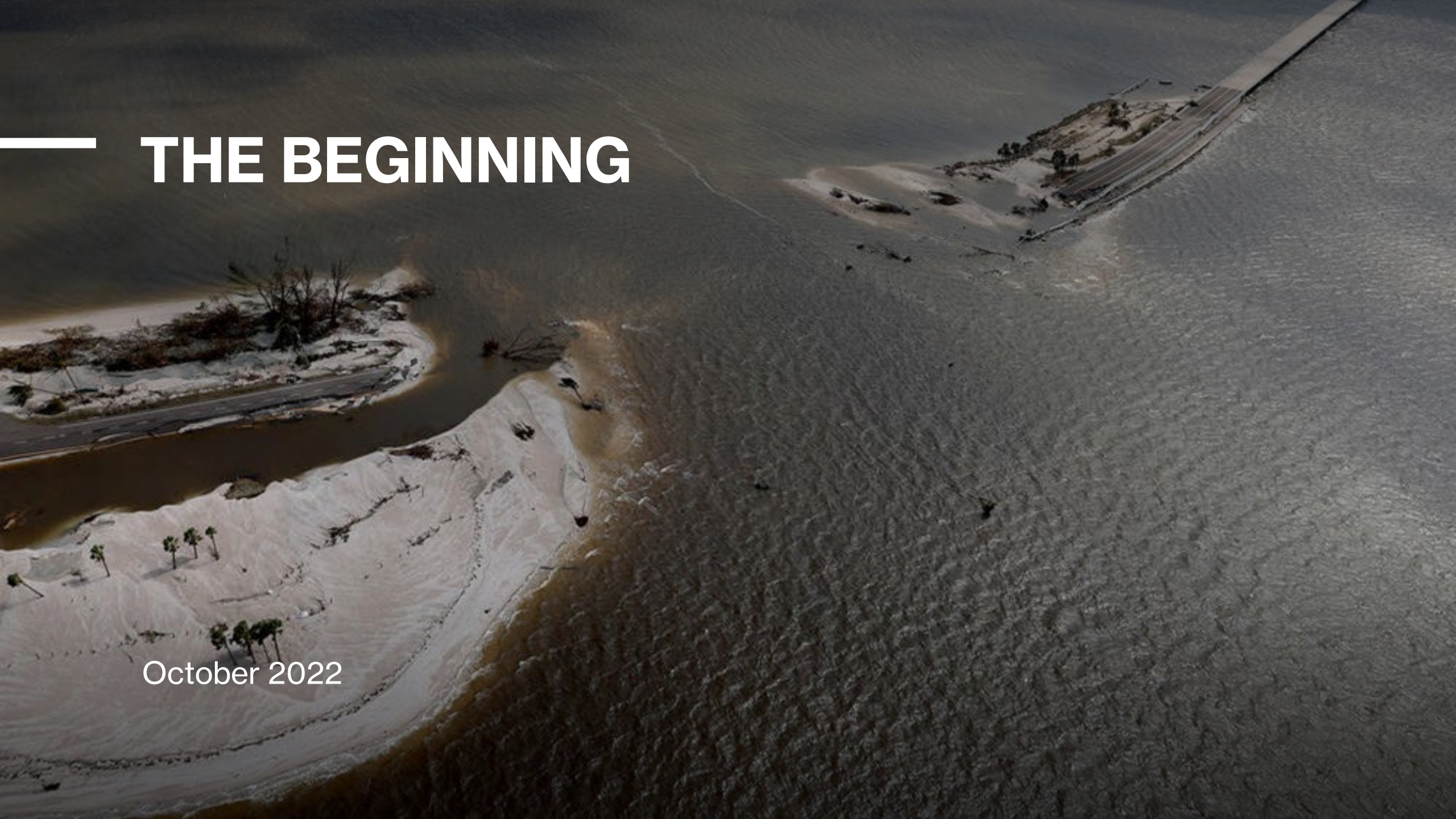
# SANIBEL CAUSEWAY RESTORATION

Kiwanis Update | November 2023



# THE BEGINNING

October 2022


Temporary Roadway

# PROGRESS


Cranes placing king pile


Seawall installation

# BRIDGE APPROACH SLAB CONSTRUCTION

# 1 - EXCAVATE THE OLD


# 2 - FRAME SECTION & PLACE REINFORCING REBAR

# TWO LAYERS OF INTERLOCKING REBAR

# 3 – FILL WITH HIGH EARLY STRENGTH CONCRETE

# 4 - FINISH THE SLAB

# Several New Resiliency Features

- Several layers of protective sheet pile walls
  - **Island walls** to protect the causeway islands roadway
  - **Sea walls** to protect the bridge approaches
  - **Retaining walls** to protect the sides of the bridges
  - **King pile walls** to wrap around the bridge abutments

Newly installed island wall

# PROTECTING THE BRIDGE

A retaining wall will protect the sides of the bridges.

**Each portion of the retaining wall also requires a concrete cap.**

This work is underway.

Building frames for retaining wall caps

# PROTECTING THE WALLS

Each wall has a protective concrete cap that is formed and then poured.

Lots of concrete delivery – **currently underway**

Newly capped island wall

# PROTECTING THE BRIDGE ABUTMENTS

- Large “King” pile sheets are driven 50’ under the water’s surface to protect the bridge abutments
- Held in place by a template while driven into the ground
- King pile installation is complete

Template holding king pile for installation

# FURTHER PROTECTION

- A bathymetric (water-based) survey was performed in September to determine placement of the armor stone.
- Granite “armor stone” from Georgia and Alabama will provide further protection of the bridge abutments.
- **Armor stone deliveries will continue for several months.**

Bathymetric Survey vessel


Armor Stone


# ARMOR STONE PLACEMENT

# PROTECTING THE SHORELINE

- Marine mattresses made of small rocks held within a framework will absorb wave energy to protect the bridge and shoreline
- As the mattresses fill with silt they support plant life and become habitat – providing further resilience
- **Crews are currently filling the marine mattress frames.** This will continue for several weeks


Empty marine mattresses


Filled marine mattresses

# PROTECTING THE ROADWAY

- A drainage structure between the bridge and the retaining wall will protect the roadway from high water.

- Sea water will drain off the road and be filtered here before returning to the Gulf.

# Timeline

- Anticipated substantial roadway completion – end of 2023
- Water work (bridge protection) estimated completion – early 2025
- Causeway islands recreation areas restoration – estimated completion – late 2027