

June 11, 2024

Ms. Chelsea Wilkerson, MBA

Chief Executive Officer

Girl Scouts of Tropical Florida

11347 SW 160th St, Miami, FL 33157

Dear Chelsea,

On behalf of you as our client, Girl Scout Council of Tropical Florida, Inc., the ULI Leadership Class of 2024 Team 1 is pleased to address the redevelopment opportunity of Camp Wesumkee in West Summerland Key, FL which is an 11-acre campsite directly located along the Atlantic Ocean, that has unfortunately been closed since 2017 when the existing structures suffered permanent damage from Hurricane Irma leading to a decree issued by Monroe County leaving a blank slate for new facilities.

Team 1's Mission: utilize an array of our industry backgrounds to provide an analysis and recommendations for Girls Scouts of Tropical Florida's redevelopment of Camp Wesumkee to restore its former glory and improve future opportunities.

Sincerely,

ULI Leadership Class of 2024

Team 1

Sustainable & Redevelopment Analysis for Camp Wesumkee

The Girl Scouts of the USA (GSUSA) is the largest leadership organization for girls in the world with around 2.5M girl and adult members worldwide aimed at empowering young women through fun, friendship and power to build courage, confidence, and character with the goal of making the world a better place through enriching experiences such as environmental stewardship, field trips, skill building sports clinics, cultural exchanges, and community service projects. Founded by Juliette Gordon Low in 1912 in Savannah, Georgia, the organization has grown into a global movement embracing more than 50 million American women over the years.

The core values of Girl Scouts include leadership, service and citizenship promoting honesty, fairness, courage, strength and respect of oneself and others. The Girl Scout Promise is a verbal statement reinforcing the values and ethics upheld by the organization, “I will do my best to be honest and fair, friendly and helpful, considerate and caring, courageous and strong, and responsible for what I say and do, and to respect myself and others, respect authority, use resources wisely, make the world a better place, and be a sister to every Girl Scout.”

On June 14, 1923, in Coconut Grove, a visionary group of women founded Alligator Troop 1 which over 100 years later has thrived as the local chapter of Girl Scouts, Girl Scouts of Tropical Florida. The chapter has served more than half a million girls since its founding. Led by Chelsea Wilkerson, GSTF is providing girls the path to leadership through more than cookies, crafts and camping via STEM programs that teach app development, robotics, coding and cybersecurity, outdoor adventures, life skills for strong relationships, protecting our environment, and career exploration as well as entrepreneurship skills and financial stability.

As the preeminent leadership development organization for girls, GSTF brings the evidence-based Girl Scout Leadership Experience to nearly 3,500 girls from every zip code across Miami-Dade and Monroe counties. For nearly 100 years, GSTF has provided a unique, transformative leadership

program for girls, building their core skills and preparing them to be strong, socially conscious leaders in our communities in South Florida with their main office based out of Camp Choe and additional properties including Camp Mahachee in Coral Gables, S. Miami Little House in South Miami, and Camp Wesumkee in Scout Key.

Camp Wesumkee

When operational, Camp Wesumkee, the oceanfront retreat located in West Summerland Key in Monroe County, offered unique experiences for Girl Scouts to engage in hands-on learning about marine and coastal ecosystems through tidal pool observations, swimming, camping, and additional science activities. The Florida Keys are a chain of islands along the southern coast of Florida renowned for their breathtaking, picturesque water views in addition to their conservation efforts for preserving the Florida Reef, the only living coral barrier reef in the continental United States and the third-largest barrier reef system in the world and marine and wildlife including sea turtles and the endangered Key deer. For the local GSTF losing access to Camp Wesumkee was devastating to their programming and financing as they are no longer able to host learning experiences, summer camps, and events to continue their stewardship and bring attention to the Florida Keys.

Alongside GSTF's partnership with Coral Restoration Foundation, the ultimate goal is to bring life back to Camp Wesumkee through The Dream Plan which consists of redeveloping and improving the existing conditions to turn Camp Wesumkee into a national destination for outdoor learning, research and experiences with a commitment to resilience and environmental sustainability.

Coral Restoration Foundation Partnership

The Coral Restoration Foundation (CRF) is a non-profit organization dedicated to the restoration and conservation of coral reefs, the largest reef restoration organization in the world. Based in Key Largo, FL, they focus on developing and implementing large-scale coral reef restoration programs to support the health and resilience of coral ecosystems.

Activities that the CRF engages in include coral propagation, developing offshore coral nurseries which grow coral from small fragments which are then transplanted back onto degraded reef sites, reef restoration, when corals have grown to a suitable size, they are outplanted to designated reef restoration sites, research and development, education and outreach.

Derek Hagen leads CRF and also is a participating board member for GSTF. Derek shares in The Dream Plan vision for Camp Wesumkee and is a committed partner to securing financing and governance approvals as the CRF would also utilize the campsite as an extension of the CRF's efforts to restore the Florida Reef and engage in learning activities for coral restoration foundations across the world. CRF has existing corporate sponsorships with Ocean Reef Club, Disney Conservation Fund, Operation SpongeBob Square Pants Sea Change, Petco, and more that could become donors for financing to execute The Dream Plan.

Federal EPA Grant

Upon starting our analysis, GSTF informed our team of their consideration to apply alongside CRF for a U.S. Environmental Protection Agency funding opportunity titled Environmental and Climate Justice Community Change Grants Program which funds community-driven projects that address climate challenges and reduce pollution while strengthening communities through thoughtful implementation. EPA is awarding \$2B through this program with Track I applicants accessible to \$10 - \$20M in funding grants and Track II applicants \$1 - \$3M. Applicants will be assessed on the impacts of climate change on human health in the United States with responses to addressing climate action strategy, community engagement, energy efficiency, resilience solutions and more. The research compiled within our presentation will be utilized as a foundation for submitting the application on behalf of GSTF and CRF.

Current buildings on the property may be classified as pre-existing non-conforming structures. This classification requires a finding by the Planning Director that the structure was built and

its use began before January 1996. According to the Land Development Code (LDC), pre-existing structures and uses may continue. However, the LDC generally mandates that pre-existing structures that are damaged more than 50% of their market value must conform to current zoning regulations, including permitted uses and setbacks. While re-zoning the property may offer additional development options, it involves substantial costs, with application and consultant fees estimated between \$75,000 and \$100,000. The re-zoning process typically takes 12-14 months and is subject to the political process.

It is recommended to schedule a pre-application conference with the County to discuss development options. This conference provides an opportunity to bring all County stakeholders together to address challenges and explore potential solutions. The cost to schedule the conference is \$400. Based on the outcome of the conference, the County will provide a Letter of Development Rights Determination to clarify the current development rights on the property, which incurs an additional cost of \$800. According to conversations with Emily Schemper, Senior Director of Planning & Environmental Resources, County staff are interested in seeing the property re-developed and are willing to facilitate the process where possible.

The property spans 16.58 acres and includes several existing buildings. The Community Center/Mess Hall is a 2-story structure built in 1970 that was heavily damaged and has been unsafe and uninhabited since Hurricane George in 1998. The Wheel House serves as sleeping quarters for over 20 occupants and includes a meeting/activity room and a single toilet room and shower. While it is generally in good condition, it requires repairs to the stairs, windows, screens, and electrical system. The Wheel House Bath is a single-story building with 8 sinks, 4 showers, and 4 toilets. It is clean but needs updates to its plumbing and electrical systems, as well as door and window replacements. The Open-Air Council Activity Center/Stage requires railing replacement, slab stabilization, and electrical service. There are 8 chickee huts with roof leaks, and screens and canvas covers that need replacement, along with entrance steps that require reconstruction. The Bath Building for the chickee huts includes 8 sinks,

4 showers, and 4 toilets, and like the Wheel House Bath, it is clean but needs plumbing and electrical evaluation, and updates to doors and windows. The Open-Air Council Meeting Center features a fire pit but lacks electric service, fire management devices, and sufficient benches. Lastly, the Residence Manager Building requires a full structural evaluation and telephone communication.

The current infrastructure includes a sewage system composed of septic tanks and drain fields, which require evaluation and mapping. The domestic water supply is facilitated by a functional fire hydrant located in the center of the project area. The entrance roadway and gate consist of a basic gate with a dangerous highway entrance that needs safety improvements. Perimeter security is compromised due to damaged fencing, dark areas, and the absence of electronic security measures. The dock and waterfront structures need to be rebuilt using storm-resistant materials. Site lighting is inadequate and requires the installation of path lights and underground electric lines. Storage containers and the shop are temporary and not compliant with code, necessitating the construction of a proper facility. Trash storage and pickup currently involve a single container, with no recycling bins, indicating a need for additional containers or carts.

Following Hurricane Irma, which struck on September 10, 2017, Monroe County assessed significant damage to the property located in a Special Flood Zone Hazard Area (SFHA). The damage was deemed substantial, with repair costs equating to or exceeding 50% of the property's market value. Compliance requirements dictate that residential structures must be elevated to or above the base flood elevation, while non-residential structures must either be floodproofed or similarly elevated. All repairs, reconstruction, and new construction require a permit from Monroe County. Failure to comply with these requirements may result in daily fines and the removal of non-compliant constructions. To dispute the assessment, a repair cost estimate from a licensed contractor and a pre-damage market value appraisal must be submitted. Recommendations include demolishing all unusable

buildings on-site and exploring three different development solutions, with a proposal from Key West Iron Works amounting to \$167,754.

The mission of the Dream Plan at Camp Wesumkee is to propel the camp into a new future through a comprehensive redevelopment of the site, incorporating permanent structures and the wish list items provided by GSTF and CRF. Building 1, dedicated to education and entertainment, will be a 1,500-square-foot structure featuring a classroom equipped as a high school science room, a restroom, an office for CRF interns, and storage. Building 2, focused on learning exchange and scholar programs, will be a 2,300-square-foot pavilion that includes an above-ground pool, six dorms for campers and staff (complete with bathrooms), a dive locker, and a mess hall with a kitchen. Building 3 will serve as the Restoration Warehouse.

Additional elements to bring The Dream Plan to life include a new pier, improved landscape, new site lighting, fire pit areas, an amphitheater, stargazing areas, a Keeper's house, parking areas, internal road circulation, trash collection spaces (dumpsters), a water treatment area, and other maintenance-related areas. These enhancements aim to create a more functional, aesthetically pleasing, and engaging environment for campers and staff.

Upon receiving the program, our next step was to assess how well the wishlist aligns with the site's zoning regulations, spatial limitations, and environmental factors, as well as the feasibility of their incorporation. The property's zoning designation does not permit the current camp use; however, the existing buildings are considered pre-existing non-conforming use, allowing for the continuation of the camp's operation. While spaces related to girls' activities can likely be retained, obtaining approval for program elements related to CRF may present challenges. From a spatial perspective, the extensive area of the site enables accommodation of all program requirements outlined by GSTF and CRF. Additional lodging areas can be introduced if necessary to accommodate more girls in the future without overcrowding the property. Water and electricity infrastructure are already in place

on the site; however, wastewater management poses a significant challenge. Depending on available redevelopment funds, various wastewater treatment solutions can be explored as part of our sustainable design approach. Among the wishlist elements, constructing a pool would be unfeasible due to coastal construction requirements, proximity to the shoreline, environmental challenges, and potential high construction costs. Discussions with CRF, the pool's main user/operator, revealed that its exclusion would not significantly impact the camp's quality of work. Therefore, we recommend reallocating funds originally designated for the pool to other program elements.

Summer camps offer American children an iconic traditional learning experience to explore new interests, make lasting friendships, and gain independence. For the 2023 list, 23 Girl Scouts-operated camps made the list of America's Top 500 Summer Camps. As a case study for Camp Wesumkee, we analyzed Camp AnSeOx in Oxford, CT, which is undergoing a massive renovation for the Girl Scouts of Connecticut. Developed with the varying needs of campers in mind, the new pool house and cook shelter facilities bring ADA accessibility to Camp AnSeOx, making it accessible for campers of all abilities. Located in Oxford, CT, the new facilities reflect the timeless and rustic aesthetic of existing camp structures through the use of 'stick-built' framing elements along with traditional gable roofs. The combination of exterior materials such as exposed wood framing and standing seam roofing helps achieve an updated aesthetic while providing the necessary longevity and durability of each structure. A key factor of these facilities is the much-improved accessibility to Camp AnSeOx features, allowing all guests to enjoy the camp experience and access the cook shelter and pool house for year-round use. Camp AnSeOx received funding and assistance from the local community.

Our primary goal for this project is to transform the camp into a functional facility. We've identified three potential strategies for rebuilding, ranging from immediate to long-term solutions, varying in cost and durability, from temporary to storm-resistant permanent structures. All

proposed options begin with the complete demolition of existing structures and include enhancements such as interior roads, landscaping, and site lighting.

After demolishing existing structures, our plan involves installing temporary buildings to accommodate program needs. This approach offers several advantages, including lower initial reconstruction costs, a shorter and simpler approval process, and quicker project completion. It's modeled after a successful strategy used at a neighboring Boys Scouts' camp to the West.

Despite its benefits, this option requires increased maintenance and care in case of emergencies since the camp would need to be dismantled and evacuated. Additionally, temporary structures have shorter lifespans and may be less comfortable.

If additional funding becomes available, we have identified the potential to rebuild certain buildings as permanent structures, enhancing the camp's resilience and functionality. Specifically, we've chosen two key buildings for this upgrade: the Mess Hall and the previously existing bathhouse. By reconstructing these buildings in the same locations and maintaining their original footprints, the approval process may be streamlined.

The Mess Hall would serve as a versatile space for both GSTF and CRF activities, accommodating everything from educational sessions to meal preparation. These permanent structures would feature storm-resistant construction and finished floors positioned above the Base Flood Elevation, making them suitable as refuge areas during storms and providing storage space for remaining temporary structures. However, this option may necessitate a zoning variance and comes with higher costs compared to Option A. Additionally, the construction timeline would be longer.

Our proposal is to rebuild the Mess Hall and bath house using Renco, an innovative system. Further details on this approach will be provided in the Sustainability and Innovative Design section.

The third explored option involves constructing all necessary facilities as permanent structures, adhering to current Zoning and Construction codes while ensuring they are storm-resistant. This represents the camp's ideal and long-term solution, embodying its dream plan.

Efforts will be made to place the new buildings in the same locations as their predecessors, maintaining their original footprints. Buildings slated for reconstruction include the Mess Hall, Wheel House, bathhouse, and keeper's house. Additionally, new program elements like the CRF pavilion and warehouse will be seamlessly integrated into the master plan to complement proposed activities. Furthermore, a new permanent pier will be constructed, while the keeper's RV will be removed.

To comply with Base Flood Elevation requirements, habitable areas and equipment must be elevated to +11 feet or higher. Given existing elevations ranging from +/-4.5' to +/-6', stairs and ADA ramps will be necessary to ensure accessibility for all users.

Elements below Base Flood Elevation, such as walls, will comply with break-away requirements to mitigate storm surge damage. One cost-saving strategy is to leave the ground floor area of buildings completely open on the sides.

The use of durable materials, particularly concrete columns and frames, either cast-in-place or prefabricated, will form the foundation of the construction. This will be completed with the use of Renco for the envelope and roof of all buildings, ensuring durability and expediting construction timelines.

As previously stated, larger buildings like the Mess Hall and Wheel House could serve multiple functions, enhancing the camp's flexibility and resilience.

All new constructions will undergo the necessary Building Permit approval process, along with any required Zoning/Environmental approvals. This may pose challenges, particularly for the

innovative Renco system, which may face a longer permitting approval process due to its novelty in Monroe County.

Furthermore, the cost and construction timeline for this option are substantial compared to using temporary structures exclusively.

A critical component of this site's resiliency study involved a comprehensive evaluation of climate risks within the immediate and extended vicinity. The Florida Keys possess a well-documented history of vulnerability to extreme weather events, with past storms playing a significant role in the site's original condemnation. Recognizing this susceptibility, we undertook a holistic examination of the area's current and projected climate threats to ensure the future development is not exposed to additional or emerging dangers.

Camp Wesumkee was a place for exploration and connection to the outdoors. Along with those experiences comes a responsibility to protect the Florida Keys. As part of the Camp's new beginning, we propose to implement systems that reduce the impact on water resources, our carbon footprint, and the amount of waste we generate. By implementing these sustainable practices, we can ensure that Camp Wesumkee continues to be a haven for future generations of campers and the incredible wildlife that shares our space.

Based on the proposed development and programming approach, we have proposed several solutions to limit the use of natural resources and protect the camp.

Most of the carbon emissions in new construction comes from concrete construction. One of our approaches is to demolish the existing buildings, leaving an open campground. The existing site is constructed or mostly concrete and can be upcycled to become aggregate in new concrete mixes. The recycled content restricts the need to extract aggregates from quarries, extending their beneficial life.

For any new construction, we are looking to minimize the impact while expanding the camp's capabilities. Concrete mixes have advanced recently allowing concrete to use less cement. Cement is a leading contributor to embodied carbon emissions. The embodied carbon of a standard concrete mix is about 410 kg per cubic meter but replacing cement with readily available fly ash brings that number down to 290 kg per cubic meter. We are looking to further decrease this by using Type 1L cement that can reduce it by another 10%.

When considering new, permanent structures for the camp, we must prioritize materials that can withstand the harsh coastal environment. Traditional steel reinforcement, while common, is susceptible to ferrous corrosion caused by the constant exposure to salt air. This corrosion weakens the steel over time, compromising the structural integrity of the buildings.

To address this challenge, we're exploring the use of Glass Fiber Reinforced Polymer (GFRP) reinforcement as an alternative. Unlike steel, GFRP bars are non-ferrous, meaning they are immune to the corrosive effects of salt spray. Additionally, GFRP thrives in high humidity environments and can even be submerged in seawater without degradation. While a cost-benefit analysis is still underway, the potential longevity and reduced maintenance needs of GFRP make it a compelling option for building permanent structures at the oceanfront camp.

Fortunately, the current site benefits from a direct supply of clean, potable water, eliminating the immediate need for a water purification system. However, for future resiliency and disaster preparedness, exploring alternative solutions might be prudent.

The water technology industry is constantly innovating, with exciting developments in self-contained, community-scale purification systems. These systems offer several advantages. Firstly, they provide redundancy in case of disruptions to the main water supply. Secondly, they address the challenge of underutilized systems. When a purification system sits idle, its components can become susceptible to mechanical failures and the development of stagnant water which can breed harmful

bacteria. These self-contained systems are designed to be more adaptable and require less ongoing maintenance, making them a potentially valuable addition to the camp's infrastructure.

We have reached out to D Squared Engineering regarding their container based, modular solution for micro-grids. Their current solution has renewable power generation, energy storage, and on-site water generation. We are aiming to use the reverse osmosis system along with treatment tanks, to enable the system to treat wastewater.

Additionally, they are exploring retrofitting the system to include a wastewater solution within the container hence simplifying maintenance and pipe routing while including the necessary treatments.

Based on preliminary investigation, the site is not currently equipped to handle wastewater being generated. Based on design guidelines, a septic tank can be installed assuming appropriate water table distance and a distance of at least 75 feet from the beach. Camp Wesumkee is capable of providing more than 100 feet of distance to the beach and can be built up to install the septic tank. To maximize the performance and tap into state funding, the State of Washington has identified options of septic tank brands that offer nitrate reduction of over 65%.¹ This upgrade would be made available in any of the options provided as it impacts critical infrastructure and funding may be made available through the Water Quality Improvements Grant Program.² For example, Septitech has published research with the EPA showing total Nitrogen removal reaching 72% and technology continues to improve³. One note to consider is the a potential need to increase grade to maintain the tank above sea level infiltration.

The composting process can have manual aeration requirements and be part of the camp groundskeeper's training and responsibilities or part of the campers' educational program to

¹ <https://doh.wa.gov/sites/default/files/legacy/Documents/Pubs/337-093.pdf>

² https://protectingfloridatogether.gov/sites/default/files/documents/WQI%20Grants%20FAQ_0.pdf

³ https://archive.epa.gov/nrmrl/archive-etv/web/pdf/09_vr_septi.pdf

discuss solid waste management. The aerobic activity will help process the compost while controlling odors.

The use of a limited water source in lieu of a hose, promotes more conscientious use of resources and typically causes effective ways to conserve water such as turning the water off or limiting the time in the shower. The camp will be allowed to maintain the water in the grounds as long as there are no harmful chemicals present. A key point here is to use camp-friendly shampoos and body washes. These are typically branded as Reef Safe, Paraben Free, and Fragrance-Free natural solutions. This is crucial to keep the marine ecosystem safe including the nearby aquatic preserve. This approach also allows for greywater to be disposed of safely onto the grounds in lieu of into a septic, sewer, or storage tank; minimizing cost and maintenance.

Increasing the camp's waste diversion rate offers a two-fold benefit: environmental and educational. By diverting waste from landfills, we reduce our environmental footprint and the associated costs of frequent hauling. This creates a unique opportunity to engage the Girl Scouts in sustainability practices.

Composting toilets and food scrap collection can become the backbone of a new waste management system, focusing on organic materials that readily decompose in an aerobic or anaerobic environment. This shift not only reduces landfill waste and hauling costs, but also yields a valuable byproduct: nutrient-rich compost. This compost can then be used to support a local garden within the camp, providing fresh food sources while completing a beautiful circular, low-waste process. The Girl Scouts can actively participate in this process, learning about decomposition, soil health, and the importance of sustainable practices firsthand.

In meeting with Cheslea Wilkerson, CEO of the Girl Scouts of Tropical South Florida, the total cost for building back Camp Wesumkee was one of, if not the, largest concern for her organization. This concern is further exasperated with the current state of the construction market where costs and

interest rates continue to remain elevated. In addition to elevated costs, the campsite site is restricted to the type of construction that is allowed to be built due to code requirements for hurricanes and other natural disasters. Fortunately, there is a way to alleviate both cost and constructability concerns.

RENCO, which is short for Renewable Composites, is a new mineral composite fiber reinforced (MCFR) building system that is an alternative to concrete and provides state of the art construction services with a focus on sustainable and innovative building practices. It utilizes building blocks that are made out of repurposed glass fiber, polyester resin and calcite chemically bonded together. The process is similar to injection molding and utilizes a “lego-like” building approach. No welding, cutting, or masonry is required and their finishes block walls function just like traditional concrete, making it easy for plumbers, electricians, and HVAC subcontractors to install their systems without adaptations. RENCO USA was co-founded by Tom Murphy Jr., who is the founder, chairman, & CEO of Coastal Construction Group.

The proposed RENCO approach matters because it prioritizes minimal environmental impact through the use of re-purposed and recyclable materials and energy-efficient processes. This significantly reduces RENCOs carbon footprint compared to conventional construction practices. It is estimated that 30 - 40% of RENCO is made up of repurposed material

Cement is the most widely used substance on Earth after water and the cement industry is responsible for around 8% of the world’s carbon dioxide emissions, which contributes to global warming.⁴ According to a study done by Deloitte in 2020, the construction sector plays a significant role in contributing towards greenhouse gasses, contributing approximately a total of 40% of the global GHG Emissions.⁵ RENCO has quantified their positive impact towards global warming via The Athena Sustainable Materials Institute, a non-profit that researches the carbon footprint of construction and as

⁴ <https://www.cbsnews.com/news/cement-industry-co2-emissions-climate-change-brimstone/>

⁵ <https://www2.deloitte.com/ce/en/pages/real-estate/articles/putting-the-construction-sector-at-the-core-of-the-climate-change->

verified by ASTM. BS Carbon was retained to compare carbon footprints and concluded that RENCO's carbon footprint contains 62% less embodied carbon than reinforced concrete.⁶ It is no secret that the RENCO product will have a significant impact on the environment as it becomes more widely utilized in the construction industry.

RENCO not only supports environmental sustainability but also offers cost-effective and practical solutions for modern construction needs, making it significant in today's market where both economic efficiency and environmental responsibility are highly valued. There are many factors that make RENCO a desirable option for Camp Wesumkee. It is more cost effective, much more durable, and takes a fraction of the time to build when compared to conventional concrete.

As the entirety of Monroe County is in an "Area of Critical State Concern" due to the susceptibility to hurricanes and tropical storms, it is extremely vital that the permanent solution, if implemented, on the campsite is considered durable enough to combat these force majeure events. Below are several characteristics that make the RENCO product a good solution for Camp Wesumkee.⁷

The ULI Team engaged RENCO to review the previously existing structures and provide both a cost estimate and modeling for what can be achieved on this site. It is important to note that the GSTF will need to hire an architect, general contractor, and other design consultants such as an architect & civil engineer in order to pull the required permits needed to build the RENCO product.

In reviewing FEMA maps and the current topography of the site, the most likely case scenario is that the majority of the grade elevations will be required to be 4' to 5' above sea level. This means that our buildings will be elevated around 6' to 7' above grade, since FFE should be at 11'. This was something important for RENCO to consider since an ADA ramp will likely be required to access all habitable buildings. All buildings were assumed to have a clear height of 9' on the interior. The floor and

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⁶ <https://innotechtoday.com/stackable-building-blocks-launch-new-era-of-sustainable-construction/>

⁷ <https://renco-usa.com/product-process/>

roof systems would be integrated with RENCO design but certain elements such as piles, stem walls, rim joists, ramps, etc. required to meet the FFE requirements will need to be provided by others. Below is breakdown for each of the buildings that we are proposing be built back utilizing RENCO, whether the GSTF chooses to build back one structure or all of them with RENCO.

The full package can be found as an exhibit to the report. All costs below exclude tax, misc. iron (if any may be required) and escalation, if any, depending on your timing as well as slab on grade (SOG). RENCO is currently approved by Florida Building Code (FBC) and IAPMO UES for buildings up to five stories and they are currently working on approval for up to 8 stories.

RENCO has already been implemented in the US successfully with the company's first project located in Palm Beach County, FL called Lakewood Village Apartments. It is a \$21 million-dollar, 96-unit housing complex made of four 3-story buildings. Each of the four identical 3-story, 29,000 sf buildings were erected with just 11 unskilled workers using only a mallet and glue gun in an average of 8 short weeks. This saved approximately 20% of the time and cost of conventional hurricane zone-type concrete construction.

RENCO anticipated bringing about 5,000 units to the market in 2024-2025 domestically. This estimate has likely been impacted with the state of the capital markets but their desire to expand within the construction industry remains strong. Additionally, ZOM Living, an established multifamily developer in South Florida and nationally, is currently working with RENCO to provide a design and cost estimate for the townhomes located at Miline Ludlam Trail Apartments Phase 2. RENCO would be building a total of 32 townhomes on this site.

Before funding opportunities could be identified, the vision for the project and subsequently, estimated budget needed to be determined. It is important to note that these costs are estimates. Leveraging the GSTF's membership pool to identify individuals that work within the various professional fields required to complete the project for assistance/pro bono work, such as Pistorino

Consultants, would alleviate a substantial amount of the costs. Below is a roll-up summary and the budget estimate can be found in the attachments to the report. The budget estimate includes the three different options or build back strategies listed earlier in the report. Option A is the estimated costs for just the temporary structures. Option B is for a hybrid approach, which is to build back the community center and bath house only - all other structures would be temporary. Option C is the full build back plan.

Since we do not have a GC contracted for the project, the following assumptions were made; As the cost of the structure only typically constitutes ~35% of the total building cost, we assumed that another 65% of the total RENCO estimate would be required to complete the project. Additionally, the structures will need to be elevated due to the base flood elevation and geographic location of the buildings. To account for this, an additional 20% was added. Lastly, an additional 15% was assumed in order to account for civil costs such as utilities, site prep, and infrastructure improvements that may be required.

As a non-profit organization, the Girl Scouts of Tropical South Florida faces several challenges in seeking sustainable funding. These include but are not limited to; competition, economic dependency, resource limitations, and missed opportunities.

In speaking with both donors & researching grant programs, we believe that a hybrid approach would be suitable to raise the required funding for Camp Wesumkee. Furthermore, we have broken out the grants as to what can be utilized to build back the site and then once the site has entered operational status, grants that would help improve the facilities and teaching programs that both the GSTF and Coral Reef Foundation (CRF) can offer.

“FEMA’s Hazard Mitigation Grant Program provides funding to state, local, tribal and territorial governments so they can develop hazard mitigation plans and rebuild in a way that reduces, or mitigates, future disaster losses in their communities. This grant funding is available after a

presidentially declared disaster.” Due to the destruction of Irma, the Hazard Mitigation Grant Program (HMGP) could be used for this type of project, but given the nature of the program it would only be able to assist with those activities that involve anything above code for new construction and for safe room/shelter in place construction. For each of these purposes, the HMGP would cover up to 75% of the costs, GSTF would be responsible for the other 25%.

Safe room construction under the HMGP is meant for limited populations that must remain in the area during a high-wind event, such as first responders, or for vulnerable populations where evacuation is not feasible. In this case it would be the caretaker of the property or campers onsite that are caught in a sudden high wind event. Designating the community center as the shelter in place building or designating a “safe room” within this structure would qualify for HMGP funding

Examples of above code construction that would apply to Camp Wesumkee would be elevating structures above base flood elevation or installing a roof structure that is rated for a higher wind load. It should be noted that the RENCO product inherently meets or exceeds code for new construction, specifically when it comes to fire, wind, and water ratings. Once the final design is determined, the analysis of what is above code for new construction can be completed by RENCO and the architect in order to qualify costs for HMGP funding. For example, RENCOs hurricane block assembly with 5/8” type x interior drywall and 3/4” exterior stucco will give a 1 hr rating on the structural walls. If the cabins are greater than 10’ apart, then no fire rating would be required. So, if RENCOs system is installed with the 3/4” stucco and 5/8” type x drywall, then the design would exceed code requirements.

The GSTF could apply directly for the grant as long as they own and operate their private non-profit (PNP) facilities per 44 C.F.R. § 206.221(e). If the GSTF does not qualify under this statute, the alternative route would be to have the local municipality or Monroe County apply on the GSTF’s behalf.

In that scenario, the municipality or county would essentially oversee the project and coordinate directly with the GSTF. ⁸

Whether Camp Wesumkee gains approval to implement innovative septic technology or is required to implement sewer, our team felt it was important to hone in a funding vehicle for these costs, specifically a grant program that could be utilized for either scenario. The first program we looked at was Florida's State Revolving Fund, specifically the Small Community Wastewater Construction Grant Program. In speaking with the Florida Department of Environmental Protection (FDEP), to qualify for this grant the sponsor would need to have a population of less than 10,000 and per capita income less than the state average. Although Big Pine Key meets the population, it does not meet the income requirements. We were instead directed to the Protecting Florida Together grants, specifically the Water Quality Improvement Grant Program. ⁹

The Water Quality Improvement (WQI) Program can be utilized to address wastewater (including septic-to-sewer), stormwater and agricultural sources of nutrients in water bodies. A summary of the eligible projects can be found on the image on the right, which was pulled from the WQI FAQ. Whether the project upgrades from septic to sewer or is able to retain septic via upgrades to the system, this grant can be utilized. Item (H) under eligible projects for the WQI program states that “where central sewage is not available, retrofitting OSTDS to upgrade such systems to enhanced nutrient reducing OSTDS or other equivalent wastewater system that achieves 65% reduction in total nitrogen.” The advancement in septic systems and the proposed solution discussed earlier in the report qualifies for this as it achieves a 72% reduction in total nitrogen.

As applications for the WQI grant program are due on June 30th for 2024, the grant would need to be applied for 2025¹⁰

⁸ <https://www.fema.gov/grants/mitigation/hazard-mitigation>

⁹ <https://florida.dep.gov/wra/srf>

¹⁰ Water Quality Improvement Grant Program | Florida Department of Environmental Protection

As the GSTF are partners with the Coral Reef Foundation on Camp Wesumkee, it is important that not only their logistical needs are considered but that funding for their onsite labs and various equipment that they will require in order to operate efficiently is sought after for grant funding. Last year, FDEP awarded grants of \$9,500,000 to various organizations via Florida's Coral Reef Restoration & Recovery Initiative and \$9, 436,552 via Innovative Technology Grant Projects. In reviewing the Florida Unified Reef Map, the campsite is located in the "pavement" designation. "Pavement", when referring to coral reefs, is a type of substrate that is typically composed of bedrock, limestone, or consolidated sediment. This type of substrate can provide a stable base for various marine organisms such as corals, algae and other stationary creatures. It is important because they often serve as a foundation for new coral reef colonies and other reef building organisms that contribute to the structure and health of the reef ecosystem. We recommend that the GSTF alongside the CRF explores Florida Coral Reef Restoration Grants once they have selected their desired equipment and determined the overall cost required to fund.

Chelsea Wilkerson, the CEO of the GSTF, notified our team during the mid-term client presentation that the GSTF and the CRF are actively pursuing the Environmental and Climate Justice Community Change Grant Program. This grant program was created by the Inflation Reduction Act and offers \$2 billion total grant money. "The Community Change Grants will fund community-driven projects that address climate challenges and reduce pollution while strengthening communities through thoughtful implementation. This historic level of support will enable communities and their partners to overcome long standing environmental challenges and implement meaningful solutions to meet community needs now and for generations to come."

During our call, Chelsea mentioned that the work we have been doing would be helpful in their application for this grant. Notably, strategy #4, "Microgrid Installation for Community Energy Resilience" would be one of the boxes that can be checked for this project. We are currently proposing

self-contained microgrids as part of our innovative solutions for the Campsite and this would be the perfect vehicle to utilize in order to qualify for this grant. These microgrids are important because it would mean that the campsite would redundant power, water, and potentially wastewater processing

The applications are accepted on a rolling basis until November 21st 2024 but the GSTF is aiming to apply in June of 2024¹¹.

Lastly, a vehicle to research additional grant programs can be done through Candid, which is an organization that provides information about grant-makers and their grants. Candid offers a comprehensive database on U.S. and global grant-makers and their funding opportunities, along with research, education, and training programs designed to advance knowledge of philanthropy at every level. For the Girl Scouts of Tropical South Florida, Candid could be beneficial for identifying potential funding sources for various different buckets that the GSTF may need to access. Engaging Candid's resources can help them find grants specifically aligned with their goals and needs, making their fundraising efforts more targeted and effective.

Accessing the Girl Scouts of Tropical South Florida's donor pool would be an effective way to alleviate the remaining costs that cannot be obtained through grant funding and alleviate the total amount of grant funding ultimately needed.

In working with the Monroe County Land Authority, we were connected with Keara McGraw from the Rotary of the Lower Key, who has expressed the Rotary's willingness and commitment to contribute to the project when ready. More importantly, she pointed the team to the Community Foundation of the Florida Keys (CCFK), whose mission is to make Key West and the Florida Keys a better place to live now and in the future. The CFFK connects people, resources and needs through philanthropy and their vision is to be the premier convener, connector, and catalyst for positive change in the Florida Keys by engaging partners, raising endowment funds, and leveraging resources to solve

¹¹ <https://grants.gov/search-results-detail/351071>

problems. Although the latest annual report is still in process, the CFFK raised nearly \$3.6 million in prior contributions and continues to expand on the total annual contribution each and every year. Since 100% of every dollar donated now goes directly to nonprofit grants and programs, we strongly recommend that the GSTF engages the CFFK to assist in meeting their goals. 12 13

We also held a meeting with Derek Hagen from the CRF, who mentioned that once the project vision is finalized, that reaching out to United Way and the superintendent of Monroe County Schools would be viable due to their existing relationships with each.

In order to obtain donors, implementing the proper marketing and outreach strategies is critical. Currently, the GSTF is marketing the support of their Camp Mahachee on the website and we believe that instituting the same type of marketing and outreach for Camp Wesumkee on the home page would make a positive impact towards reaching their financial goals. Social media engagement, email marketing, events & fundraisers, online funding raising platforms, SEO & Marketing, donor recognition, and volunteer programs are all effective marketing strategies to get donor fundraising off the ground and build momentum.

¹² <https://cffk.org/>

¹³ <https://cffk.org/resource-library/2022-annual-report/>

Acknowledgements & Works Cited

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