



Island Green's Sustainable Living Center (SLC) : St John, Virgin Islands

Parcel 6A-1 Estate Susannaberg on Centerline Rd.(Rt.10) @ Gifft Hill Rd. Intersection.

Executive Summary: The Sustainable Living Center is a physical place and a state of mind, where innovative “thinking outside of the box” sustainability and resiliency solutions, specific to St. John’s issues and needs are being developed and implemented to create and provide economic, environmental and social long term regenerative sustainability and security for the preservation of St. John’s natural beauty and unique way of life.

The physical building and surrounding spaces will be an interactive, hands on educational tool, providing innovative solutions, green jobs and creative entrepreneurial startup business prototypes, that can be replicated in the community.

SLC can also become a center for Eco Tourism, located on Centerline Road, providing eco tours of the Center, green educational activities, volunteer opportunities and it can become the St. John Green Knowledge Bank.

Intrinsic to SLC’s mission is inspiring a culture of change within the islands, empowering and engaging the public and our visitors through education, reinforcement and recognition. Sustainable living should become second nature. Island Green Living will promote the following concepts.

- Rethink before one purchases an item. Do I want it? Or do I need it?
- Reduce consumption which will contribute to waste reduction and eliminate the use of products sold in single use disposable containers.
- Encourage and practice: Rethink, Reduce, Reuse, Recycle, and Compost.

On a broader level, the SLC will encourage St. John, as a small, remote island community, to focus on creating environmental security, energy security and food and water security. Those activities, in themselves, will help to create economic sustainability for St. John. Once developed these solutions, which will be scalable, can be applied to St. Thomas, St. Croix and potentially other Caribbean islands.

The SLC will contain the following activities, components and small island scale visionary sustainability models for the future. Island Green Living will bring systemic change in the "way we live and eat" to St. John, over time, in order to create true sustainability and resiliency for our home. The SLC is a holistic "game changing" context under which we can act on individual components. The SLC will create programs and activities that will encourage people to participate because it will improve the quality of their lives and its activities align with their personal interests!

The Facilities Program will contain the following elements:

Net Zero Waste: *(Environmental security) Island Green views waste materials as renewable resources:*

Proposed Solution/Action Plan:

1st Action: **Expand and improve the non-profit (501 C3) ReSource Depot and Thrift Store:** Selling (recycling) donated used building materials, appliances, home

furnishings and clothing to the community at reasonable prices, which keeps these unwanted, but usable items from going into the landfill and repurposes them back into the community, based on the Habitat for Humanities model. (Funding model attached)

2nd. Action: Expand the Recycling/Upcycling Center: Aluminum, Glass & Plastic, (to Start).

- **Aluminum:** Continue and expand the current activity, compacting, baling and recycling economically sustainable aluminum used beverage cans (UBC's) to be sold and shipped direct to a major aluminum manufacturer in the US.
- **Glass:** Install equipment to upcycle waste glass already on St. John, eliminating both raw material purchase and shipping costs, into usable sellable products for St. John. Create a diverse local market for upcycled glass to include crushed aggregate consisting of silica sand and smooth edge 3/8" diameter aggregate for use in construction, backfilling, plaster, concrete, asphalt, landscaping and waste treatment sand filters. Create glass blown art objects and household items, glasses, plates and cast architectural products, tiles, eco paver, light fixtures, etc. The Recycling/Upcycling Center will be economically sustainable by generating power from solar, waste cooking oil and biogas generated from sewage waste to power the facility and run the equipment.
- **Plastics:** Working with **Plastic Free Islands: St. John** the SLC plans to Install equipment to turn plastic bottles into pellets, which are then fed into a plastic extrusion machine to produce locally recycled plastic components to build the Link Beach Chair and other outdoor furniture and marine products, deck boxes, C&C cutout routers for production of vernacular architectural "gingerbread", etc.

3rd. Action Community Composting demonstration facility in conjunction with VIWMA turning green waste into a soil amendment to be sold and used in the **Community Organic Gardens to be located on the green roof** .

Future Activities: a) Upcycling paper and cardboard. b) Develop an innovative plant based bio filter to process the off gassing from melting aluminum for small scale, local smelting and aluminum product casting .

Net Zero Energy Use: *(Energy security) The Island Green SLC will be a net zero (+) renewable energy microgrid node, with PV + storage and biodiesel generators to power the SLC and provide backup and demand response power to the VITEMA headquarters, DPW/VITRAN and VIWMA facilities on Parcel 6A, Susannaberg.*

Proposed Solution/Action Plan:

1st Action: Solar Canopy & Microgrid. Providing solar power (with hurricane protection) and battery storage to run the Resource Depot and Recycling/Upcycling Centers with space under the waterproof canopy for recycling/upcycling operations. The solar array will eventually expanded to become a **Community Solar Farm.**

2nd Action: Biodiesel from used cooking oil Utilizing and recycling used restaurant cooking oil to produce bio diesel to run the backup generators. (Note: Rudolph Diesel, designed and exhibited his first diesel engine (1896) which ran on pure vegetable oil.)

3rd Action: Bioogas Power. Produce methane gas to power the glass furnace from the SLC's innovative sewage treatment system, to replace propane to run the glass melting furnace, for glass blowing and casting of architectural products..

Create Green Jobs by empowering local at risk and challenged youth

(Economic security) Proposed Solution/Action Plan:

1st Action: Working with other non profits and government agencies the SLC will establish a "hands on" **Green Jobs Training Program** to recruit and train local at risk and challenged youth to work in the Recycling/Upcycling center.

Promote Local Food (& Water) Security

Proposed Solution/Action Plan:

1st Action: Establish the **Mid Island Farmers/ Gardeners Market and Organic Food Co-op.** **SJ. John is an organic "food desert"** (except for Josephine's). Most people say that they don't buy organic food on St. John, because it is too expensive. Regular food prices are already "out of sight". The grocery store owners say they don't carry more organic food, because no one buys it! Catch 22!

The SLC Organic Food Co-op can solve this problem and bring more members into Island Green! The Mid-Island Farmers/Gardeners (and Local Crafts) Market, will encourage local farmers/gardeners to sell their food and the development of an innovative smart phone app will encourage local backyard gardeners to grow and sell their excess at the market. The App would inventory, market, sell and take payments for the weekly CSA (Consumer Supported Agriculture) program. It would be based on the highly successful ECO (Eastern Carolina Organics) model <http://www.easterncarolinaorganics.com/>

Net Positive Green Built Environment: **(Environmental security)**

WATER: Net Positive Water: 100% recycling of water, freshwater, gray and black water on site.

ENERGY: Net Positive Energy. 100% Renewable

HEALTH & HAPPINESS: Civilized Environment, Healthy Interior Environment, Biophilic environment

MATERIALS: Red List (Toxic) Free, Embodied Carbon Footprint, Responsible Industry, Living Economy (local/regional) Sourcing.

EQUITY: Human Scale + Humane Places, Universal Access to Nature & Place, Equitable Investment

BEAUTY: Beauty + Spirit. Inspiration + Education

PLACE: Native Landscaping, Green Belts, Community Gardens

Creative Environmental Education: (Environmental security)

- Launch of Sustainable Curriculum K-12 . In cooperation with the **College of Education , UVI**, Island Green Living will dedicate resources and train the teachers , ways to incorporate sustainability as part of the schools existing curriculum. Including starting each day with a Green word for the day, school gardening, establishing 'Green knowledge Bowl' competition among schools etc.
- Establishing a connections with other environmental organizations such as UNEP, Eco Tourism Society, NOAA, etc. that can benefit our community.
- Conduct regularly scheduled ecotours of the SLC and monthly environmental education seminars!

Scalability of the SLC: Every Island should have an SLC!

Once establish, Island Green will work with other NGO's to establish similar facilities on other islands.

Architectural Program and Site Master Plan Outline:

After a two-and-a-half-year struggle to get the lease signed, Island Green Living has a 20-year lease, (with a 15 year renewal option) from the VI Government for \$100. a month, for Parcel 6-A1, Estate Susannaberg, containing .5 acres of flat land and an 1800 sq. ft. warehouse building and may be considered a Brown Field Restoration Project. The SLC is programed to be implemented, in Two Phases, over a multiyear time span, as funding becomes available.

To maximize space usage on the site, **3 levels are proposed, the top level** would provide the SLC with direct public access from Centerline Road (Route 10), which is the major traffic artery running the length of St. John from east to west. This level, would contain Income generation activities, the Resource Depot, Thrift & Gift shops , Recycled Art & Crafts Gallery and public outreach facilities (and bathrooms), off street parking with EV charging spaces.

The middle level will be devoted to public education/training and administration, with a large community meeting space with kitchen, classrooms, conference room, administrative offices and Safe Room in natural disasters.

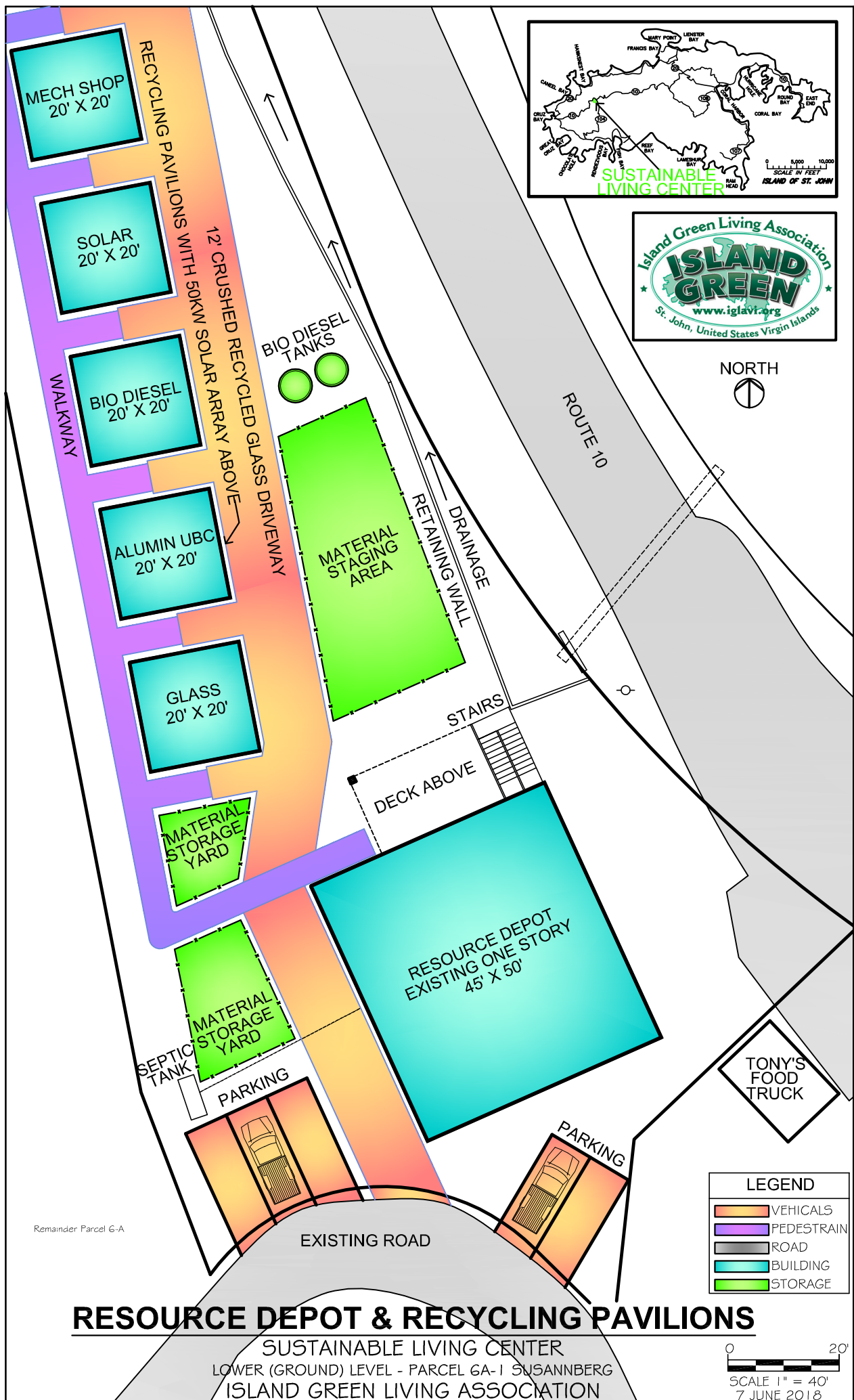
The lower level would house recycling, upcycling , product production and green technology innovation projects as well as larger, heavier ReSource Depot building materials.

The SLC will be designed as a steel structure to 2250 mph wind loads (the new normal), so that it can survive a major storm with minimal damage and be able to operational immediately afterward. It will be a 5 Star Certified Island Green Building (<http://iglavi.org/igba-pros/green-certification/>) and follow the guidelines of the Living Building Challenge 3.0 (<http://living-future.org/living-building-challenge-30>) standards.

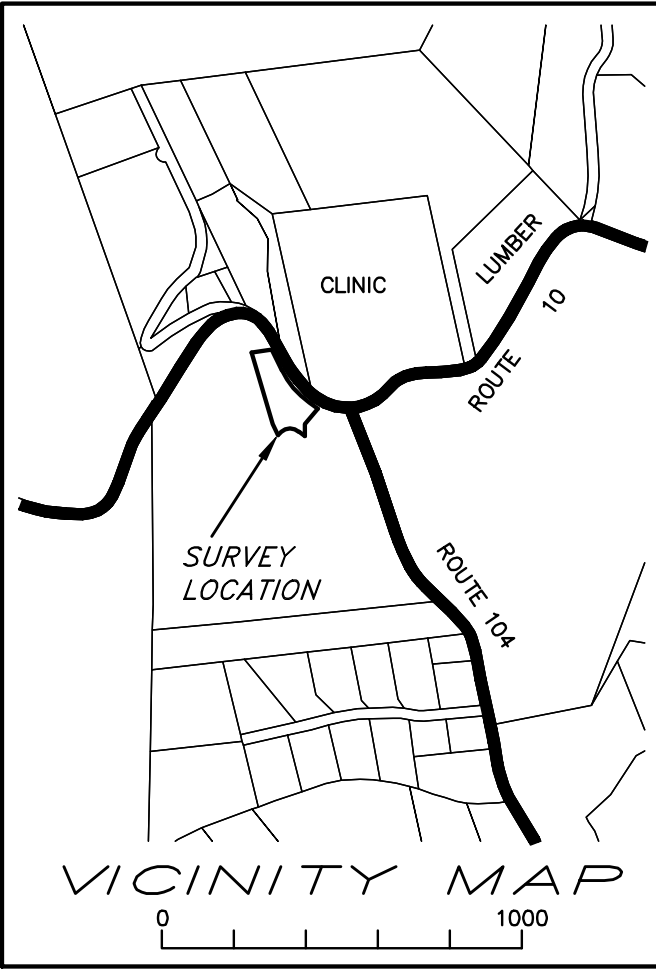
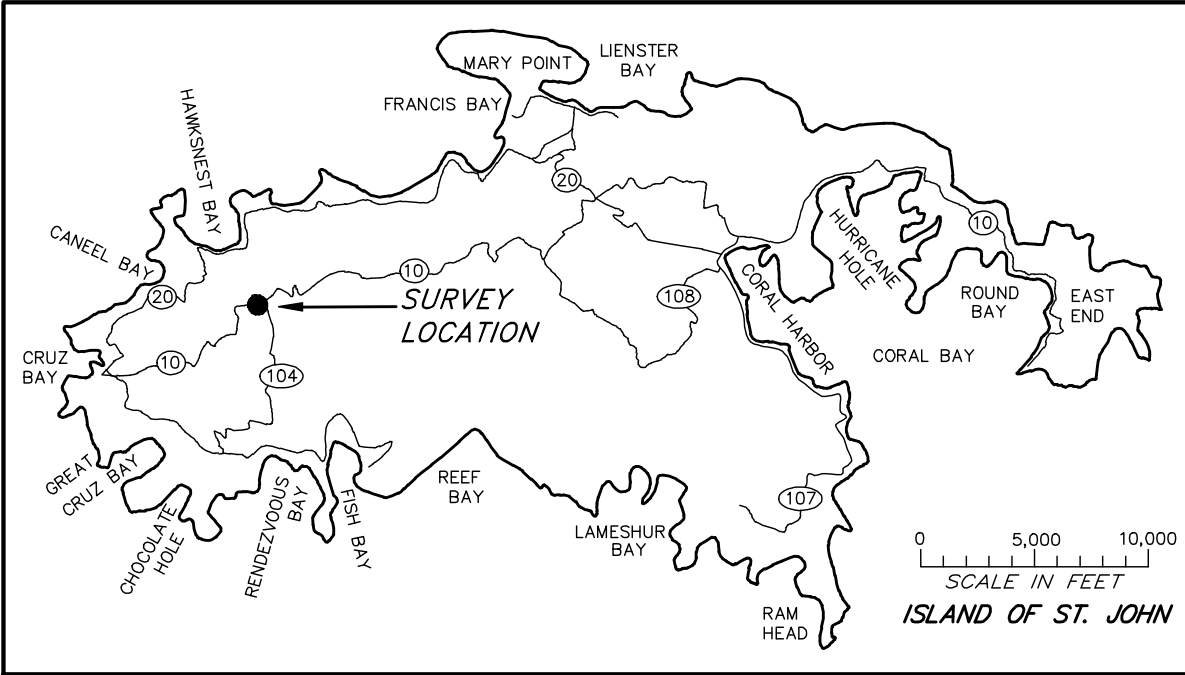
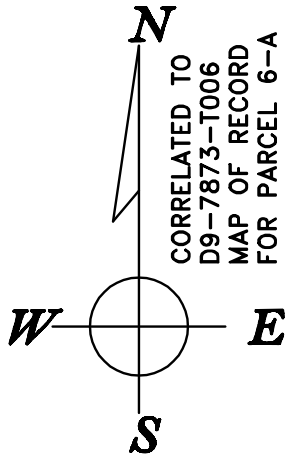
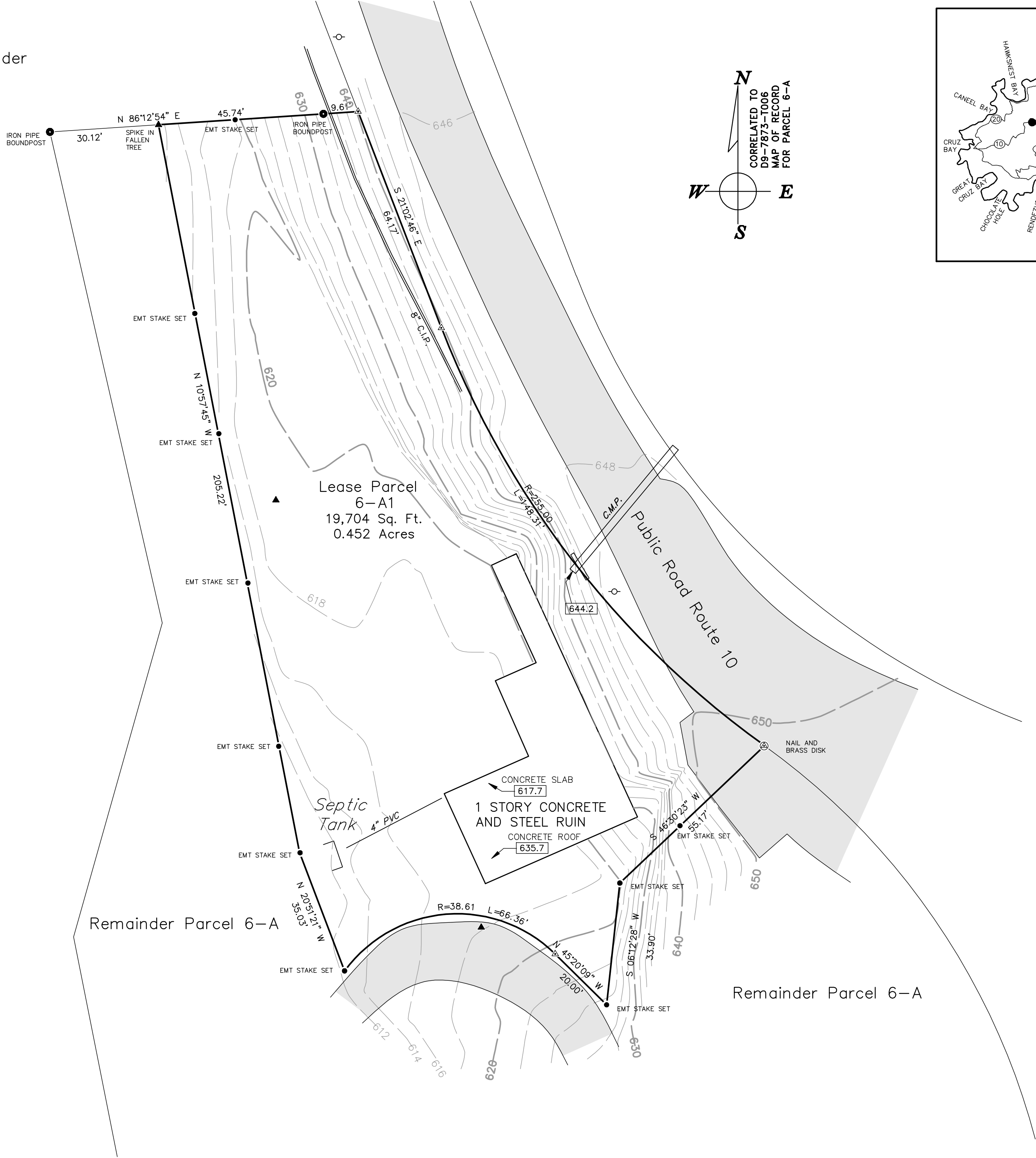
End of Executive Summary & Program

Updated 04/15/18

Compiled & edited by Doug White, Architect, Island Green Co-Founder & SLC Chairman. dougkwhite@gmail.com

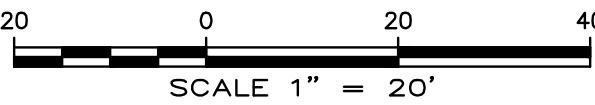


Parcel 6 Remainder



LEGEND

- IRON PIPE BOUNDPOST FOUND
- EMT METAL STAKE SET
- ▲ CALCULATED UNMARKED POINT
- ▲ NAIL SET
- ⊗ SURVEY DISK FOUND
- UTILITY POLE
- PROPERTY LINE OF SURVEYED PREMISES
- CONTOUR LINE - 2' INTERVAL
- CONTOUR LINE - 10' INTERVAL
- CONCRETE OR ASPHALT PAVEMENT
- 123.4 ELEVATION ON BUILDING OR PIPE INVERT DATUM SCALED FROM U.S.G.S. MAP



Best Winters Land Surveyors Inc.
P.O. Box 1655, St. John, V.I. 00831 (340) 693-9339

TOPOGRAPHIC SURVEY
LEASE PARCEL 6-A1
ESTATE SUSANNABERG
No. 17A CRUZ BAY QTR.
ST. JOHN, V.I.

ZONING IS R-1
DATE: 1/26/2018
FIELD: LB/CF
RAW DATA: 4071*.RW5
DRAWN: LB
DRAWING No. 4071T3

The Sustainable Economic Model for Island Green's ReSource Depot and the Sustainable Living Center.:

**A complementary Case Study: Sisters, Oregon, located in central Oregon, population 2,500
2016 Annual Report: Sisters Habitat for Humanity**

ReStore • Selling donated household and building materials,

- **Raised \$284,700 and contributed \$120,500 to Sisters Habitat.**
- 52 people volunteered over 3,755 hours in the ReStore.
- **Kept 960,000 lbs of materials out of the landfill.**
- Contributed items to 13 families in need referred by the Family Access Network (FAN).
- Gave more than 45 sleeping bags and tents to homeless people and collected items for the Sisters Cold Weather Shelter.
- Donated over \$300 in goods to other Sisters and Central Oregon Nonprofits

<http://sistershabitat.org/wp-content/uploads/2017/03/Habitat-2016-Annual-Report.pdf>

If a small town in the "middle of nowhere" in central Oregon can do this, SO CAN ST.JOHN!!

Population in 2014: 2,224 (0% urban, 100% rural). **Population change since 2000:** +131.9%

Males: 1,128 (50.7%)

Females: 1,096 (49.3%)

Median resident age: 40.2 years

Oregon median age: 39.2 years

Zip codes: [97759](#).

Estimated median household income in 2016: \$62,200

<http://www.city-data.com/city/Sisters-Oregon.html>