WHOI and Plans for Facilities

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**Fixed Modular Dock:**
- 177 - Steel Pipe Piles
- Concrete Pile Caps
- Concrete Deck

**Hybrid Floating Dock:**
- 11-ft Deep Concrete Float
- Five 78” Diameter Guide Piles Along Bulkhead
- Four 60” Diameter Pile Mooring Dolphin in Test Well
- Two 30-ft Wide Ramps

**Tension-Pile Floating Dock:**
- 5-ft Deep Steel Float
- 21 - 60” Dia. Guide Piles Between Float and Deck
- (120) 20” Dia. Concrete Deck
- No Ramps or Guide Piles
CWATER – Emerging Design Approach
CWATER - Open Space and Community Outreach
Looking at the New Waterfront
CWATER - View into High-Bay
Preferred vendor team has been selected

Next steps include
- Design and programming meetings
- Conceptual design and preliminary estimate package

Preliminary concept
- Approximately 6,000 GSF building footprint
- Workspace on first floor
- Office and conference space on second floor
Facilities Under Construction

- **New Quissett Facility (NQF)**
  - Construction contract has been fully executed
  - Building permit issued by Town of Falmouth
  - Foundations nearly complete, along with road/parking
  - Superstructure will start next month

- **AVAST (Advanced Vehicles, Autonomy, and Sensor Technology)**
  - Working group gathered over 100 interviews across Institution
  - Vision as a catalyst for innovation and collaboration
  - Community-driven R&D
  - Building, sharing, and sustaining common resources
  - Reaches beyond the physical facility
NQF as of earlier this week
New Quissett Facility (NQF)
Autonomy, Vehicles, and Sensing Technologies (AVAST)
AVAST Layout

- **R&D space**: free, high-value, short-term use (days-year)
- **An Innovation Hub**: promotes innovation & collaboration formally & informally: ‘helpdesk’ for technical mentoring & advice, proposal prep; education & training; workshops, etc.
Continued Focus on Community-Driven Innovation

- Collaboration with MIT/Lincoln Lab Beaver Works Center
  - MIT Mech Eng senior capstone course
  - Real world design experience on a problem of complex systems
  - Bring together a team with diverse experiences and knowledge
  - Structured as a start-up

- 2019 problem focused on new approaches to undersea platforms
  - Rapid sampling to measure a volume, not a point or line
  - Modular and scalable

- RAPID – Rapid Autonomous Pod for In situ Data
System Overview
RAPID Team visits WHOI
Before and After the Pandemic

Then...

Now...
New Approaches, New Partnerships

- Design thinking
- Scalable innovation
- New ways of working and collaborating
  - Remote
  - Open facilities
  - Unexpected partnerships