Re-Engineering a Resort Shoreline: Half Moon, Jamaica

Kevin R. Bodge, PhD, PE

Olsen Associates, Inc.
Jacksonville, Florida
N-NW storm waves

6,800 feet

Prevailing Winds, Seas, and Current
2014

• Eroded beach; no continuous shoreline.
• Non-functional groins & breakwaters; active seawalls.
• Degraded dolphin swim area.
• No connection (path) along the oceanfront.
Existing

WAVES

WAVES DIFFRACT AROUND END OF STRUCTURE AND ERODE THE SAND

INTERFACE WITH SEA IS BACKWARDS

UPLAND (LAWN)

Proposed

WAVES

INTERFACE, WITH SEA IS NATURAL

SPUR GROWS PULL THE SHORELINE SEaward & OPEN IT TO SEA

UPLAND (LAWN)

THOSE BECOME MOSTLY BURIED
Prototype Example:

One&Only Reethi Rah Resort, Maldives (2004)
Pre-Improvement Shoreline

Prototype Example:

One&Only Reethi Rah Resort, Maldives (2004)
Recommended max limit of structures
Recommended max limit of structures
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Key Features:

- Demolish oceanfront buildings & seawalls;
- Re-build landward.
- Re-configure coastal structures; add beach fill
- Keep existing shoreline location;
- Expand beach into upland.

- Connect shorefront with a continuous promenade.

- Raise the upland site elevation by 4+ ft;
- Raise bottom floor elevations.

- Modify stormwater; route overflow pipes through groins.
PHASE 1 CONSTRUCTION
2017 - 2019
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New Shorefront Promenade

Oceanfront Development (Demolish)

Phase 1
Construction: West End

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New Shorefront Promenade

DEMO/EXCAVATION

SAND FILL

GROIN RE-CONSTRUCTION

ELEVATION (Meters, MSL)
Phase 1 Construction – East End

Oceanfront Grade & Rip-Rap (Demolish)

New Shorefront Promenade
Phase 1 Construction – East End

Oceanfront Grade & Rip-Rap (Demolish)

New Shorefront Promenade

NO SAND FILL REQUIRED ON SUNRISE BEACH
Phase 1 Construction – East End

Oceanfront Grade & Rip-Rap (Demolish)

New Shorefront Promenade
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With special acknowledgement to
HALF MOON RESORT and
HART HOWERTON