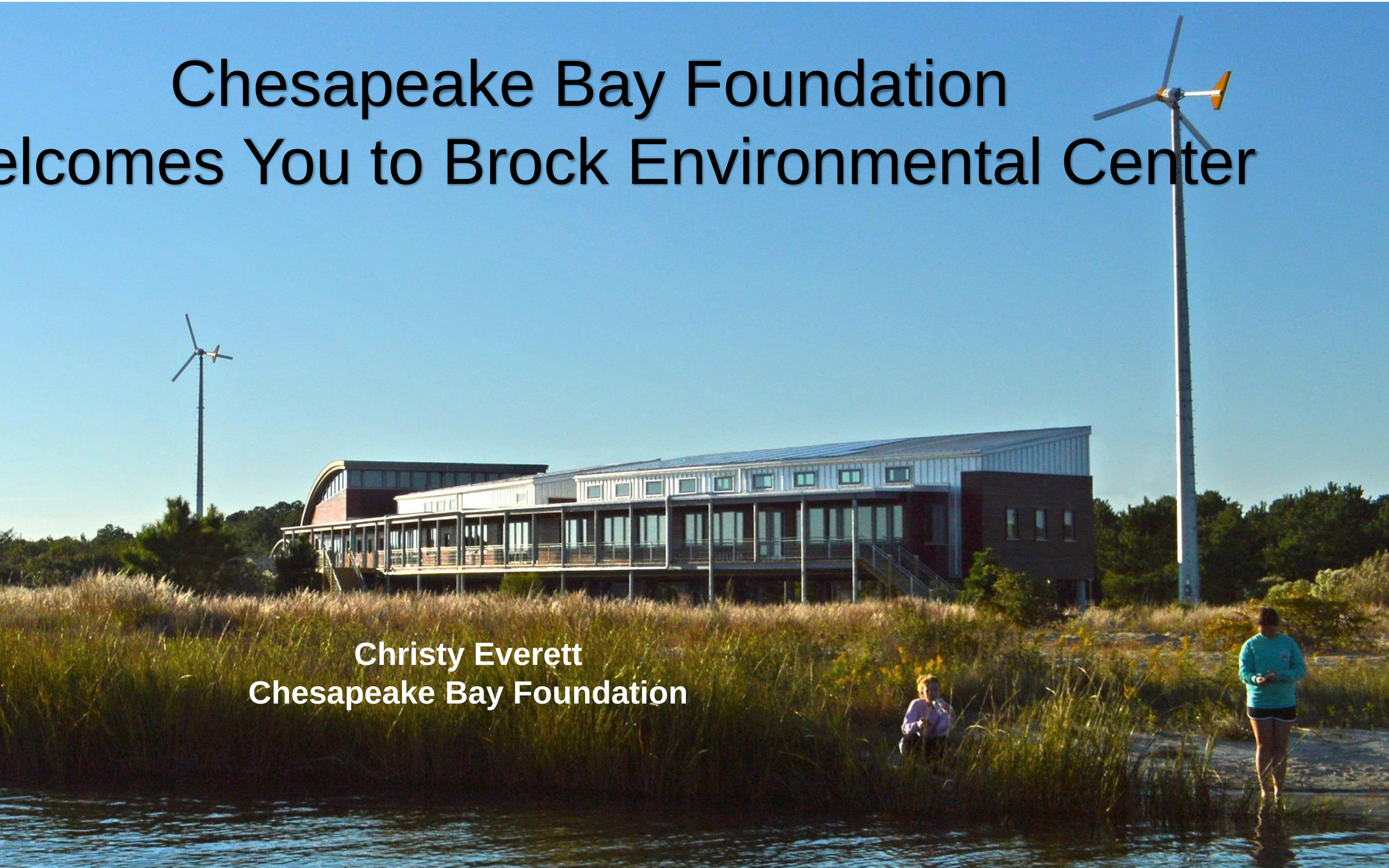
Chesapeake Bay Foundation
elcomes You to Brock Environmental Center



Christy Everett
Chesapeake Bay Foundation

Chesapeake Bay Foundation

Save the Bay ‘s waterways, and keep them saved, through education, restoration and advocacy.

RETENTION
DETENTION
INFILTRATION
BASF SITE
PINO SITE
BLOCK 12 SITE
CONSTRUCTED WETLANDS
SUBSURFACE STORAGE
GREEN ROOFS
RAINWATER HARVESTING
BIOSWALES
STORMWATER PLANTERS

Why Build an Environmental Education Center?

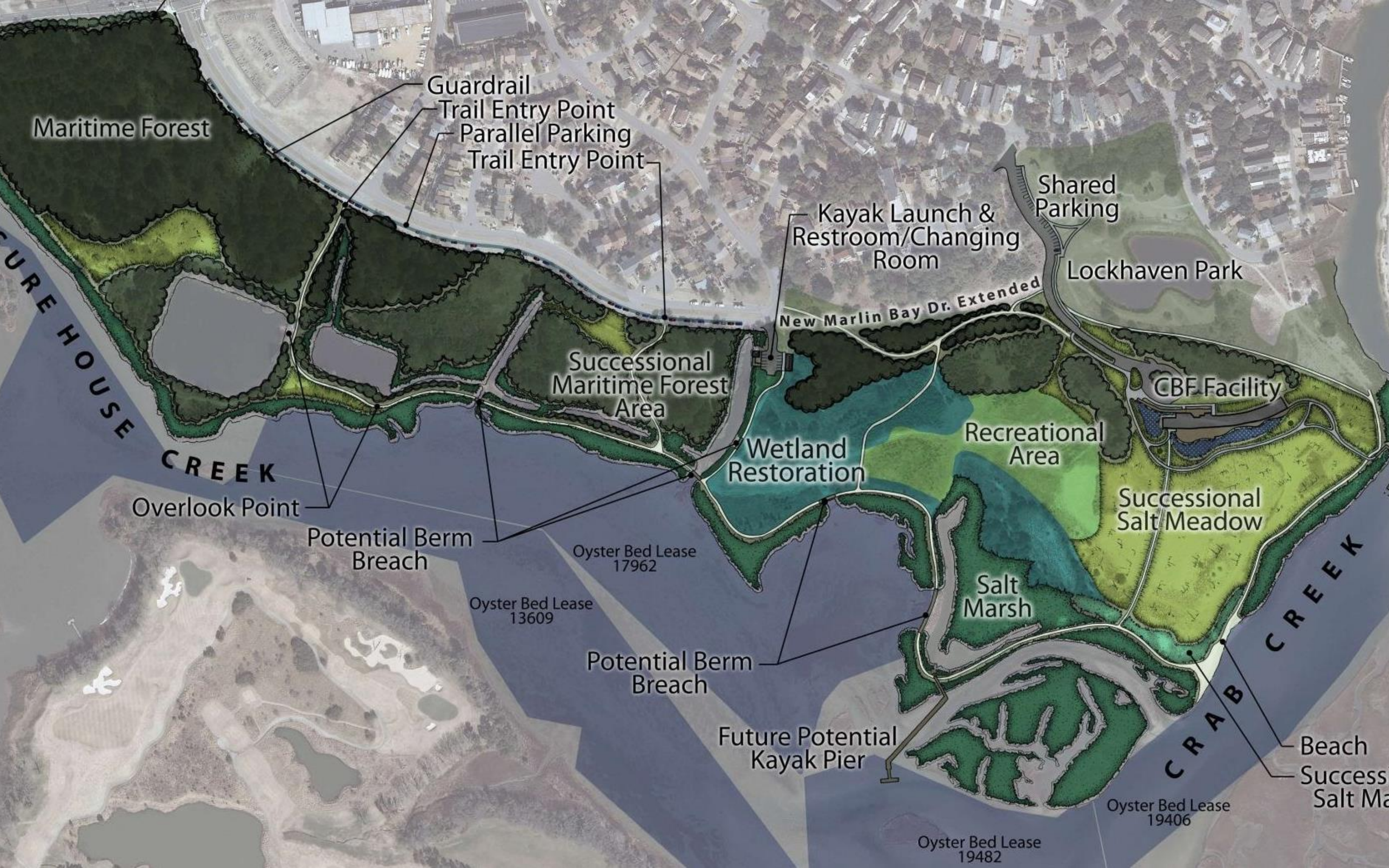
INDIGO DUNES
Classic Southern Waterfront Living

Why Build an Environmental Education Center?

- Preserve The Entire 110 Acres From Development
- Restore 100 Acres Into Public Natural Passive Park
- Build An Environmental Education Center
- Return The Property To Act As A Filter For The Community's Stormwater Runoff and Hold Flood Water

Trust for Public Land | CBF | City of Virginia Beach - with community support

$13M from: Commonwealth of VA | Dominion | CBF | City of Virginia Beach | US Gov't


Maritime Forest
Guardrail
Trail Entry Point
Parallel Parking
Trail Entry Point
Kayak Launch &
Restroom/Changing
Room
Shared
Parking
Lockhaven Park
New Marlin Bay Dr. Extended
Successional
Maritime Forest
Area
CBF Facility
Recreational
Area
Wetland
Restoration
Successional
Salt Meadow
Overlook Point
Potential Berm
Breach
Oyster Bed Lease
17962
Oyster Bed Lease
13609
Salt
Marsh
Potential Berm
Breach
Future Potential
Kayak Pier
Beach
Oyster Bed Lease
19406
Oyster Bed Lease
19482
CREEK
CRAB CREEK

SITE

RESTORING A HEALTHY COEXISTENCE WITH NATURE

WATER

CREATING WATER INDEPENDENT SITES, BUILDINGS AND COMMUNITIES

ENERGY

RELYING ONLY ON CURRENT SOLAR INCOME

HEALTH

MAXIMIZING PHYSICAL AND PSYCHOLOGICAL HEALTH AND WELL BEING

MATERIALS

ENDORSING PRODUCTS AND PROCESSES THAT ARE SAFE FOR ALL SPECIES THROUGH TIME

EQUITY

SUPPORTING A JUST, EQUITABLE WORLD

BEAUTY

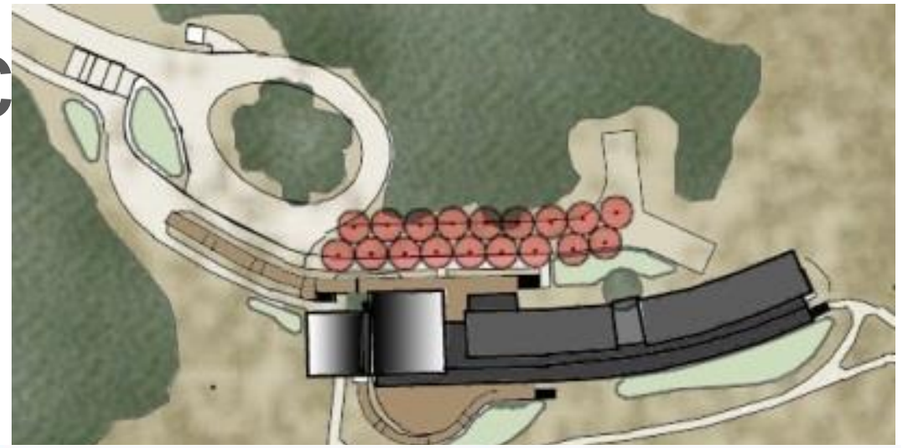
CELEBRATING DESIGN THAT CREATES TRANSFORMATIVE CHANGE

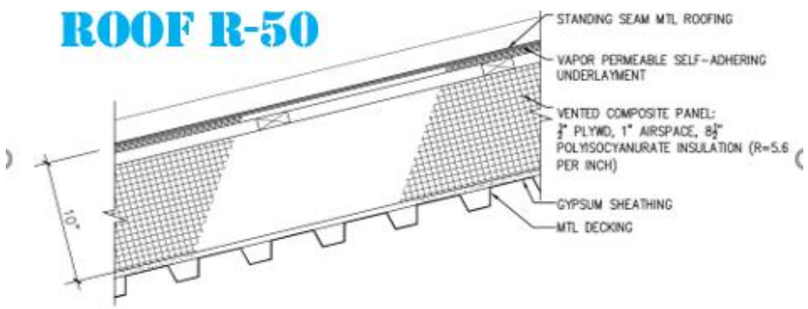
LIVING BUILDING CHALLENGE™ 2.0

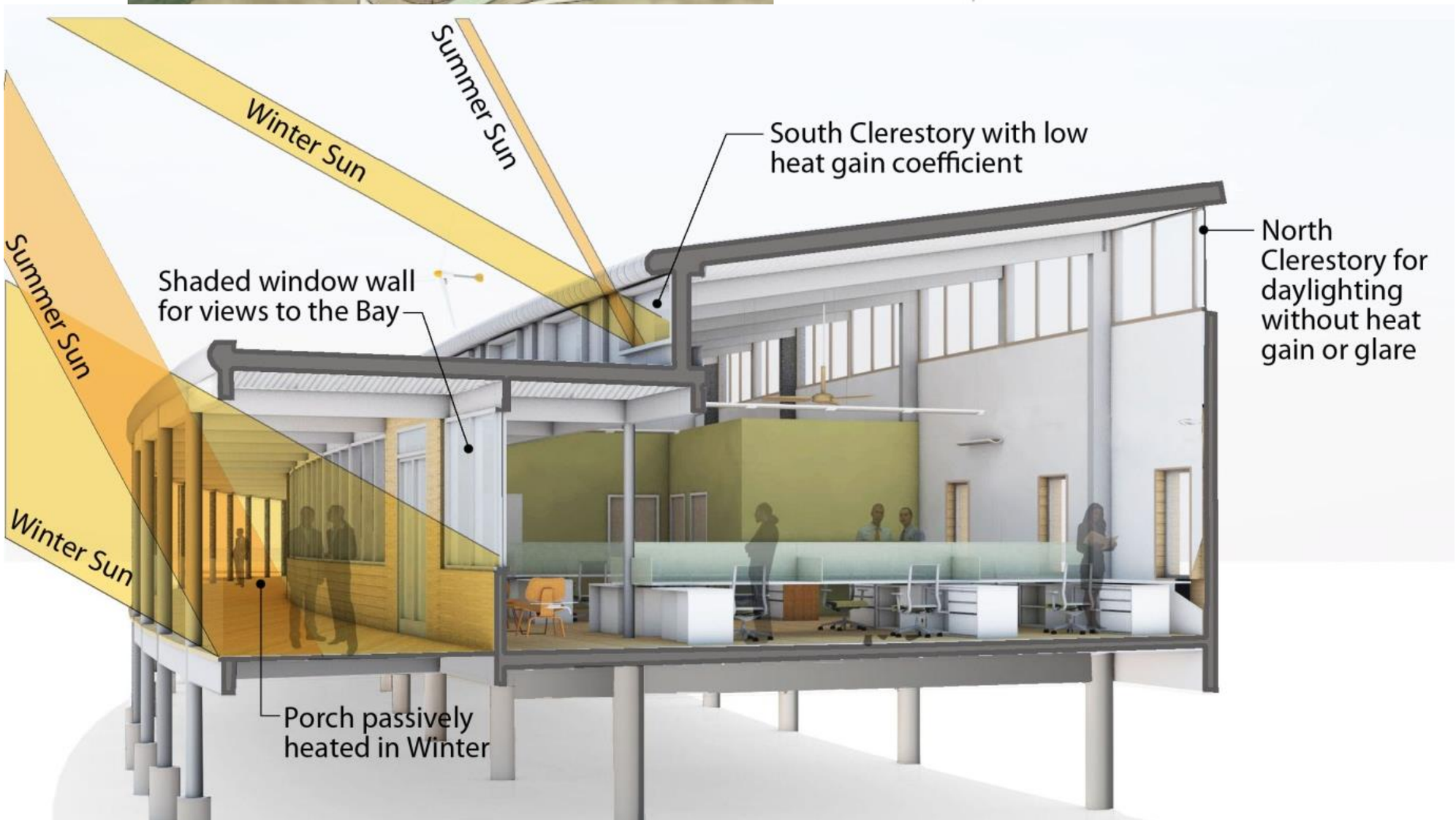
Truly Sustainable Development

- Meets entire energy use through on-site renewable energy
- Meets entire water use through captured rainwater
- Treats all waste water and stormwater on site
- Enhances human health
- Enhances habitat & local ecolog
- Is regenerative and **resilient**

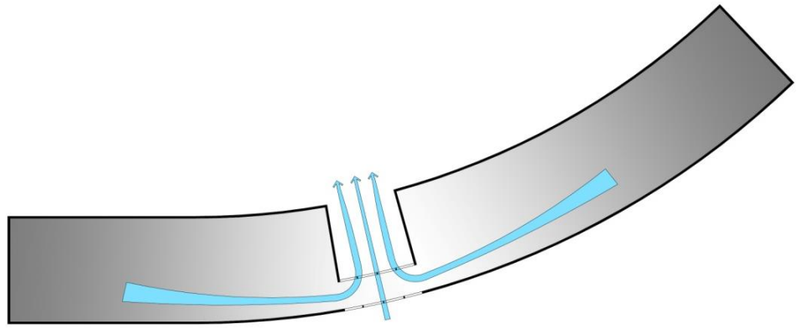
Efficienc



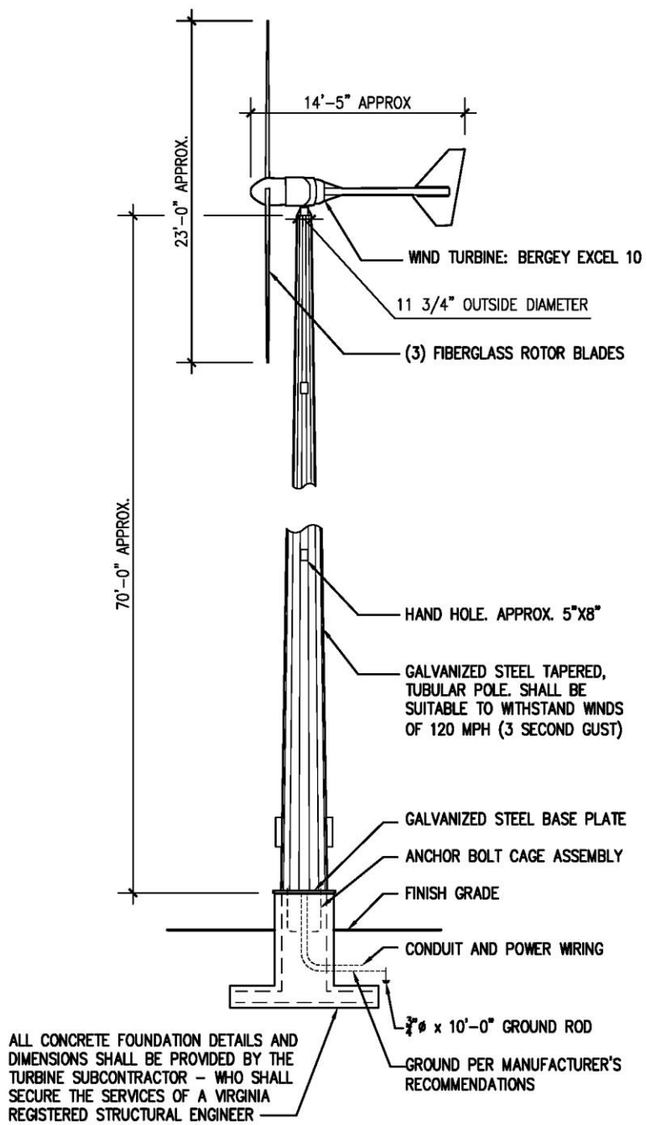

ROOF R-50
STANDING SEAM MTL ROOFING
VAPOR PERMEABLE SELF-ADHERING UNDERLAYMENT
VENTED COMPOSITE PANEL: 3/8" PLYWD, 1" AIRSPACE, 8 1/2" POLYISOCYANURATE INSULATION (R=5.6 PER INCH)
GYPSUM SHEATHING
MTL DECKING
10"


Winter Sun
Summer Sun
Summer Sun
Winter Sun
South Clerestory with low heat gain coefficient
North Clerestory for daylighting without heat gain or glare
Shaded window wall for views to the Bay
Porch passively heated in Winter

Energy Independence: Staying C



Renewable Energy: wind turbines and PV panels



Dashboard: cbf.org/brock

Net Electricity Consumption

Kilowatt-hours of electricity consumed last year

CHESAPEAKE BAY FOUNDATION
Saving a National Treasure

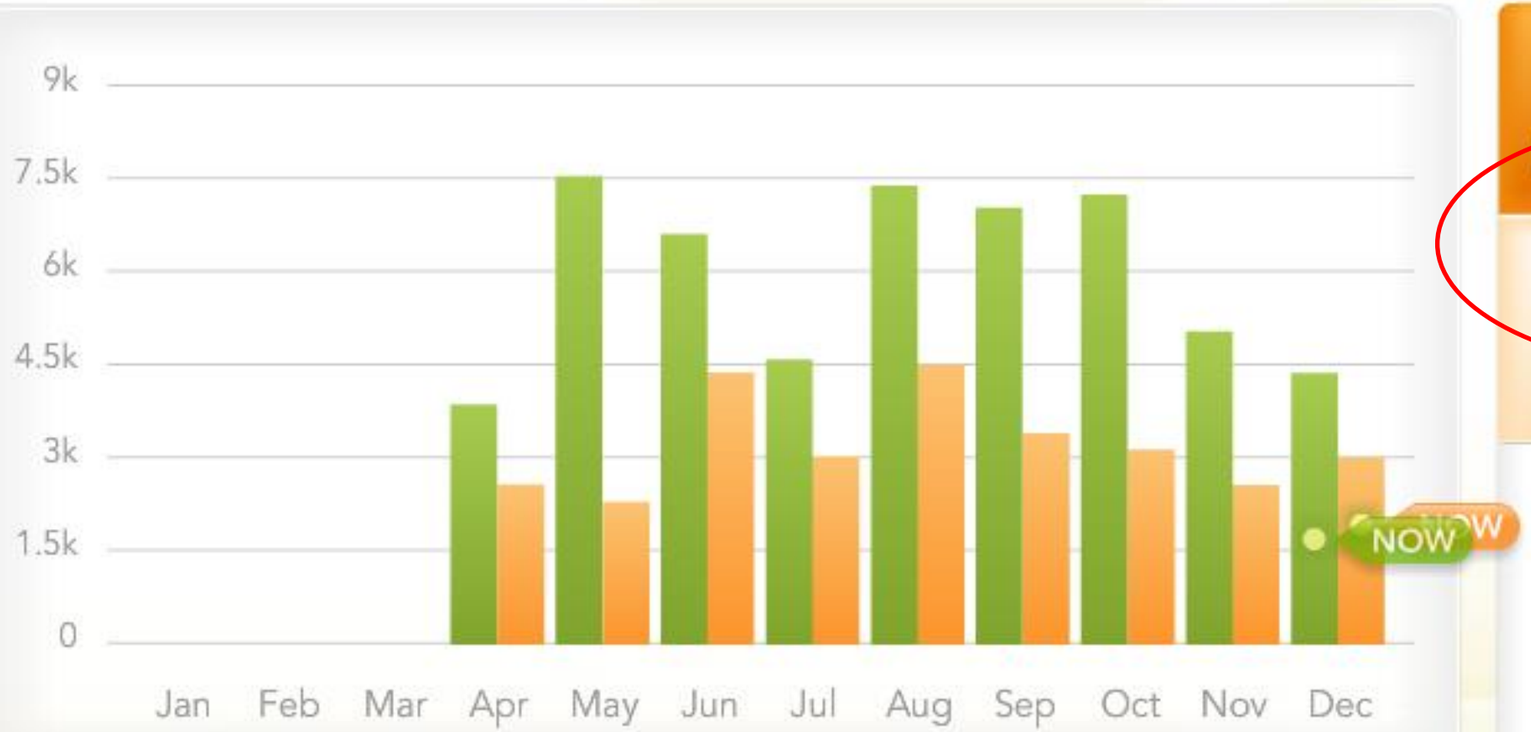
Brock Environmental Center

Brock Environmental Center

SolarWind Production

59,049

Kilowatt-hours



Brock Environmental Center

Electric Consumption

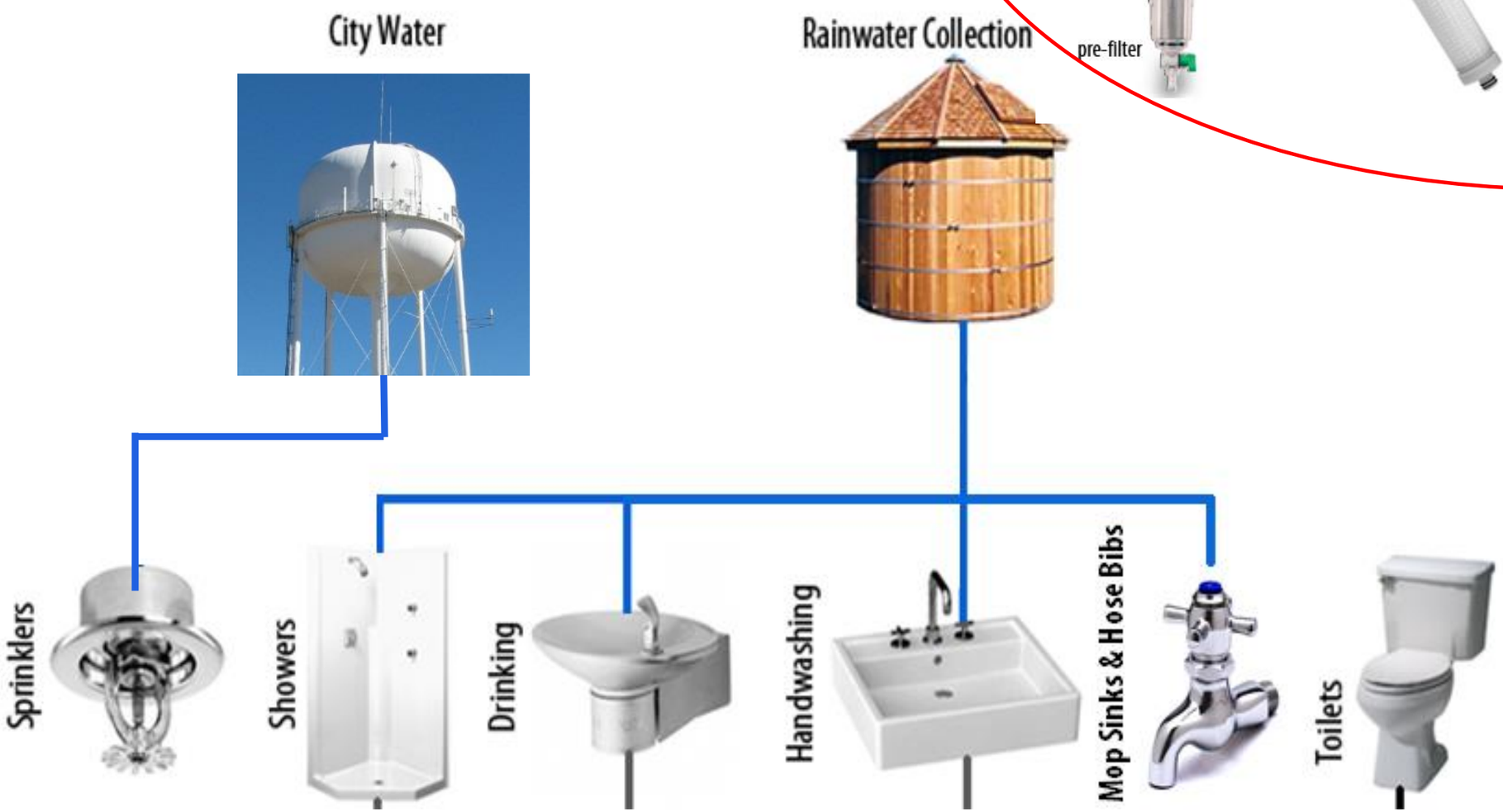
28,452

Kilowatt-hours

Select a Timescale

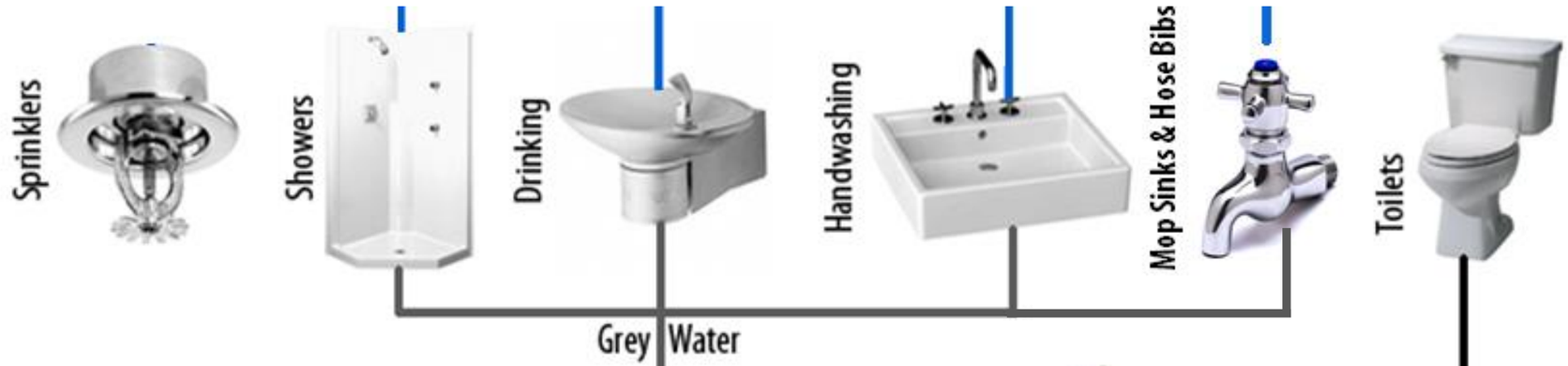
Introduction | Power Consumption | Wind Power | Solar Power | Baseline | Rainwater | Comparison | Green Features | Weather

Water

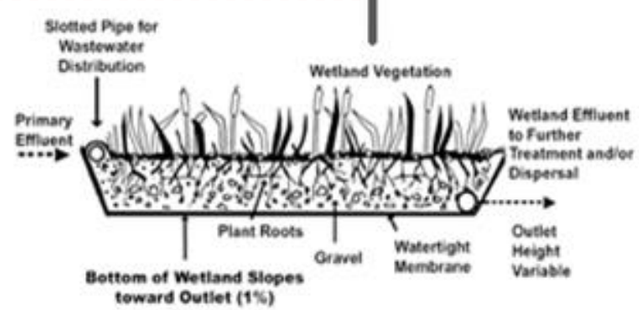


No water

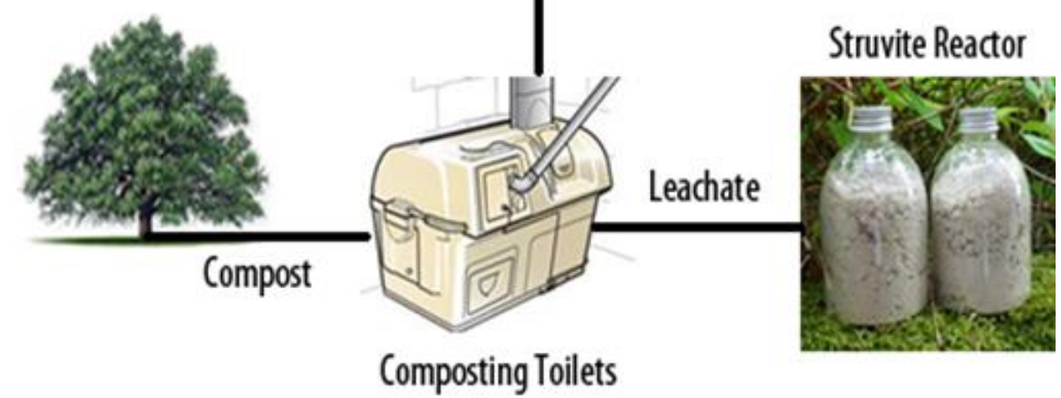
Waste

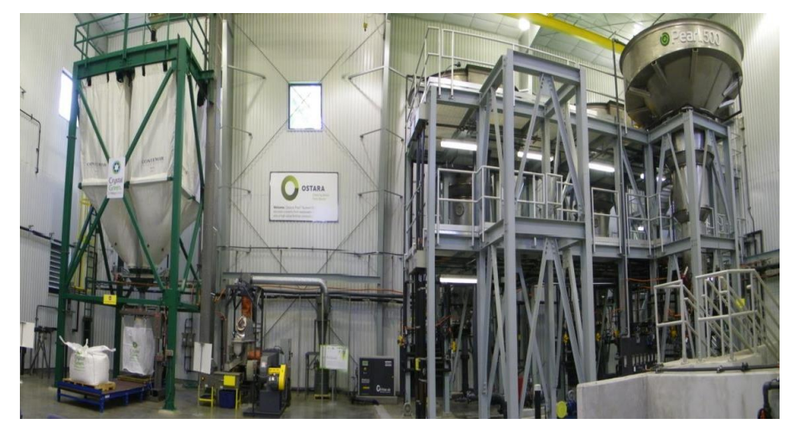


Wastewater Treatment Plant

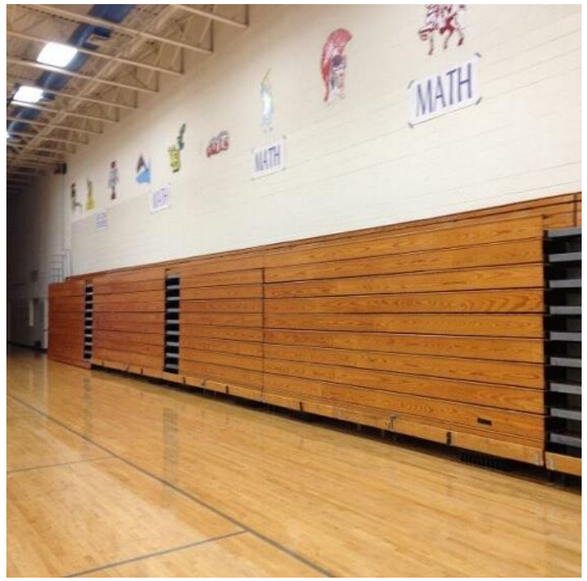


Infiltration Basin

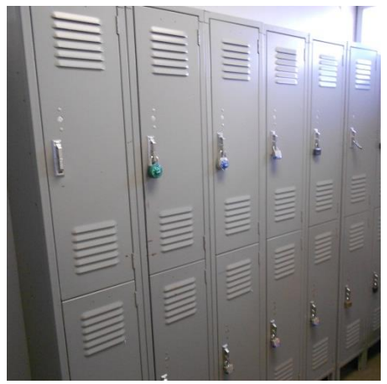




Materials: Safe, Locally Sourced – or Reused



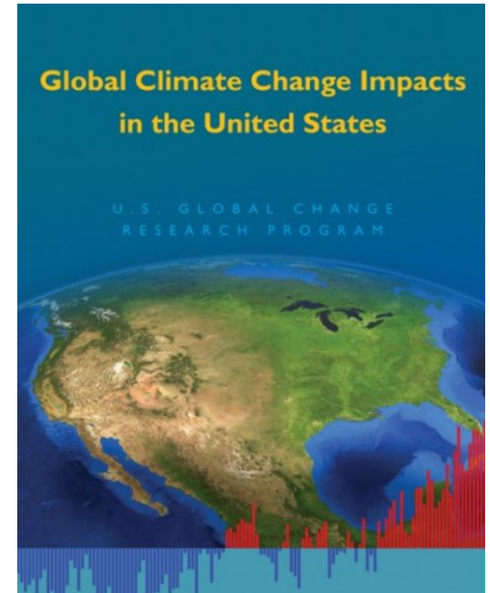
Everything INCLUDING the kitchen sink.



What will the site look like in 2100?

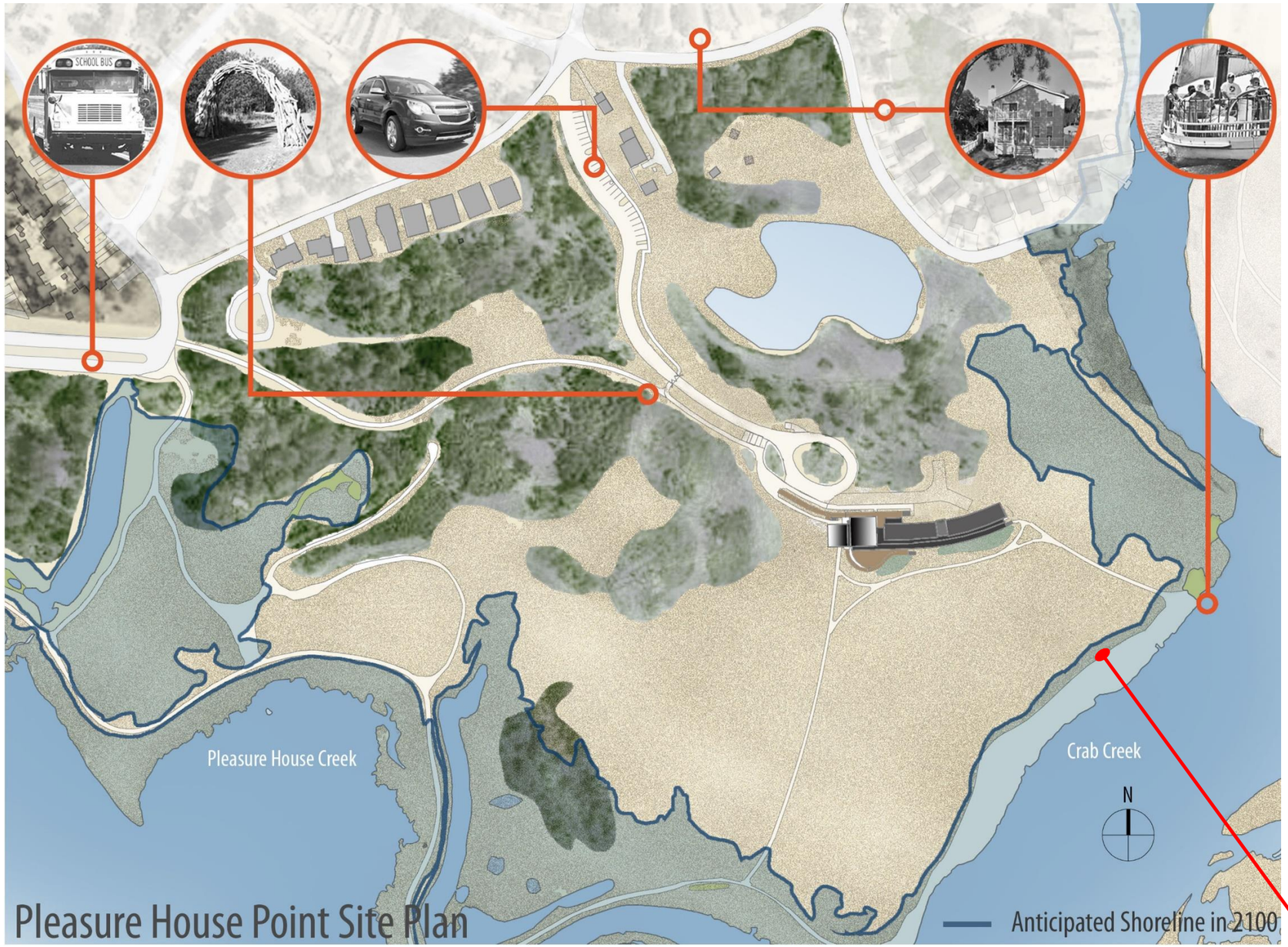
Regional and local factors will influence future relative sea level rise for specific coastlines around the world. For example, relative sea level rise depends on land elevation changes that occur as a result of subsidence (sinking) or uplift (rising). Assuming that these historical geological forces continue, a 2-foot rise in global sea level by 2100 would result in the following relative sea level rise: [1]

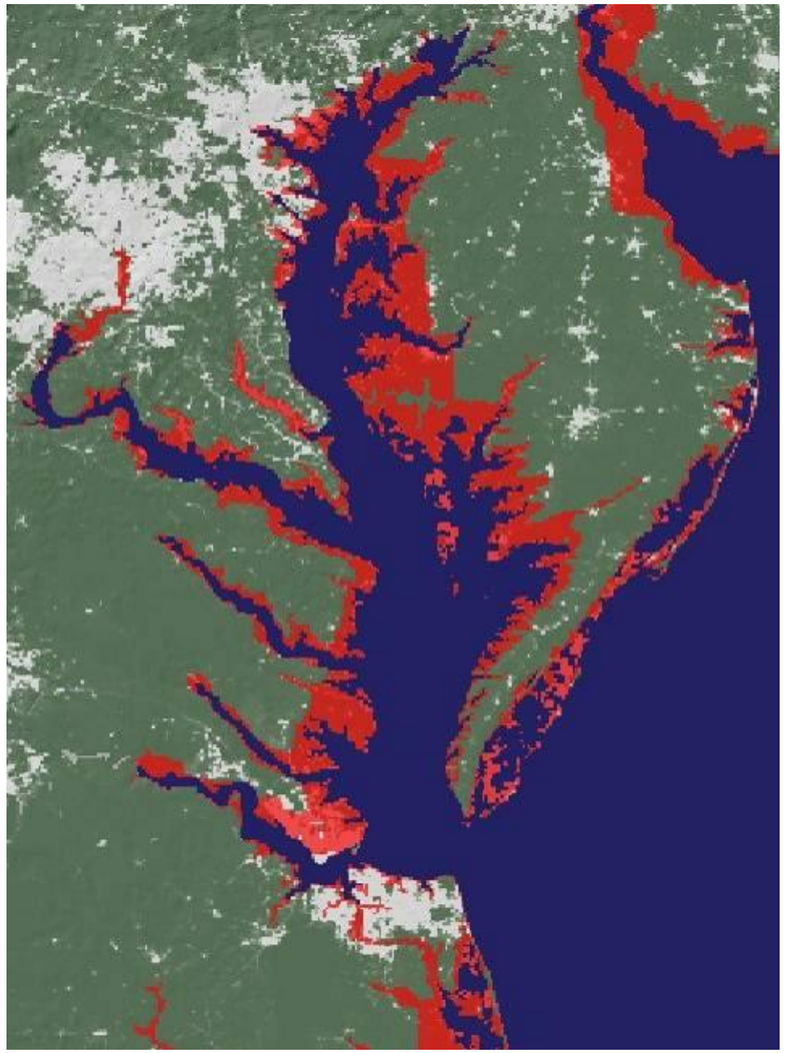
- 2.3 feet at New York City
- 2.9 feet at Hampton Roads, Virginia
- 3.5 feet at Galveston, Texas
- 1 foot at Neah Bay in Washington state



Thomas R. Karl, Jerry M. Melillo, and Thomas C. Peterson (eds.). United States Global Change Research Program. Cambridge University Press.

Anticipating Sea-Level Rise

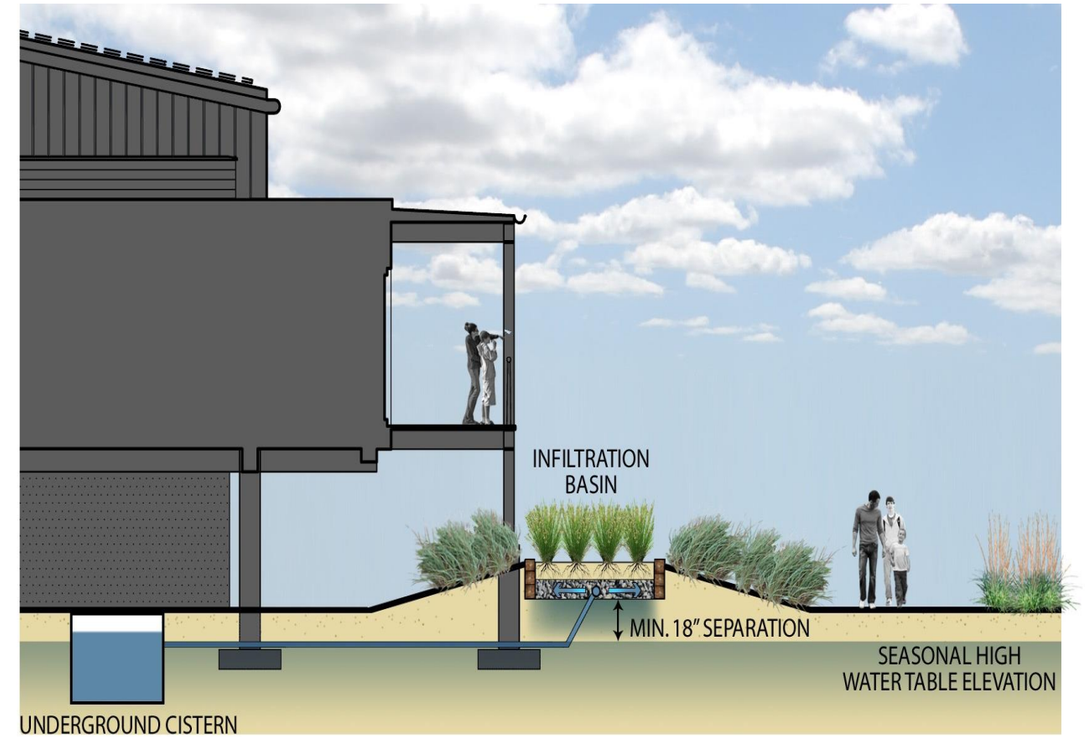


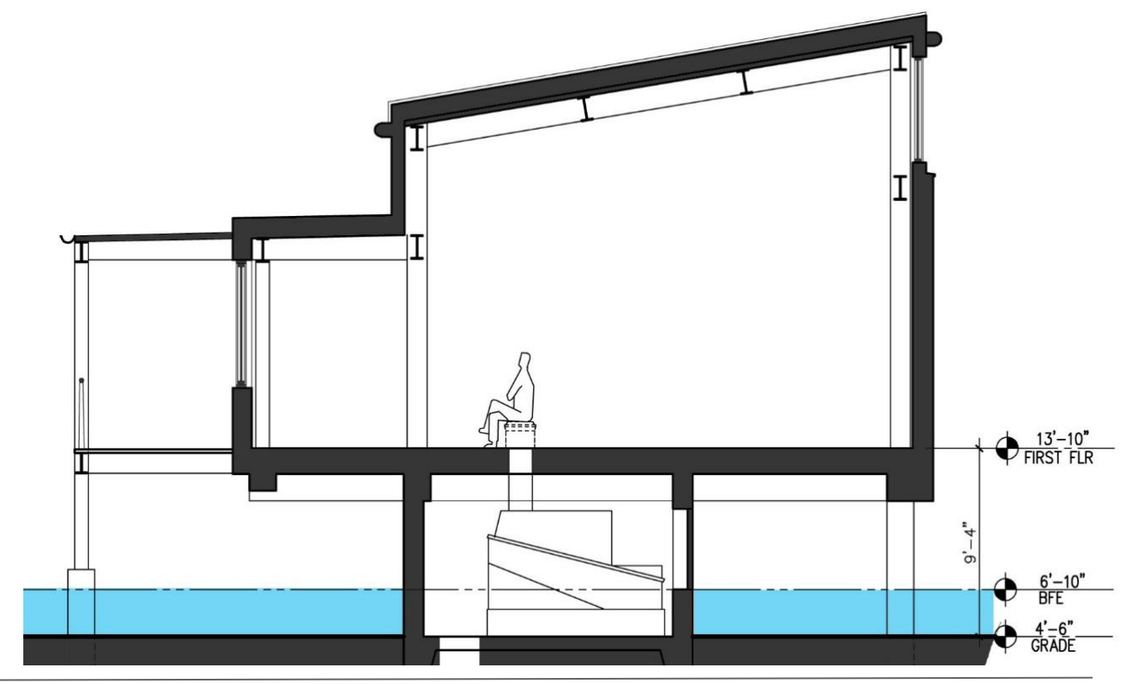


Sea Level +1M

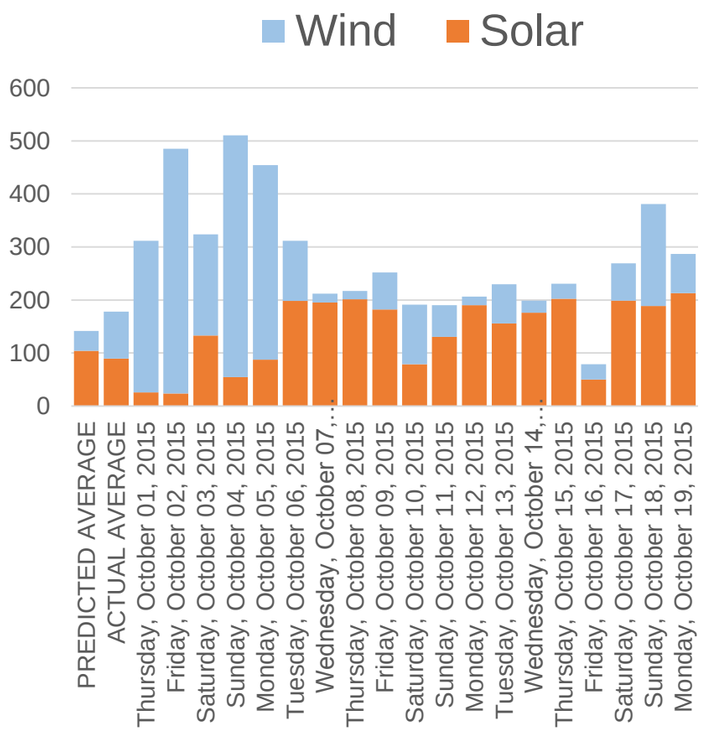
Anticipated Shoreline in 2100

Anticipating Sea-Level Ris





Weathering the Storm



Learn more about Brock

Learn More: cbf.org/brock

Questions: Christy Everett, CBF, ceverett@cbf.org; 757/622-1964