

LITTLE DIX BAY RESORT INFRASTRUCTURE IMPROVEMENT PROGRAM

VIRGIN GORDA, BRITISH VIRGIN ISLANDS

Prime Engineering furnished engineering services to address aging infrastructure at the 600-acre Little Dix Bay Resort in the British Virgin Islands. The Infrastructure Improvement Program addressed:

- Stormwater management and erosion control problems
- Electrical distribution systems feeding the guest rooms proposed for renovation
- Wastewater collection system deterioration, clogging, and domestic water pressure
- Design of the Cow Hill Roadway extension to Colison Point, including concrete paving, stormwater drainage, power, water, sewer, and cable TV

Stormwater Management System

- Develop construction documents for improving the main stormwater channel
- Provide support during Bidding and Construction Phases.

Electrical Distribution System Modifications

- Prepare construction documents for a new electrical service to be run from the existing transformers to the guest room building electrical panels.
- Provide path and site lighting for new buildings.
- Provide probable construction cost estimates for recommended improvements.
- Provide support during Bidding and Construction Phases.

Wastewater Collection System

- Review current conditions of the resort's wastewater collection system.
- Obtain topographic information for newly developed areas and incorporate this information into the existing aerial topographic survey.
- Obtain an as-built survey of the wastewater piping (approximately 3,500 feet of gravity piping) and incorporate this information into the existing aerial topographic survey.
- Develop an existing conditions hydraulic capacity report.
- Procure pipeline cleaning and inspection subcontractor.
- Provide support during Cleaning and Inspection Phases.

Potable Water Distribution System

- Review current conditions of the resort's potable water distribution system.
- Obtain topographic information for newly developed areas and incorporate the information into the existing aerial topographic survey.
- Obtain an as-built survey of the water distribution system and incorporate the information into the existing aerial topographic survey.
- Develop hydraulic models for both existing and proposed conditions.
- Develop a domestic water distribution system master plan for the resort and villa expansion program.
- Provide a concept plan to manage the resort's water distribution system for both the existing and the proposed developments.
- List recommended improvements to the resort's water distribution control system, then develop a comprehensive domestic water distribution system corrective action program, including documentation for each recommendation.
- Provide probable construction cost estimates for recommended improvements.

Roadway Extension

- Obtain strip topographic information for existing and proposed roadway alignment and incorporate this information into the existing aerial topographic survey.
- Develop design documents for structural concrete paving, stormwater drainage, power, water, sewer, and cable TV systems.
- Provide support during Bidding and Construction Phases.

