The IP and Beau Rivage Casinos

Presented by Henry R. Seawell, III, P.E.
Chairman / Principal – Thompson Holdings, Inc.

April 21, 2017
The Beau Rivage and IP Casinos

“Things Are Not Always What They Appear”
Brief History of Gaming in State of Mississippi

• 1990 Mississippi Gaming Control Act
• Counties on River and Gulf (Dockside Riverboat Gaming)
• Regulations Written by Gaming Attorneys – Ambiguous and Confusing
Boat in a Moat on River Counties

- First Major Interpretation and Guidance by MGC
- Floating Dockside Casinos “south of the three southern counties” remained the MGC position
River System Hydrology Used by MGC in Evolving Regulations

**BOAT IN A MOAT SOLUTION**

- **Max Flood Water Elevation (55 FT GUAGE)**
- **Navigable Water Elevation**
- **25 Year Flood Protection Level (After Basin Closure)**
- **Entry Excavation Level**
- **Low Water (Zero Foot Guage)**
- **Mississippi River**

**Floating Casino**
**Pre-Existing Grade**
• In 1991 the Mississippi Supreme Court rejected as too restrictive the obsolete “steamboat carrying two hundred bales of cotton” definition of navigability found in Miss. Code § 51-1-1.

• Instead, a water body is “navigable in fact” if it can be navigated by “loggers, fishermen and pleasure boaters, and that oxbow lakes that were formed by navigable rivers or public waterways are public waters.
The Beau Rivage and the IP
Solicits design and construction to build a conventional moored floating casino that moves with the tide
Steve Winn - Golden Nugget / Mirage - 1995

- Solicits Design Competition by several Design/Build Groups
- Challenge – “It must float but not move much with the tide – preferably not at all!”
Factors Affecting Design Solution

MISSISSIPPI SOUND
(GULF OF MEXICO)

WAVE HEIGHT (+20' MSL)

100 YEAR FLOOD

LOW WATER (-3')

FLOATING CASINO
(LITTLE OR NO VERTICAL MOVEMENT)

LANDSIDE FACILITIES

DOCK
Beau Rivage Solution

- Using our Offshore Experience, we conceptualized the World’s Largest Semi-Submersible Substructure for the Beau Rivage
- Conventional mooring by original design for the IP
Design / Build Team – Beau Rivage

- Paul Steelman
- W.G. Yates Construction
- Thompson Engineering
- Charles Gower & Associates
Barge Truss Substructure

FEA Half Model Isometric
BP Thunder Horse Production Drilling Quarters
Topside Platform: 145,000 sq ft deck plan area
Case History – IP

- Original contract $350 million casino hotel resort
- 1,200 hotel rooms
- 2,000 car garage
- Category 3 hurricane moorings / 15 ft storm surge designed for floating casino
Final Report: Feasibility / Alternatives Analysis

Mississippi Ad Hoc Gaming Committee
Mississippi Department of Marine Resources

November 4, 2004

Presented By:
Thompson Engineering
Henry R. Seawell, III, P.E.
Pre-Katrina Casino #1 and #2
Only the Beau Rivage and the IP Remained Undamaged
After Katrina
The Next Challenge:

- Bring the IP Casino up to current House Bill 45 allowed land-based or fixed base status
- Solicit design competition
- Client-specified design requirements
Client-Specified Design Requirements

- Do all of the work without any cessation or interruption of business operations
- Remediate corroded barge and bulk system
- Dry-dock the casino in a graving dock for semi-permanent mooring
- Preclude future tidal movement of barges, except during hurricane surges
- Upgrade mooring to Category 5
- Minimize or preclude any long-term settlement of dry-docked barge despite listing foundation, extremely soft marine clayey soils in the Bay of Biloxi
We Will Be Discussing Today:

• So how did we do it?
  – System performance and solution-effectiveness to-date
  – Construction photography
  – Work completed to date
  – But first an animation of our construction solution and sequence
Animation of Construction Solution & Sequence
Congratulations to the Design and Construction Team

Engineering News Record’s (ENR’s) 2015 “Best of the Best Specialty Design and Construction Project” and “Texas-Louisiana Region Project of the Year and Best Renovation/Restoration”

- Thompson Engineering
- W. G. Yates Construction
- Ron Frye, Vice-President of Design & Construction, Boyd Gaming
Notable Accomplishments

- **The Beau Rivage**
  - Largest semi-submersible floating structure ever built
  - Sustained Hurricane Katrina without structural damage

- **The IP**
  - Largest continuous underwater casting of concrete in the world, at the time
  - Zero interruption of client’s business operations during the project
  - Zero net change orders
  - Accomplished at a cost of less than 30% of a new facility (if land were available)
  - No future settlement will occur under dry dock conditions
  - It worked precisely as conceptualized and designed
  - It won the Engineering News Record’s (ENR’s) 2015 “Best of the Best Specialty Design and Construction Project” and “Texas-Louisiana Region Project of the Year and Best Renovation/Restoration”
Lessons Learned

- Design-build preferred delivery method for this type of project
- Internal review of every stage of design development critical – ongoing “brain drain” sessions
- Engage the best experts for peer review of all new, unproven concepts considered
- Insist on a fair fee for the value of services delivered
- Welcome an engaged, sophisticated client
Questions & Answers