Senior Design Project May - 2021

*∀*ANDELAY ENGINEERS, LLC

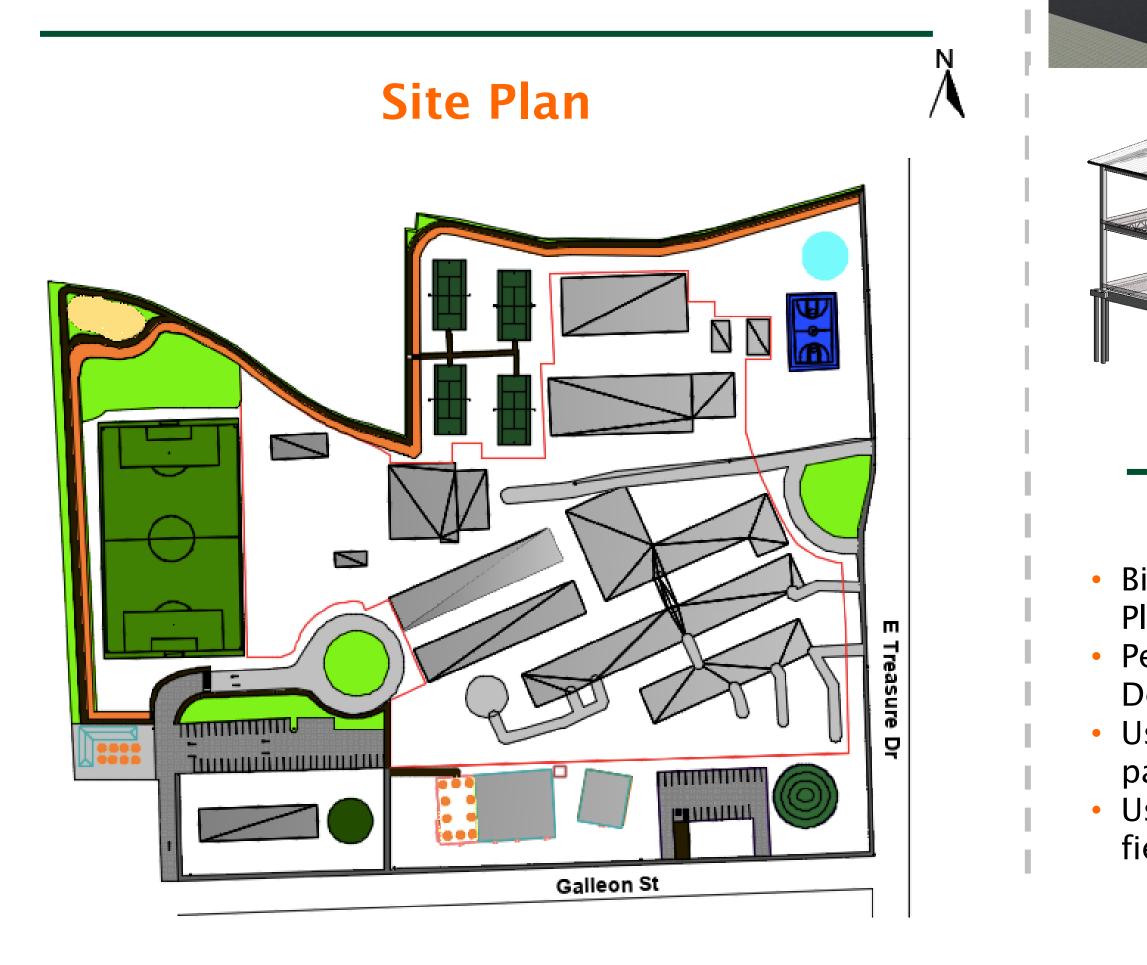
Hanan Alhamdan, Fatema Alqattan Department of CAE Engineering

Lara Tomenchok, Nawaf Al Hajaj, Mohammad Alsaied, Benjamin Kern, Alexander Wang Dr. Matthew Trussoni, Dr. David Chin, Dr. Esber Andiroglu, Larissa Montas Bravo, Nancy Lewis

Project Vision

Treasure Island Park will be a neighborhood center that brings together the North Bay Village community through a variety of recreational spaces. The park will capitalize on underperforming resources and synergize public spaces such that it can attract economic development for a prosperous future. This area will also be sustainable, hurricane resistant, and adaptable to the risks associated with climate change so that the community can enjoy it for many years to come.

Livability | Resiliency | Prosperity



UNIVERSITY OF MIAMI COLLEGE OF ENGINEERING



Treasure Island Park

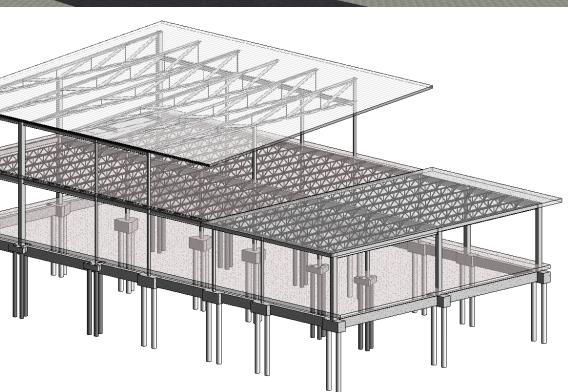
Architectural/Structural Designs

Community Center

Police Department

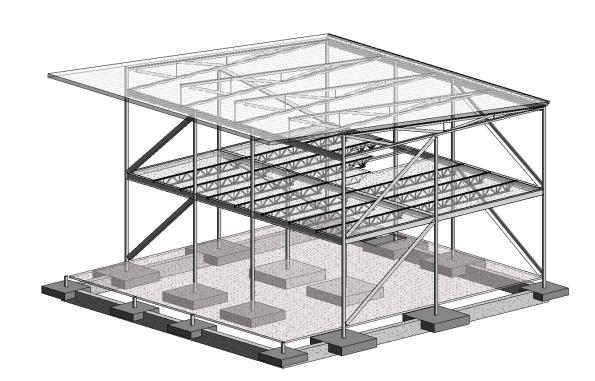






Paving Materials

- Bicycle Path made of Recycled Plastic
- Pedestrian Path made of Decomposed Granite
- Used pervious concrete for the parking lots pavement
- Used Astro Turf for the Soccer field



MEP Features

- efficient VRF HVAC Energy system
- LED Lighting
- Vehicle Charging Electric Stations



Community Focus



- Improving the quality life by adding of adding community amenities, services, and places for social interactions
- Refreshing the NBV identity by leveraging existing assets with infrastructure new improvements to reassert NBV's image as greener, smarter, and more connected

Resiliency

Preparing for environmental challenges: protect the water quality of Biscayne Bay, mitigate effects of severe weather conditions, remaining open to modifications over time to adapt to the effects of sea level rise.

- Rain Garden
- Rainwater harvesting
- Permeable Pavement
- LEED certification
- NBV Green code
- Design for 10-year storm



Acknowledgments

We would like to thank the Senior Design Professors and North Bay Village for this opportunity and for all the help they provided for this project.