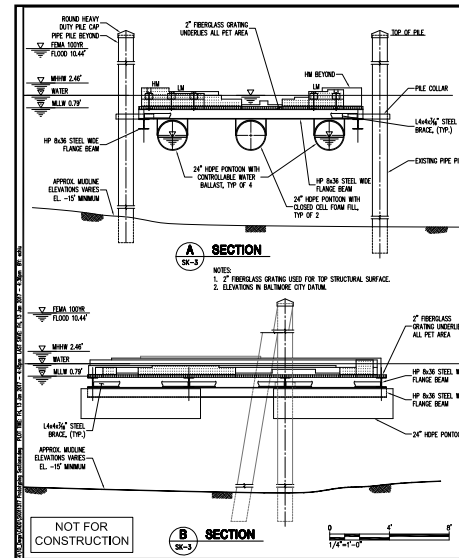
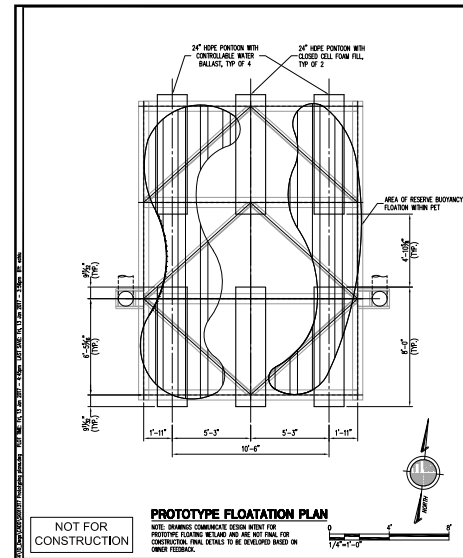
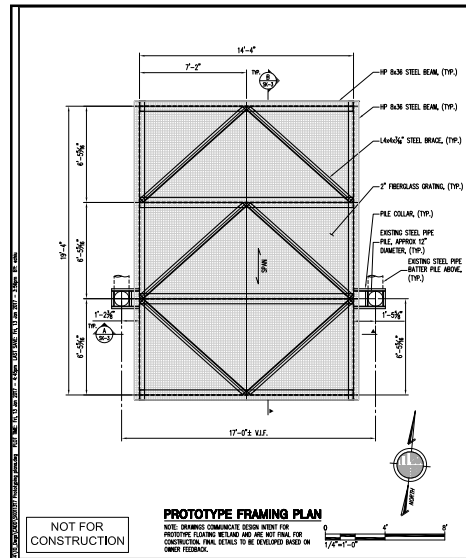
BREADTH OF INFORMATION

The poster's design centers around three main themes: planting design, wildlife observations, and the technical system under the water. The rich layering of information allows readers to quickly understand the main goals of the project, then dive deep into the complex balance of constructed and natural materials.

Underwater technology consists of aeration to improve the water quality surrounding the wetland, along with a system of adjustable buoyancy devices to keep the wetland floating as bio-mass grows. The poster combines short paragraphs with specific call-outs to clearly explain how this technology comes together.

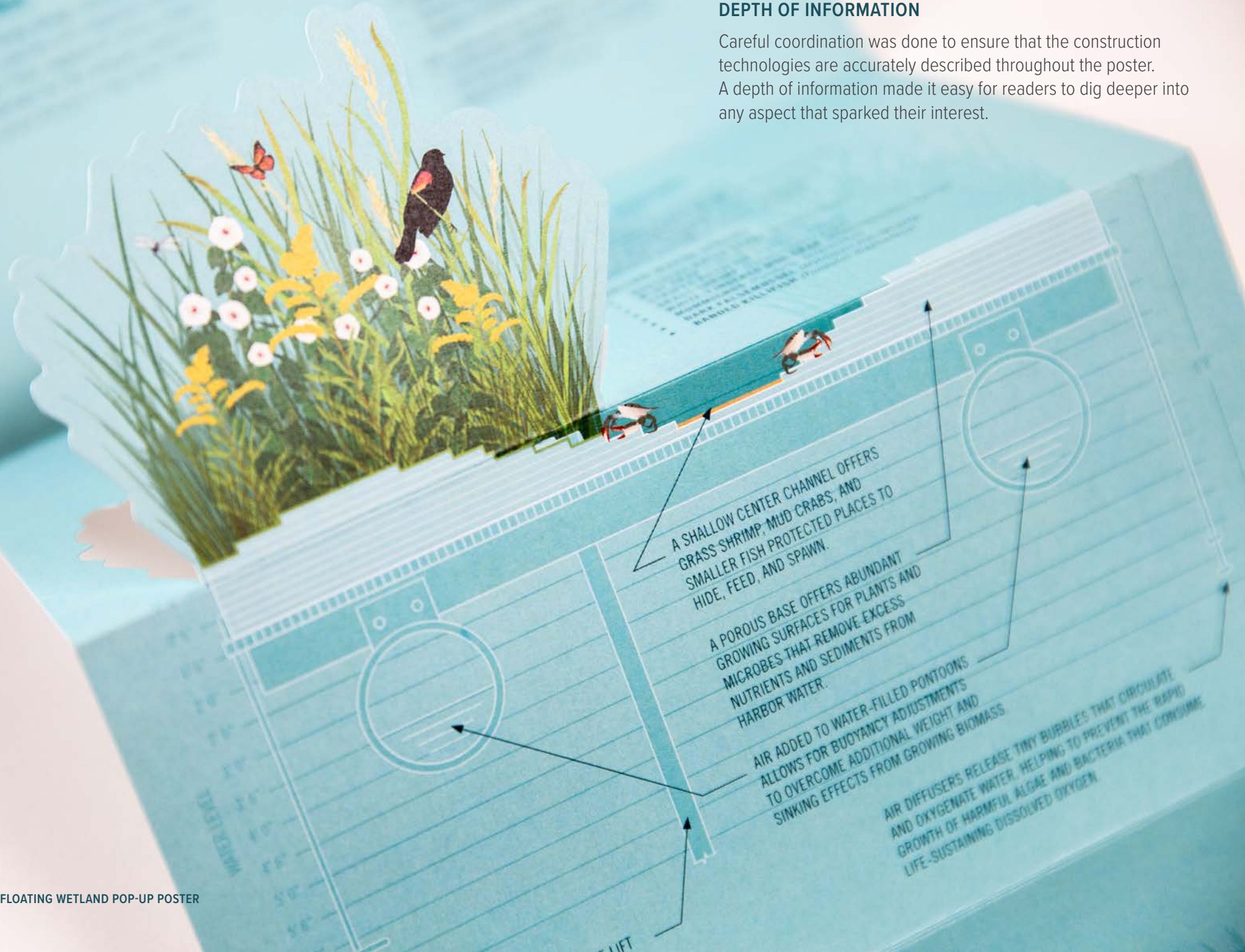


The design criteria, construction technology, and installation of the prototype took countless hours of teamwork from a long list of designers, engineers, manufacturers, biologists, and construction experts. To clearly and accurately relay the correct information, the graphic design team had to fully immerse themselves in this sophisticated process.



DEPTH OF INFORMATION

Careful coordination was done to ensure that the construction technologies are accurately described throughout the poster. A depth of information made it easy for readers to dig deeper into any aspect that sparked their interest.





FLOATING WETLAND POP-UP POSTER

PLANT SPECIES

Native species that can survive in submerged conditions cover the floating wetland. The illustrations of the plantings are scientifically accurate to the form and color of the plants used on the wetland. In-depth planting information teaches people about how plants thrive best in different planting conditions and create habitats for fauna.



SPECIES ILLUSTRATION

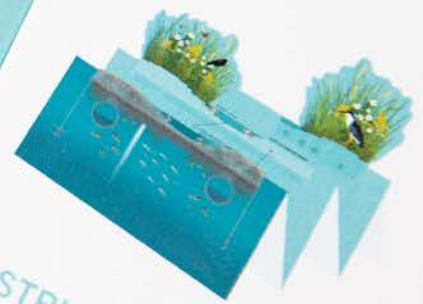
The planting on the wetland attracts a variety of underwater and terrestrial critters. The team worked with biologists at the aquarium to determine the correct animals to feature. Illustrations showcase how the species use the space.



FLOATING WETLAND POP-UP POSTER

BUILDING A BETTER FLOATING WETLAND

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INSTRUCTIONS

- 1 REMOVE BAND, EXPAND CARD, AND LAY FLAT.
- 2 POP UP CUT SECTIONS.
- 3 REFOLD CARD AND DISPLAY AS SHOWN.

COMPACT DELIVERY

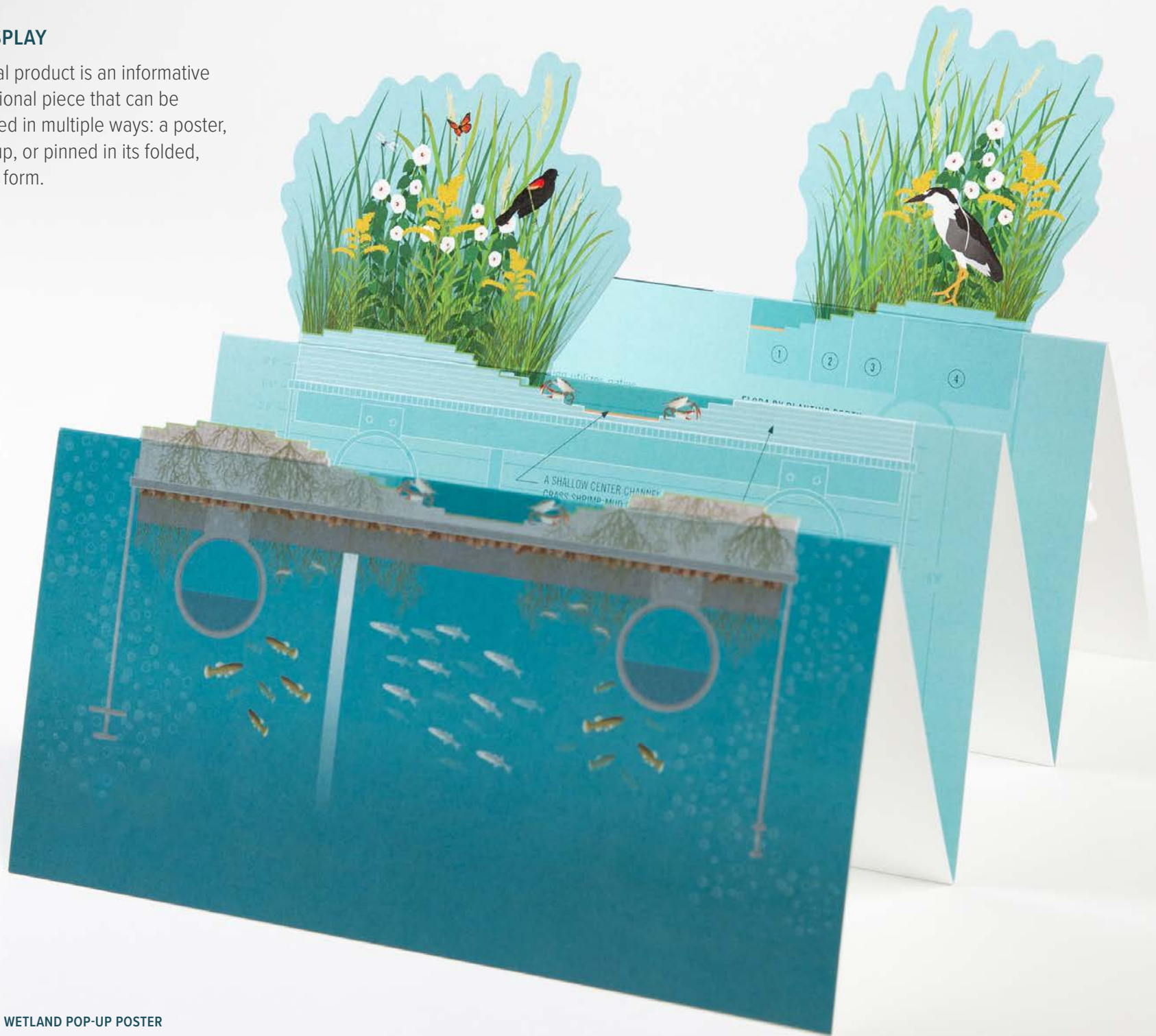
The pop-up was sent to clients, prospective clients, and industry professionals. A belly band was attached with instructions on how to punch out the cut sections and display.



FLOATING WETLAND POP-UP POSTER

3D DISPLAY

The final product is an informative promotional piece that can be displayed in multiple ways: a poster, a pop-up, or pinned in its folded, pop-up form.



FLOATING WETLAND POP-UP POSTER