

GREAT ST. JAMES

MAINTENANCE BUILDING ARCHITECTURAL PROGRAMMING

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GREAT ST. JAMES, U.S. VIRGIN ISLANDS
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INTRODUCTION

The purpose of this document is to identify the scope of work to be designed in terms of functional and operational requirements and to gain a consensus of how the building and its systems will work once the building is occupied. The intent is to provide information to make decisions regarding current and projected space needs for implementation in order to guide the building design and to inform design consultants, vendors, and potential builders/contractors of the general vision for the completed facility.

GENERAL INFORMATION

Project Name: GSJ Maintenance Building
Project Address: Parcel No. B21-1 & B-2-2, Great St. James, Island
No. 6A Red Hook Quarter, St. Thomas, U.S. Virgin Islands

Owner: Great St. James/Little St. James, 6100 Red Hook Quarter B-3, St. Thomas, USVI 00802

Architect: Boschulte Architecture, LLC, 41-42 Kongens Gade, St. Thomas, VI 00802

PROJECT TYPE

The project type is a maintenance/engineering building. The types of spaces to be included are identified in this document along with space criteria for those spaces.

GOALS AND OBJECTIVES

The function of the building is to be the headquarters of the management, operations, and maintenance services needs for Little St. James (LSJ) and Great St. James (GSJ). These functions are currently housed in one or more structures located on Little St. James and the owner desires to relocate them to a consolidated facility on Great St. James. The building will house the day-to-day activities necessary for operation and maintenance staff to perform their basic duties in a safe, functional facility.

SITE REQUIREMENTS

The project site has been previously identified by the owner to be Parcel No. B-2-1 and B-2-2, Great St. James, Island (D9-7345-T004). The site will be located on the north-west area of Great St. James near the knoll directly north of Christmas Cove bay. This provides location provides easy access from the existing barge landing at Christmas Cove and is located away from the residential functions of the

USE OF ADJACENT PROPERTIES

Use of adjacent properties is residential (largely undeveloped).

OWNERS OF ADJACENT PROPERTIES

All adjacent properties on GSJ island are under the owned by the project owner.

PUBLIC SERVICES

The public utilities are not available at the project site due to the site location being GSJ which is an island off the south eastern coast line of St. Thomas, VI. Current and future vision for services is that GSJ is to be a self-sustaining island. Possible future connection to LSJ for electrical grid connection is being considered but will be unavailable when the project is constructed and during initial occupancy.

- Gas: If propane fuel is necessitated by the building's equipment or appliances these will be stored in propane tanks to be refueled by propane vendor's trucks barged to the island.
- Electric: No WAPA service is currently available on island. Building to tie into planned underground electric service from the existing GSJ diesel generator. Provisions to be made for future tie-in to anticipated undersea grid connection to LSJ electric grid. Design consideration to be given to roof-top solar panels installation for sustainable solar power production for the building.
- Communications and data: Phone and Internet service provider (ISP) to be determined by owner. Space to be identified within the building for ISP hub/WIFI/Server etc.
- Sewer: No public sewer is available on site. Building to utilize a packaged on-site sewage waste disposal system.
- Water: Primary water source will be from a packaged reverse osmosis plant (R.O.) which is planned for GSJ. Intent is to connect to R.O. plant via tie-in underground water main (under development). Consideration to be given to below ground or above ground water cistern of site-cast concrete construction with roof top rainwater collection as secondary source of water supply. Pre-manufactured water tank(s) are another consideration for secondary water supply. Cistern or tanks may be necessitated due to fire suppression/sprinkler requirements for the building.

FUNCTIONS

The facility is anticipated to house the following functions with square footages table below:

- Enclosed Maintenance Work Area ("wreck shop")
- Painting – storage, painting booth
- Electric Shop
- Wood Shop
- Grounds Maintenance / Landscaping

- Captain's Area
- Laundry Room
- Staff Break Room
- Male and Female Restrooms
- Pantry / General Storage ("Cost U Less")
- Boat Trailer Storage
- Office Space / File Storage
- Mechanical Room
- Electrical Room
- Circulation (corridors/hallways)
- Power Washing Station (exterior)
- Fuel station (exterior)

GSI MAINTENANCE BUILDING

SPACE REQUIREMENTS

ID No.	Space/Activity	Existing Space	Space Criteria	No. of People or Items	Space Sub-Total	No. of Spaces	Square Feet Required	Notes
1.00	Interior Spaces							
1.10	Maintenance Work Area		1,100	5	5,500	1	5,500	
1.20	Painting		400	1	400	1	400	
1.30	Electric Shop		400	1	400	1	400	
1.40	Wood Shop		640	1	640	1	640	
1.50	Grounds Maintenance/Landscaping		800	1	800	1	800	
1.60	Captain's Area		50	6	300	1	300	
1.70	Laundry Room		320	1	320	1	320	
1.80	Staff Break Room		30	25	750	1	750	
1.80	Male Restroom		100	3	300	1	300	
1.90	Female Restroom		100	3	300	1	300	
1.10	Pantry/General Storage		800	1	800	1	800	
1.11	Boat Trailer Storage		200	5	1,000	1	1,000	
1.12	Office Space / File Storage		350	1	350	1	350	
1.13	Mechanical Room		480	1	480	1	480	
1.14	Electrical Room		250	1	250	1	250	
	SUB TOTAL NET ASSIGNED SQUARE FOOTAGE						12,590	
	CIRCULATION AND WALLS (@ 20%)						2,518	
	TOTAL GROSS SQUARE FOOTAGE						15,108	

2.00	Exterior Spaces							
2.10	Power Washing Station (exterior)		320	1	320	1	320	
2.20	Fuel Station (exterior)		480	1	480	1	480	
2.30	Work Vehicle Parking		200	1	200	10	2,000	
	TOTAL AREA REQUIRED						2,800	

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CONSTRUCTION

The facility is anticipated to be constructed of a pre-engineered steel structure with metal panel siding for the building envelope. Some portions of the building envelope may be constructed of concrete block (CMU) walls for added durability. Foundation to be concrete slab foundation with concrete footings at the locations of the steel structure columns. Steel structure to be designed by steel building manufacturer per wind speed and seismic requirements of the project location (provided by the structural engineer consultant adhering to International Building Code – IBC). The building manufacturer to provide certified loading reactions to the structural engineer in order to design the foundation. Roof to be of metal panel construction with rain water gutters at perimeters and gutters to rain water collection cistern/tanks or to grade.

Interior spans to be kept as open as possible for interior layout flexibility and future space planning changes if needed. Interior partitions to be of metal stud and gypsum wall board or concrete blocks where durability or fire rated walls are necessitated.

BUILDING SYSTEMS

HVAC:

- Conventional A/C system direct expansion (DX), split systems, or rooftop units
- Ventilation make up exhaust air fans based on project requirements
- Mini-split DX A/C for special rooms as required
- Provisions for outside air intake (wall louvers) as required
- Shop equipment to be furnished by owner, with equipment list/mechanical and electrical requirements

PLUMBING:

- Portable water: From R/O plant tie in and/or pump package from cistern/tanks
- Sewer: On-site sewerage waste disposal system
- Water heating system: electric tank type
- Water saving plumbing fixtures
- Roof drains/perimeter gutters for rain water collection
- Hose bibs for convenience
- Provisions for tie in for irrigation system (outside of initial scope of work by Architect – to be designed by others if needed for the project)
- Emergency Generator – Diesel piping layout if required for the project
- Water coolers/bottle fillers with water filtration
- Shop equipment info/equipment list with plumbing requirements to be furnished by owner

ELECTRICAL:

- Proposed power via tie-in to GSJ diesel generator; otherwise a standalone generator will be proposed with future connections to GSJ power.

- Fire alarm system as required by Life Safety Code NFPA 101
- Lighting fixture selections by electrical engineer using photometric calculations for outdoor and indoor
- Lightning protection – Owner’s option if this desired (no NEC requirement according to electrical engineer)
- Owner to verify type of voltage available, and voltage requirements for any owner supplied equipment. Owner to submit equipment list and desired equipment layout for use by electrical engineer.

FIRE PROTECTION:

- To be designed per NFPA13 using cistern/tank water with extra capacity. Areas to be sprinklered per building code requirements (at a minimum).

SUSTAINABILITY

Facility to be designed to minimize energy, water, and land resources to minimize environmental impact.

- Optimize site potential/use of land through building orientation on site which can affect energy use.
- Optimize energy use of building to conserve electricity.
- Select fixtures for water conservation/efficiency to reduce fresh water demand, rainwater catchment, and reuse or recycle grey water for on-site use if feasible.
- Use building materials in most productive and sustainable way with building life cycle in mind.
- Enhanced indoor environmental quality (IEQ) for occupant health and thermal comfort for increased productivity. Maximize daylighting, use appropriate ventilation, and moisture control, acoustic performance, and utilize low VOC materials for construction.
- Use of materials to simplify and reduce maintenance requirements to reduce life-cycle costs.

SUMMARY

The architectural program for the GSJ Maintenance Building as outlined above is intended to assess the owner’s building use requirements and organize the functional objectives with the goal of creating a successful project outcome. This document will be updated as information becomes available and modified accordingly.