

## CASE STUDY

# The Rooftop at Riverside Selects Garrison's Hammerhead™ Aluminum Flood Log System



#### Introduction:

The Rooftop at Riverside, a newly constructed luxury bar and restaurant complex in downtown Bonita Springs, FL, is built in a known flood zone, according to FEMA maps. Phoenix Associates, the project's main contractor, partnered with Garrison Systems to protect this newly constructed high-end structure. This case study delves into the rationale, implementation, and the ensuing outcomes of their decision.

#### **Background Information:**

Nestled near the serene Riverside Park, The Rooftop at Riverside incorporates the laid back charm and vibe of "key west" style architecture. Unbeknownst to passersby, this building has been constructed to meet the most up-to-date standards for hurricane proofing. The building itself is a concrete structure that is clad with simulated clap board to evoke the tropical feel, yet meeting rigorous local codes. One would think, looking at the building, that it was a classic wooden tropical structure.

The site features a prominent central two-story upscale bar, a designated area for food trucks, and a dedicated building for restrooms and storage facilities. The Rooftop is expected to hold events, live music performances, and be a central downtown entertainment venue and hub for local Bonita Springs residents.



#### The Challenge:

Being in a designated flood zone, The Rooftop at Riverside grappled with the dual challenge of maintaining its unique architectural look and feel, while adhering to local construction codes and <u>FEMA's Technical Bulletin 3</u> for dry floodproofing standards. Phoenix Associates, the architects and property developers of The Rooftop, emphasized the importance of making the flood barrier support posts both visually appealing and compatible with the width of the decorative molding planned for all openings. Furthermore, the contractor wanted the system to be easily deployed by untrained personnel and compactly stored when not in use. The contractor also wanted the flood barrier supplier to install the flood panels and posts, making sure all was done according to the manufacturer's instructions.

### **Solution:**

Phoenix Associates sought bids from multiple flood barrier manufacturers and evaluated several potential systems. Garrison's Hammerhead $^{\text{TM}}$  flood-log system was selected as the best choice in terms of aesthetics, degree of protection offered, ease of deployment, and price point.

Strategically integrated within the building's design, the Hammerhead™ posts became a part of the structure's aesthetic appeal, aligning perfectly with the molding that surrounds each opening. In total, 14 large openings, on two buildings, were fortified using the Hammerhead™ flood log system. Each fully installed section is specifically designed to withstand the anticipated hydrostatic loads, the impact of debris, and the long-term effects of being deployed in a marine environment. The system has been run through extensive FEA (Finite Element Analysis) engineering testing to confirm its capabilities.

Garrison's flood tech installers visited the Bonita Springs location and spent two days on- site. During their visit, they installed and mounted the Hammerhead<sup>TM</sup> posts, caulked and sealed the connection points, and demonstrated the proper placement and deployment of Hammerhead<sup>TM</sup> flood logs. Once completed, sections were dismantled, leaving just the support posts in place on the building.

The planks' compact storage ensured that flood logs can be discreetly tucked away and ready for deployment when the next storms occur.



#### **Garrison's Hammerhead™ Aluminum Flood Plank System:**

Garrison's Hammerhead $^{\text{TM}}$  system stands out from the competition due to its unique combination of style and safety features.

- **Customization:** Flood barriers are custom fabricated to fit specific openings, ensuring a good fit and seamless protection.
- Durability: Hammerhead™ utilizes a robust plank and post system made from top-grade 6063 T-5 aluminum. This carefully constructed design ensures durability and strength, providing maximum resilience against floodwaters and debris.
- Mechanism: The design of the system involves U-Channel posts
  positioned on both sides of each opening. Flood logs are then slid
  into the U-Channel posts, stacked, and tightened against neoprene
  seals to ensure a watertight fit.
- Reliability: Hammerhead<sup>™</sup> meets the requirements outlined in FEMA's technical bulletin 3 for dry floodproofing, as well as the local building codes and cost guidelines. This makes Hammerhead<sup>™</sup> a reliable and compliant choice.

#### **Conclusion:**

With the Hammerhead™ system in place, The Rooftop at Riverside is protected against potential Gulf Coast hurricanes and expected future flood conditions.

Beyond tangible security benefits, there's a newfound confidence among all stakeholders, knowing that the venue's architectural charm remains uncompromised while still being shielded against nature's fury.

The Rooftop at Riverside's collaboration with Garrison Flood Control Systems showcases a pioneering approach to property protection in flood-prone regions. It's a testament to the idea that safety and aesthetics can coexist, and one doesn't have to be sacrificed for the other. This installation is an example for future construction projects, especially in zones vulnerable to flooding, emphasizing the balance of design with disaster planning and readiness.



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