

Gasparilla Island Bridge Authority

Design Update for the South and Center Bridges
Public Information Workshop
December 7, 2010



History

- Bridges and causeway built 1952-1958
- GIBA took over operations and maintenance of the bridges, causeway and toll system in 1998
- Routinely inspected
- Ongoing maintenance
- Repairs made whenever needed



Evaluation and Repair History

- **1997** Comprehensive “due diligence” engineering study concluded \$2.5 million in bridge repairs & renovation required to bring the bridge system into “*safe & reliable condition*”
- **1998** Purchased toll & causeway system in 1998 knowing extensive repairs were needed
- **1998** First & highest priority was \$1.2 million renovation to swing bridge



Evaluation and Repair History

- **1999** Next priority was 2 fixed bridges - performed \$1.3 million in major structural repairs - new fiberglass pile jackets with built-in cathodic protection on all concrete pilings
- **2002** Replaced critical wedge components & installed 4-new drive couplings on the swing bridge



Evaluation and Repair History

- **2004** Piling tests determined piling lengths & bridges overall condition
 - High chloride or saltwater contamination in concrete
 - Bottom soils analysis & determination of piling/bridge structure holding capacity
 - 1956 pilings actual lengths (each piling) short in south bridge vs. traffic load potential
 - Storm “scour” potential: Yes for both bridges



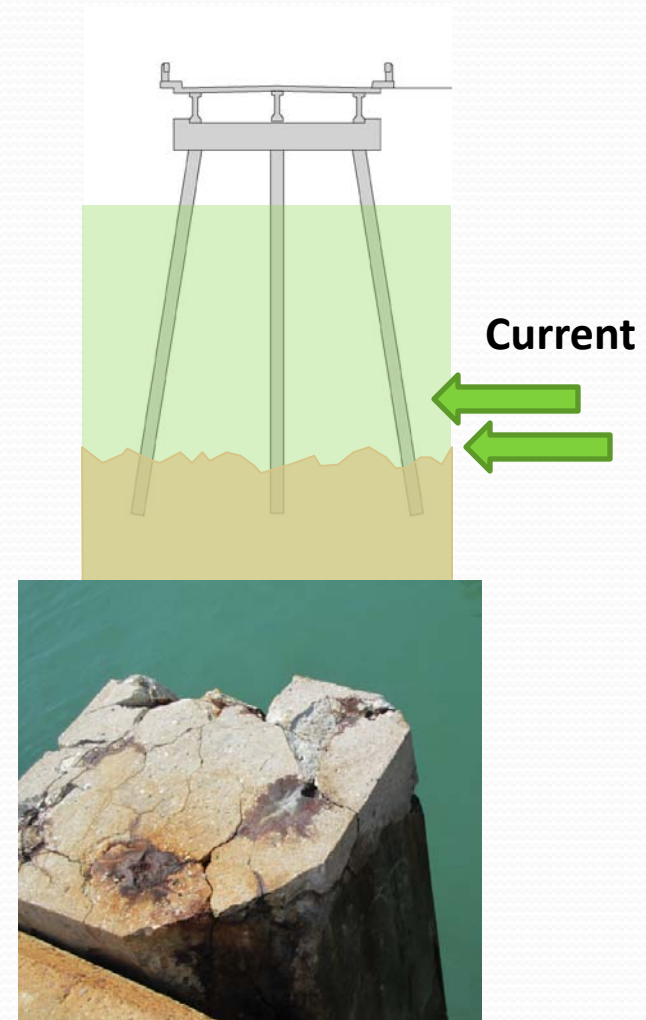
Evaluation and Repair History

- **2005** Finish tests including additional soil borings, salt intrusion tests and studies of bridge's load capacities
 - South bridge *most critical* in storm surge situation, pilings least embedded in bay bottom
 - Currents removed 10 ft. of soil since bridge built
 - **Conclusion: All GIBA bridges need replacement in 7-15 years from 2005**
- **2010** Reduced speed limit to 20 MPH, installed speed bumps to reduce stress on the fixed bridges



Need to Replace the Bridges

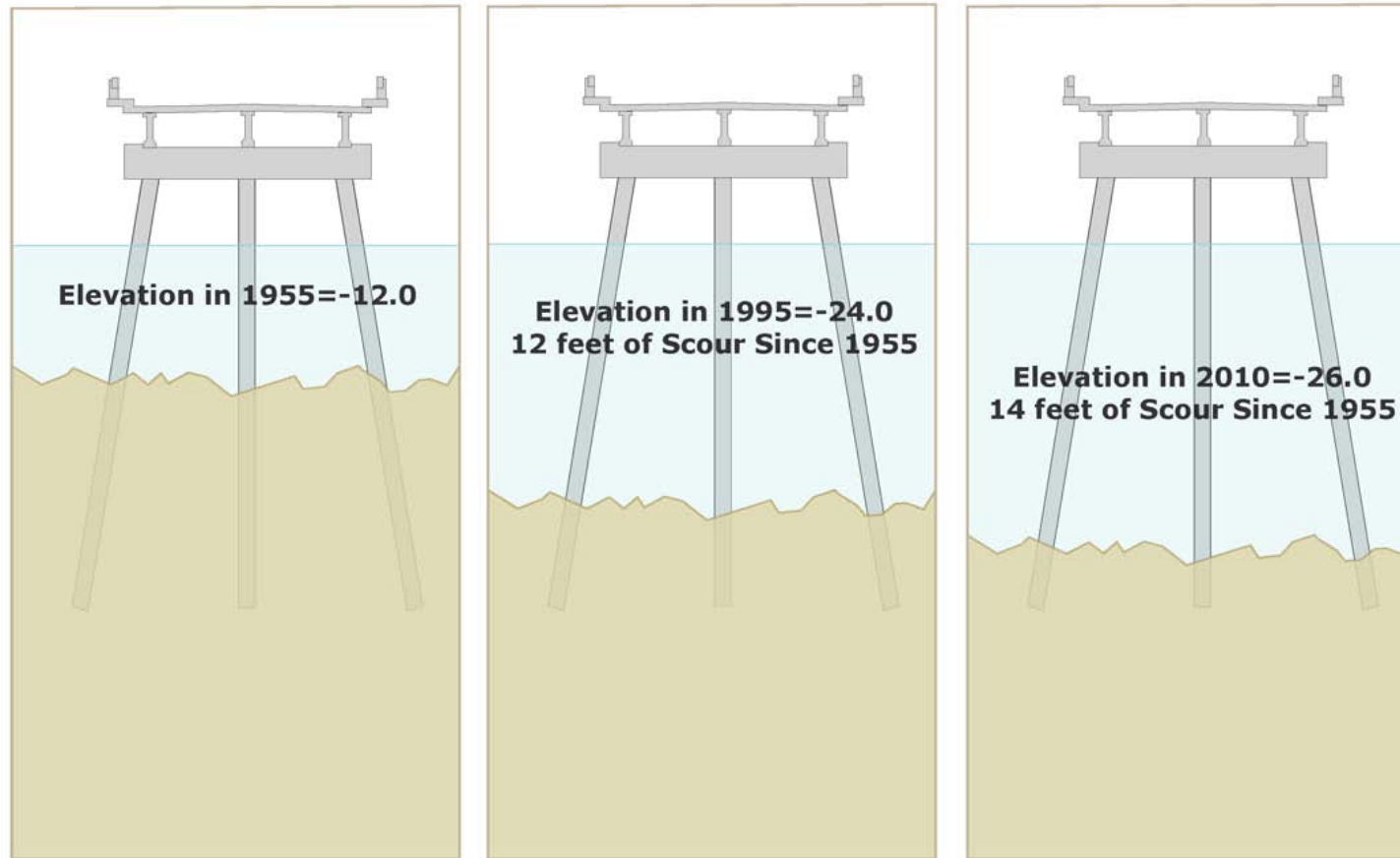
- Lifespan of bridges designed in the 50's = Approximately 45 - 50 years
- Built in a shallow saltwater environment with strong currents that cause "scour"
- Intrusion of saltwater into concrete – deteriorates reinforcing steel
- Type of materials used then – technology has greatly improved
- Functionally obsolete, safety issues i.e. minimal shoulders



Existing Condition - Bulkheads



Bridge Scour History



1955

1995

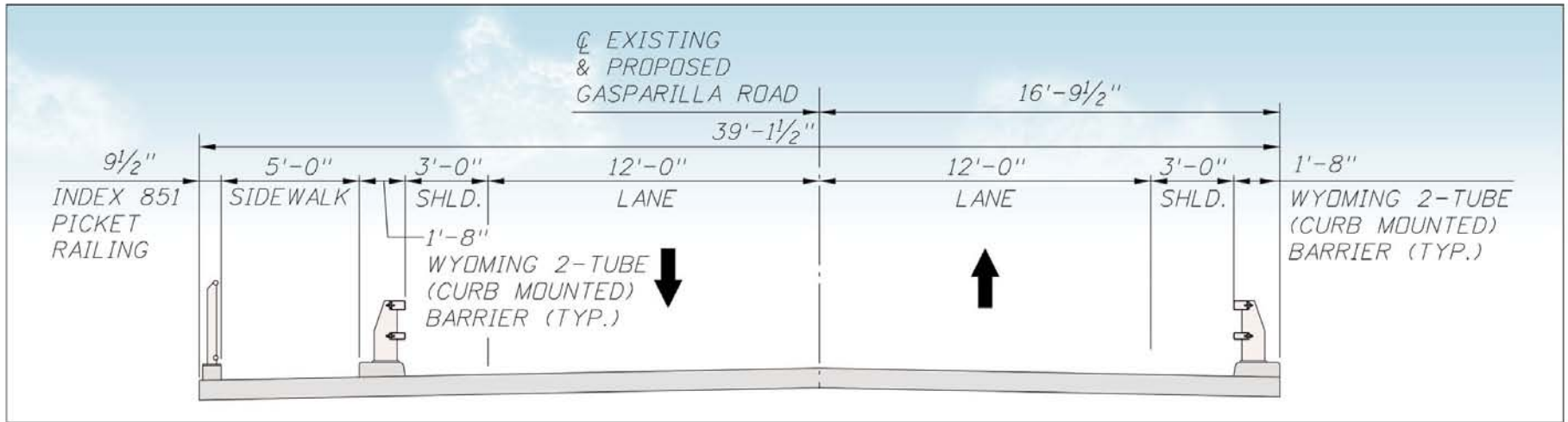
2010



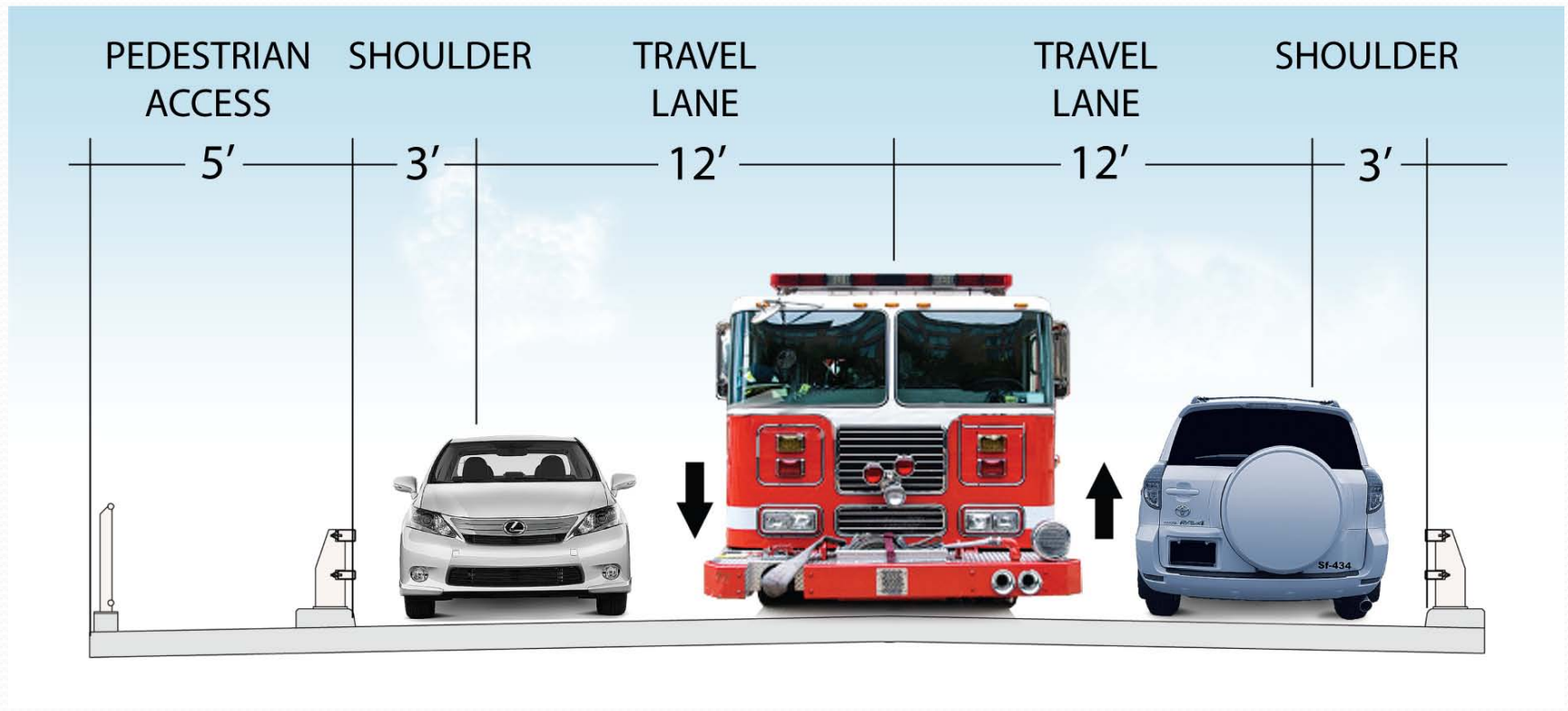
Advantages of New Fixed Bridges

- Improved safety with new design standards (shoulders)
- Latest technological materials – concrete with “salt resistance” properties
- Life span of new bridges = 75 or more years
- Reduced maintenance = cost savings
- Raised up out of the splash zone to reduce saltwater impacts
- Deeper piles
- More clearance for boaters
- Safe pedestrian access between Boca Grande and Boca Grande North
- Speed bumps removed

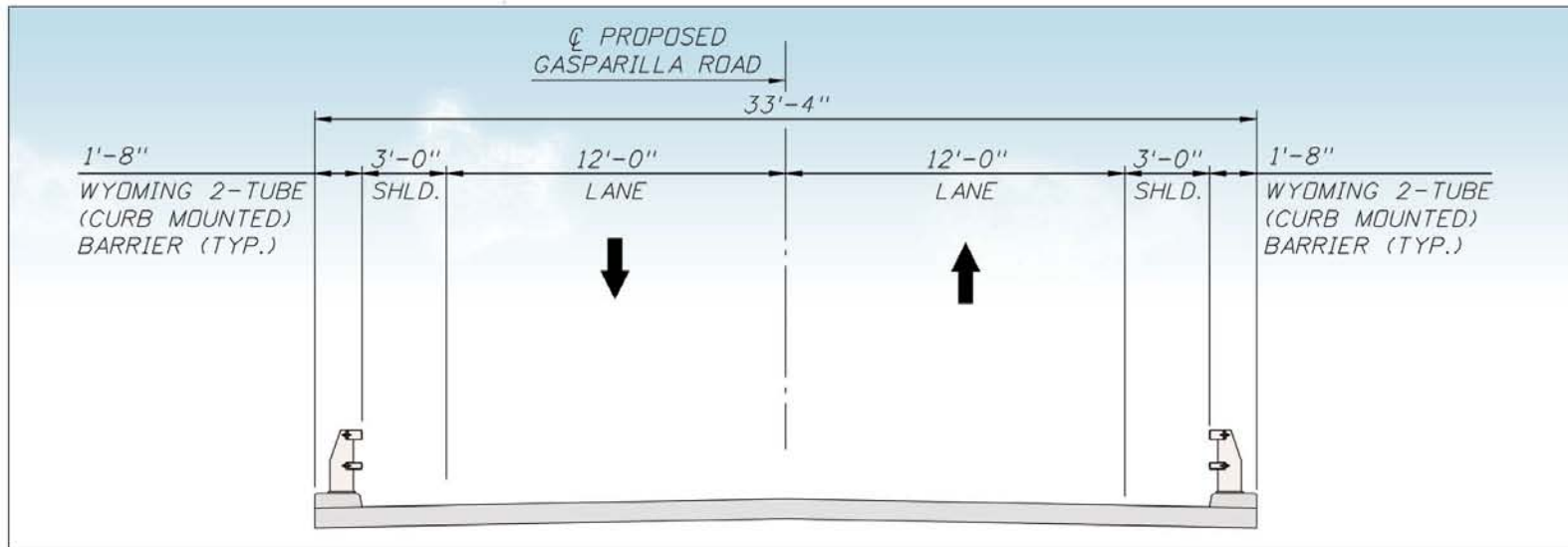
Proposed Bridge Typical Section South Bridge



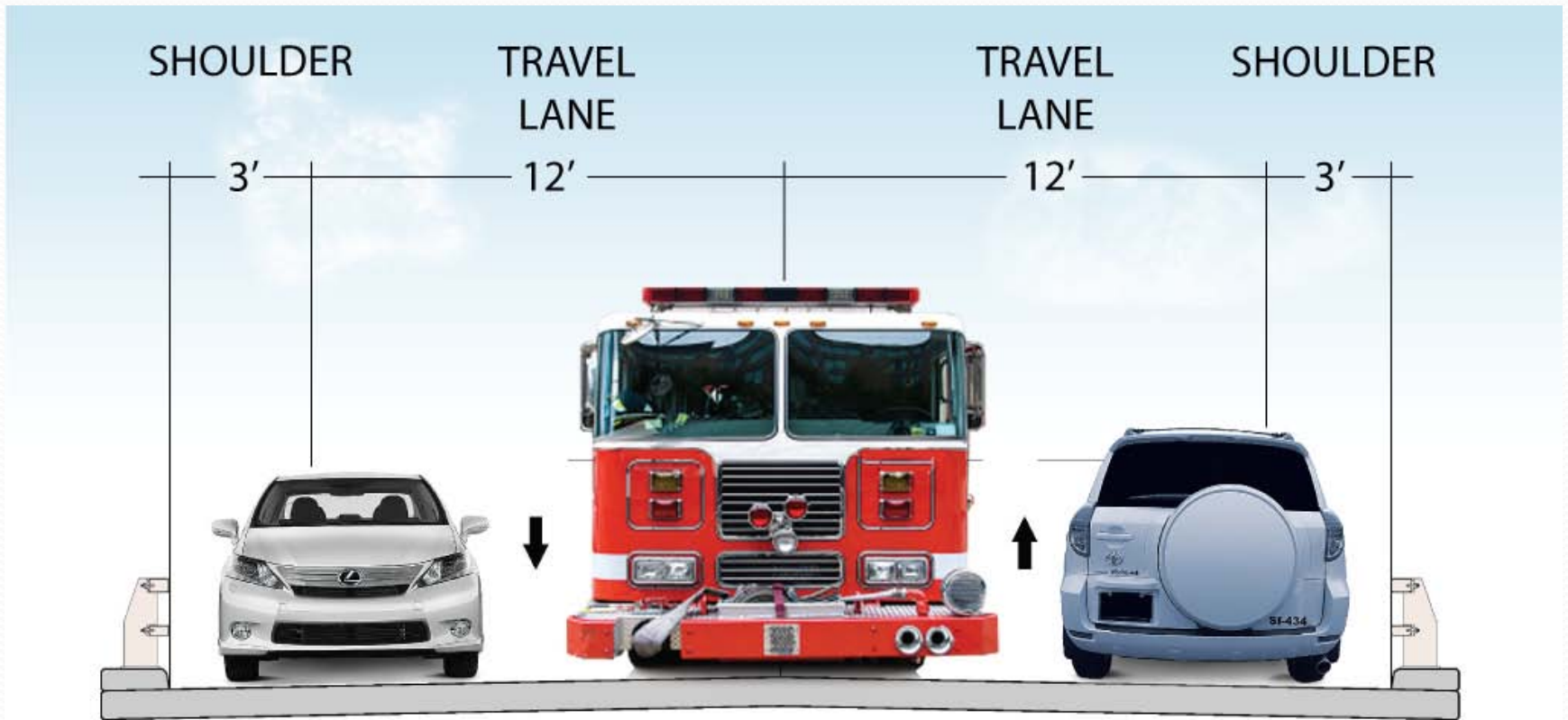
Proposed South Bridge



Proposed Bridge Typical Section Center Bridge



Proposed Center Bridge



Proposed Barrier Style



**Standard FDOT
Corral Shaped
Barrier**



**Proposed
Wyoming 2-Tube
Railing**

South Bridge – Existing and Proposed



Existing vertical clearance = 7 feet



Proposed vertical clearance = 16 feet

South Bridge – Existing and Proposed





Center Bridge – Existing and Proposed

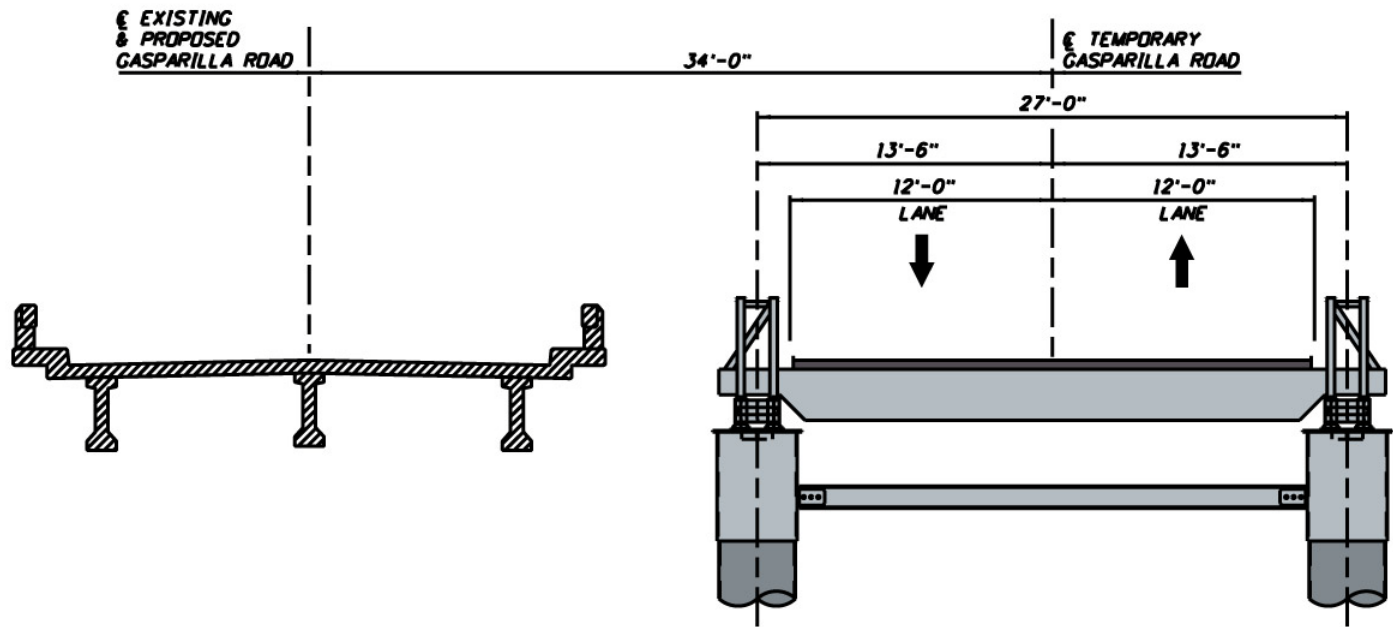


Existing vertical clearance = 15 feet

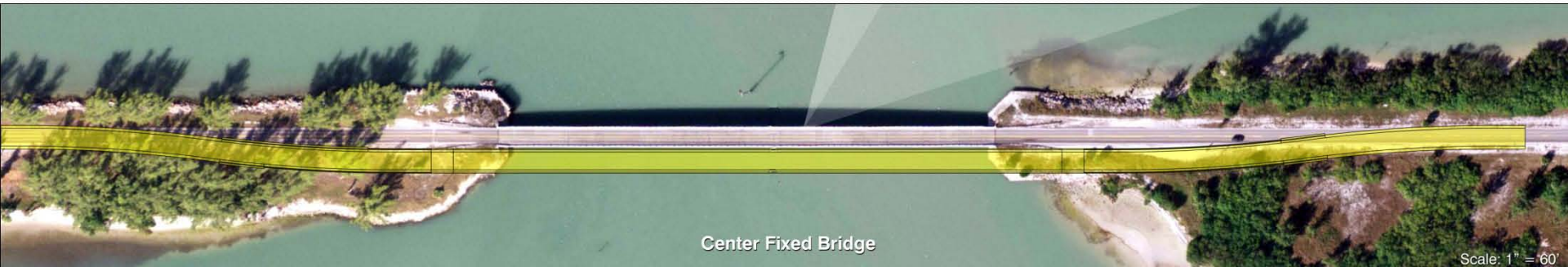


Proposed vertical clearance = 26 feet

Sequence of Construction – South Bridge



Sequence of Construction – Center Bridge



Center Fixed Bridge

Scale: 1" = 60'

What's Next

- Project team continues design after reviewing public comment
- Public information workshop at 60% plans
 - April 2011
- Project design completed Summer 2011
- For more information contact:
 - Jim Cooper, GIBA Executive Director -(941) 697-2271 Ext. 2 jimgiba@earthlink.net
 - Kris Cella, Cella Molnar & Associates – Public Information 1-877-496-1076 kcella@cella.cc
- Visit the web site to download the handout:
www.GIBA.us



Your Comments Are Important!

- Comment forms are provided in your brochure and on the comment tables
- Drop your form in one of the comment boxes provided at this meeting
- Mail your comment to preprinted address on back of the form
- Email your comments to Kris Cella, Cella Molnar & Associates, Inc. Public Information Kcella@Cella.cc



Thank You for Attending the Public Information Workshop for the Design of the South and Center Bridges!

- Please review the displays
- Project team members are available to answer your questions
- This completes the presentation

