



Venetian Causeway Bridge Replacement 30% Public Meeting

April 18th, 2023, 7PM-9PM

Miami-Dade County
Department of Transportation and Public Works





ELECTED OFFICIALS OPENING REMARKS



AGENDA

- Welcome and Introductions
- Meeting Guidelines
- History
- Project Scope
- Project Details
- Project Timeline
- Summary
- Question and Answer



COUNTY PROJECT TEAM

- **Eulois Cleckley, CEO and Director**, Department of Transportation and Public Works (DTPW)
- **Josenrique Cueto, PE, LEED GA**, Deputy Director, DTPW
- **Miguel Soria, PE**, Assistant Director, DTPW
- **Ryan Fisher, PE**, Manager, DTPW Highway Bridge Engineering Division
- **Gabriel Delgado, PE**, Project Manager, DTPW Highway Bridge Engineering Division
- **Lin Li, PE**, Construction Manager – Causeway Section, DTPW Construction Division
- **Satiar Shirazi, PE**, Project Manager, EAC Consulting
- **Enrique “Rick” Crooks, PE**, Principal-in-Charge, EAC Consulting



GUIDELINES

In an effort to maintain a safe and respectable forum, we ask that participants abide by the following guidelines during the designated Q&A portion. Violators are subject to removal from meeting.

- All participants' microphones will remain muted, unless it is their turn to speak
- Raise hand to ask a question
- Profanity or inappropriate language will not be tolerated
- When speaking, be mindful of background noises
- Speaking time is limited
- Violators are subject to removal from meeting



HISTORY



Aerial View of Venetian and County Causeways c. 1930.

Credit: Helen Muir Florida Collection. Special Collections and Archives. Miami-Dade Public Library System.

- Original Causeway built in 1926
- 12 bridges: 10 fixed span bridges and 2 bascule leaf span bridges
- The bridges are designated as historic landmarks by the City of Miami and City of Miami Beach
- Endured numerous hurricanes since constructed
- The bridges are moderately to severely deteriorated and have been repaired numerous times
- Due to new design codes, the bridges do not meet current design and safety requirements

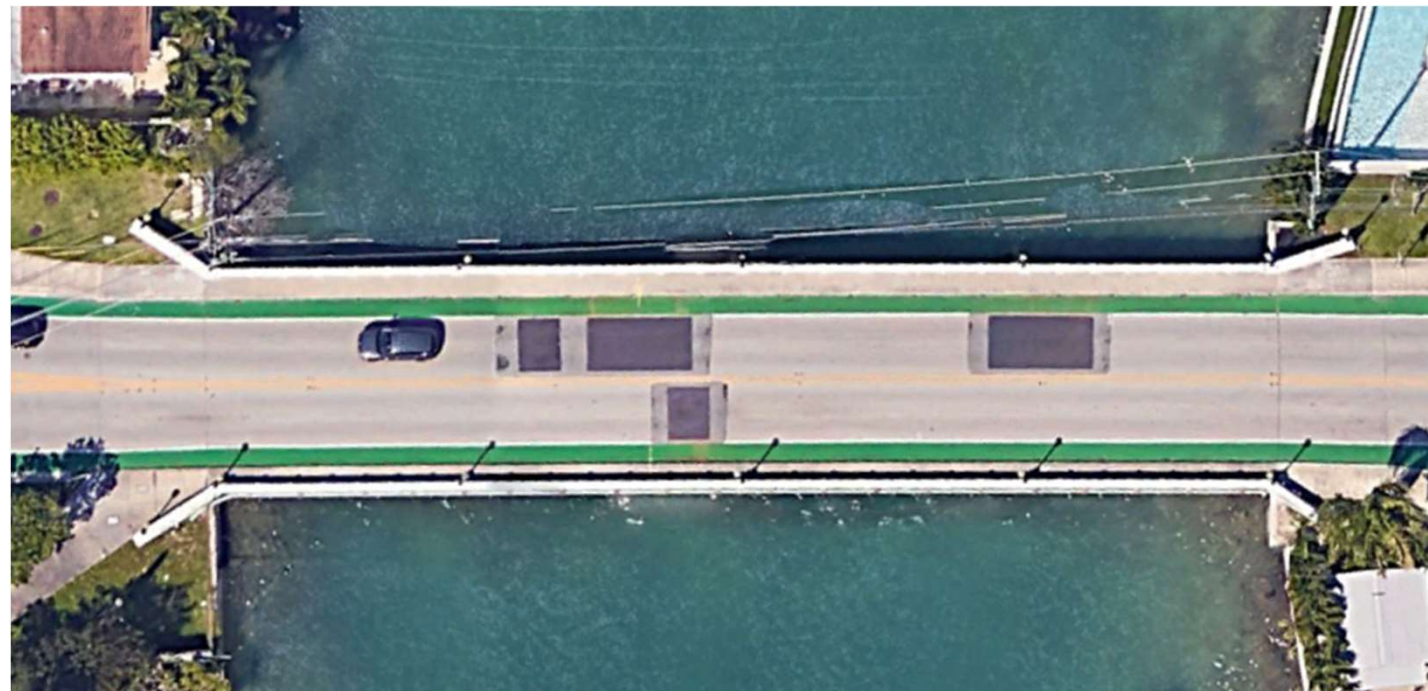


HISTORY

Right: Steel plate covering deck failure



Below: Aerial showing the extent of bridge deck repairs on Bridge 2 connecting Biscayne and San Marco islands.



- Originally built with an anticipated design life of 50 years, the bridges have exceeded their design life by over 40 years.
- The bridges exhibit severe deterioration because of the proximity to the very aggressive marine environment.
- All bridges are Functionally Obsolete (FO). Bridges 2, 3, 4, 6, 7, 8, 10, and 11 are also Structurally Deficient (SD).
- Regular maintenance impacts traffic and is costly. Can be a nuisance to residents and commuters.
- The bridges and approaches are at-risk of hurricane wave loading, storm surges and sea level rise.
- Safety concern, as the Causeway is a hurricane/emergency evacuation route



HISTORY

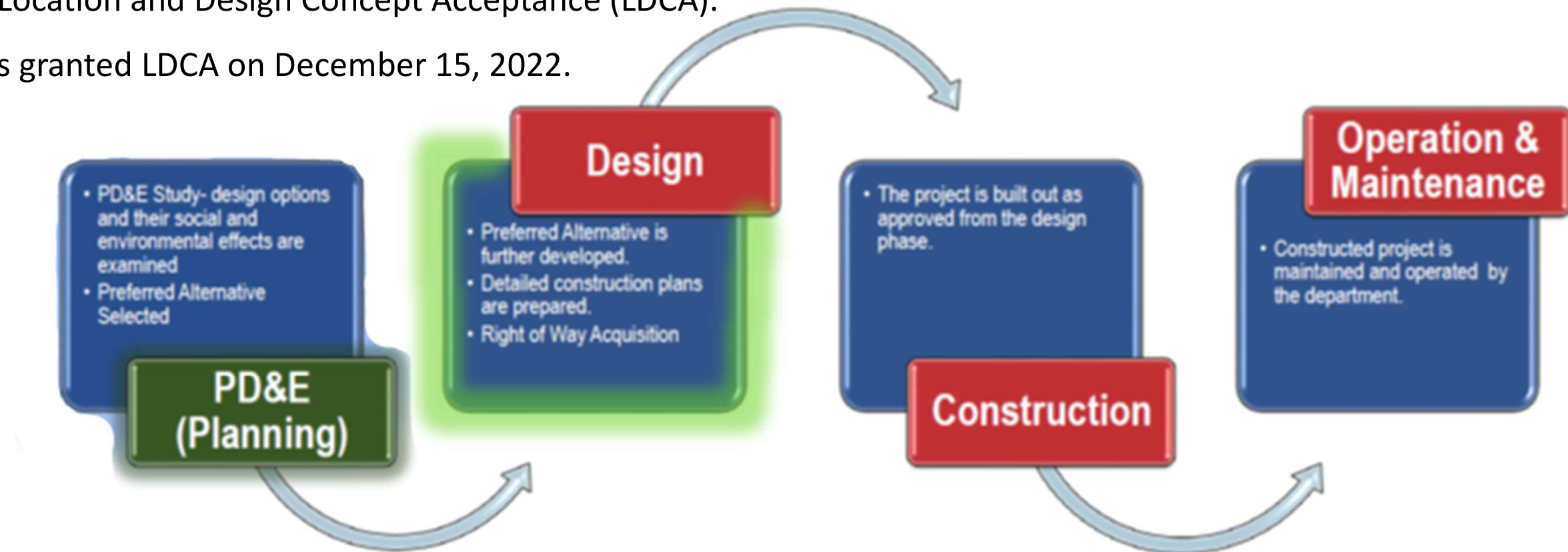
- The Florida Department of Transportation initiated a Project Development and Environment (PD&E) study in 2012.
- A PD&E study is conducted to meet the requirements of the National Environmental Policy Act (NEPA).
- As part of the study, conceptual designs of several build alternatives for bridge replacements and their social, economic, and environmental effects were analyzed.
- Held numerous public meetings during the PD&E study.
 - Public kick-off meeting on June 25, 2014.
 - Alternative's Public Workshop on May 13, 2015.
 - Four Project Advisory Group (PAG) meetings held between 2014 and 2017
 - Four Cultural Resource Committee (CRC) meetings held between 2014 and 2021.





HISTORY

- A PD&E study is finalized when the Federal Highway Administration (FHWA), reviews the documentation and recommendations and provides a Location and Design Concept Acceptance (LDCA).
- This project was granted LDCA on December 15, 2022.



- As a result of the public hearing commitments were made regarding permanent access to the spoil islands, retaining historic character of the bridges, sea-level rise, and pedestrian/bicycle improvements.



PROJECT SCOPE

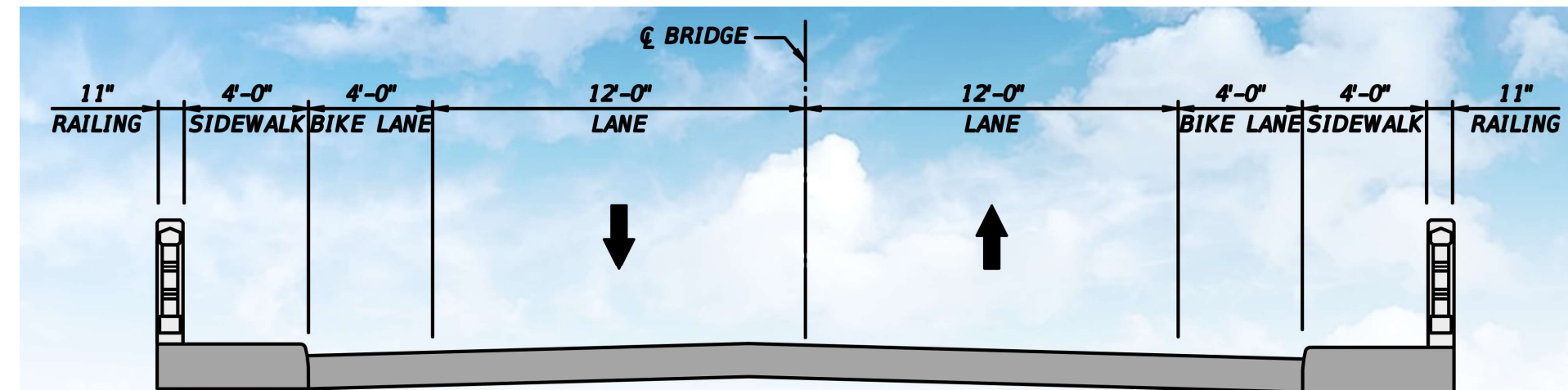


- Replace Bridges 2 through 12 within the Causeway
 - Bridges 2 through 9, 11 and 12 are fixed bridges
 - Bridge 10 is movable
- Provide wider typical section that meets current criteria
- Design takes historic designation into account
- Raise bridge vertical alignments to mitigate against sea-level rise
- Resiliency improvements (not included in the PD&E study)
 - Widen and restore spoil islands
- Major environmental permitting needs currently being coordinated.

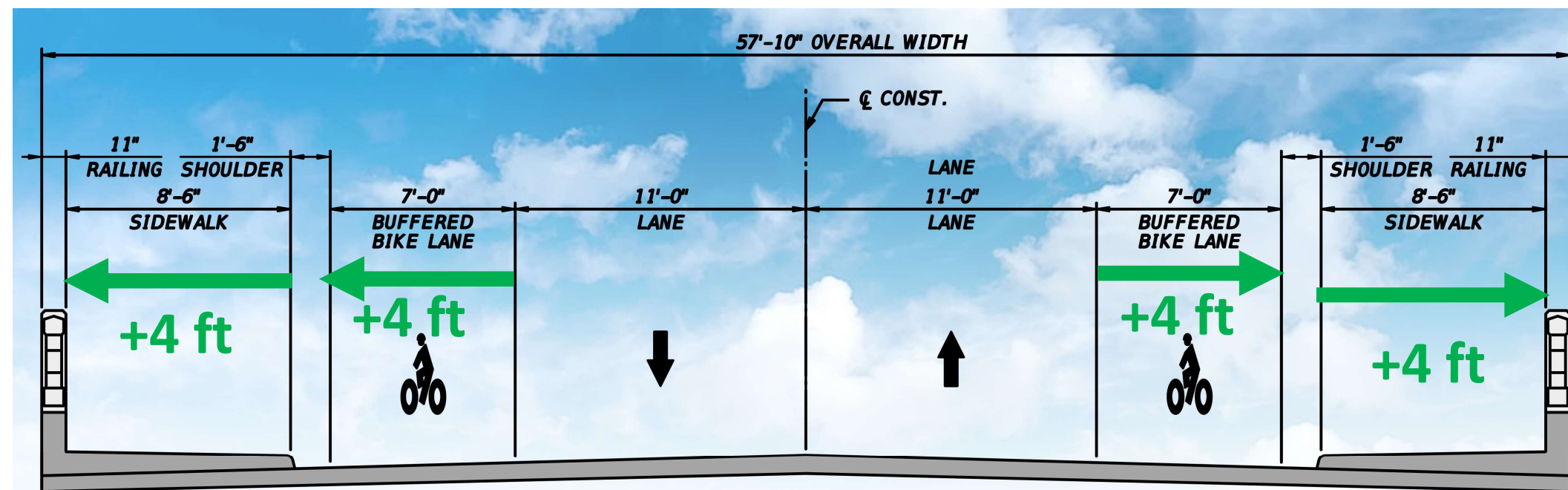


NEW TYPICAL SECTION

- In each direction of travel:
 - 8' sidewalks (4' exist.)
 - 7' separated bike lanes (4' exist.)
 - 11' travel lanes
- Meet the latest safety and design criteria for pedestrians, bicyclists, and vehicles.
- Bicycle separation options under evaluation.



Existing

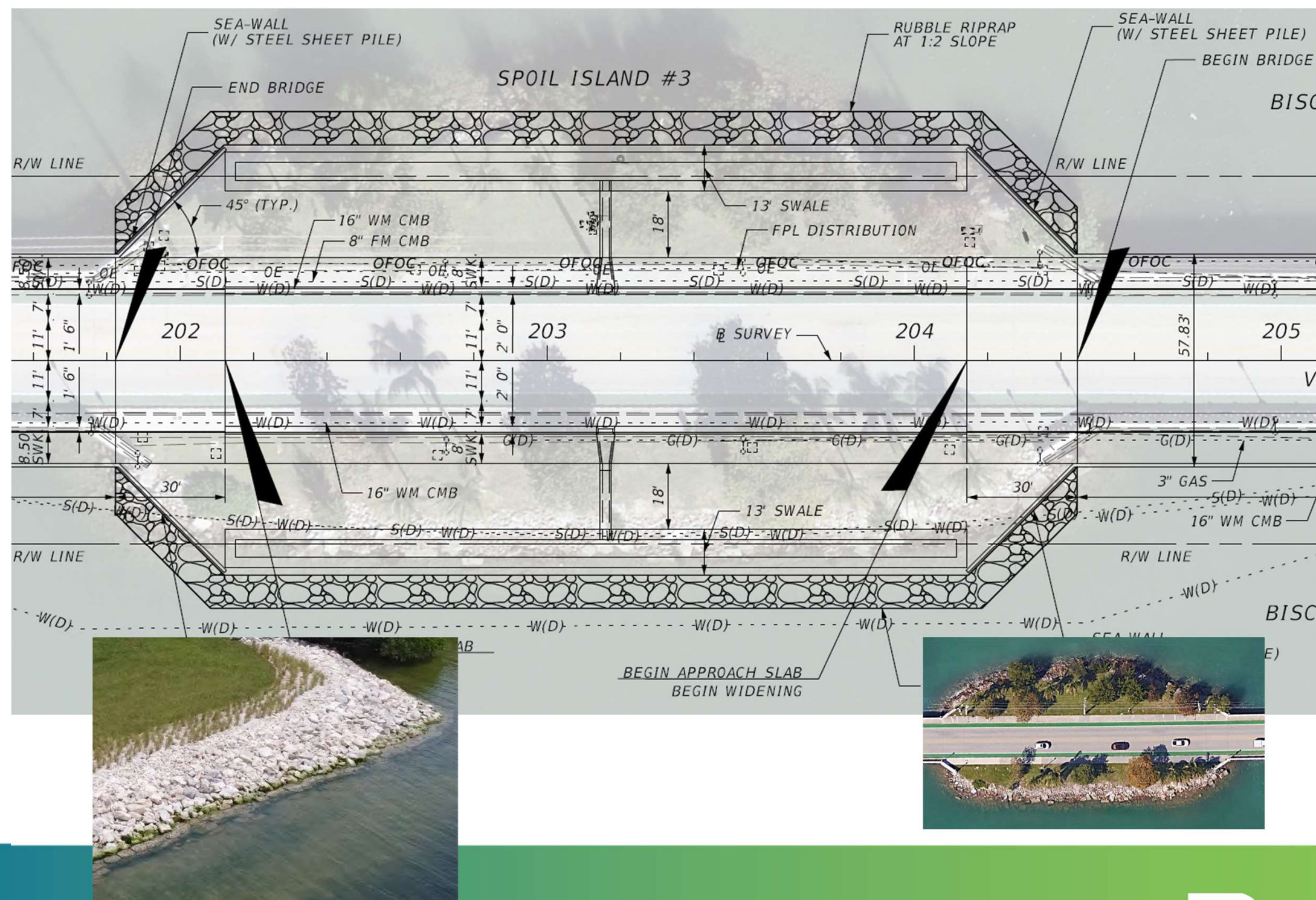


Proposed



RESTORATION OF SPOIL ISLANDS

- Addition since the PD&E phase – became critical design consideration after damage caused by hurricanes Ian and Nicole
- Restores spoil island footprints to same as originally constructed
- Improved sea-level rise resiliency
- Ensures Causeway can withstand 100-year storm
- Improves the overall safety of the corridor
- Wider green areas for recreational use.





FIXED BRIDGES – ARCHED BEAMS



At least 1 foot higher than
existing bridges



DOUBLE LEAF BASCULE BRIDGE



Elevated and protected machinery room will minimize maintenance downtime during normal operation and storm events.

2.83' higher than existing bridge



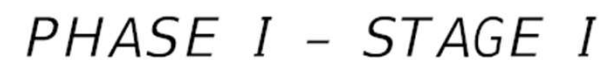
MAINTENANCE OF TRAFFIC

- Temporary Bridge at East Bascule will allow 2 Lanes of traffic (Pedestrians & Bicycle Access).
- The fixed bridges will allow 1 lane of 2-Way traffic
 - Will feature temporary signal or automatic flaggers at ends of the bridge to direct the one-way traffic.
- Limit Access Impacts to One Island at a Time
- Construction duration is approximately 1 year per bridge.
- Duration = 48 Months





 **DEMOLITION**
 **EXISTING BRIDGE**
 **PROPOSED BRIDGE**
 **RELOCATE UTILITIES**

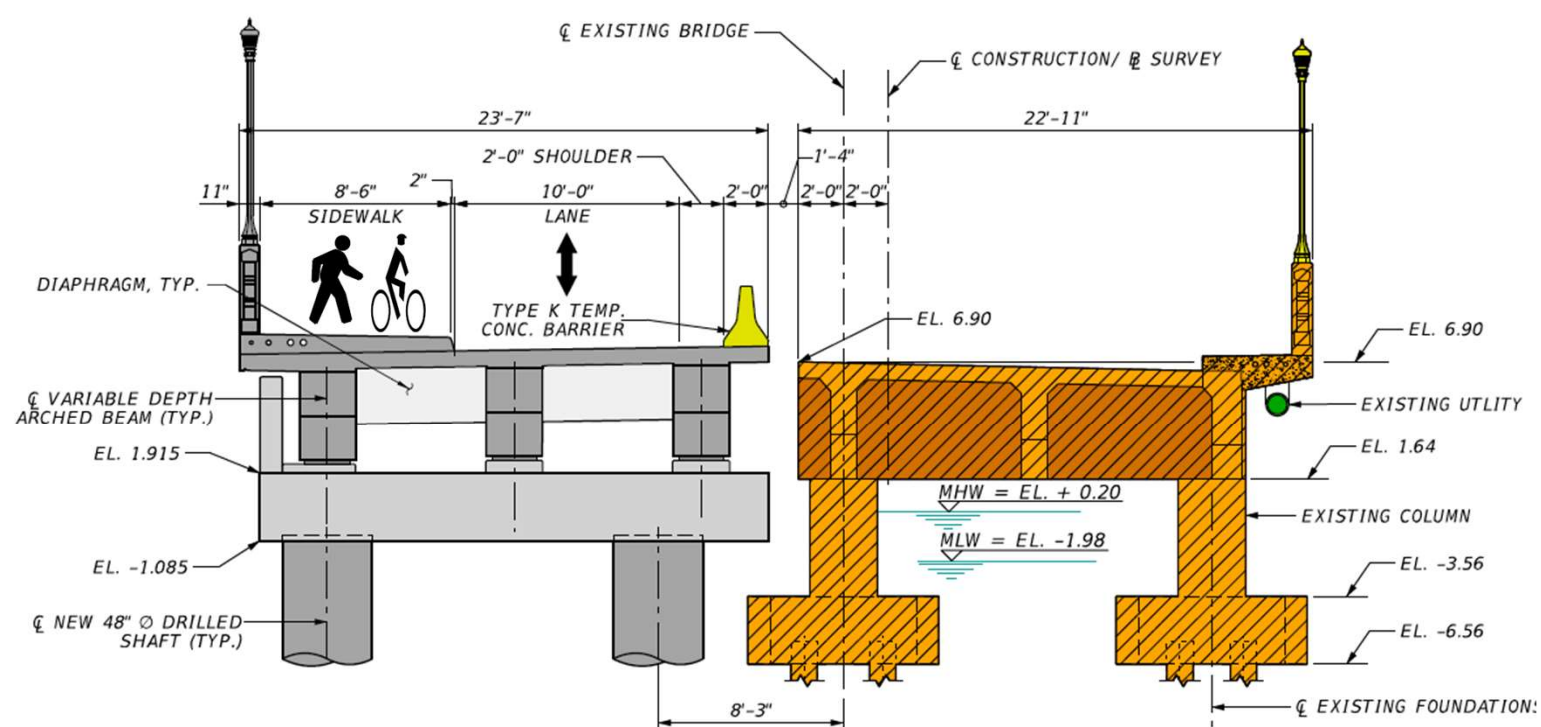




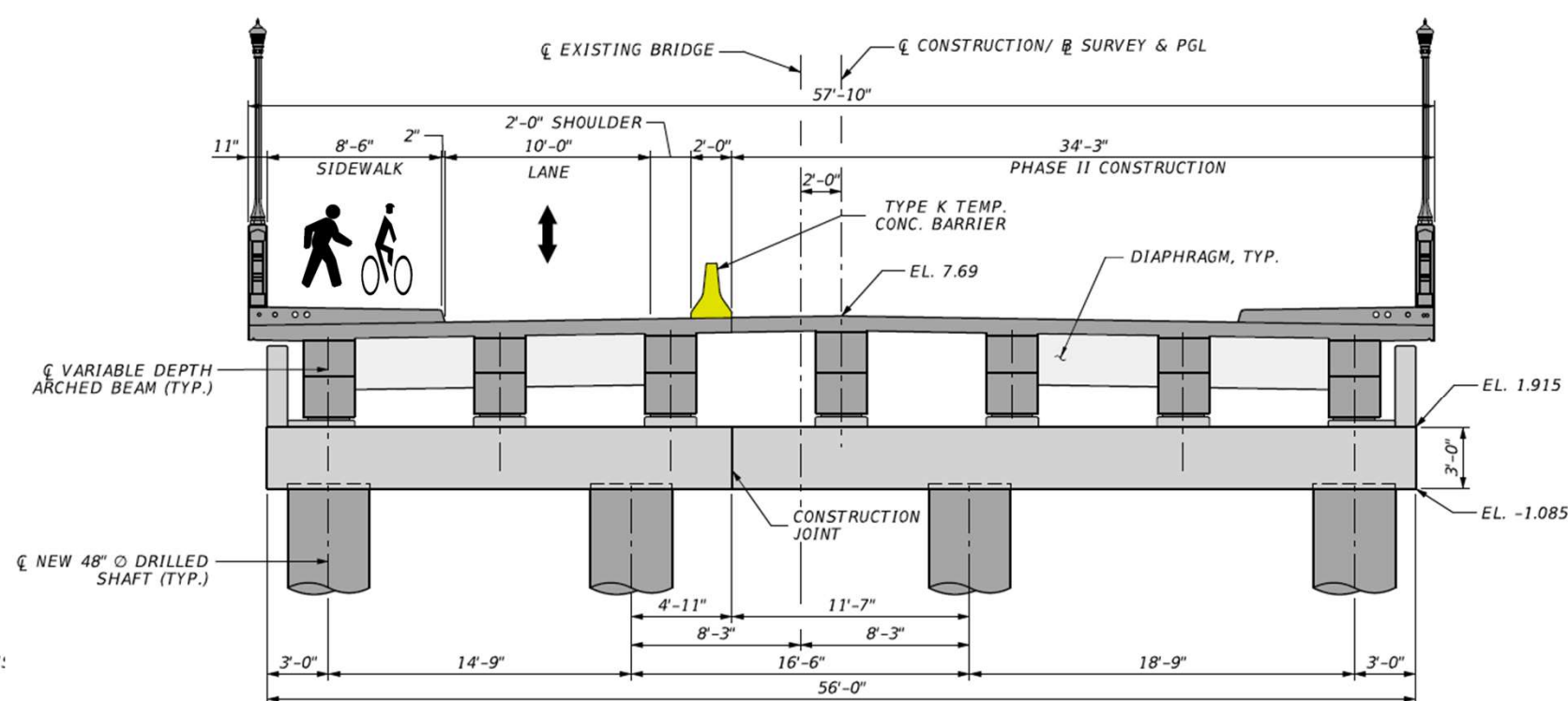
PHASED CONSTRUCTION

Demolish the south side of the existing bridge in the second phase

- DEMOLITION
- EXISTING BRIDGE
- PROPOSED BRIDGE
- RELOCATE UTILITIES



PHASE II - STAGE I



PHASE II - STAGE II



UTILITIES

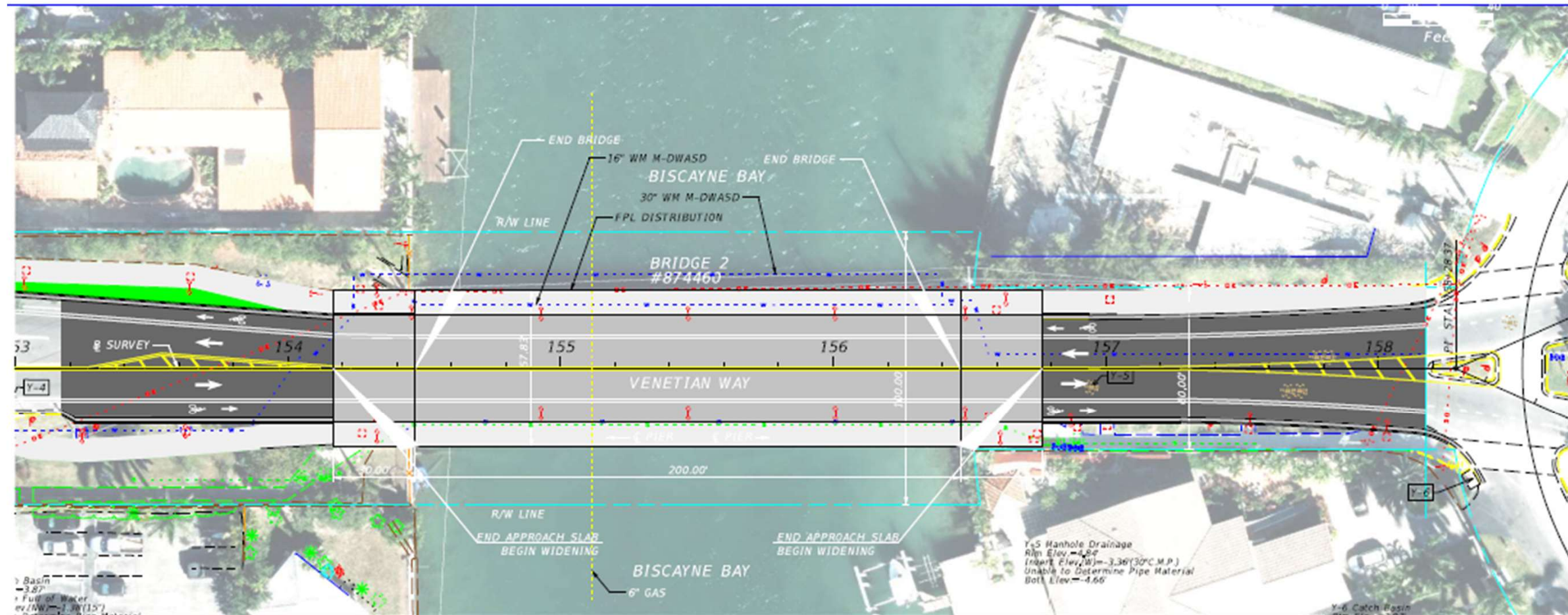
The following utilities are currently being converted to sub-aqueous:

- 16-in watermain
- 6-in and 8-in force mains

The following utilities will be embedded in the concrete sidewalk

- Fiber optic, cable, communications
- Gas

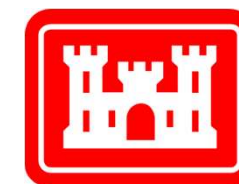
FPL will remain aerial during construction with the stipulation that their facilities also be made subaqueous later.





PERMITTING NEEDS

- Designing to minimize impacts to existing natural resources, including corals
- Permitting through USACE, USCG, DERM, and SFWMD
- It is anticipated that the above agencies will follow the same review process as is followed for FDOT projects for environmental permit applications



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PROCUREMENT PROCESS & TIMELINE

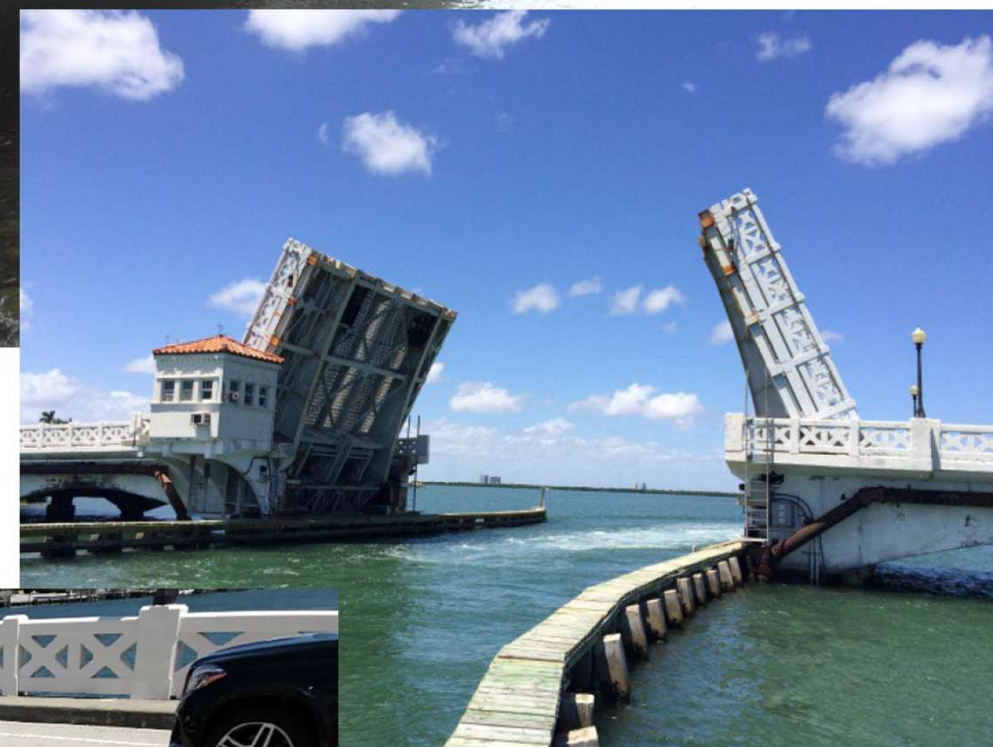
- Seeking Federal funding opportunities for construction (BIP grant application pending)
- Design-Bid-Build
- Will need to follow State and Federal guidelines, but County responsible for procurement process.
- Target begin procurement date: October 2024
 - Plans Complete in Fall 2024
- Target construction start: Summer 2025 (tied to BIP grant requirements)





IN SUMMARY

- Existing bridges moderately to severely deteriorated
- Replace fixed bridges 2 through 9, and 11-12 and bascule bridge 10
- Raise bridges to mitigate against sea-level rise
- Widen spoil islands to original footprint
- Wider sidewalks
- New bicycle lanes
- Relocate utilities





QUESTION & ANSWER

REMINDERS:

- Raise hand to ask a question – if dialing in, press *9
- Profanity or inappropriate language will not be tolerated
- When speaking, be mindful of background noises
- Speaking time is limited to 2-minutes per speaker
- Violators are subject to removal from meeting



ADDITIONAL QUESTIONS?

- Email Venetian@MiamiDade.gov to ask additional questions.
- Emailed questions will be addressed after the meeting.

The background image is a tropical beach scene featuring several tall palm trees in the foreground and a multi-story building in the background. The image is split vertically down the middle. The left half is tinted with a vibrant green color, while the right half is tinted with a deep blue color. The text "THANK YOU" is centered across the middle of the image, spanning both halves. The text is white, bold, and in a clean, sans-serif typeface.

THANK YOU



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