

# FERRY COVE OYSTER HATCHERY

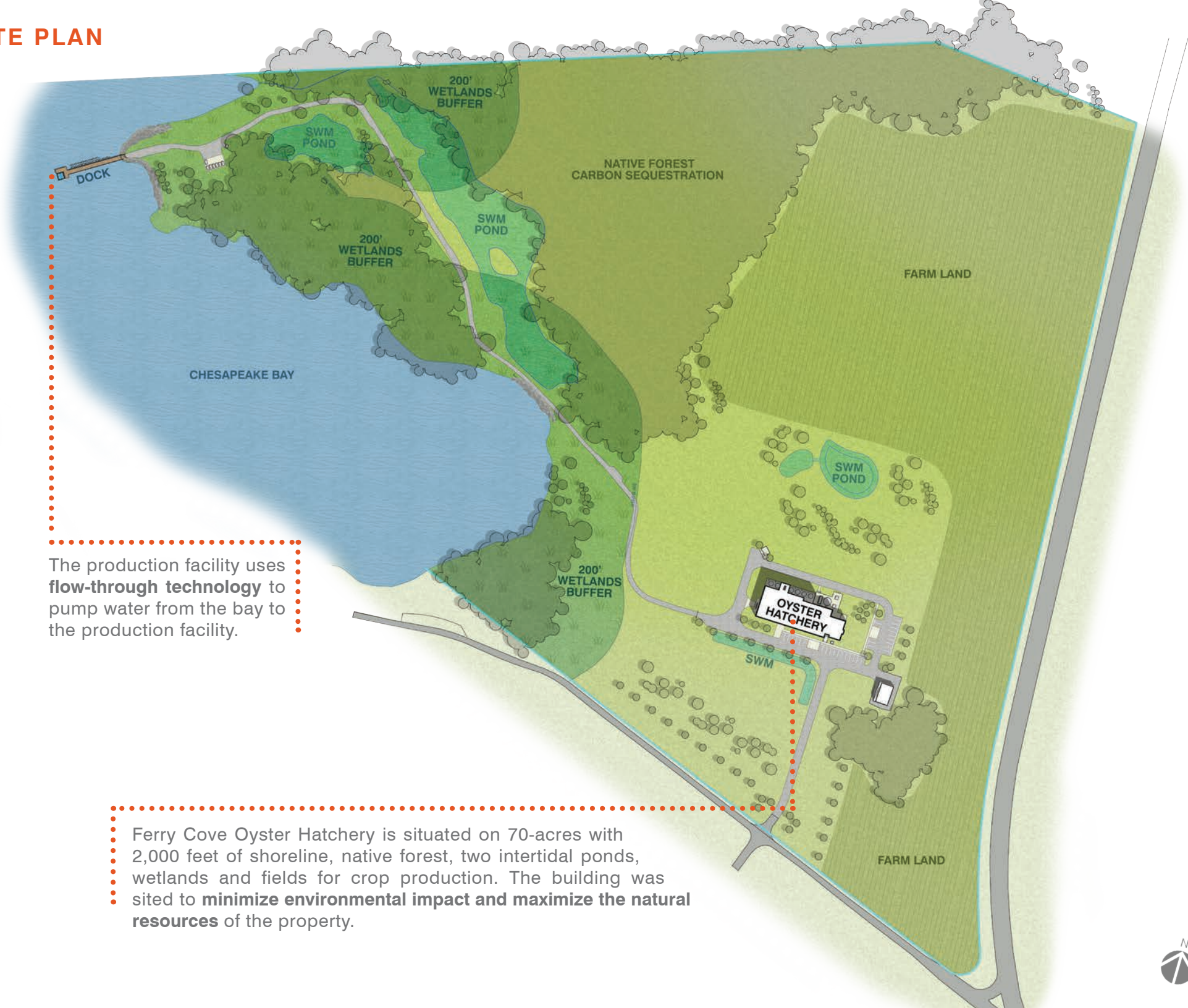
SHERWOOD, MARYLAND

**COMMERCIAL** | NEW CONSTRUCTION

Ferry Cove is designed to become one of the largest commercial oyster hatcheries on the east coast. The facility capitalizes on its location adjacent to the Chesapeake Bay, the nation's largest estuary, to create a mutually beneficial relationship between the natural resource and the hatchery. The organization's goal is to demonstrate how businesses can balance economic development and working waterfronts while addressing coastal resiliency-related issues. The new 20,483 GSF building was split programmatically into two volumes – production and administration. The production side houses the highly complex aquacultural activities including laboratories and algae production facilities. The exterior form harkens back to the Oyster processing houses of the 1800's which used to inhabit the Bay with clerestory windows providing ample light for the processing areas.



# SITE PLAN



The production facility uses **flow-through technology** to pump water from the bay to the production facility.

- Ferry Cove Oyster Hatchery is situated on 70-acres with
- 2,000 feet of shoreline, native forest, two intertidal ponds,
- wetlands and fields for crop production. The building was
- sited to **minimize environmental impact and maximize the natural resources** of the property.



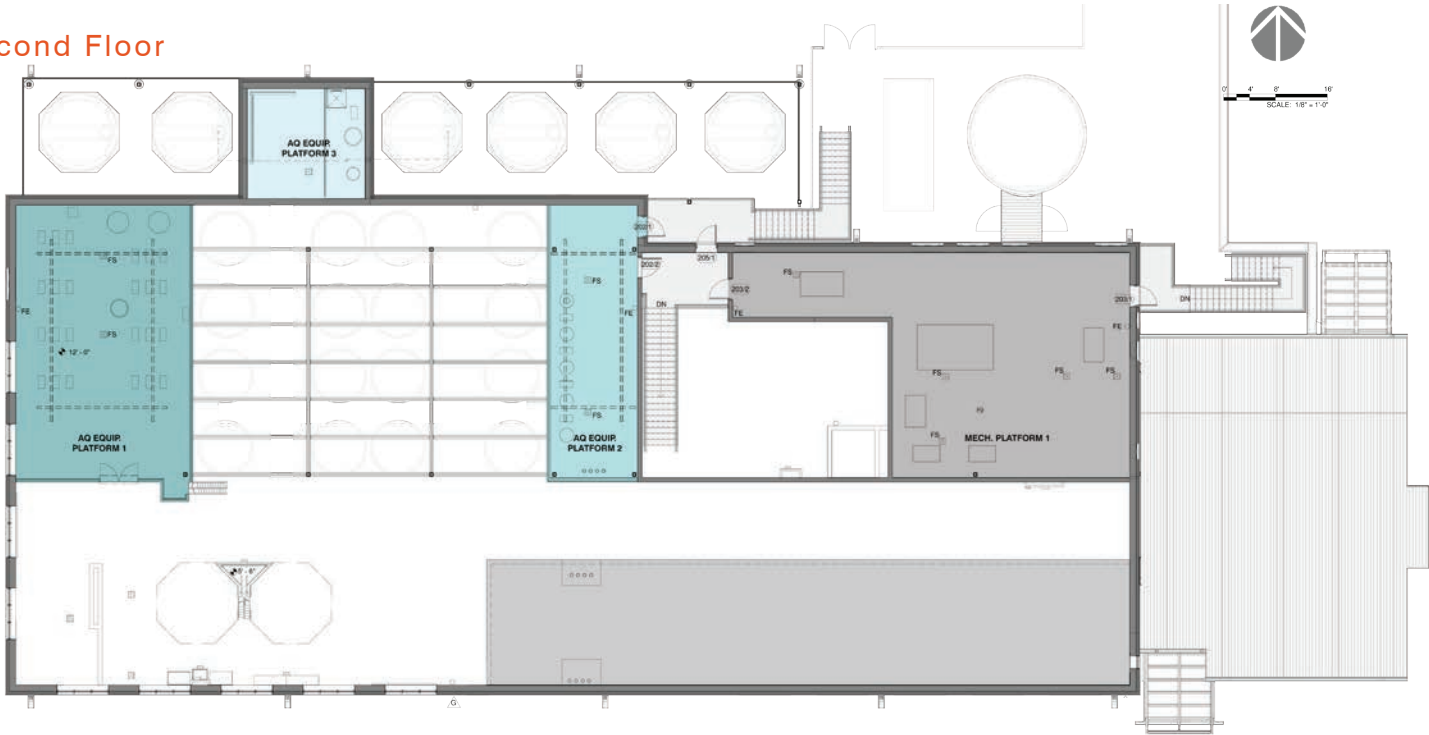
# FLOOR PLAN

The building is designed to be highly flexible to accommodate growth and evolving technology. Ferry Cove expects to replace equipment several times in the building's life cycle. **By creating an open floor plan with easy-to-access connection points, new machinery can be installed with little to no major constraints.** Building materials and finishes were selected to provide minimal maintenance and withstand the harsh saltwater environment.

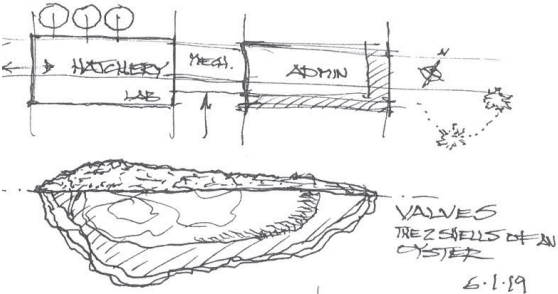
## First Floor



## Second Floor



## Concept Sketch







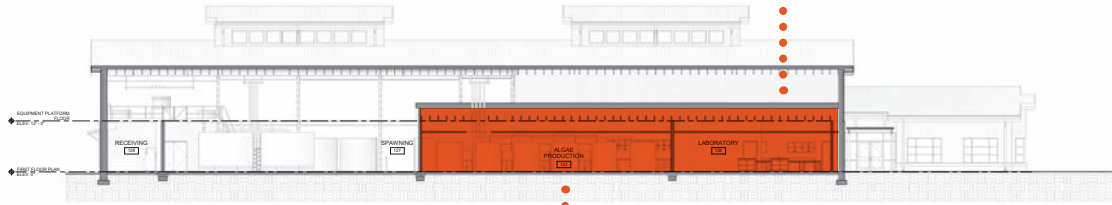
Historic Precedents

Oxford Marine Library

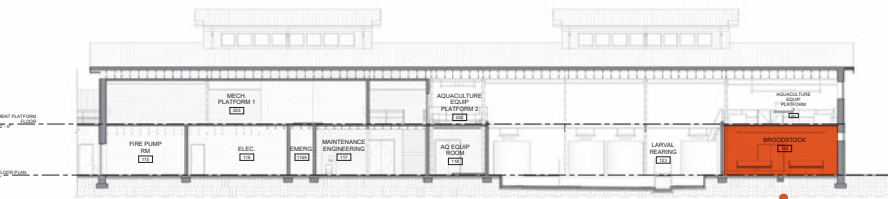


The building is not only designed to produce, but to educate. Ferry Cove hosts student and community groups for educational tours. The design team took this into consideration and created **a production space that is viewable and understandable to visitors.**

## Laboratory



## Algae Production



## Broodstock



The facility was designed from the ground up to not only maximize larvae and seed production, but also provide **maximum flexibility during the production process** to mitigate the many environmental conditions that could impact production.

By increasing production of oyster seed, Ferry Cove's objective is to increase farm-raised oyster production in the Mid-Atlantic region. Oysters serve as a natural filtering system and reduce algae in the water, **creating a balanced ecosystem** and allowing other marine life to flourish.





**Oyster Aquaculture science drove the design.** The state-of-the-art facility was designed from the ground-up to maximize larvae and seed production while providing maximum flexibility during the production process to mitigate the many environmental conditions that could impact production. **Located in the historical epicenter of oyster production in the Chesapeake Bay, the building draws its form from historical precedents of the many processing houses that once dotted the bay,** while also paying homage to the Eastern oyster (*Crassostrea virginica*) itself with the striated design of the CMU walls and offset roofs being representative of an oyster shell. The highly water dependent process maintains reserves to address changing Bay salinity conditions while the highly computerized process monitors and adjusts calibrated doses of algae-enriched water flows around the hatched larvae.

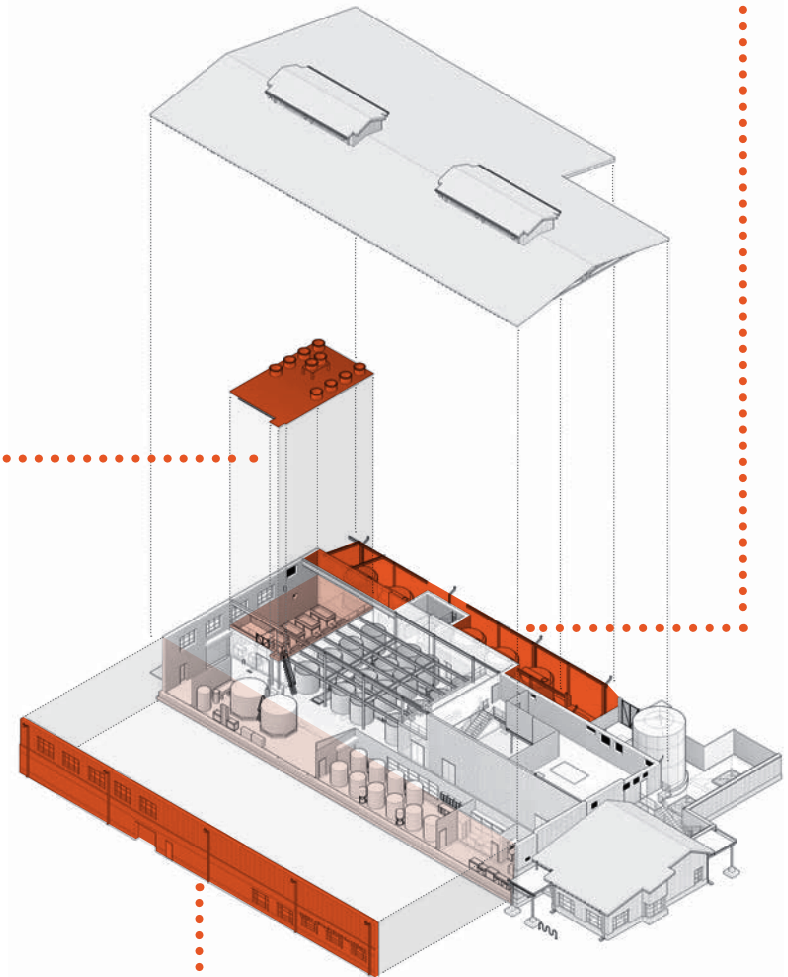
### Water Tank Reserves



### Aqua Culture



### Masonry Veneer







Larvae Spawning & Rearing Tanks

**Clerestories provide daylight** inside the production space while all office areas have large windows. This daylighting reduced the need for artificial lighting and **improves the well-being of inhabitants.**

