



Gasparilla Island Bridge Authority
c/o Cella Molnar & Associates, Inc.
1631 Hendry Street
Fort Myers, FL 33901

Design of South and Center Bridges

Gasparilla Island Bridge Authority

Please join us for a public information workshop!

Date: Tuesday, December 7, 2010

Time: 11 a.m. - 2 p.m. or 3 - 6 p.m.

**Place: Lighthouse United Methodist Church
325 3rd St. West, Boca Grande, FL**

(please attend anytime during these "open house" hours)

www.GIBA.us

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Newsletter #1

December 2010

History of Existing Bridges

The three bridges and the causeway were built from 1952-1958 by a private developer and the causeway opened to traffic in 1958. In 1998, the Gasparilla Island Bridge Authority, or GIBA, purchased the toll plaza, the causeway and the three bridges. GIBA took over operations and maintenance of the bridges including routine inspection, maintenance and repairs.

In 1997, an engineering study determined that \$2.5 million in bridge repairs and renovations were required to bring the bridge system into a "safe and reliable condition". The first of the renovations was made in 1998, totaling \$1.2 million to repair the swing bridge.

Next came \$1.3 million in major structural repairs for the two fixed bridges, adding new fiberglass pile jackets to protect the concrete pilings. In 2004 tests were completed to determine the piling lengths and the overall condition of the bridges. The tests concluded there was high chloride contamination in the concrete. The tests also showed that for both bridges, a particularly strong storm current could wash away the sand and sediment at the base of the pilings.



In 2005, tests including additional soil borings, salt intrusion tests and studies of the bridges' load capacities were completed. The south bridge was shown to be the most critical in a storm surge with the pilings the least embedded of all of the bridges. The strong water current has removed up to 14 feet of soil around the pilings since the south and center bridges were built.

From these tests in 2005, it was determined that all of the bridges needed to be replaced within 7-15 years. In 2010 GIBA took steps to reduce the stress on the bridges by lowering the speed limit to 20 MPH and installing speed bumps to slow traffic on the bridge approaches.

Why Replace the Bridges?

It is now time to replace the bridges. Bridges such as these which were designed in the 50s, have a lifespan of approximately 45 to 50 years. This bridge was built where saltwater and strong currents cause what is known as "scour". Bridge scour is the removal of sediment such as sand and rocks from around bridge abutments and pilings. Scour, caused by swiftly moving water, can scoop out holes in the bay bottom, compromising the integrity of the bridges. The south and center bridges are at "scour critical" conditions. As the concrete degrades, saltwater can infiltrate the pilings, deteriorating the reinforcing



steel structure as shown here. Today we have improved technology and materials for bridges built in this environment. New designs also have more safety features such as wider shoulders.

Advantages of New Bridges

There are multiple advantages to new bridges. As mentioned, new design standards promote improved safety. New materials, such as concrete with “salt resistant” properties, give bridges built today a life span of 75 years or more. Raising the bridges above the splash zone reduces saltwater impacts and gives more clearance for boaters. New bridge design also gives pedestrians safer access between Boca Grande and Boca Grande North.

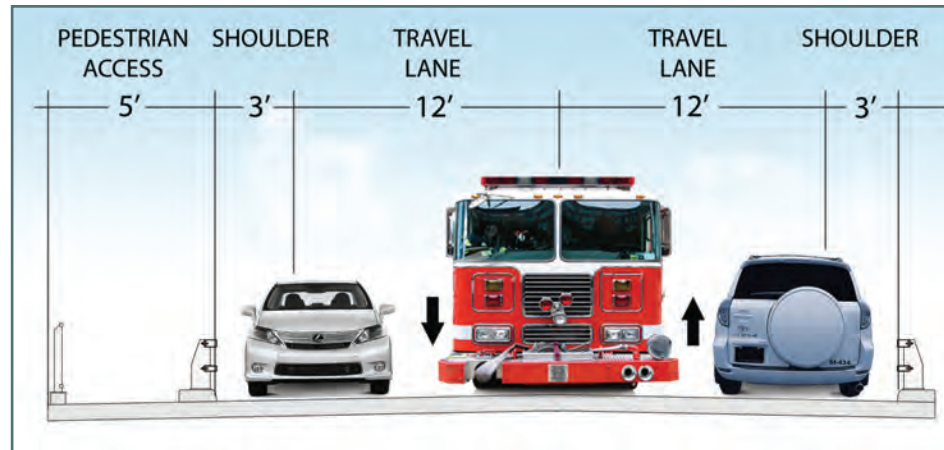


Proposed pedestrian access on south bridge

What the new bridges would look like

Proposed South Bridge

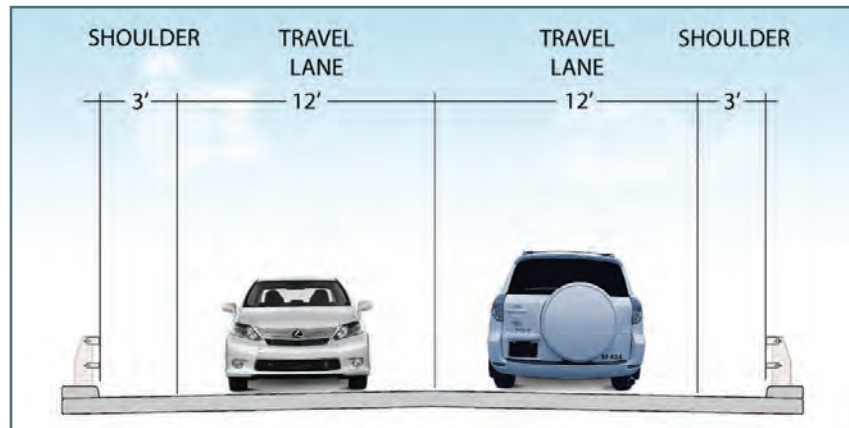
The typical section for the proposed south bridge is shown to the right. It would have two, 12-foot lanes and three-foot shoulders on both sides. In addition, the proposed south bridge would have a barrier separated, five-foot pedestrian access on the west side, connecting Boca Grande to Boca Grande North. The picture shows that with 30 feet between the barrier walls, motorists can move onto the shoulders leaving ample room for emergency vehicles to pass.



Typical section for south bridge allows safe 24-7 emergency vehicle access

Proposed Center Bridge

The typical section for the center bridge is shown below. There will be two, 12-foot lanes and three-foot shoulders on both sides. The center bridge also allows safe passage of emergency vehicles.



Typical section for center bridge

Sequence of Construction

A temporary bridge will be constructed adjacent to the existing south bridge and traffic will be shifted to this temporary bridge. The existing south bridge would be demolished and a new bridge would be constructed in its place.

A new center bridge would be constructed adjacent to and east of the existing bridge. Then the existing bridge would be demolished.

Proposed South and Center Bridges



Proposed south fixed bridge



Proposed center fixed bridge

The new bridges will be raised to provide additional clearance for boaters.



Example of Wyoming Railing

View from the Bridges

GIBA understands the value of the special water view to the residents and visitors to Boca Grande. The proposed Wyoming 2-tube railing shown in the photo gives motorists the best possible view. This railing would be used on both the south and center fixed bridges.

What's Next?

Following this workshop, the project team will continue design of the new bridges. There will be another public information workshop once the design has reached 60% completion, which is scheduled to be in April 2011. The design of the new fixed bridges is expected to be complete in Summer 2011.

For more information on the project, please contact the public information consultant:

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