PLANTING PALETTE

A diverse selection of species are chosen with several primary goals: to showcase native species, provide pollinator habitat, build soil while increasing ecological resilience, reduce erosion, act as seasonal food and medicine sources for on-site uses, and provide highly tangible learning opportunities for visitors and staff on the farm.

The species shown on the following page are samples from our preliminary plant list. When composed on-site, they will contribute to a refined pastoral character.

HARDCORE PALETTE

The hardcore materials themselves are humble and elemental, typical of those seen around Martha’s Vineyard. When arranged thoughtfully, they provide functional accents and backdrops to the planting palette and infrastructure on site.

Reclaimed stone and untreated woods create a subdued, tasteful material palette which has a minimal energy footprint. Impervious surfaces, combined with proposed grading and drainage strategies, allow a majority of the rainfall on site to gently infiltrate and rehydrate the ground.
ISLAND GROWN FARM
MARTHA'S VINEYARD COMMISSION
OCTOBER 8, 2021

PLANTING & HARDSCAPE PALETTE

KITCHEN GARDEN INTENSIVE GARDENS
SMALL TREE and UNDERSTORY SHRUBS
HERBACEOUS PERENNIALS and NATIVE MEADOW

Nyssa sylvatica Quercus velutina Sassafras albidum

Kalmia latifolia Ilex verticilata Vaccinium corymbosum Salix hummilis Clethra alnifolia Prunus maritima Amelanchier sp.

LARGE CANOPY and OVERSTORY TREES

PARKING AREAS STONE DUST PATHWAYS
RECLAIMED GRANITE STONES and STEPS
RECLAIMED GRANITE WALLS
WIRE MESH FENCING and GATE
WOODEN PRIVACY FENCING

SMALL TREE and UNDERSTORY SHRUBS

LARGE CANOPY and OVERSTORY TREES
HERBACEOUS PERENNIALS and NATIVE MEADOW

ISLAND GROWN FARM
MARTHA'S VINEYARD COMMISSION
JANUARY 13, 2022
Eversource to:
- tap from bottom open wire conductors & install 3-1/0AL 25kV OH primary cable + neutral from P9276/35.5 to new P9376/35.5-B via 9276/35.5-A. 2 sections, TL = 100'+/-. 
- install 3-40T fused cutouts on P9276/35.5 towards new 3ph lateral. 
- install 3-25T fused cutouts & new 3ph primary riser on both new P9276/35.5-A & 9276/35.5-B. 
- install 3-1/0AL 25kV UG primary in loop configuration from new poles to new pm xfmr with normal open as shown. 22 sections, TDL = DL = 7,915'+/-. 
- install a 500kVA, 3ph, 22.8/13.2kV, 277/480V pm xfmr at new /060. 
- install a 300kVA, 3ph, 22.8/13.2kV, 120/208V pm xfmr at new /100. 
- make new secondary connections at new pm xfmr (customer to provide all terminations).

Note: With the request of 2 separate voltages to same parcel of land, Town wiring inspector &/or Fire Dept is required to approve any buildings with 2 different voltages, as well as buildings are required to be placarded.

Note: See Eversource WO #6247456 for new conduit installation from new poles to 10168/060 along Head of the Bay Rd, Oab.

Note: A single phase PRIVATE UG system exists along this route. Eversource does not own or maintain this private system.

Customer to install, own & maintain 3 sets of 4-400kcmil UG cables in conduit from each new pm xfmr to new 800Amp service. DL's = ?

Customer to install, Eversource to own & maintain 2-4" pipes in concrete with 1-4/0Cu ground from 10168/060 to & including 2 new 3ph concrete xfmr pads via & including 2 M1216 primary pull boxes as shown. 4 sections, TDL = 895'+/-.

Note: See Eversource WO #6600110 for new conduit installation from new poles to 10168/060 along Head of the Bay Rd, Oab.
STORM WATER MANAGEMENT SUMMARY

The proposed stormwater management strategy will capture runoff from all new impervious surfaces in a series of bio-retention areas that allow for infiltration. The bio-retention areas would remain dry most of the time except for during large storm events wherein the stormwater is anticipated to fully infiltrate within 72 hours or less. The retention areas are planted with native wet-loving grasses and forbes.

The plan currently includes 9,025 SF of impervious surface that has been divided into two management areas: the Education & Innovation Center (EIC) area with 4,685 SF of impervious surface and the Housing (HO) area with 4,340 SF of impervious surface. A 25-year storm event at Island Grown Farm would generate approximately 5.75" of rain over a 24-hour period based on current rainfall intensity curves. During such an event, the EIC area would generate approximately 1800 FT$^3$ of stormwater and the HO area would generate approximately 1680 FT$^3$ of stormwater over a 24-hour period.

Based on test pit data, the A and B soil horizons on site are silt loams with clay that are not ideal for good infiltration rates. At 3-4 FT below horizons A&B, soil horizon C (the subsoil) is a sand-gravel mix that is valued (by state and federal standards) as a soil type with the highest possible infiltration rate at 8.27 in per hour.

The bio-retention areas are designed to a depth of 3-4 FT in order to reach soil horizon C with the high infiltration rate. Graded to these depths, each retention area has enough volume to accommodate the amount of stormwater generated during a 25-year storm event without the added benefit of infiltration (which will occur at a high rate) during the event taken into account. Each management area includes a small forebay that drains into the larger bio-retention areas. The forebay is intended help settle out solids and potential pollutants while also handling most smaller storm events.
### ALLOWABLE NITROGEN LOAD

<table>
<thead>
<tr>
<th>Lagoon Pond Watershed Adjusted Nitrogen Load Limit</th>
<th>1.87 kg/acre/year</th>
<th>per MVC Water Quality Management Policy v13 (1.12.18)</th>
</tr>
</thead>
<tbody>
<tr>
<td>IGF Development Envelope</td>
<td>6.46 acres</td>
<td></td>
</tr>
</tbody>
</table>

**TOTAL ALLOWABLE NITROGEN LOAD**

12.08 kg/yr

### ESTIMATED NITROGEN LOAD

<table>
<thead>
<tr>
<th>Description</th>
<th>GPD</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.5 dwelling units</td>
<td>372,350</td>
</tr>
<tr>
<td>1600 sq.ft. office</td>
<td>67,160</td>
</tr>
<tr>
<td>24 seat meeting space</td>
<td>52,560</td>
</tr>
<tr>
<td>12 farm workers</td>
<td>26,280</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>518,350</td>
</tr>
</tbody>
</table>

NitROE by Klean Tu denitrification system:

\[
\text{RO} \times \text{(518,350 GPD) x (3.785 l/gal) x (8 mg/l) / (1M kg/mg)}
\]

**TOTAL WASTEWATER LOAD**

15.70 kg/yr

**TOTAL ESTIMATED NITROGEN LOAD**

15.70 kg/yr

7.52 kg/yr (62%) OVER what's allowable

### PROPOSED MITIGATION

Island Grown Initiative, in an effort to offset the nitrogen loading overage at the farm, will install one residential advanced treatment septic system within the Lagoon Pond Watershed District. Our team will work with the Tisbury Board of Health to identify potential candidates. This off-site mitigation strategy will provide real nitrogen reduction results in the Lagoon Pond.
Chronology

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>March 2020</td>
<td>Cultural Resources Due Diligence Assessment by The Public Archaeology Laboratory, Inc. (PAL)</td>
</tr>
<tr>
<td>November 2021</td>
<td>Project Notification Form &amp; Permit Application to MA Historical Commission</td>
</tr>
<tr>
<td>December 2021</td>
<td>Intensive Archaeological Survey (at all areas of proposed ground disturbance)</td>
</tr>
<tr>
<td>December 2021</td>
<td>Management Memorandum &amp; Permit Amendment Request to MA Historical Commission</td>
</tr>
<tr>
<td>January 2022</td>
<td>Machine-Assisted Excavation (within the area of proposed ground disturbance at the Housing ONLY)</td>
</tr>
</tbody>
</table>

Intensive Archaeological Survey Summary

Both pre-contact (ancient Native American) and post-contact (18th thru 20th century) cultural materials were collected.

The majority of these materials were collected in previously disturbed and/or plowed soils, and because they are not in their original soil context lack the potential to provide additional information about Native American land use.

One possible pre-contact shell feature was identified within the general area where the new Housing structures are proposed. This area also contained natural, undisturbed subsoils.

PAL recommends machine-assisted topsoil excavation within the area of proposed ground disturbance at the Housing ONLY. This work should commence in January 2022.

PAL recommends that no additional archaeological investigations are necessary within the remainder of the project impact areas.