



**WOODS HOLE OCEANOGRAPHIC INSTITUTION
NEW QUISSETT FACILITY
CAPE COD COMMISSION- PUBLIC HEARING**

07 October 2019

WHAT IS THE WOODS HOLE OCEANOGRAPHIC INSTITUTION?

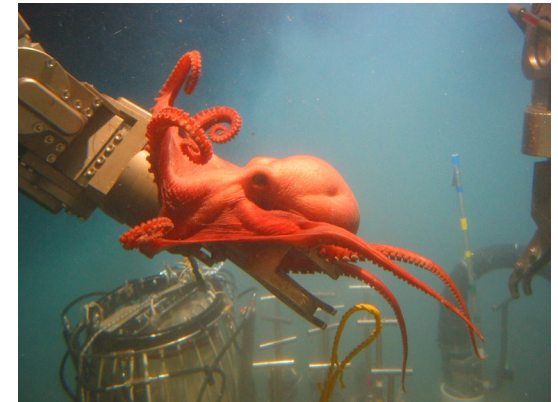


- Founded in 1930 with a grant from the Rockefeller Foundation
- Non-Profit, Massachusetts corporation
- Total population of ~1450, including employees, graduate students and visiting scholars
- 450 scientific and technical staff
- \$230 million annual budget; 750 active projects
- World-class joint PhD program with MIT; over 1000 graduates; 50 year anniversary in 2018

WHAT IS MAKES WHOI UNIQUE?

- Independent
- Non-Profit
- Entrepreneurial
- Trusted, Globally-recognized brand
- Science, engineering, education

We are hands-on and seagoing



WHOI's GLOBAL REACH?



- Based in Woods Hole on Cape Cod
- Operations and research projects all over the globe
- Open ocean, coastal ocean, deep ocean
- Rivers, mangroves, and mountains
- Tropics, mid-latitudes, arctic and Antarctic
- 50 international agreements for collaborative research

Fueling the Economy

3,898 Jobs

\$186.5M in employee
compensation

\$333.7M in Value Added (GDP)

\$603.8M in Sales Revenue (Output)

Federal Funding Powerhouse

\$200M total federal funding

\$650k average grant award

#70 Rank in federal funding among all
US research institutions

7.5% share of all academic research
funding in MA

WHOI's total economic contribution to the U.S. economy in 2017

WHOI: TWO CAMPUSES

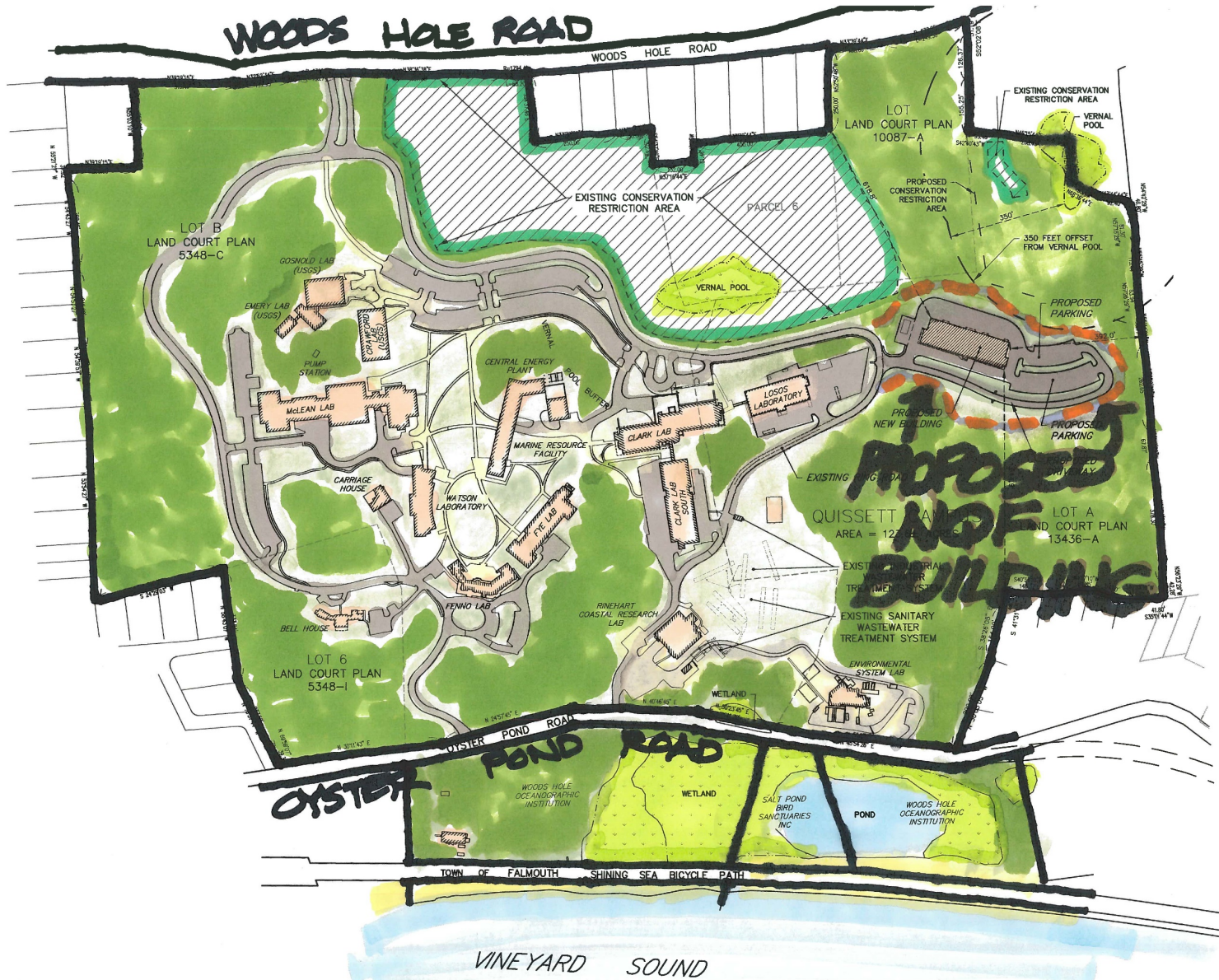


HOW DOES THE NEW QUISSETT FACILITY ADVANCE WHOI'S MISSION?

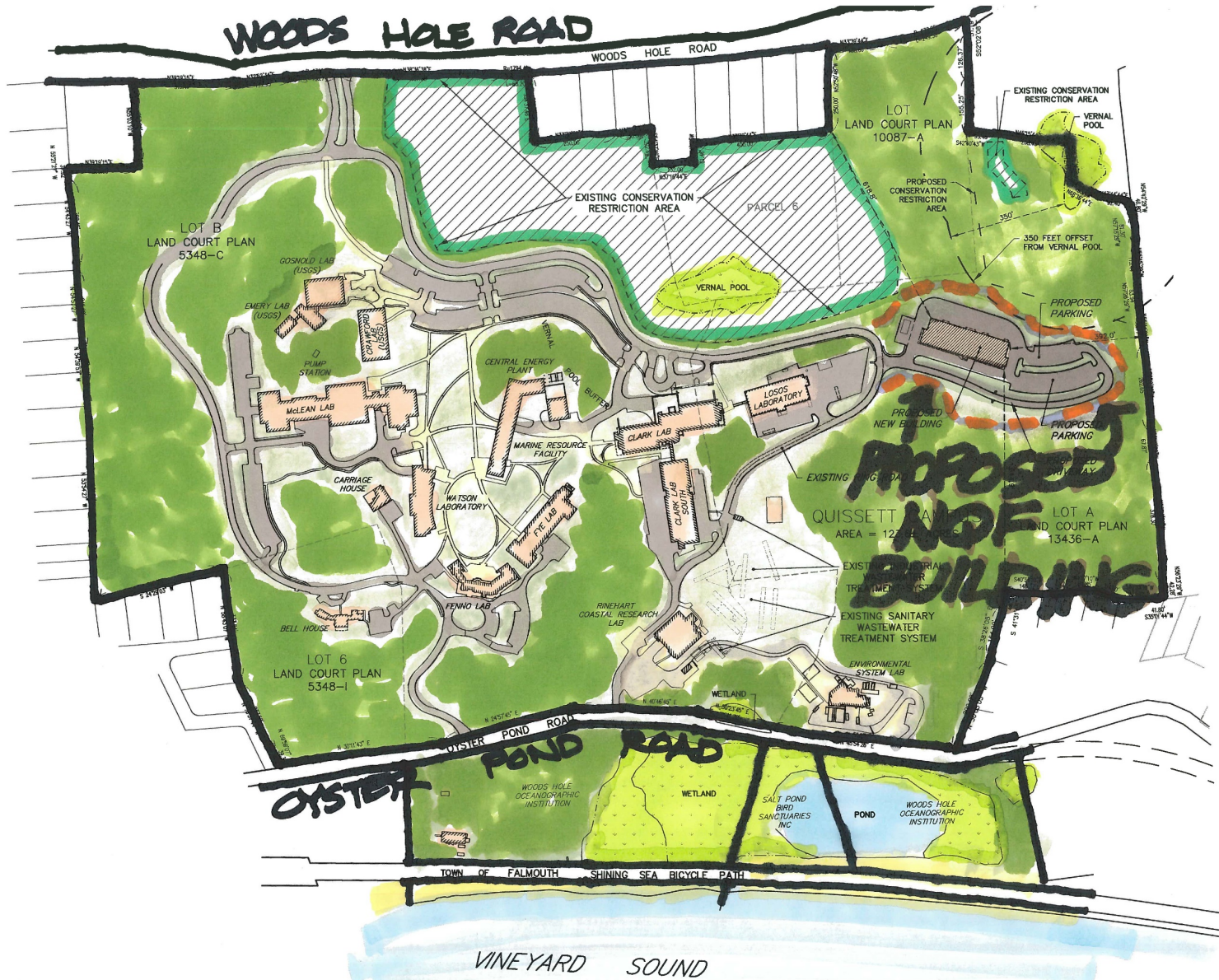
- The NQF is a “technology accelerator”
- NQF will become the epicenter of autonomous vehicle, sensor, and technology innovation (AVAST) at WHOI
- NQF will also be home to WHOI's Rigging group who will be relocated from the waterfront facilities in the village
 - This move prioritizes the waterfront for research and educational missions that require direct access to the ocean
- Flex space
 - The interior layout of these space will be designed later
 - This space allows WHOI to relocate groups from existing buildings in order to maintain and repair aging infrastructure



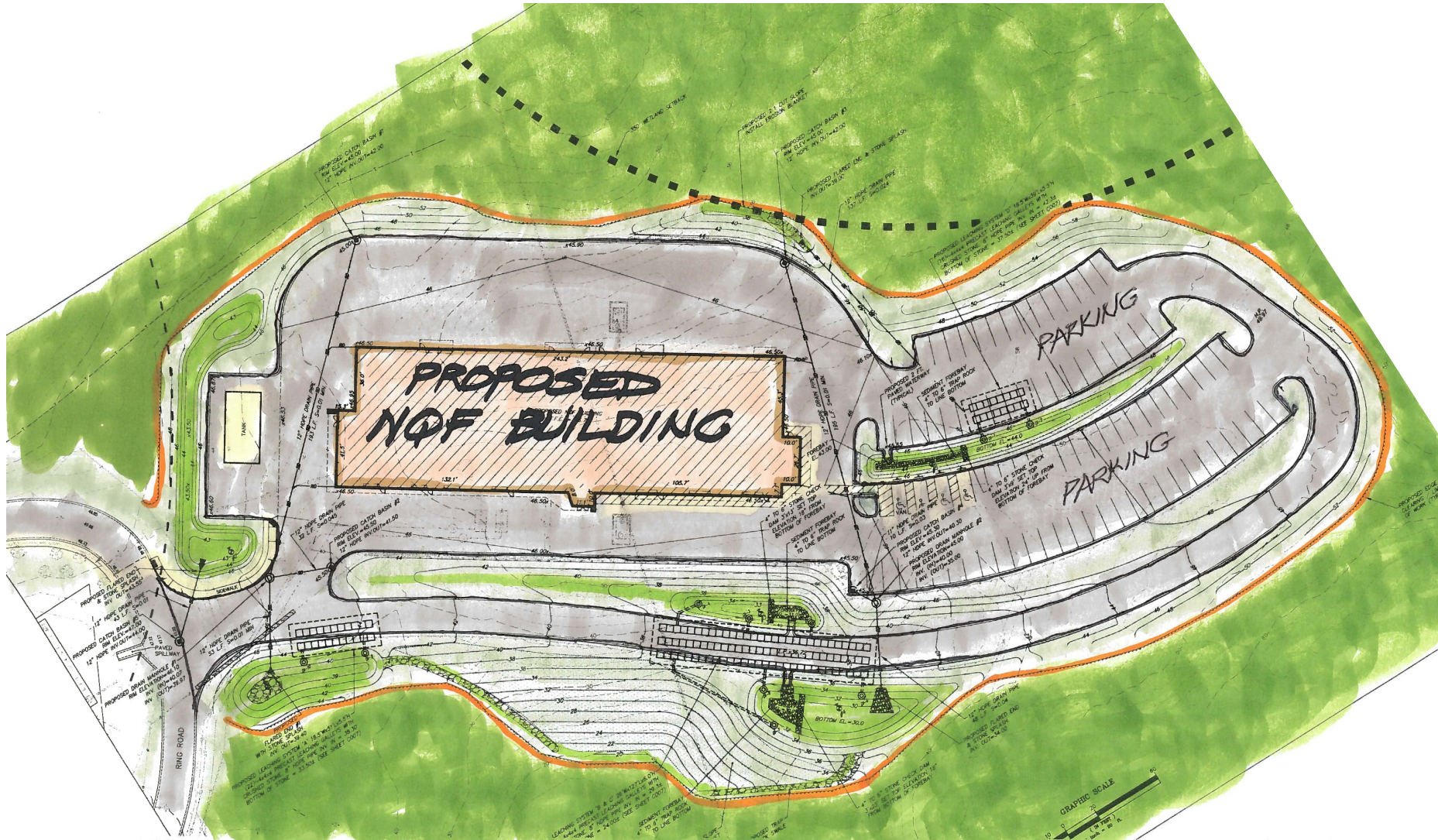
QUISSETT CAMPUS OVERVIEW



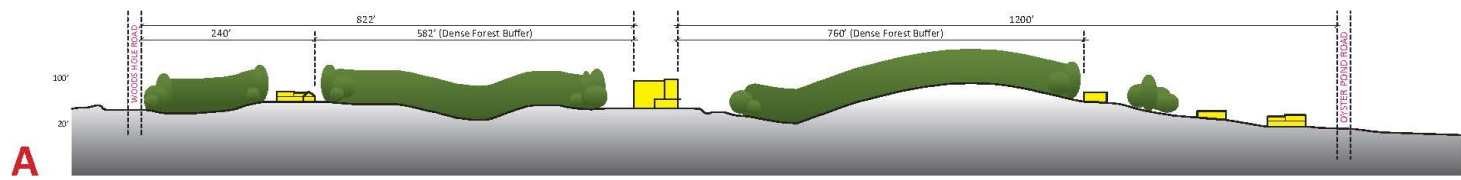
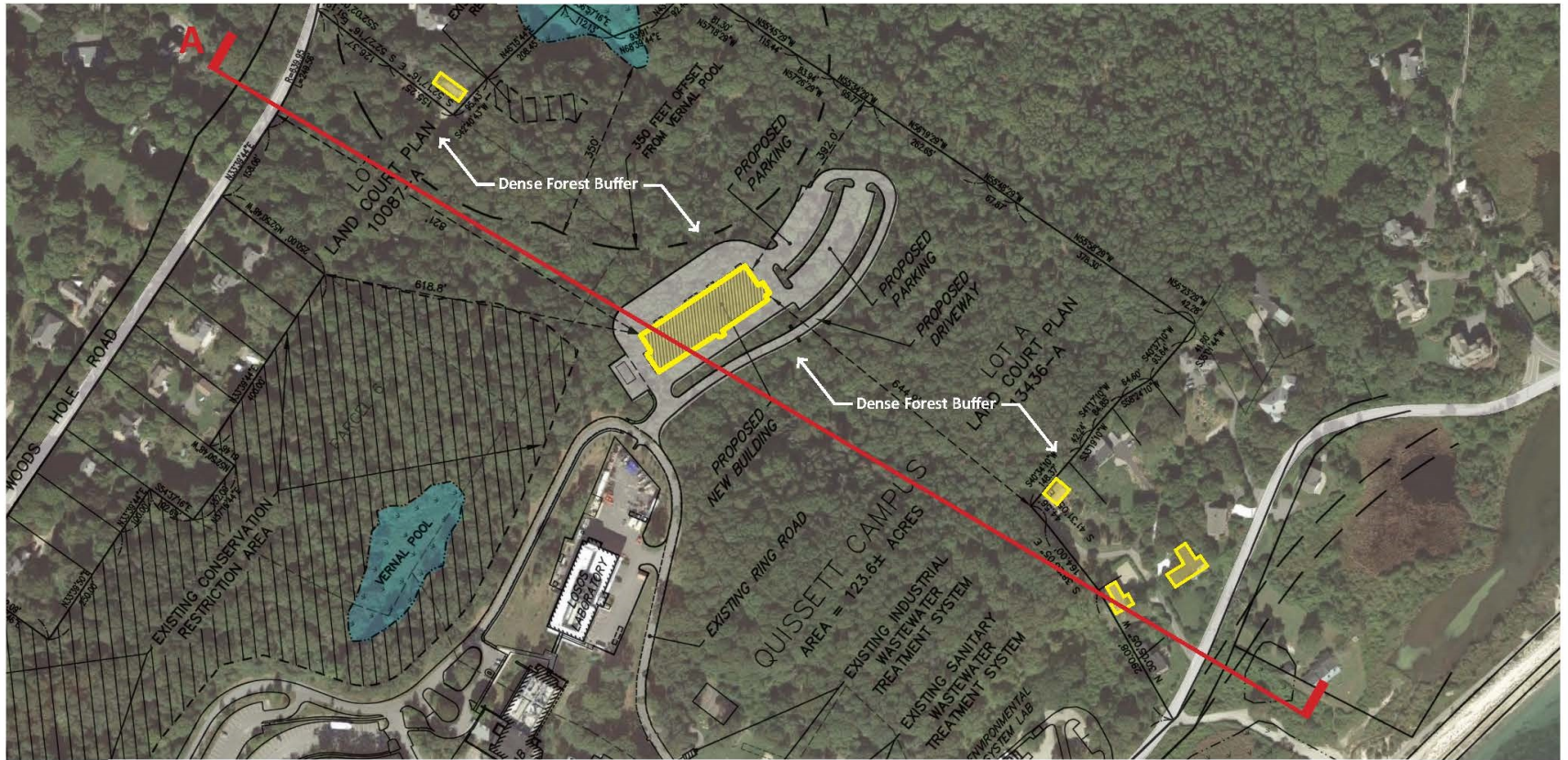
NEW QUISSETT FACILITY- LOCATION PLAN



NEW QUISSETT FACILITY SITE PLAN



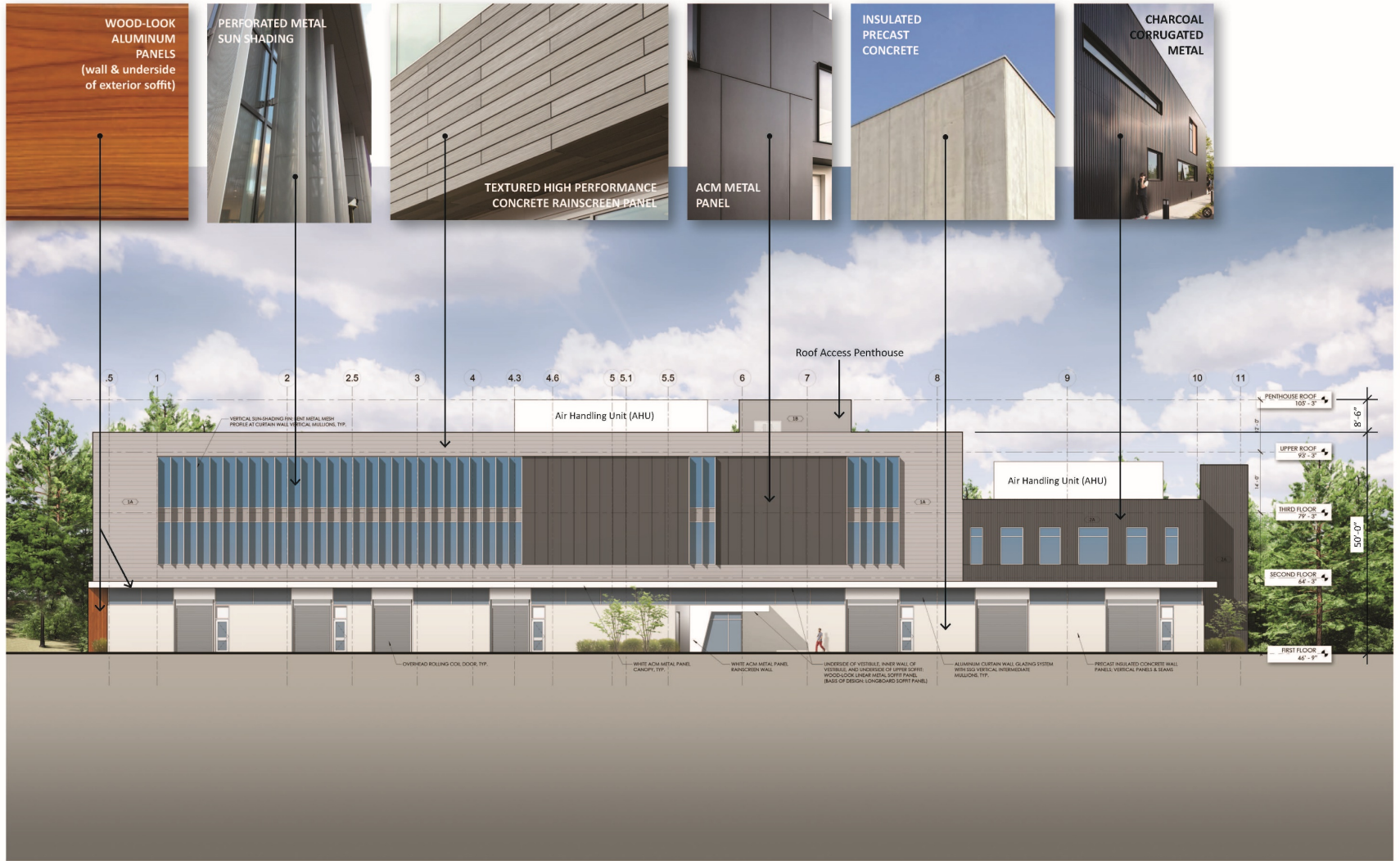
AERIAL VIEW AND SITE SECTION



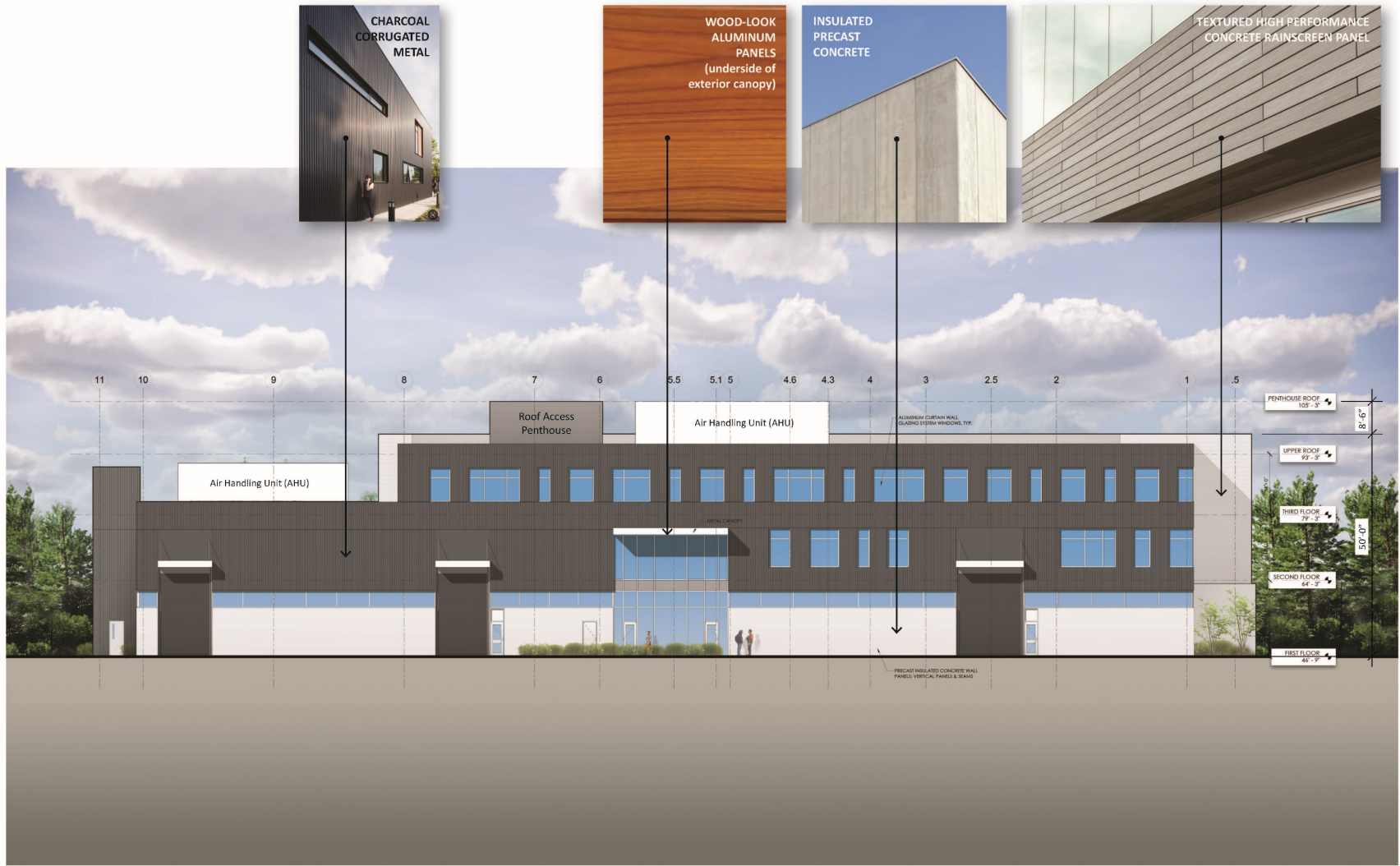
3D VIEW- LOOKING NORTHEAST



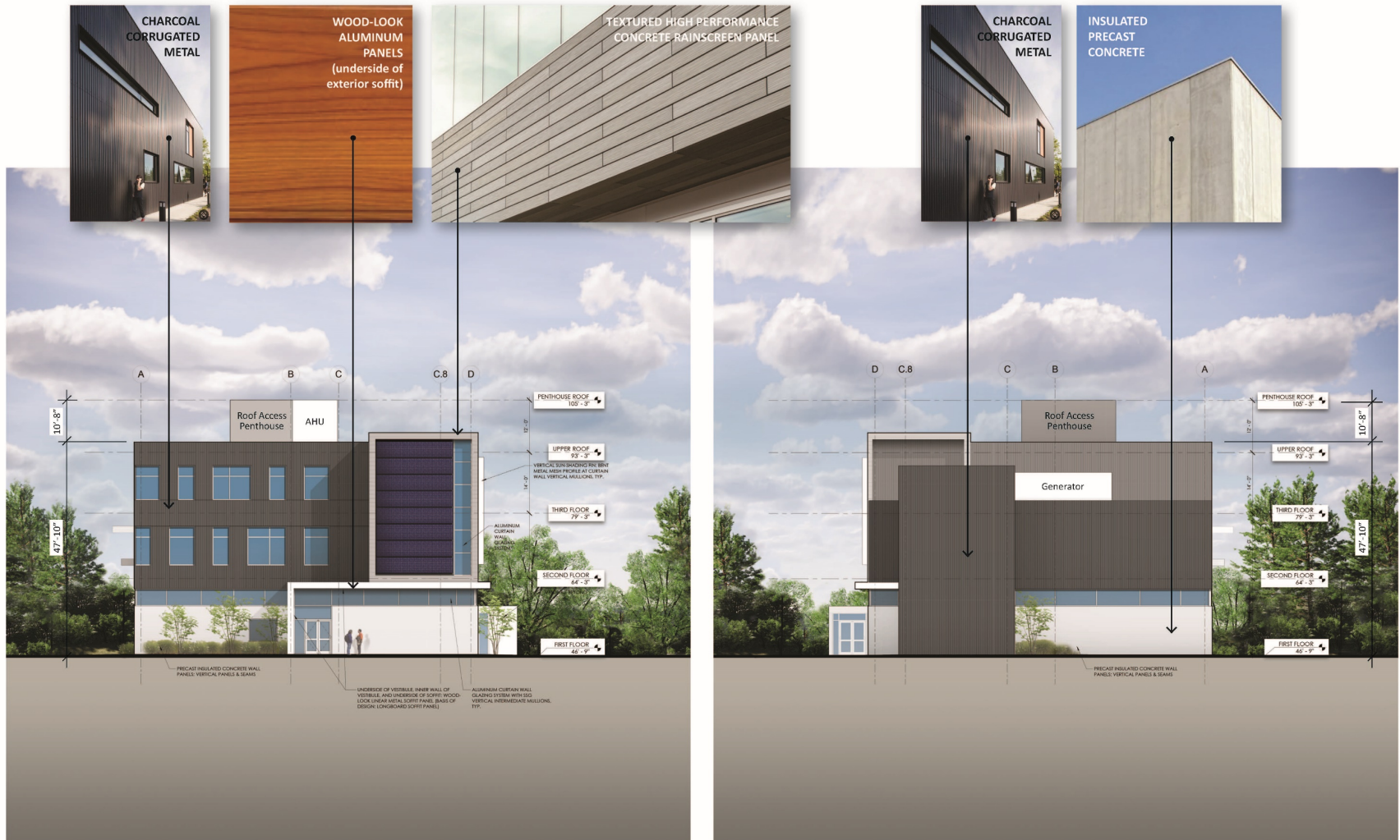
BUILDING ELEVATION- SOUTH



BUILDING ELEVATION- NORTH

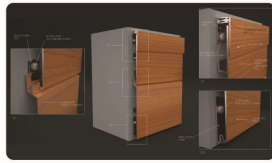


BUILDING ELEVATION- WEST & EAST



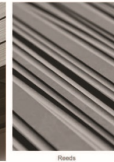
PROPOSED MATERIALS

WOOD-LOOK
ALUMINUM
PANELS



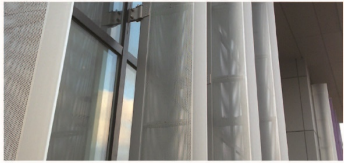
LONGBOARD
Mayne, Inc.
Wood-look aluminum panels
6" V-groove plank
<https://longboardfacades.com/linear-metal-soffits/>

TEXTURED HIGH
PERFORMANCE
CONCRETE
RAINSCREEN PANEL



TAKTL SELECT
Ultra High Performance Concrete (UHPC)
Rainscreen panels with exposed fasteners
"Reeds" pattern
<https://www.taktl-llc.com/taktl-select/>

PERFORATED METAL
SUN SHADING



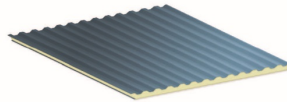
SOLINEAR
Aluminum mesh fixed vertical solar shades
<https://www.solinear.co.uk/product-range/perforated-mesh-shading/>

ACM METAL
PANEL



REYNOBOND ACM (or similar)
Aluminum Composite Material (ACM)
Charcoal color
https://www.arconic.com/aap/north_america/en/info_page/market_architecture_building.asp

CHARCOAL
CORRUGATED
METAL



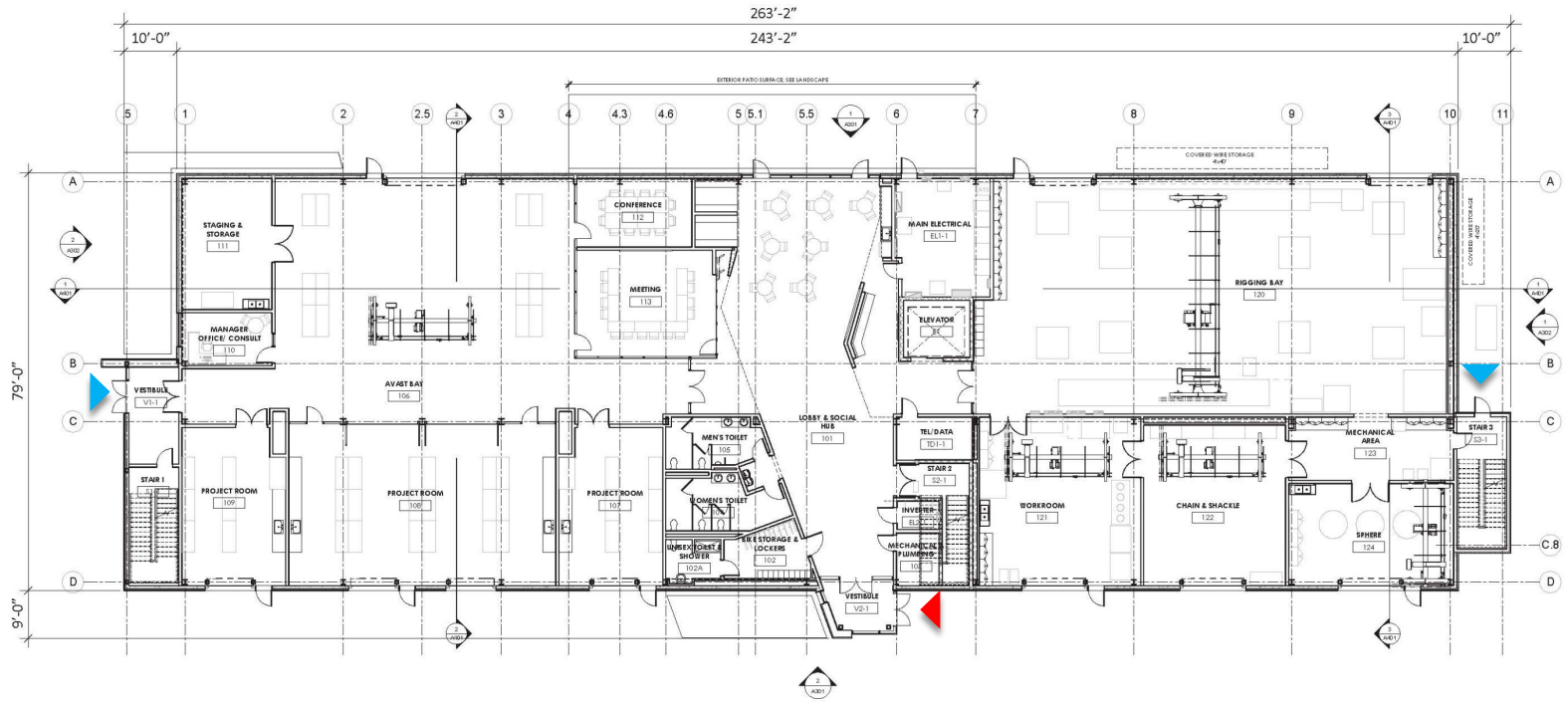
MBCI 7.2 Insul-Rib (or similar)
Insulated corrugated panel
Charcoal color
<http://www.mbc.com/products/insulated-metal-panels/insulated-wall-panels/7-2-insul-rib/>

INSULATED
PRECAST
CONCRETE

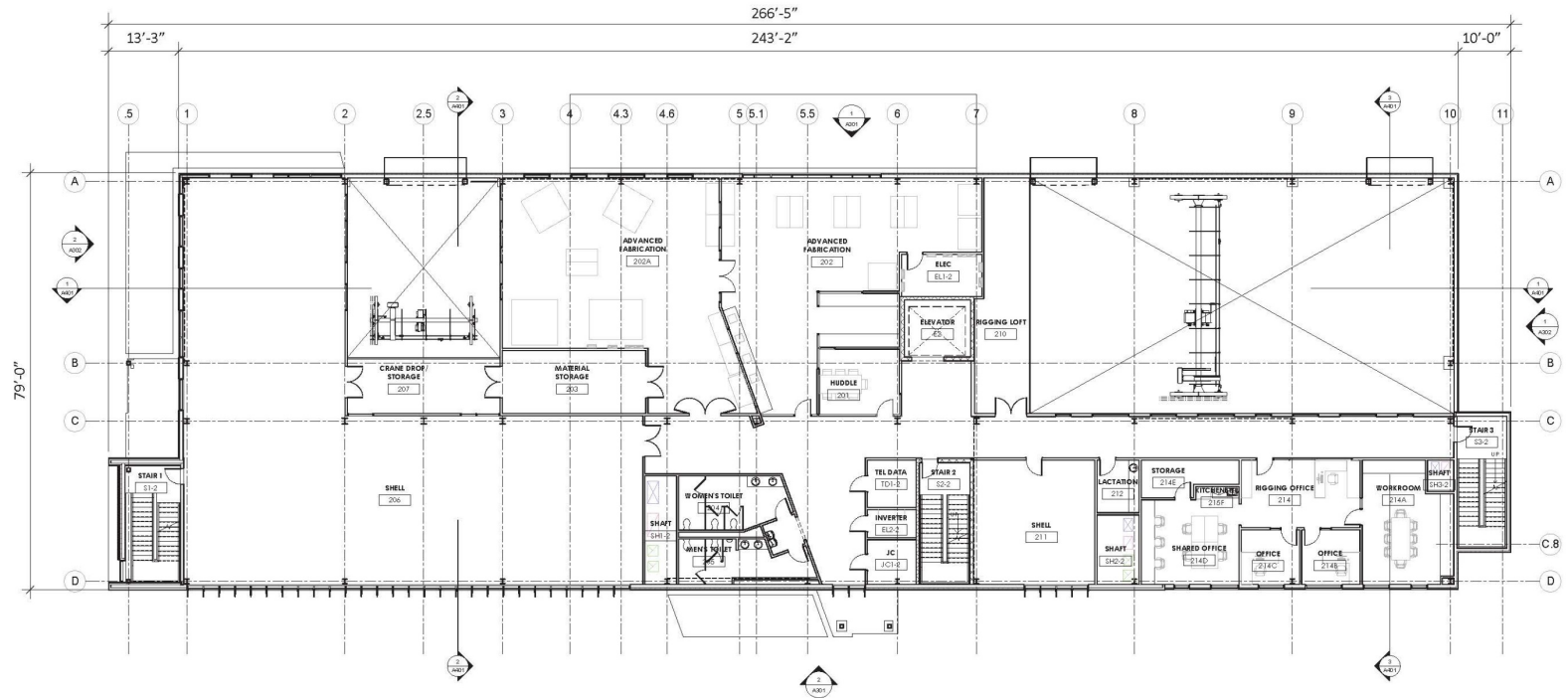


THERMOMASS
Cast-in-place insulated concrete wall:
Structural concrete wythe + rigid insulation + Architectural Precast concrete panel exterior
<https://thermomass.com/products/system-cjp/>

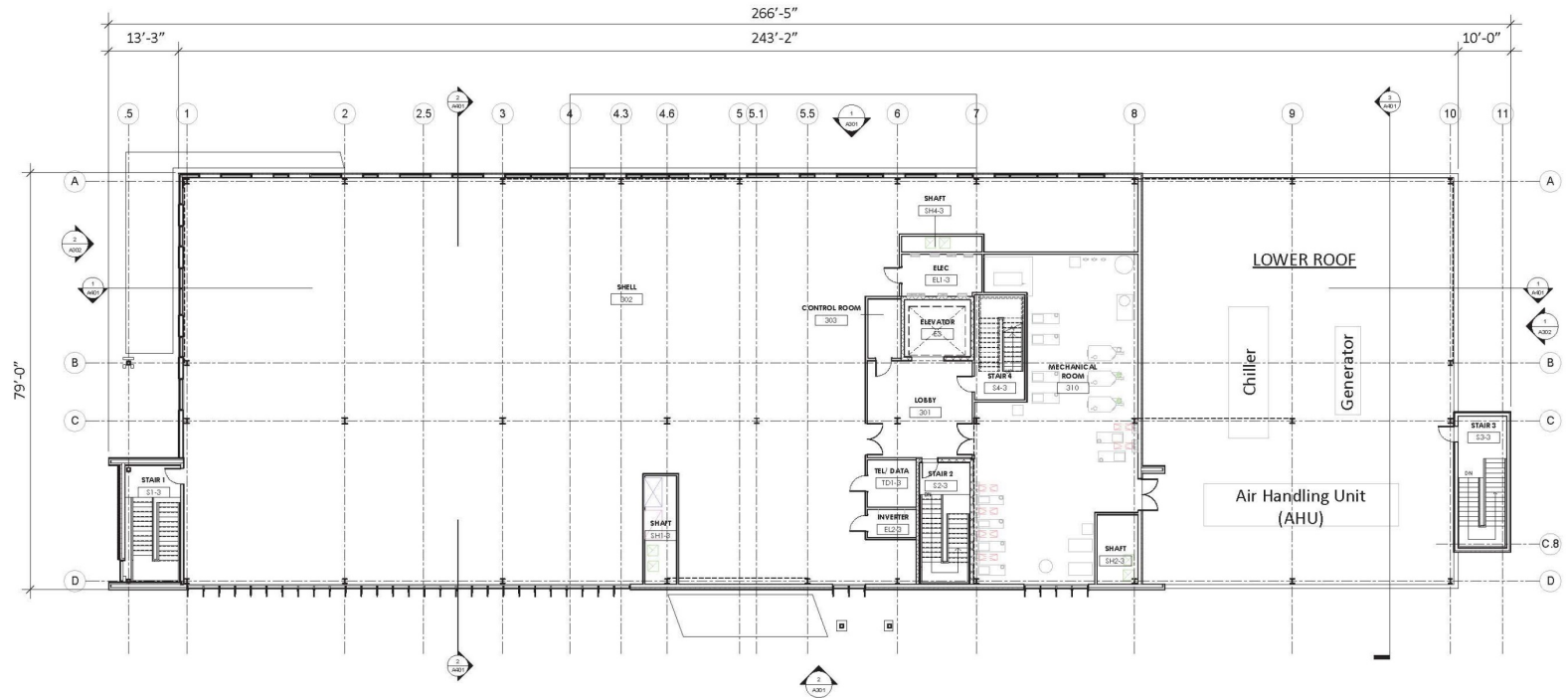
FLOOR PLAN- LEVEL 1



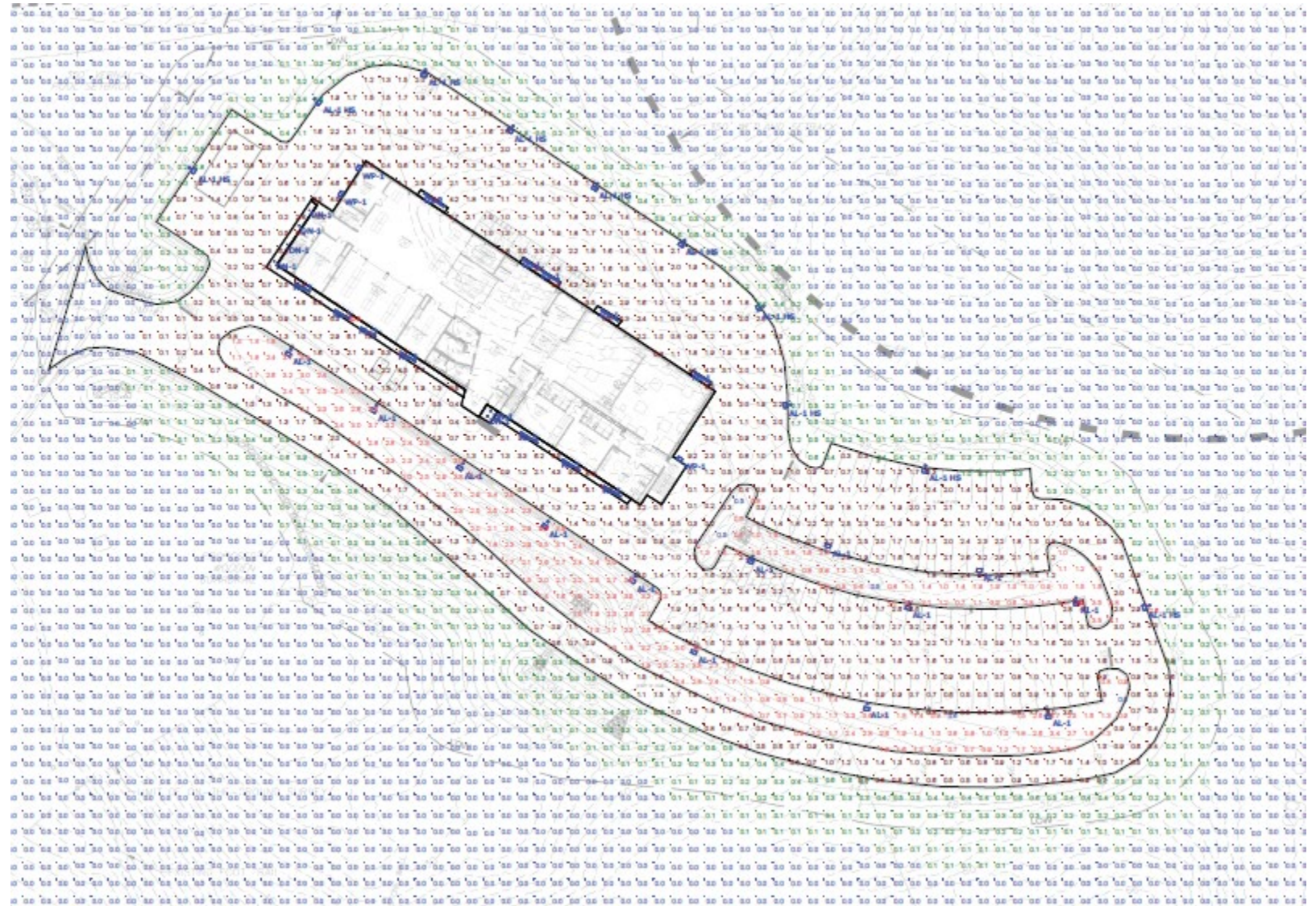
FLOOR PLAN- LEVEL 2



FLOOR PLAN- LEVEL 3

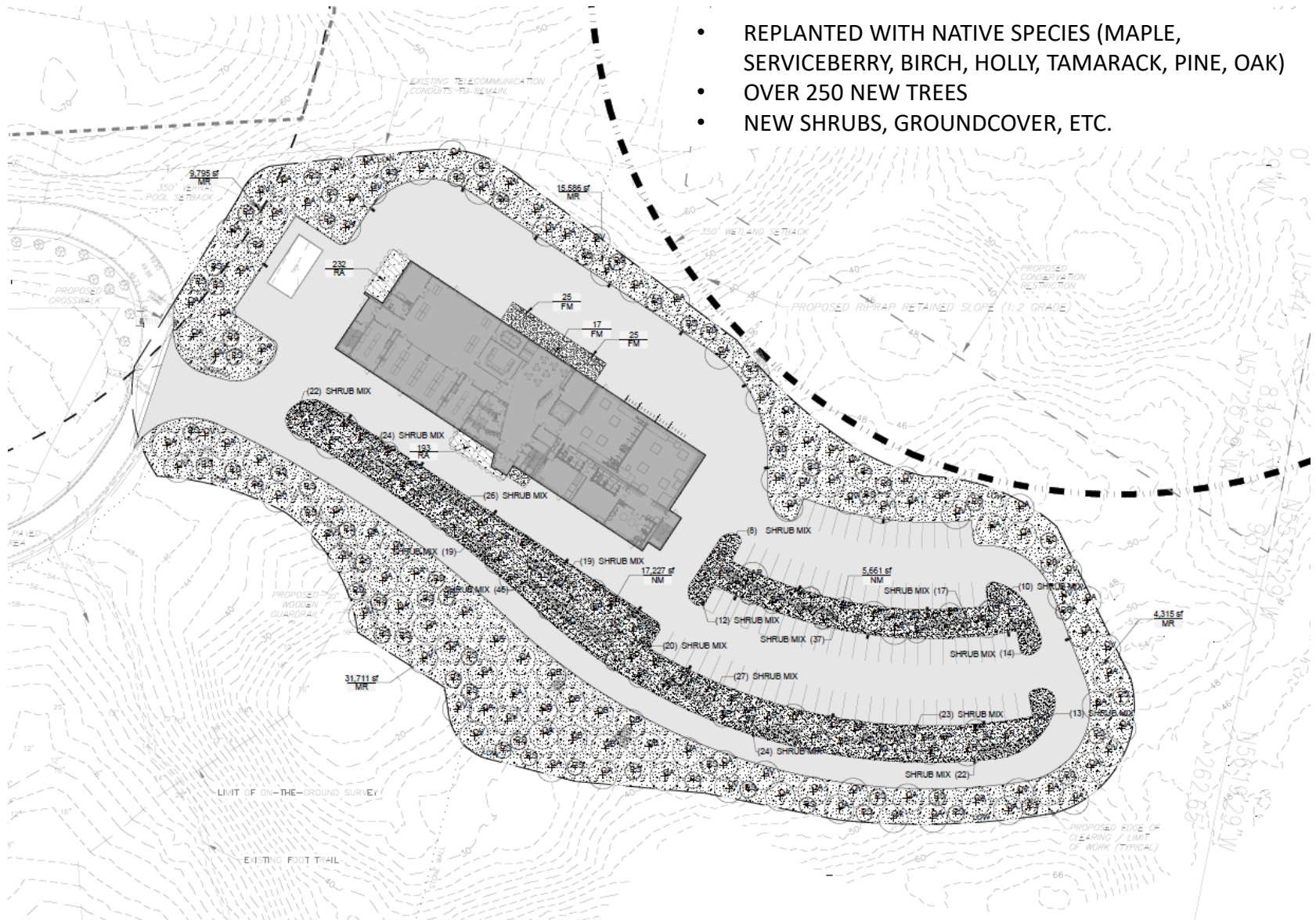


NQF- PHOTOMETRIC PLAN



NQF- VEGETATION PLAN

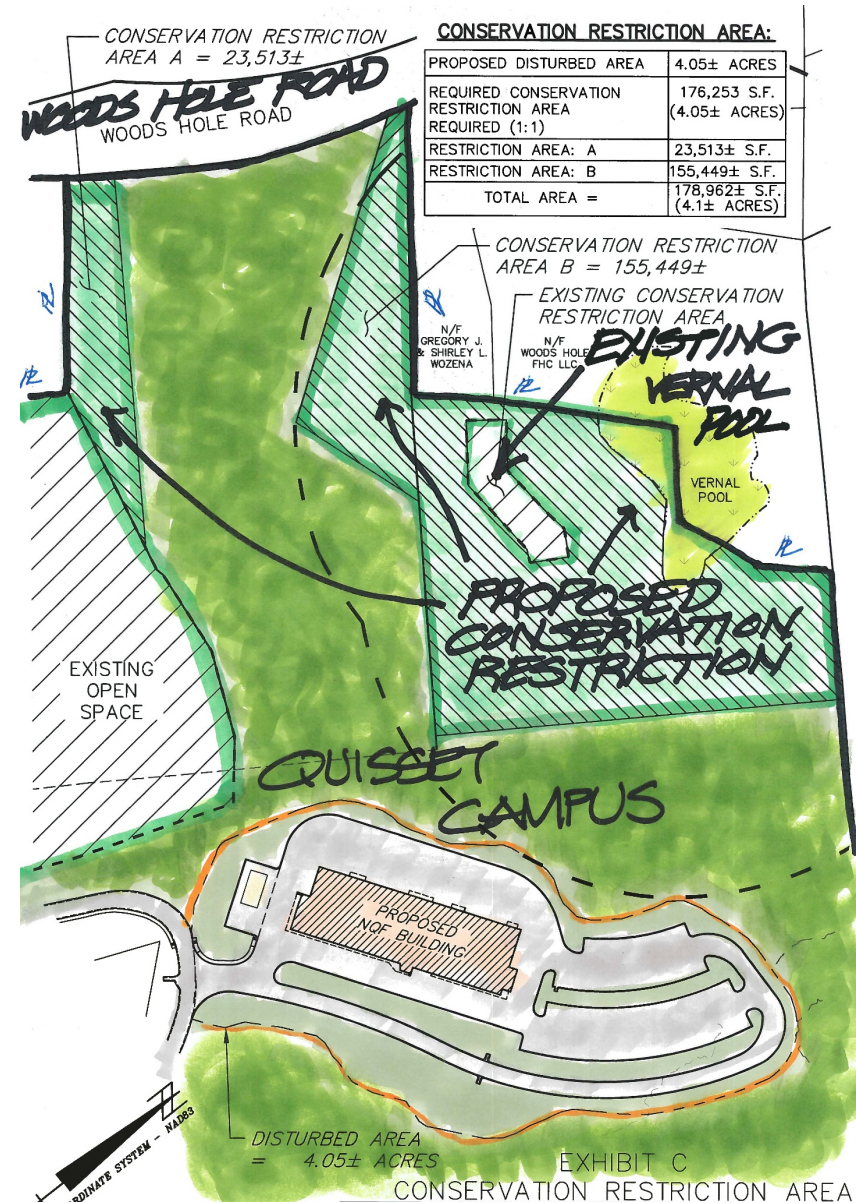
- REPLANTED WITH NATIVE SPECIES (MAPLE, SERVICEBERRY, BIRCH, HOLLY, TAMARACK, PINE, OAK)
- OVER 250 NEW TREES
- NEW SHRUBS, GROUND COVER, ETC.



OTHER ASPECTS OF PROJECT

1. Open Space
 - Proposed Conservation Restriction on 4.1 Acres
 - Abuts existing restricted land
 - Restricts sensitive habitat areas
2. Transportation
 - Low Traffic Generator
 - Relocation of Trips for Village Campus
 - Robust TDM Plan

OPEN SPACE- CONSERVATION RESTRICTION



EXAMPLES OF PROJECT BENEFITS

- The project offers a broad spectrum of services to meet the needs of the worldwide oceanographic community and will help support new and emerging technology development in marine services.
- Project advances the Cape's Blue Economy initiative.
- Design minimizes site impacts and avoids impact in the more sensitive areas of the subject property
- Project connects to existing infrastructure, including the existing wastewater treatment facility resulting in a final nitrogen load of just 3.68 mg/L
- Project proposes habitat protection measures, including an Eastern Box Turtle Protection Plan, erosion control measures, delineated limits of work during construction, and revegetation of existing disturbed areas.
- Open space is proposed that abuts existing conservation areas and wetland resource buffers.

EXAMPLES OF PROJECT BENEFITS (continued)

- Project has minimal transportation impacts coupled with good access management principles, a robust TDM plan and pedestrian connections.
- Project proposes to designate 25% of the required parking as “reserve” spaces
- Relocating WHOI’s non-water dependent uses to Quissett allows for concentration of water-dependent uses on WHOI’s working waterfront.
- NQF will lead to new employment opportunities in emerging marine science and technology, and in emerging industry clusters, and will support entrepreneurship and development of new business, technologies and products.
- WHOI is the 2nd largest employer on Cape Cod and it provides excellent jobs with excellent benefits.
- By creating this facility, the NQF will become the epicenter of autonomous vehicle, sensor and technology innovation.
- WHOI attracts federal funding, private investment and sustainability for the MA economy.



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