

NOTE: A request form is available. Please fill it in and return it prior to the start of the meeting if you would like to speak during public comment. When you speak, you must come to the podium in the front and clearly state your name and address for the record. Please turn off or mute your cell phone or pager at the start of the meeting. Thank you.

TOWN OF BAY HARBOR ISLANDS
SPECIAL COUNCIL MEETING AGENDA

May 12, 2022

STATEMENT OF DECORUM

All comments must be addressed to the Council as a body and not to individuals. Any person making a racial or slanderous remark or who becomes boisterous while addressing the Town Council, staff, etc. shall be barred from the audience by the presiding officer. No profanity, shouting, heckling, verbal outbursts, or disruptive behavior in support of or opposition to a speaker or his/her remarks is permitted. Please mute or turn off your cell phone or other electronic devices at the start of the meeting. Failure to do so may result on being barred from the meeting. Persons exiting the Chambers shall do so quietly.

The Town of Bay Harbor Islands Special Council Meeting will take place in a Hybrid format where a quorum of the Town Council will be physically present at the Town Hall Council Chambers. The public and other members of staff are welcome to participate in person or virtually via the Zoom video conferencing platform:

Zoom Meeting Link: <https://us06web.zoom.us/j/84563200224>

Meeting ID: 845 6320 0224

To request to speak during Public Comment, please utilize the “raise your hand” Zoom feature on your electronic device. You will be recognized at the direction of the Zoom Meeting Host.

The staff, members of the public and the applicants are strongly encouraged to attend virtually but will not be denied access to the physical meeting, consistent with public safety and health considerations.

In addition, any member of the public who does not wish, or is unable to participate through the Zoom video conferencing platform, but would still like to participate can do so by listening to the meeting as it happens by dialing the Toll-free numbers below:

US Toll Free Numbers: 877 853 5247 or 888 788 0099

For higher quality, dial a number based on your current location):

US: 1 312 626 6799 or 1 646 558 8656 or 1 301 715 8592

Meeting ID: 845 6320 0224

Participant ID: Press the # key.

To request to speak: Dial *9 on your telephone device to activate the “Raise your Hand” feature on the zoom platform.

Members of the Public can also submit their request to speak and/or comments via email to the Office of the Town Clerk at yhamilton@bayharborislands-fl.gov

CALL TO ORDER at 6:00 P.M.

PLEDGE OF ALLEGIANCE:

ROLL CALL:

1. **Discussion** and **possible action** of contract award to Atkins North America, Inc. for the Town of Bay Harbor Islands Broad Causeway Drawbridge Replacement Concept Design, if item is not acted upon during the May 11, 2022 Regular Council Meeting. Enclosed are copies of the RFQ presentations.

ADJOURNMENT:

Pursuant to Florida Statutes 286.0105, the Town hereby advises the public that should any person decide to appeal any decision of the Town Council with respect to any matter to be considered at this meeting or hearing, he or she will need a record of the proceedings, and that, for such purpose he or she may need to ensure that a verbatim record of the proceedings is made, which record includes the testimony and evidence upon which the appeal is to be based.

To: Honorable Mayor and Council Members
Town of Bay Harbor Islands

From: Maria Lasday
Town Manager

Date: May 9, 2022

Subject: **Recommendation of Award of Consulting Engineering Contract for the Project Development and Environmental Study (PD&E) for the Broad Causeway Drawbridge Replacement to ATKINS NORTH AMERICA, INC. – REQUEST FOR QUALIFICATIONS (RFQ) NO. BC-160**

The Town of Bay Harbor Islands (TOWN) administration is requesting Town Council authorization to award the contract for Consulting Engineering for the preparation of the PD&E Study for the Broad Causeway Drawbridge Replacement Project to **ATKINS NORTH AMERICA, INC.** based RFQ No. BC-160.

BACKGROUND

On January 31, 2022 the Town issued RFQ No. BC-160 for the PD&E Study preparation for the Broad Causeway Drawbridge (#875101) – SR922 Replacement Project. The Evaluation Process and Criteria that was provided in the RFQ was as follows:

CRITERIA	POINTS
Qualifications and Experience of the Firm and Subconsultants	35
Qualifications of the Project Manager	25
Project Understanding and Approach	30
DBE Utilization	5
Adherence to instructions of Request for Proposals	5
TOTAL OF POSSIBLE POINTS	100

On February 16, 2022, a Pre-Qualifications Meeting was held in the Town Council Chambers, where the Town's expectations and RFQ Requirements for the project were discussed with the interested parties. A total of ten (10) Firms attended the Pre-Qualifications Meeting.

The submittal deadline for the Qualifications Packages was on March 22, 2022 at 3:00 PM. A total of five (5) firms submitted their Qualifications Packages. In alphabetical order the firms that submitted qualifications were;

- ATKINS NORTH AMERICA, INC.
- BCC ENGINEERING
- EXP US SERVICES
- HANSON PROFESSIONAL SERVICES, INC.
- HARDESTY AND HANOVER

The Committee Members, a total of Three (3) Town Staff, appointed by the Town Manager reviewed all the Qualifications Packages based on the RFQ Criteria, and proceeded to invite the 5 Firms for presentations and interview process.

On May 9, 2022, the Committee Members met at the Council Chambers to hear the presentations from each of the firms. A total of 30 minutes was given for each firm to present their qualifications and approach to complete the work, and 15 minutes for Committee Members to ask questions or seek clarification from the firms.

At the end of the presentations, the Committee Members discussed each firm's proposals based on the Evaluation Criteria from the RFQ. At the end of this discussion, each Committee Member proceeded to evaluate and provide Ranking of the Firms.

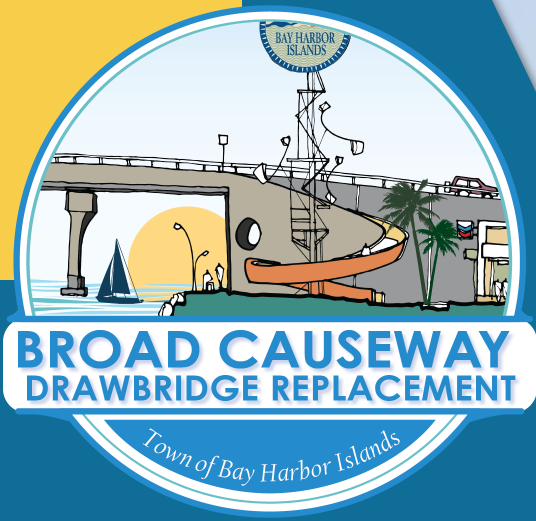
The Final Ranking of the Firms, based on the evaluation process was as follows;

FIRM	RANKING
ATKINS NORTH AMERICA, INC.	1
HANSON PROFESSIONAL SERVICES, INC.	2
EXP US SERVICES	3
BCC ENGINEERING	3
HARDESTY AND HANOVER	4

Based on this evaluation, the Firm ***ATKINS NORTH AMERICA, INC.*** is recommended for award of the subject Contract.

Enclosed are copies of the presentations provided by the firms.

Maria Lasday
Town Manager – Bay Harbor Islands



Oral Technical Presentation

TOWN OF BAY HARBOR ISLANDS BROAD CAUSEWAY DRAWBRIDGE SR 922 (#875101) REPLACEMENT CONCEPT DESIGN

Town of Bay Harbor Islands

Solicitation No. BC-160

May 9, 2022



Subconsultants



Experienced and Efficient

- ❖ Proximity to the project
- ❖ Understand FDOT processes
- ❖ Miami-Dade TPO/DTPW
- ❖ FTE and MDX Tolling

Project Specific Experience

- ❖ Experts in every discipline
- ❖ Previous teams with Atkins

14% Minimum Commitment

- ❖ DBE (11%), SBE (3%), W/MBE



ATKINS

Member of the SNC-Lavalin Group



Organizational Chart & Availability of Key Staff

ATKINS

Member of the SNC-Lavalin Group



PROJECT MANAGER
Jose Custodio, PE

PROJECT MANAGER
David Konz, PE, SE (90%)

PRINCIPAL-IN-CHARGE
Rodrigo Pigna, PE (60%)

QA/QC MANAGER
Steve McWilliams, PE (50%)

DEPUTY PROJECT MANAGER
Wendy Lasher, AICP (80%)

(##%) Availability of Management Team and Task Leaders
◆ indicates Key Personnel (Resume included)

SUBCONSULTANTS KEY
1. Arehna Engineering (DBE/SB)
2. F.R. Aleman & Assoc. (DBE)
3. INTERA

4. Media Relations Group (DBE)
5. Vector Corrosion Solutions
6. WSP

PD&E TEAM

PD&E / ETDM LEAD
Wendy Lasher, AICP ◆ (80%)

EFFICIENT TRANSPORTATION DECISION MAKING (ETDM)
Wendy Lasher, AICP ◆

NEPA DOCUMENTATION
Andrea Garcia, MURP ◆
Greg Garrett ◆

NATURAL ENVIRONMENT
Beth Zimmer ◆
Melanie Calvo ◆
Andrew Jungman

SOCIAL / ECONOMIC RESOURCES
Todd Engala, MURP
CULTURAL RESOURCES / SECTION 4(f)
Wendy Lasher, AICP ◆
Rebecca Spain-Schwarz, AIA
PHYSICAL ENVIRONMENT
Bradley Bayne, PG ◆
Cristina Schoonard

PRELIMINARY ENGINEERING
David Konz, PE, SE ◆ (90%)

BRIDGE ALTERNATIVE CONCEPTS
Ryan Jensen, PE ◆
Glenn Myers, PE ◆

ALTERNATIVES ANALYSIS
Juan Canizares
CONSTRUCTABILITY REVIEW
Mike Abrahams, PE ◆

PUBLIC OUTREACH
Alicia Gonzalez ◆ (70%)

ENGAGEMENT & VISUALIZATIONS
Vanessa Salinas⁴
Felipe Jung

PUBLIC MEETINGS
Jennifer Dorning ◆
Alicia Gonzalez ◆
Dayana Sanjurjo⁴

NEIGHBORHOOD MEETINGS
Jeanette Gorgas⁴
Paulette Summers⁴
LAP COORDINATION
Mike Palozzi, EIT ◆

CONCEPT DESIGN / DESIGN-BUILD OWNER'S REP. TEAM

ROADWAY LEAD
Ryan Jensen, PE ◆ (80%)

ROADWAY DESIGN
Dylan Schienman, PE ◆
Edwin Ramos, PE

TEMPORARY TRAFFIC CONTROL
John Salatino, PE ◆

ACCESS MANAGEMENT / SAFETY
Wiatt Bowers, AICP

DESIGN VARIATIONS & EXCEPTIONS
Derek Kunkle, PE

DESIGN BUILD RFP
Kayleen Mueller, PE ◆
Joseph Garrity, PE, PMP

STRUCTURES LEAD
Glenn Myers, PE ◆ (75%)

BRIDGE DESIGN
Matt Robertson, PE, SE ◆
Hector Lopez, PE

BRIDGE DESIGN
Fabrice Lazarre, EI
Todd Mitchell, PE⁶

MISCELLANEOUS STRUCTURES
Rudy Pein, PE, SE
Grant Curtiss, PE

BRIDGE PRESERVATION
Brian Pailles, Ph.D, PE⁵ ◆

MOVABLE (STRUCTURAL)
Chris Ray, PE ◆
Trevor Johnson, PE⁶

MOVABLE (MECHANICAL)
Amaka Anderson, PE⁶
David Nyarko, PE⁶

MOVABLE (ELECTRICAL)
Graciela Patino, PE⁶
Grace Patino, EI⁶

PERMITTING / DRAINAGE LEAD
Carlos Estrella, PE, PMP ◆ (80%)

BRIDGE HYDRAULICS / DECK DRAINAGE
Rick Renna, PE ◆
Shayne Paynter, Ph.D, PE, PG

DRAINAGE PERMITTING
Scott Wesson, PE ◆

DREDGING
Mark Stroik ◆

SCOUR / COASTAL ANALYSIS
Mark Gosselin, Ph.D, PE³ ◆
Michael Salisbury, PE

ENVIRONMENTAL PERMITS
Melanie Calvo ◆
Ed Cronyn, PWS

SAFETY / TRAFFIC LEAD
Michelle Schofner, PE, PTOE, RSP1 ◆ (70%)

TRAFFIC MODELING
Chris Russo, PE, PTOE ◆

BICYCLE / PEDESTRIAN MOBILITY & COMPLETE STREETS
Michelle Schofner, PE, PTOE, RSP1 ◆

TOLLS
Don Erwin, PE

ITS
Paul Mannix PE, PTOE

LIGHTING
Pete Trevin, PE, LEED AP, LC ◆

SUPPORT SERVICES

GEOTECHNICAL
Angela Alba, PE¹ ◆

SURVEYING
Yvette Aleman, PE, SIT² ◆
Gaspar Lobaina, PE, PSM² ◆

UTILITY COORDINATION / DESIGN
Ryan Jensen, PE ◆
Chris Rader, PE, ENV SP

3D DIGITAL MODELING
Erick Gray, PE
LANDSCAPE / HARDSCAPE
Harry Belton, RLA ◆
David Larsen, RLA, ASLA

ARCHITECTURE
Jose Castellanos, AIA

CEI
Daniel Menendez, PE ◆
Marianne Brinson, PE ◆
David Adato, PE
Gabriel Fernandez

Technical Advisors
Grants and Funding -
Erin Capps ◆
Sustainability / Envision -
Daniel Parsons, PE, CFM, ENV SP ◆

DB Procurement Expert -
Jeremy Bourdon, PE ◆
Segmental Bridges -
Dongzhou Huang, Ph.D, PE ◆

Atkins Qualifications and Experience

Meet the Presenters



David Konz



Project Manager



Wendy Lasher



Deputy PM / NEPA



Rodrigo Pigna



Principal-in-Charge



Matt Robertson



Structures



Ryan Jensen



Roadway



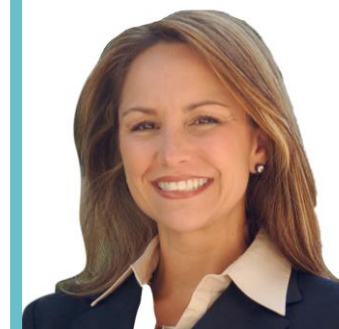
Erin Capps



Funding Solutions



Jeanette Gorgas



Public Involvement



Project Manager Qualifications



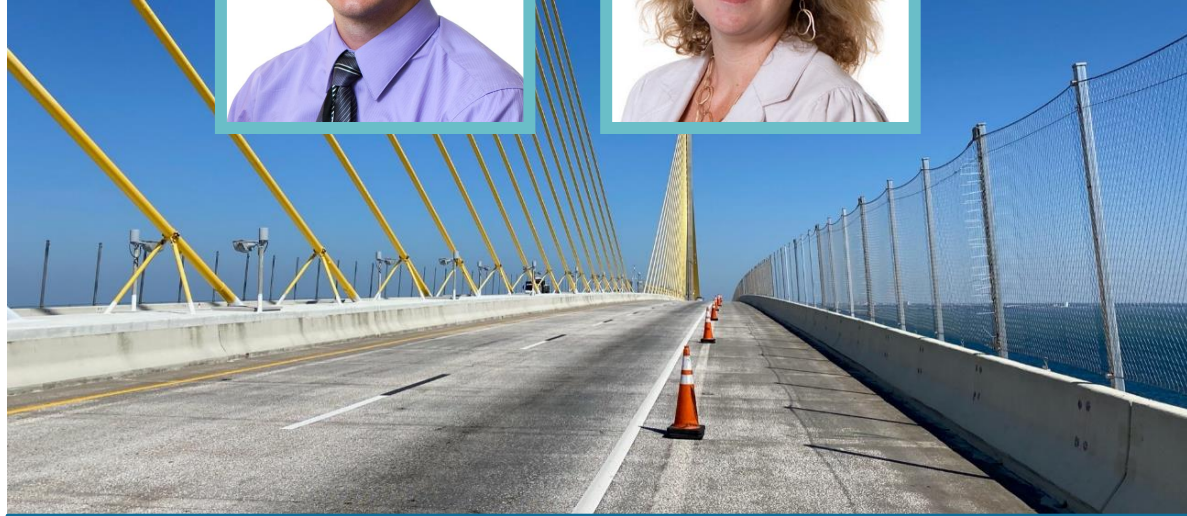
David Konz



- ✓ **Alternative Delivery through entire career**
- ✓ **\$544M 118th Ave and Gateway Expressway DB**
 - Deputy PM and Technical Discipline Lead
 - 80% Concept Plans
 - DB Owner's Rep
- ✓ **\$72M I-75 over Caloosahatchee River DB**
 - Technical Discipline Lead
 - 90% Concept Plans
 - DB Owner's Rep
- ✓ **Successfully managed and delivered similar projects**

Resources Access: 28 structural in Florida, weekly national workshare (82 staff), and Global Working Group (650+)

PM Team & Communication Approach



OUR COMMITMENT

Communicate Proactively
Anticipate Challenges
Provide Solutions
Focus on Client Goals

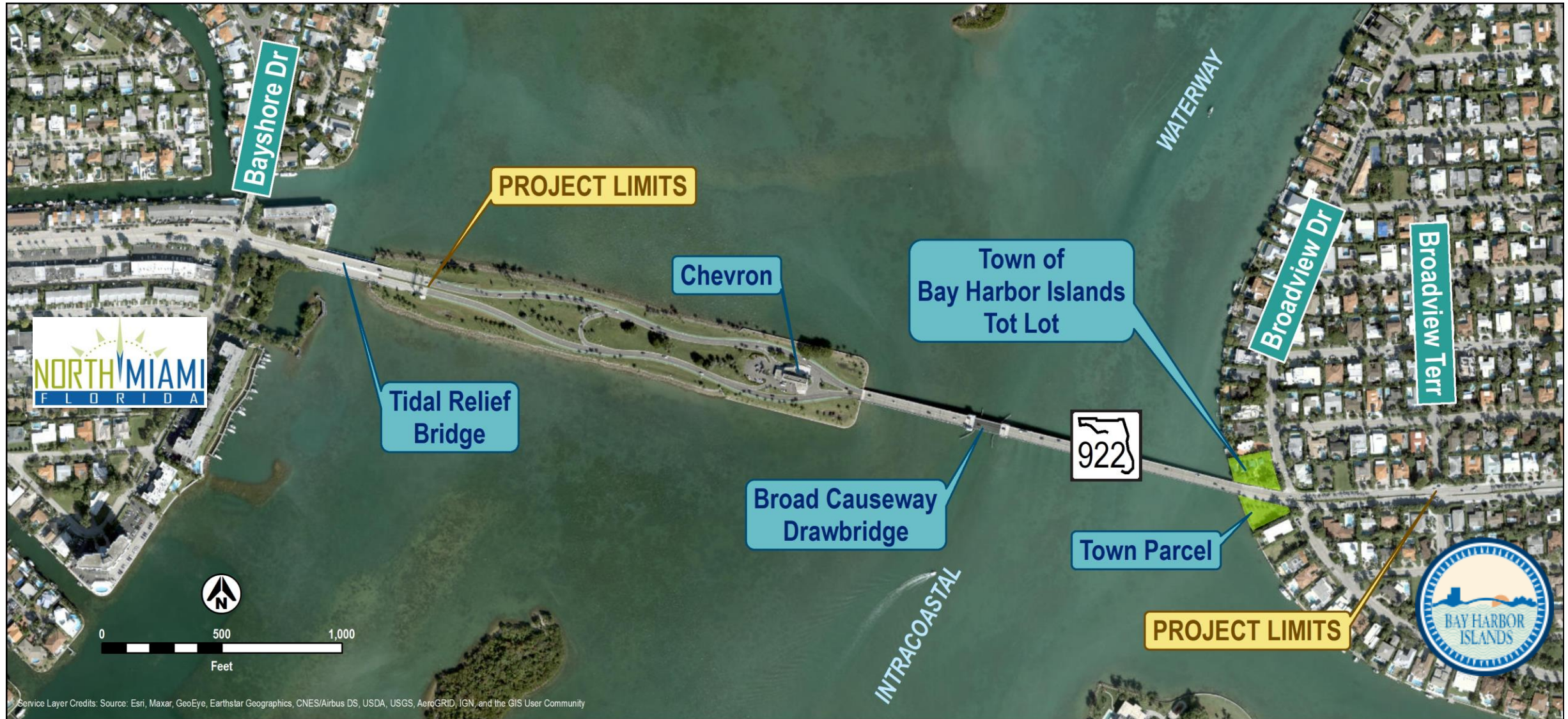


ATKINS

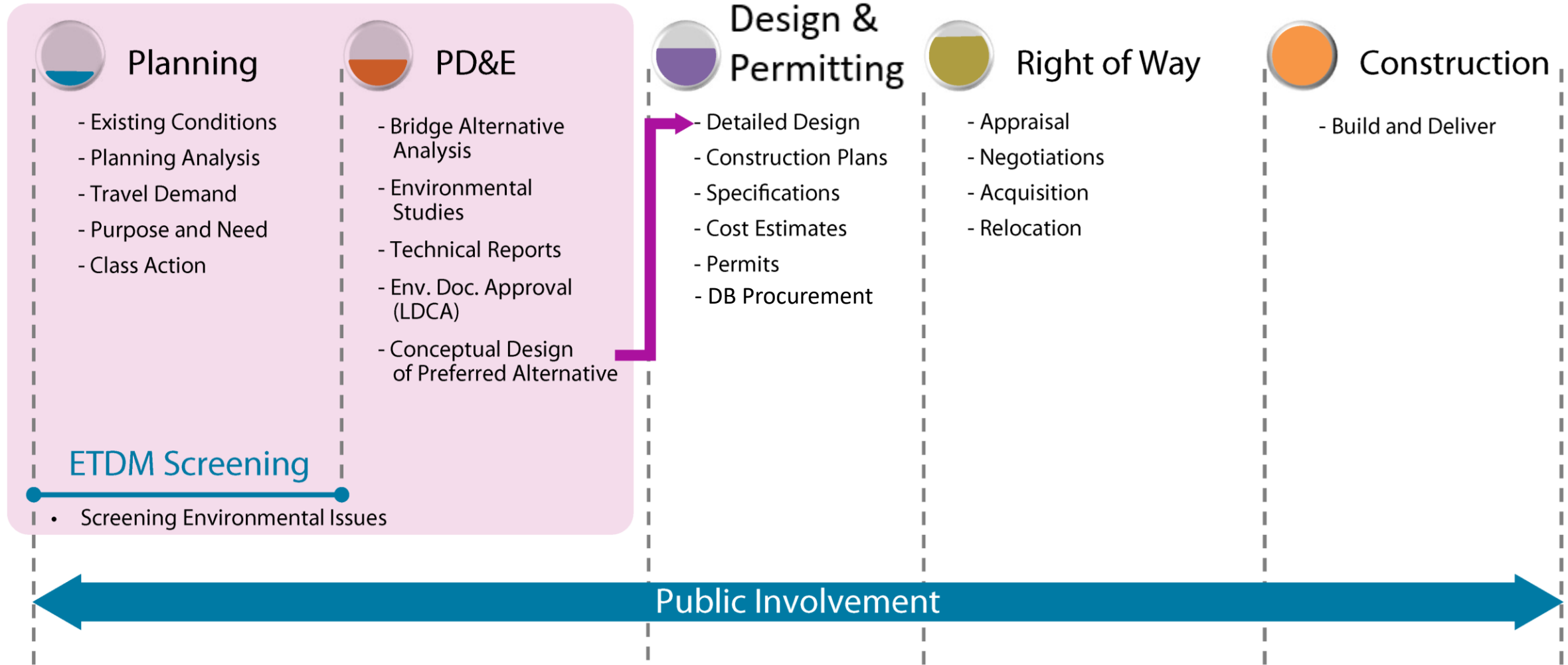


- Bi-weekly Teams call
- Monthly Progress Reports
- Project SharePoint site

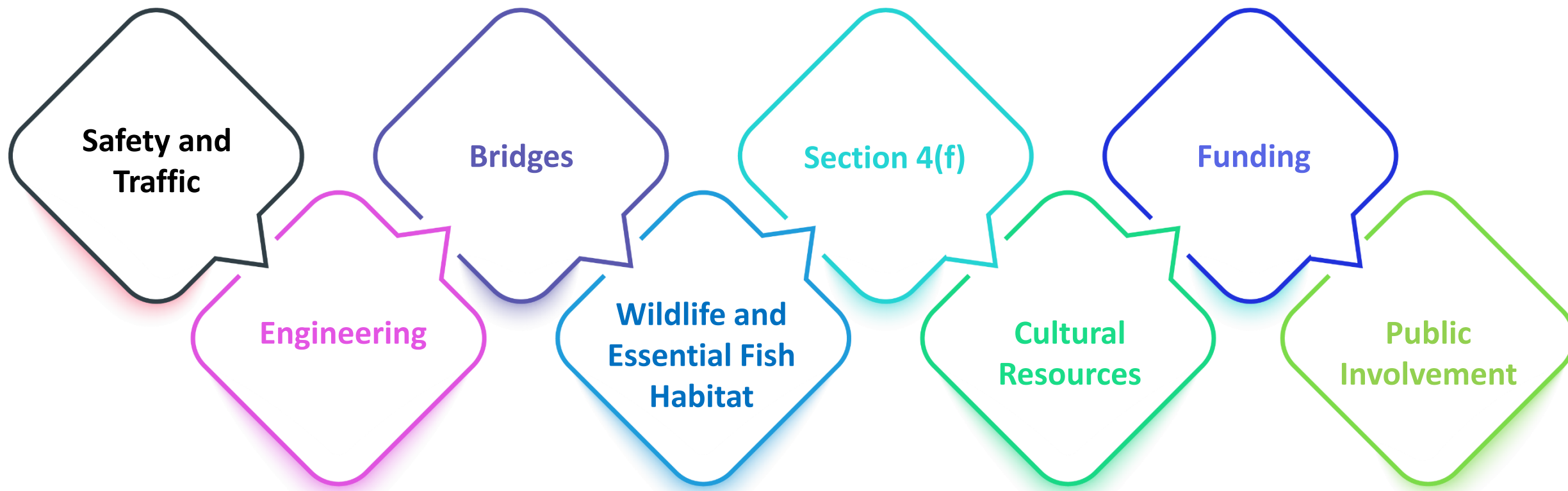
Project Location Map



Project Understanding and Scope



Key Project Issues

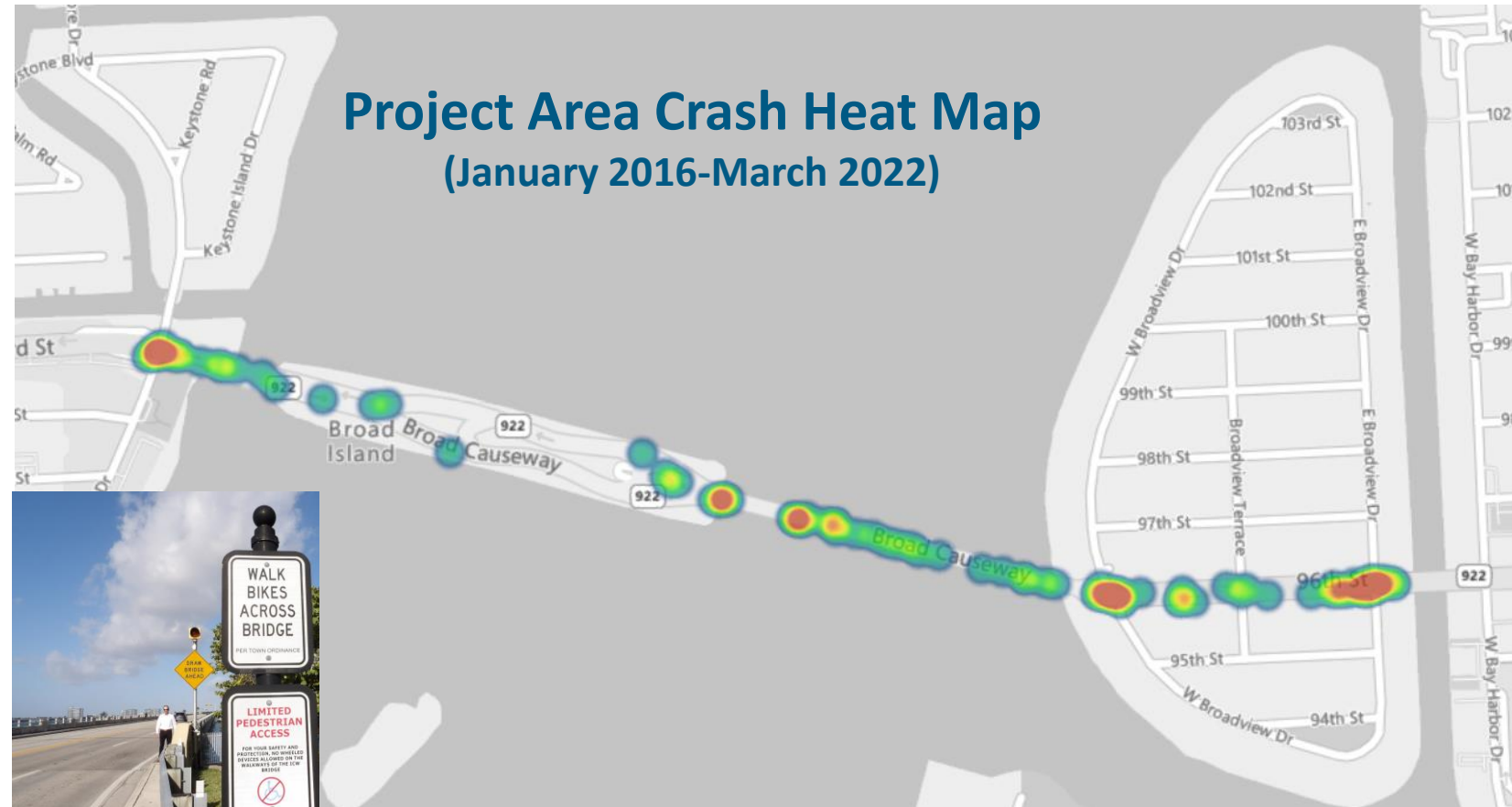


Crash Severity

- ❖ 145 total crashes
- ❖ 6 bicycle/pedestrian crashes
- ❖ 3 with incapacitating injuries
- ❖ 29 with non-incapacitation/possible injuries

Traffic Congestion

- ❖ Existing and future LOS is failing



Project Area Crash Heat Map (January 2016 – March 2022)

Existing Avg. Daily Traffic	Existing LOS	LOS Standard	2045 AADT	2045 LOS
21,030	D	D	29,400	D

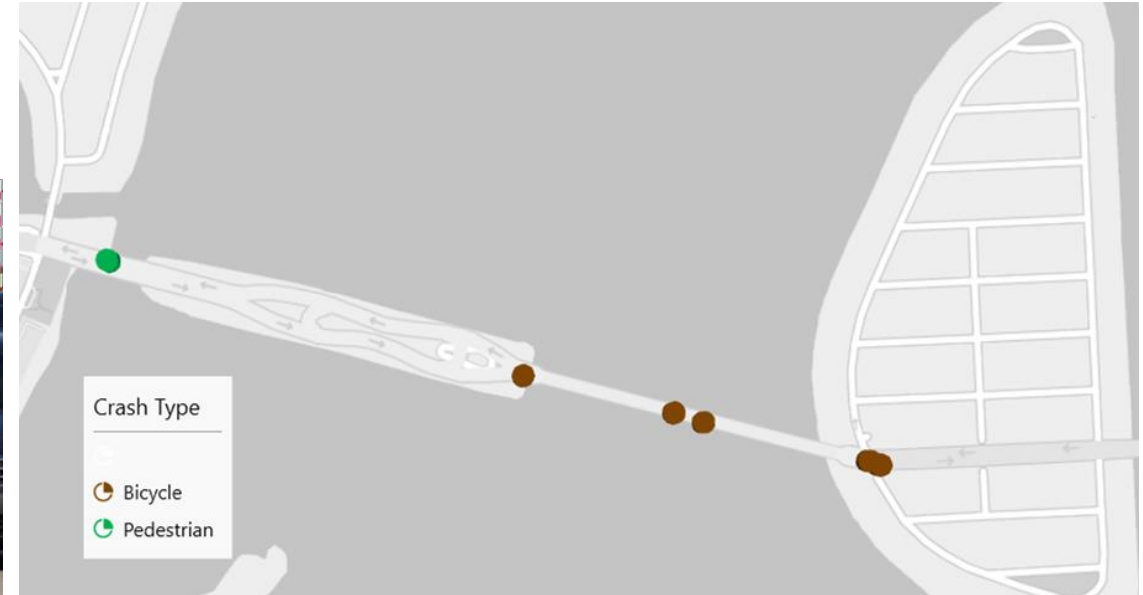
Safety & Traffic

Existing Sidewalks

- ❖ No passing spaces
- ❖ Does not meet ADA width
- ❖ No guardrails dividing sidewalk from roadway

Bicycles

- ❖ Share outside traffic lane

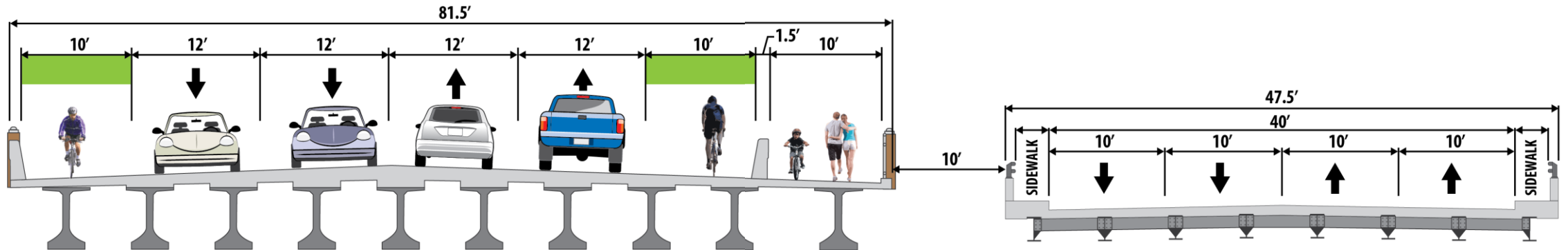


Project Area Pedestrian and Bicycle Crashes (January 2016 – March 2022)



Rickenbacker causeway east bound bike lane and shared use path

PROPOSED TYPICAL SECTION



Offset of existing and proposed typical sections

**MAJOR ADVANTAGE OF
OFFSET ALIGNMENT**

MOT drastically reduced!

Alignment Options

- ❖ Provides complete vehicle & pedestrian access
- ❖ Minor truck restrictions
- ❖ Existing bridge remains in service during construction
- ❖ Gas station remains in full service
- ❖ “Linear Park”
- ❖ Modest expansion of island

Further Consideration

- ❖ Eliminate movements
- ❖ Remain within island footprint

Option 1 – EB & WB Chevron Access



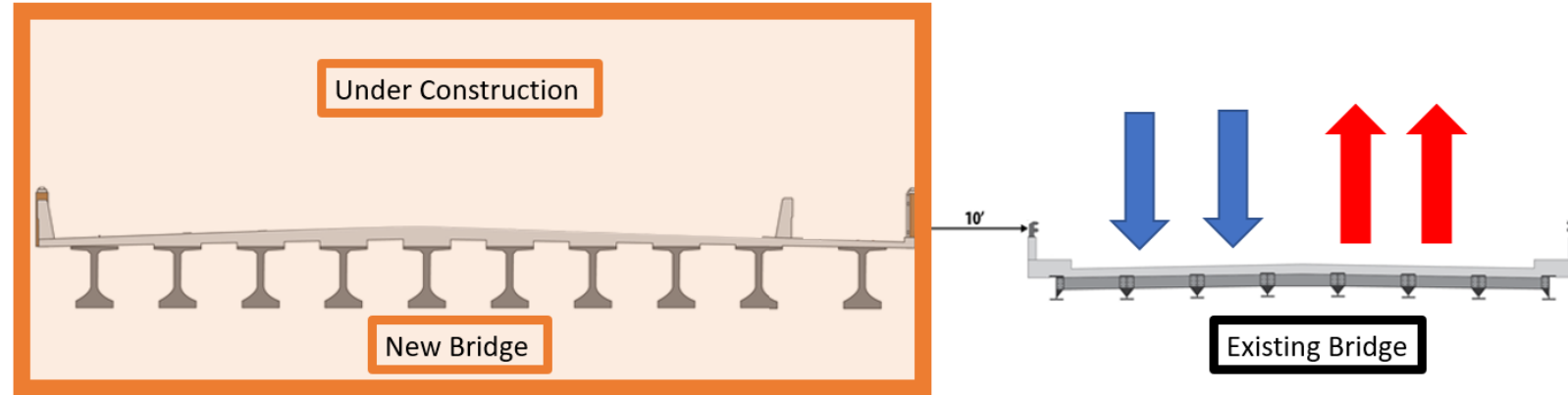
Option 2 – Within existing island footprint



Maintenance of Traffic Approach

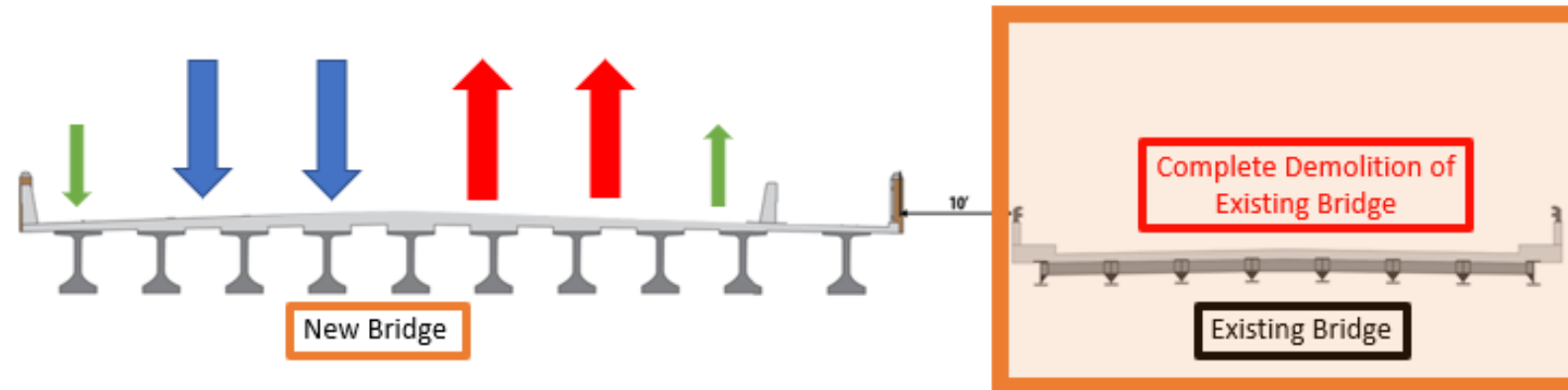
- Shift EB traffic lanes North with temporary pavement
- Construct new bridge and approaches
- **Maintain 4-lanes of traffic, tolls, and access to gas station**
- Only restrict during overhead work

PHASE 1

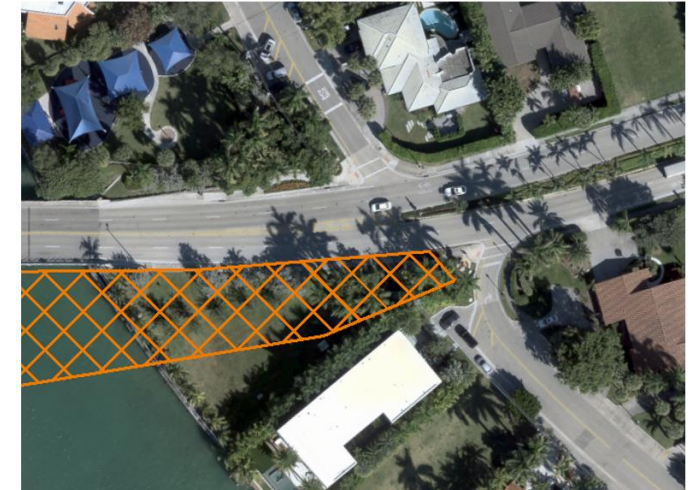
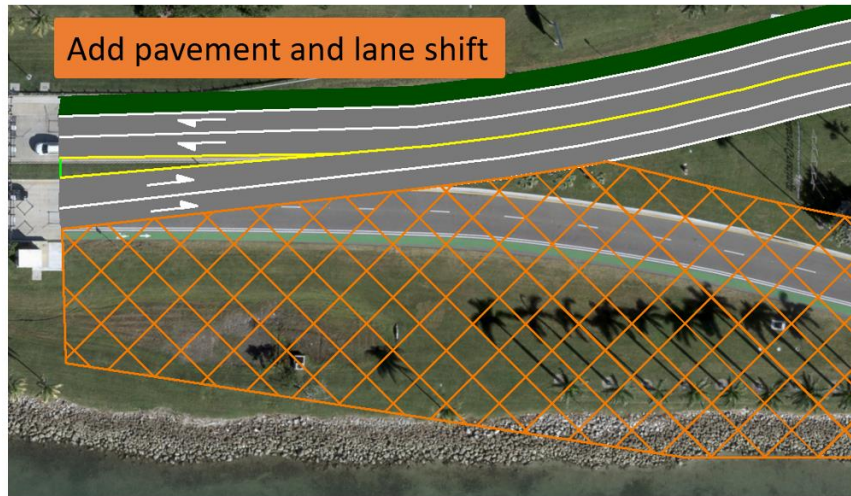


- Finalize construction of ramps
- Demolish existing bridge and construct pedestrian access ramp
- Open Shared-Use-Path

PHASE 2



MOT – Pinch Points and Solutions

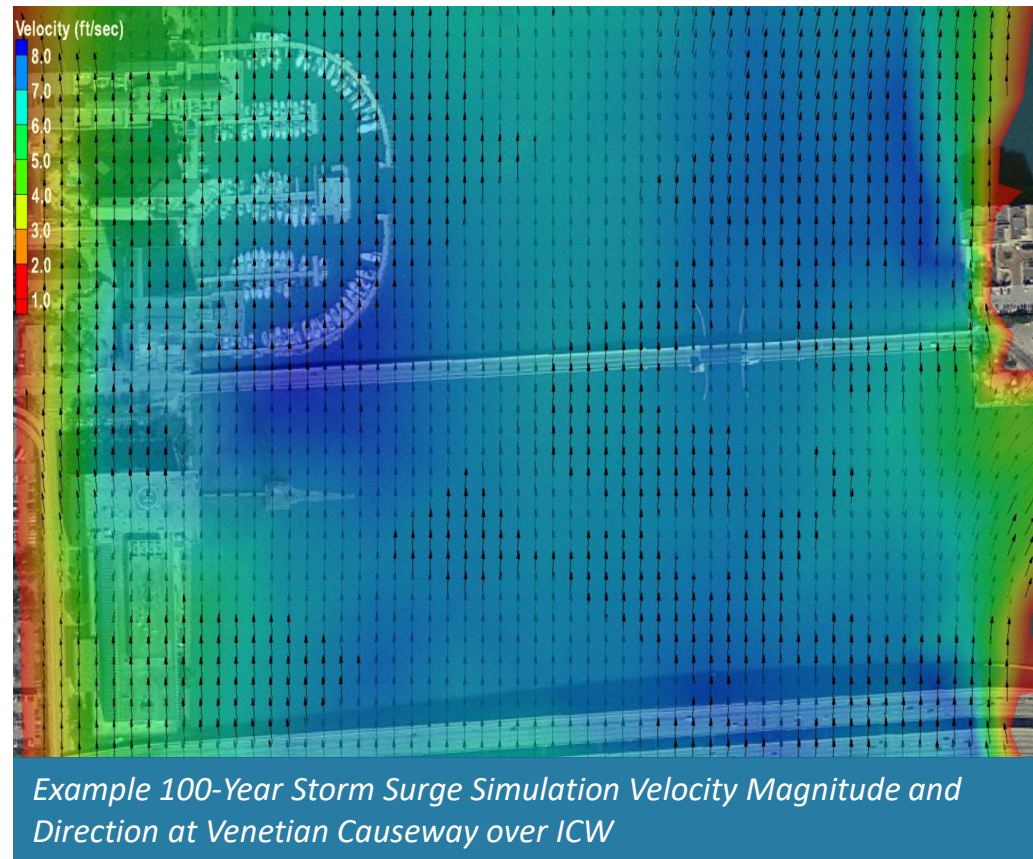


Scour & Bridge Hydraulics Report (BHR)

- ❖ INTERA: Industry expert
- ❖ Bridge scour modelling at piers
- ❖ Tide, wind, wave forces
- ❖ Navigational clearance

Sea Level Rise (SLR)

- ❖ Design using 2D model will include anticipated future SLR
- ❖ FDEP Sea Level Impact Projection (SLIP) Study



Engineering – Utilities in the Corridor

- ❖ Atlantic Broadband
- ❖ AT&T
- ❖ City of North Miami
- ❖ Comcast
- ❖ Crown Castle
- ❖ Dade County Traffic
- ❖ FPL (Subaqueous & Transmission)
- ❖ Hotwire
- ❖ Miami Dade Water and Sewer
- ❖ TBHI Water and Sewer
- ❖ TECO



Engineering – Existing Bridge (#875101)



1951 construction – 71 years old
Length 1,630 feet
Moveable-bascule bridge
Ongoing extensive repair projects



Bridge Condition



Sufficiency Rating

46.1 / 100

Functionally
Obsolete

Bridge Rating

Intolerable: Deck Geometry
Fair: Condition, Deck,
& Superstructure
Good: Substructure

Bridge Railings & Guardrail Ends

Does Not Meet
Acceptable
Standards

Maintenance Issues

Increasing Costs
to Operate Bridge

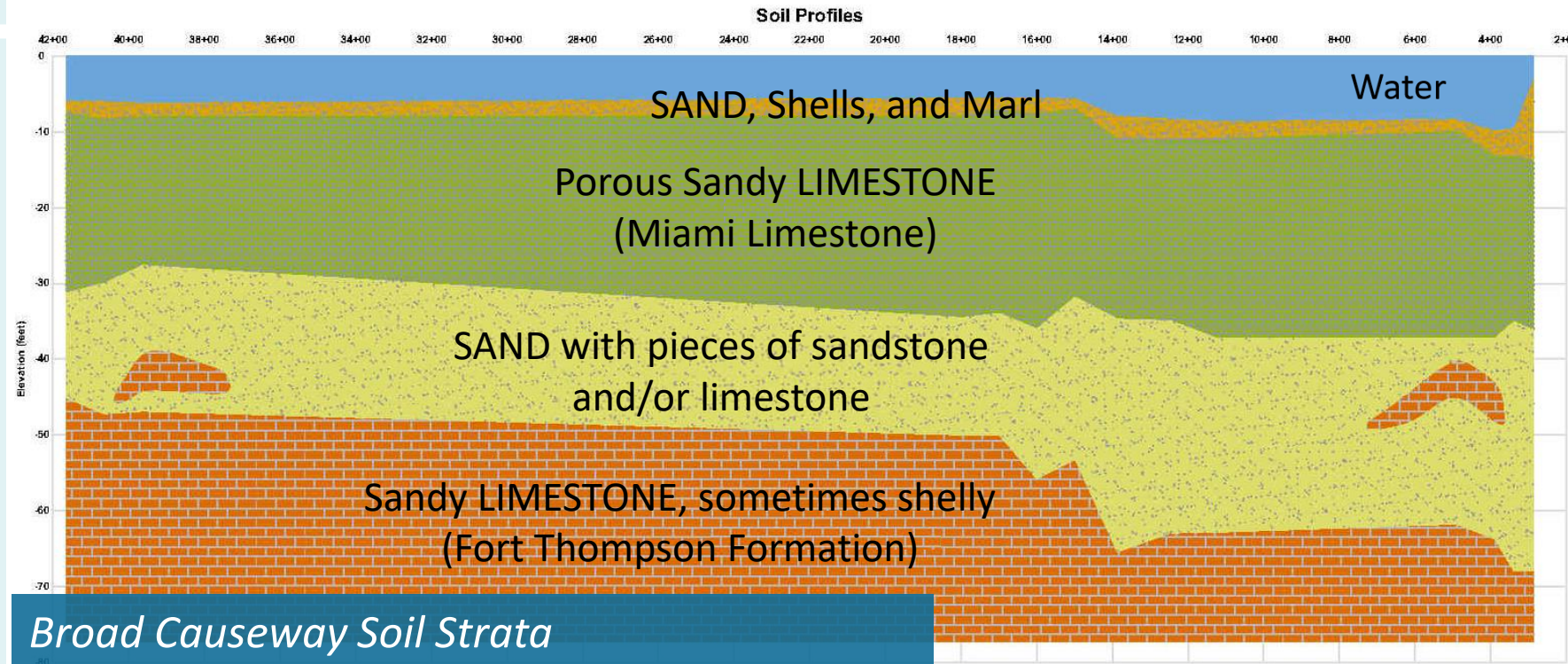
Power Generation

Undersized
Emergency Power
Generator

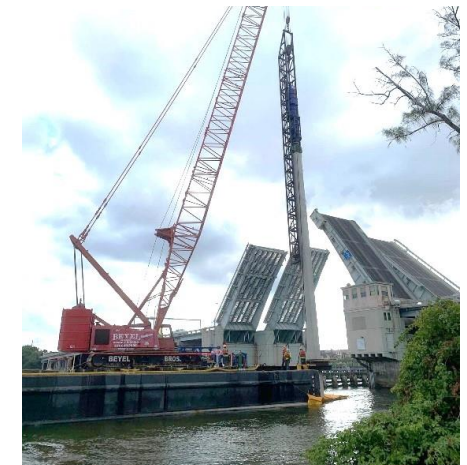
Experience identifying vibration and settlement concerns for “Historically Sensitive Structures”

Vibration monitoring

- ❖ Arehna was Geotechnical Engineer for **SR-5 Jupiter Federal Bridge** in Palm Beach County with 30” concrete Test Pile (right image)
- ❖ Accelerometer Specifications
- ❖ Provide casing for drilled shaft



Angela Alba



Project Understanding
and Approach

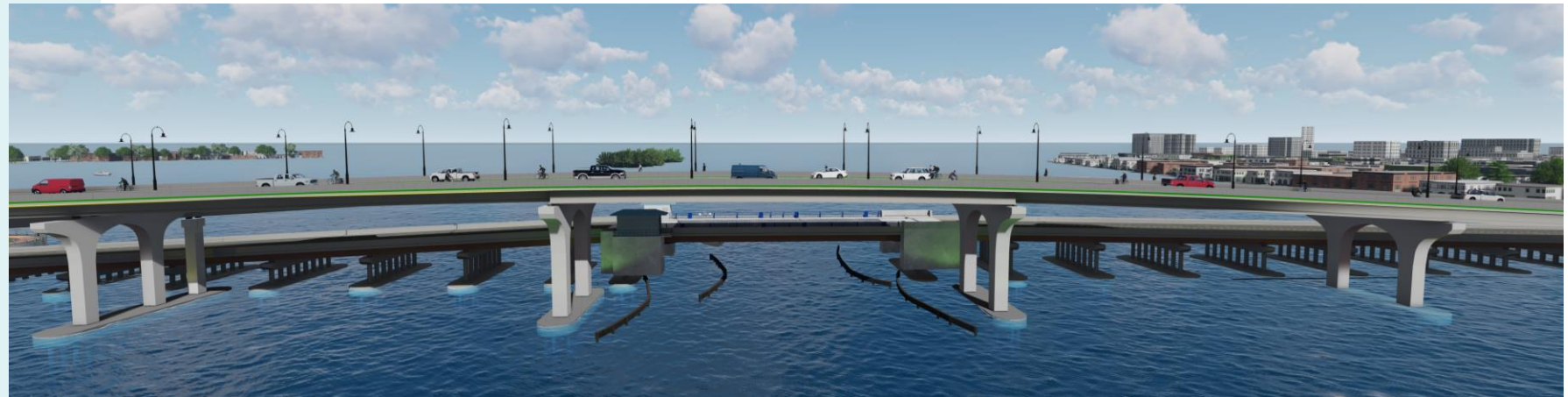
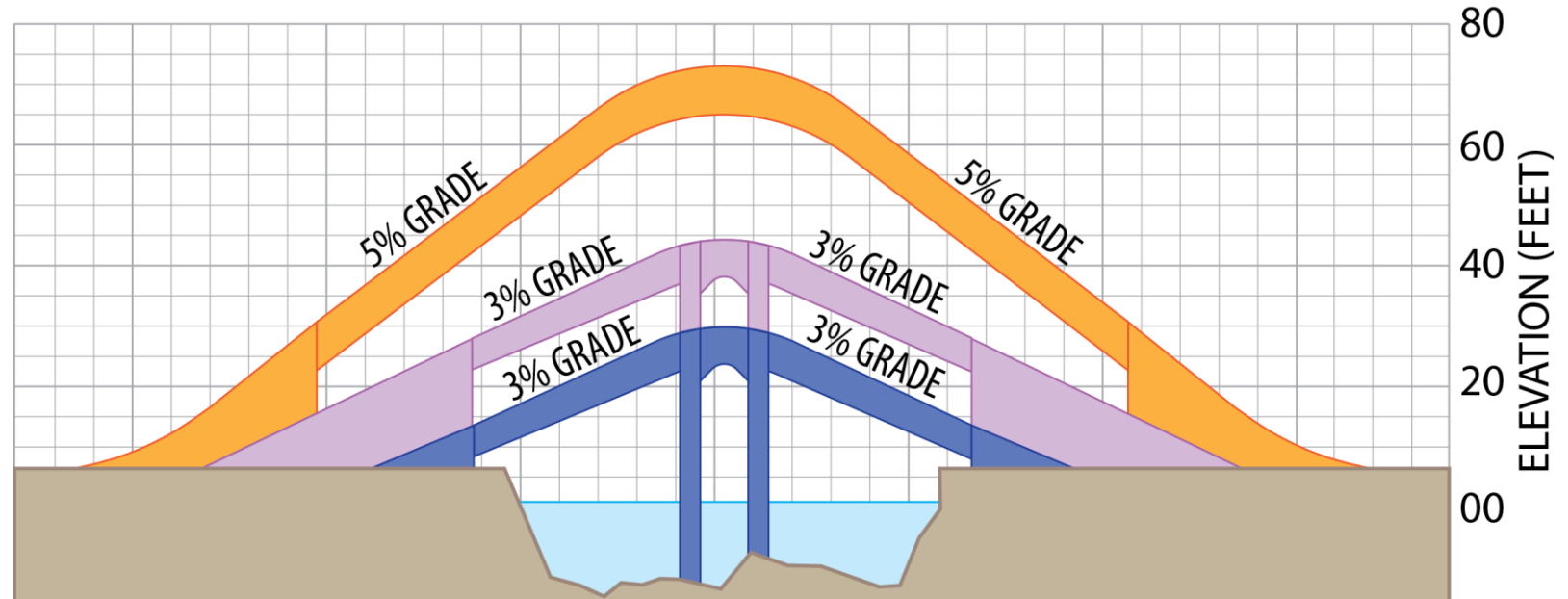
Engineering - Broad Causeway Bridge Clearances

Navigation

- ❖ Boat Survey to determine clearance requirements

Clearances

- ❖ USCG Guide Clearance
 - Horizontal = 125' between fenders
 - Vertical = 65' above MHW



Bridge Replacement Solutions

Options

- ❖ Rehabilitation (No-Build)
- ❖ Replace In-kind
 - ❖ Low-level movable
 - ❖ Mid-level moveable
- ❖ High-Level Fixed

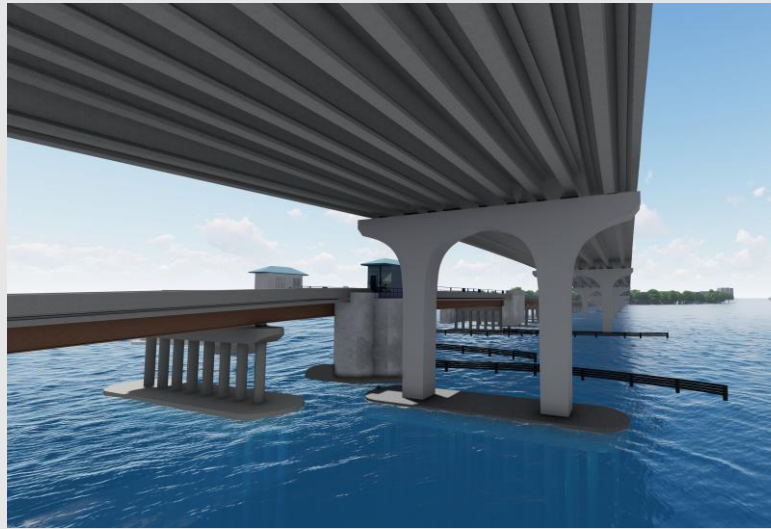
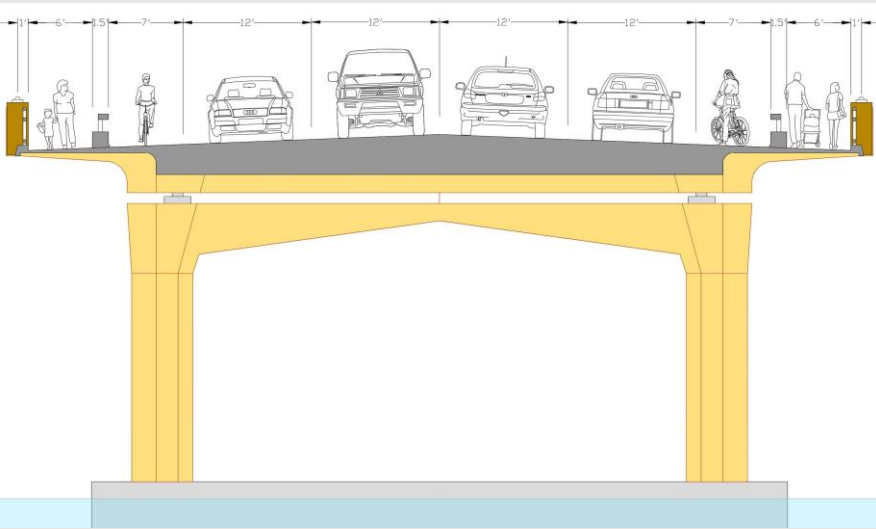
Engage public for input

Resiliency

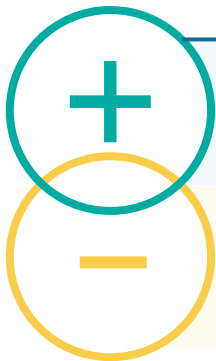
Demolished bridge material can be strategically sunken for scuba diver recreation as an *“Underwater Park”*



Bridge Replacement Solutions



Advantages



Transversely post-tensioned slab

- ⊕ Minimize profile climb
- ⊖ Challenging to construct; may lead to long-term maintenance concerns.

Prestressed Beams

- ⊕ Most economical. Conventionally built with repetition & speed.
- ⊖ May need additional aesthetics to match client's "vision".

Spliced precast U-beams

- ⊕ Aesthetic appeal with closed shape from boat view. Could utilize Accelerated Bridge Construction.
- ⊖ Higher construction costs

Disadvantages

A 3D architectural rendering of a bridge project. The bridge, a long straight causeway, spans a large body of water. It features a multi-lane road with a central green-paved section, flanked by red-paved shoulders. The bridge is surrounded by lush greenery, including trees and palm trees. On the left side, there are several modern buildings with flat roofs. On the right side, there are older, multi-story buildings. The water is a deep blue, and the sky is a light blue with some clouds. The overall scene is a detailed and realistic representation of the proposed bridge and its surroundings.

ATKINS

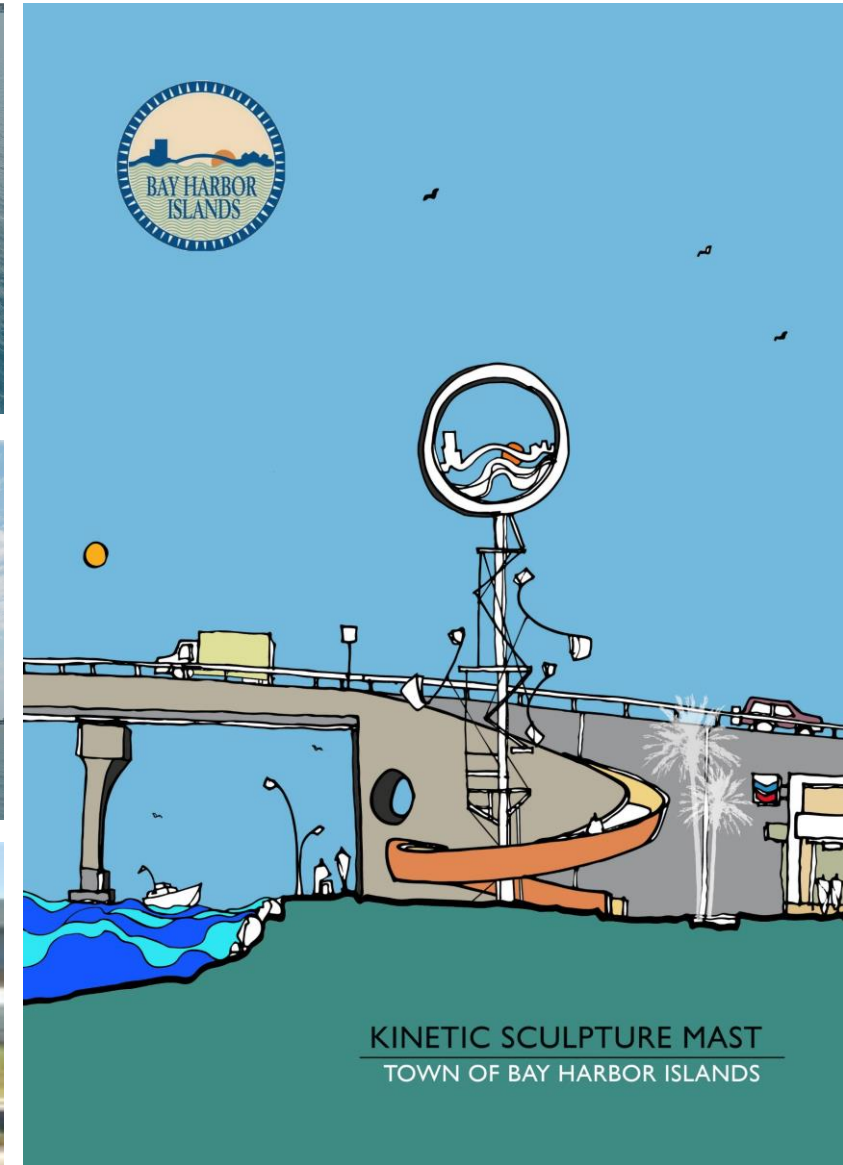
Member of the SNC-Lavalin Group

3D Broad Causeway Bridge Visualization

Gateway to Bay Harbor Islands

Aesthetics

- ❖ Community Gateway
- ❖ “Art in Public Places”
- ❖ Overlooks
- ❖ Aesthetic Treatments
- ❖ Programmable LED Lighting



NATURAL

- **Protected Species and Habitat**
- Coastal and Marine (EFH)
- Wetlands and Other Surface Waters
- **Water Resources**
- Floodplains
- Sole Source Aquifer
- **Aquatic Preserves**
- **Outstanding FL Waters**
- Wild and Scenic Rivers

CULTURAL

- **Section 106 (NHPA)**
- **Historic and Archaeological Sites**
- **Section 4(f)**
- **Recreational and Protected Lands**

PHYSICAL

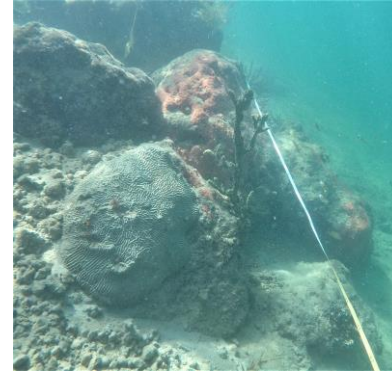
- **Highway Traffic Noise**
- Air Quality
- Contamination
- Navigation
- Infrastructure

SOCIAL

- Social
- Economic
- Land Use Changes
- **Mobility**
- **Aesthetics Effects**
- Relocation Potential
- Farmlands

Protected Species and Habitat Potential for Occurrence

	High	Moderate	Low
Johnson's Seagrass (Delisted – effective 5/16/22)	✓		
Sea Turtles (FE/FT)	✓		
West Indian Manatee (FT)	✓		
Corals (FT)		✓	
Florida Bonneted Bat (FE)		✓	
Smalltooth Sawfish (FE)		✓	
American Crocodile (FT)			✓
Atlantic Coastal Plants (FE/FT, ST)			✓
Florida Burrowing Owl (ST)			✓
Gopher Tortoise (ST)			✓



Sources: USFWS, Audubon Society, wildlife.florida.org, marinelab.fsu.org, ucf.edu



PERMITS ANTICIPATED

- ✓ USCG Bridge Permit
- ✓ ACOE – Nationwide
- ✓ Miami-Dade County Class I Permit
- ✓ SFWMD - ERP
- ✓ FDEP – SSL Easement

Essential Fish Habitat

Habitat Area of Particular Concern

- ❖ Penaeid shrimp
- ❖ Phragmatopoma (worm reefs)

Potential EFH Habitats: Seagrasses & Corals

EFH Managed species

- ❖ Spiny lobster
- ❖ Snapper-grouper complex
- ❖ Blacktip shark
- ❖ Spinner shark
- ❖ Nurse shark
- ❖ Lemon shark
- ❖ Sailfish
- ❖ Sandbar shark
- ❖ Skipjack tuna
- ❖ Great hammerhead shark
- ❖ Tiger shark



Atkins Dive Team



Potential Section 4(f)



- ❖ Town of Bay Harbor Islands Tot Lot
- ❖ Town Parcel
- ❖ Florida Circumnavigational Saltwater Paddling Trail



Cultural Resources

Broad Causeway Bridge (DA10123)

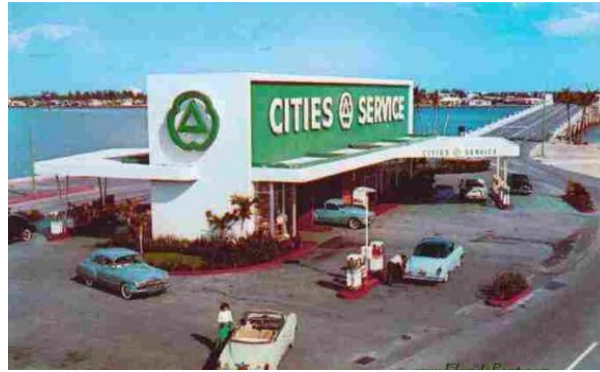
- ❖ Determined NRHP eligible

Chevron/1501 Broad Causeway (DA10436)

- ❖ Determined NRHP eligible

Bay Harbor Islands Historic District (DA10515)

Need to Evaluate Archeological Sites



Other Environmental Issues

Sociocultural Effects

- ❖ Aesthetics
- ❖ Mobility – Hurricane Evacuation

Water Quality

Noise



Source: Google Earth

Planning Consistency and Local Agency Program Experience

Atkins Supports Numerous FDOT LAP Offices

- ❖ Several FDOT District 6 contracts including Modal Development Office
- ❖ State Transportation Improvement Program (STIP)

Miami-Dade Transportation Planning Organization Coordination

- ❖ General Planning Consultant (GPC) since 2015
- ❖ Numerous Corridor Studies for beach communities
- ❖ Long Range Transportation Plan
- ❖ Transportation Improvement Program (TIP)



Atkins has the expertise necessary to navigate between Town and FDOT requirements to ensure the final design reflects the expectations of both.



Miami-Dade TPO GPC Contract – Lehman Causeway Rendering

Extensive Grant Experience

Application Development and Management

Legacy and Future Grant Programs

- ❖ American Rescue Plan Act (ARPA)
- ❖ Infrastructure Investment and Jobs Act (IIJA)

Comprehensive Knowledge

- ❖ Technical feasibility
- ❖ Design review
- ❖ Benefit-Cost Analysis (BCA)

>2,000

Grant Applications

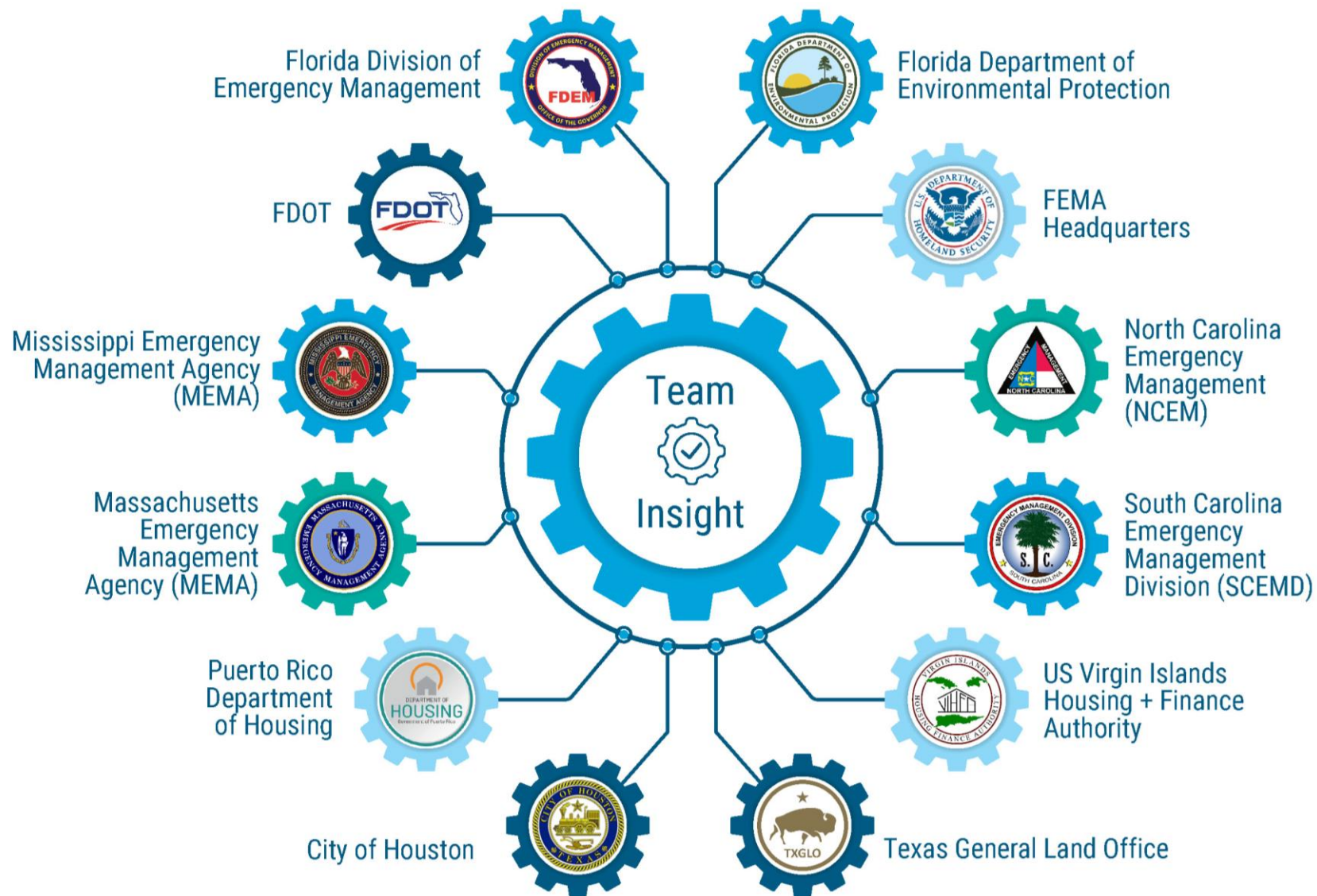
\$50B

FEMA/HUD Funding

\$160M

DOT Funding

Key Clients – Grant Development / Administrative Services



Atkins currently oversees **\$137M in ARPA funding for the City of Miami**, which includes prioritizing projects for multiple funding opportunities.

Approach to Funding



Initial Scoping

Prioritize to Maximize Funding

Review for Eligibility

Develop Grant / Document Progress

Analyze Alternatives

Project Understanding
and Approach

Public Involvement Plan & Approach



Proactive and Continuous
Public Involvement Plan

Knowledge of the Area,
Community and
Stakeholders

Awareness and Sensitivity
of Key Concerns

- ❖ Maintenance of traffic
- ❖ Evacuation routes
- ❖ Project schedule
- ❖ Project impacts

Public Input is Vital!

Communication with Key Stakeholders



Community Partners

- Bal Harbour Gourmet Market
- Bank of America
- Bicycle Groups
- Chevron Gas Station
- Fred Astaire Dance Studios
- Grand Beach Hotel Bay Harbor
- Homeowners Associations
- Keystone Point Neighborhood Association
- Manna Spa & Wellness
- Morris N. Broad Community Center
- O'Lima Signature Cuisine
- Ocean Reef Academy
- Plastic Surgeon - Dr. Mel Ortega
- Preferred Jewelers International
- Ruth K. Broad Bay Harbor K-8 Center
- Rx Home Health Services
- The French Bakery Cafe & Bistro

Federal, State, and Local Stakeholders





Elected Official Briefings

- ❖ Town of Bay Harbor Islands
- ❖ City of Miami
- ❖ Miami-Dade County District 4
 - ❖ Commissioner Sally Heyman

Innovative Outreach Methods

- ❖ Hybrid meetings
- ❖ Use Town existing communication resources
- ❖ Pop-up events
 - ❖ Bicycle Safety Rodeo
 - ❖ Bike Ride with the Chief
 - ❖ Annual events
 - ❖ 75th Anniversary events

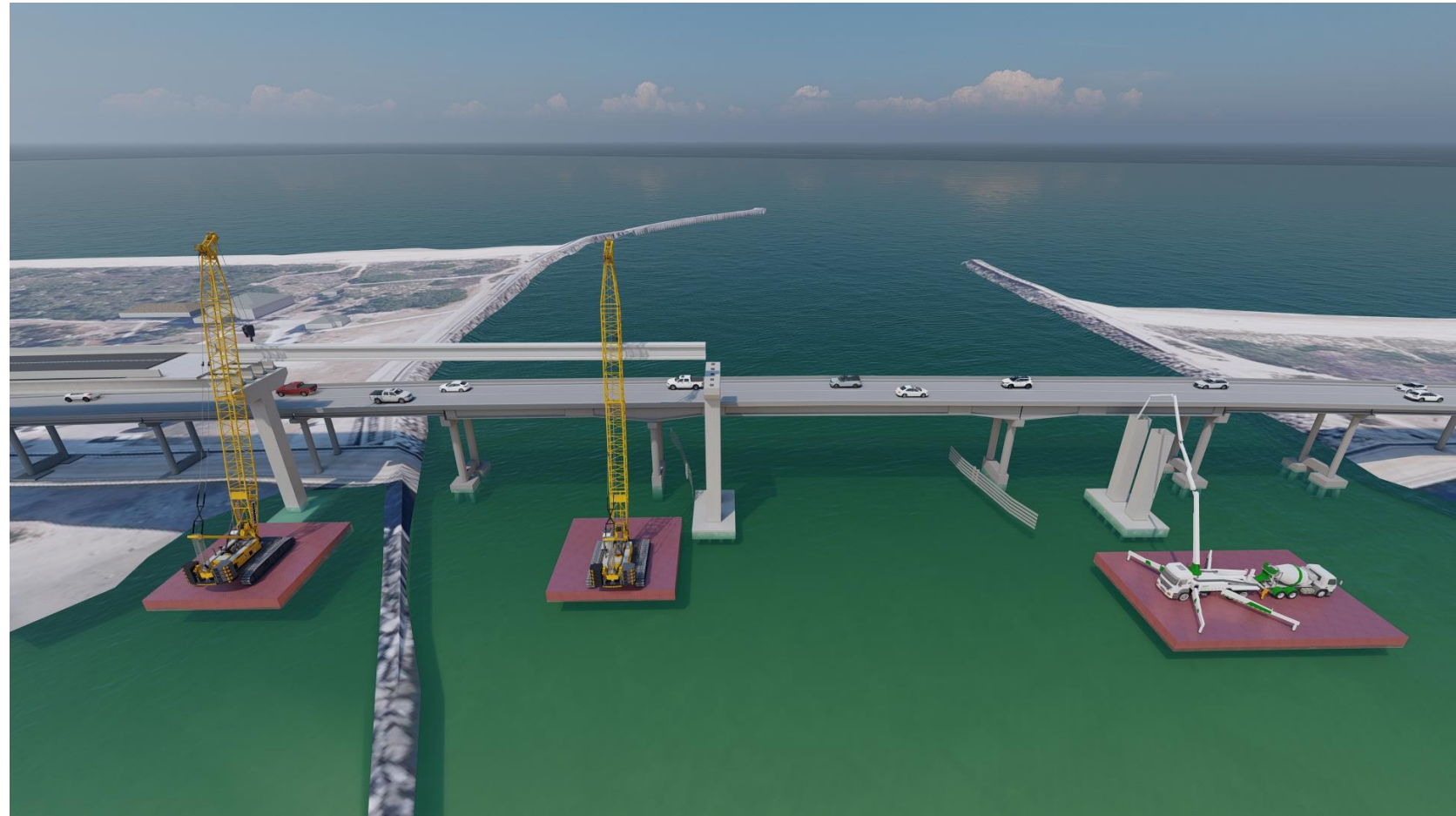
Next Steps

Permits - Consider All Stages,
Barge Access, Equipment, etc.

DB Procurement Support

- ❖ Key staff DB RFP experience
- ❖ Howard Frankland Bridge CEI (\$865M)

CEI and Construction Support



Permit Support, DB Owner's Rep, CEI

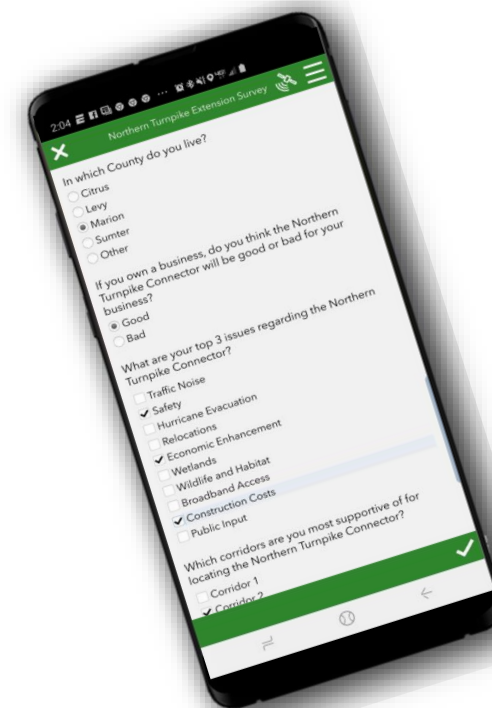


I-275 Howard Frankland Bridge CEI



Innovative Concepts

QR Code for Dashboard and Project Visualization



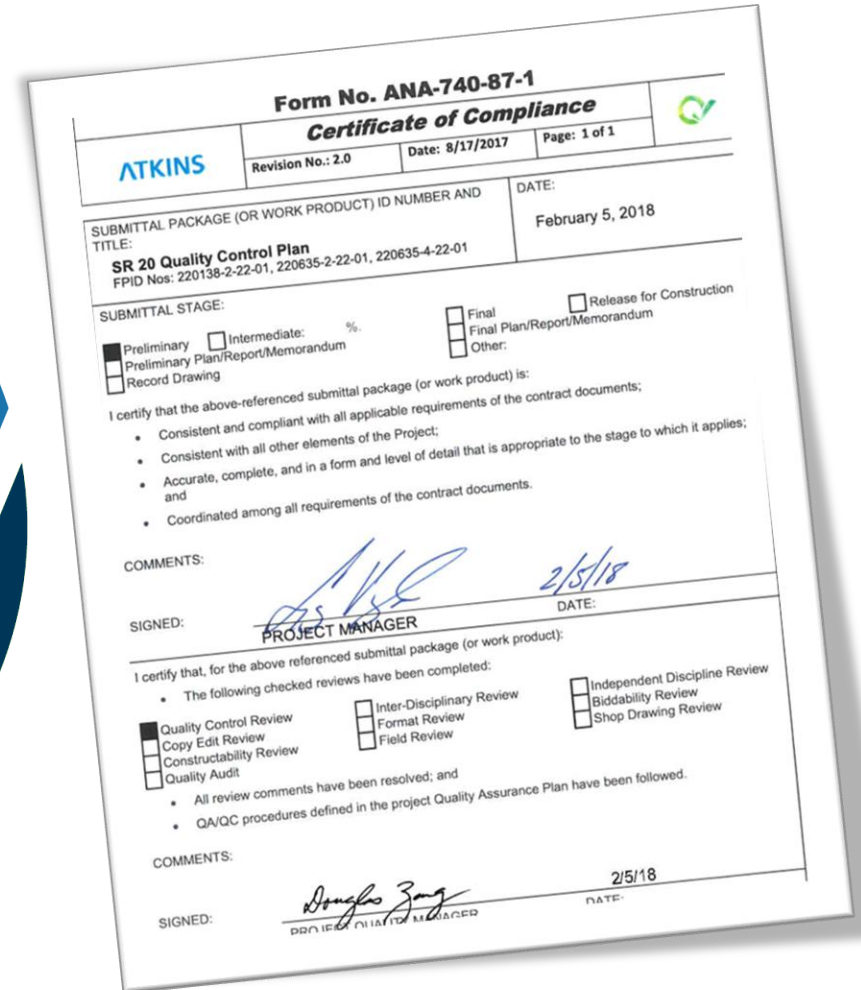
Virtual Surveys

Quality Control

We bring continuity

- ❖ Independent Reviewers
- ❖ Internal Audits
- ❖ 5-Step Process with Bluebeam
- ❖ Subconsultants Follow Atkins QC Requirements
- ❖ PQM

Steve McWilliams



Form No. ANA-740-87-1
Certificate of Compliance

ATKINS
Revision No.: 2.0
Date: 8/17/2017
Page: 1 of 1

SUBMITTAL PACKAGE (OR WORK PRODUCT) ID NUMBER AND TITLE:
SR 20 Quality Control Plan
FPID Nos: 220138-2-22-01, 220635-2-22-01, 220635-4-22-01

DATE:
February 5, 2018

SUBMITTAL STAGE:
☒ Preliminary
☐ Intermediate
☐ Preliminary Plan/Report/Memorandum
☐ Record Drawing
☐ Final
☐ Final Plan/Report/Memorandum
☐ Release for Construction
☐ Other:

I certify that the above-referenced submittal package (or work product) is:

- Consistent and compliant with all applicable requirements of the contract documents;
- Consistent with all other elements of the Project;
- Accurate, complete, and in a form and level of detail that is appropriate to the stage to which it applies; and
- Coordinated among all requirements of the contract documents.

COMMENTS:

SIGNED: *[Signature]* DATE: 2/5/18
PROJECT MANAGER

I certify that, for the above referenced submittal package (or work product):

- The following checked reviews have been completed:
☒ Quality Control Review
☐ Copy Edit Review
☐ Constructability Review
☐ Quality Audit
☐ Inter-Disciplinary Review
☐ Format Review
☐ Field Review
☐ Independent Discipline Review
☐ Biddability Review
☐ Shop Drawing Review
- All review comments have been resolved; and
- QA/QC procedures defined in the project Quality Assurance Plan have been followed.

COMMENTS:

SIGNED: *[Signature]* DATE: 2/5/18
PROJECT MANAGER

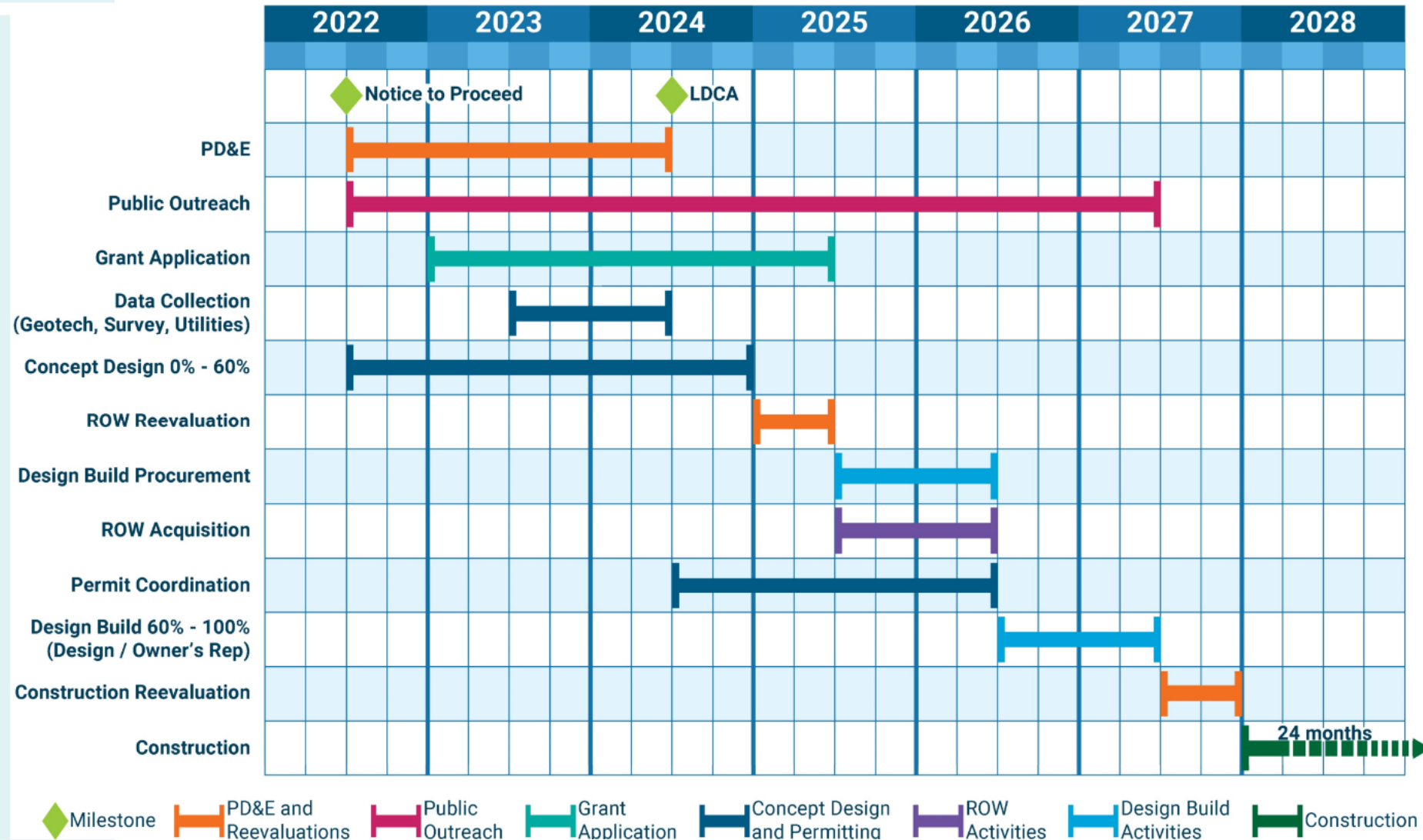
Project Schedule

Control Project Schedule and Budget

2 and 4-week Look-aheads on Critical Path

Acceleration options

- ❖ Advance portions to 60% (begin permit clock)
- ❖ Consider DBB



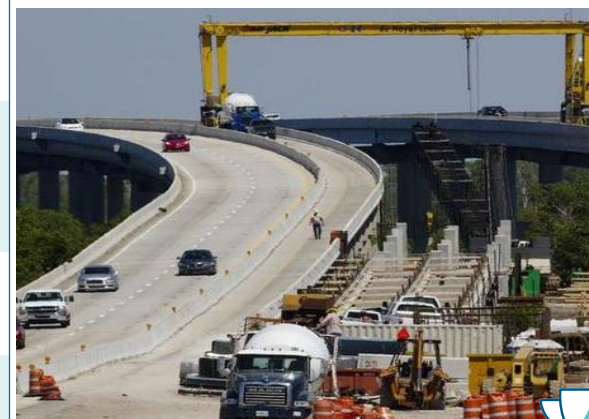
Experience Counts!



Project	Owner	Construction Cost (millions)	Bridge Over Water	PD&E	Public Outreach	Concept Design (%)	DB Owner's Rep	Final Design	CEI
Broad Causeway AET Toll conversion	D6	\$20	◆			◆		◆	
Indian St. Bridge over St. Lucie Waterway	D4	\$68	◆	◆	◆				
Dixie Highway over Hillsboro Canal	D4	\$43	◆			90%	◆		
Cortez Boulevard Bridge over ICW	D1	\$66.5	◆	◆	◆				
I-75 over Caloosahatchee River DB	D1	\$72	◆			90%	◆		
Bayway Structure E Bridge over ICW	D7	\$56	◆	◆	◆				
Anna Maria Island over ICW	D1	\$76	◆	◆	◆				



Cortez Boulevard Bridge PD&E



I-75 over Caloosahatchee River DB

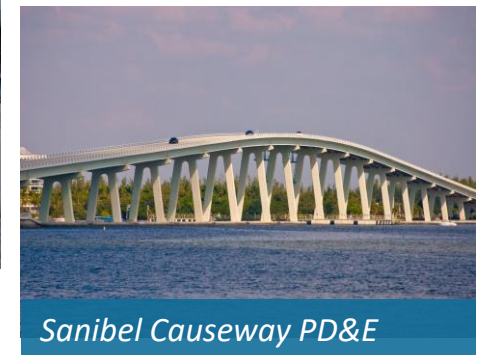
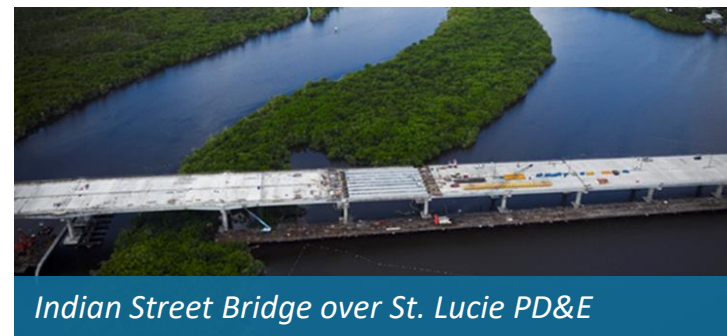


Bayway Structure E (SR 679) PD&E



Experience Counts!

Project	Owner	Construction Cost (millions)	Bridge Over Water	PD&E	Public Outreach	Concept Design (%)	DB Owner's Rep	Final Design	CEI
I-4 Lee Roy Selmon Connector	D7	\$460	◆		◆	◆		◆	
I-275 Westshore Interchange DB	D7	\$1,800		◆	◆	30%			
I-275 Howard Frankland Bridge over Tampa Bay DB	D7	\$850	◆						◆
John's Pass Bascule Bridge Replacement (SR699) over ICW	D7	\$77	◆			◆		◆	
118th Ave Improvement and Gateway Expressway DB	D7	\$544			◆	75%	◆		
Northern Arterial Corridor Program (NACP)	D2	TBD	◆	◆	◆		◆		



Why Atkins?



Top PD&E Consultant for ICW crossings,
Visualizations & interactive public meetings



Trusted partner: Port of Miami, Port
Everglades, Miami-Dade TPO, FDOT
all Districts, and more!



Scientific Dive Team on staff.
Planning through ribbon cutting



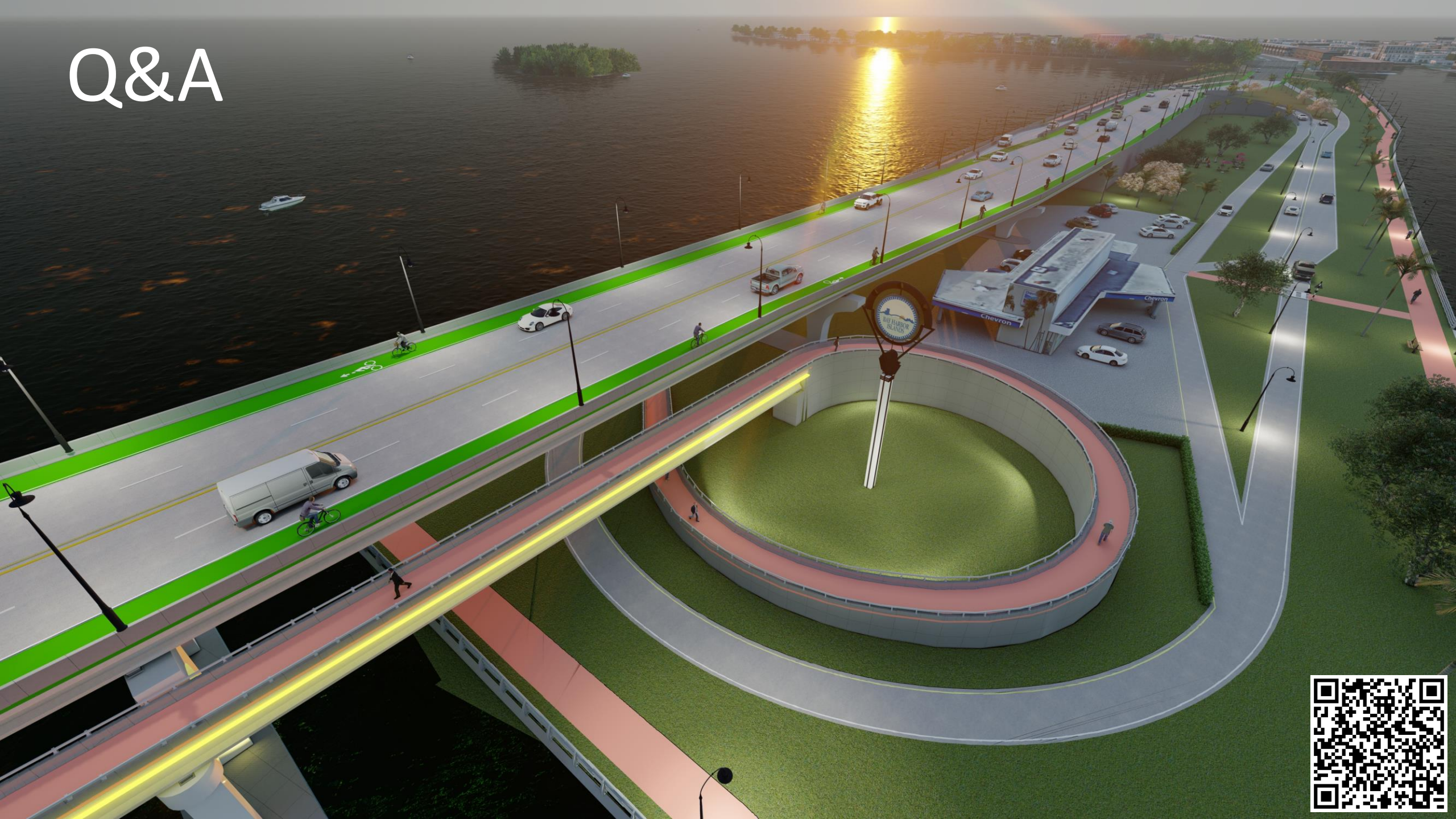
Thank You

ATKINS

Member of the SNC-Lavalin Group



Q&A



Innovative Concepts

Multi-use Corridors of
Regional Economic
Significance (M-CORES)

Northern Arterial Corridor
Project (NACP)



City of Clearwater
Fort Harrison Complete Streets Project

ATKINS
Member of the SNC-Lavalin Group



March 9, 2021

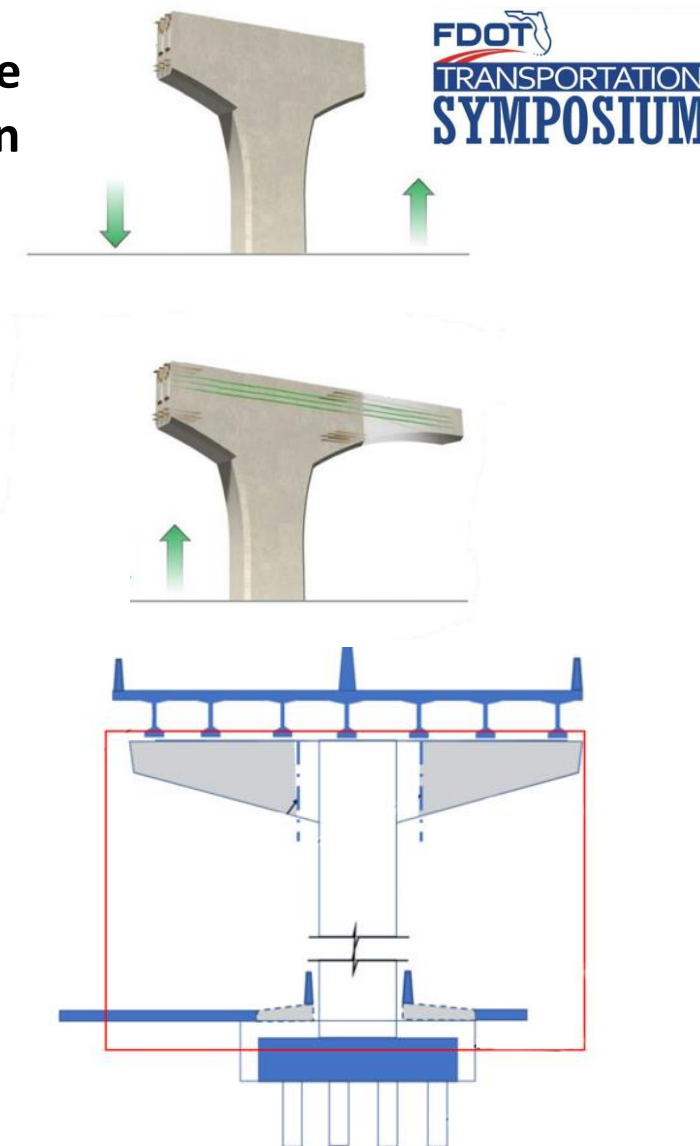
Innovative Concepts

3D Modeling Tours

- ❖ iTwin 3D Model reviews
- ❖ QR-Code Dashboards (NACP)



Accelerated Bridge Construction





BROAD CAUSEWAY DRAWBRIDGE REPLACEMENT

(#875101) - SR-922 CONCEPT DESIGN | PROJECT NO. - BC - 160

SHORTLIST PRESENTATION



GETTING THERE
JUST GOT EASIER™

INTRODUCTION



ATTENDEES



STEPHANIE ROMERO, PE
Project Manager



VICTOR HERRERA, PE
Principal-in-Charge



CARLOS RODRIGUEZ, PE
PD&E / NEPA Lead



ROB MYERS
Environmental



BILL JUNKIN, PE
Structures



KATHY LAJO, PE
Roadway



JULIANN BERTONE
Grants & Funding



OSCAR GONZALEZ
Public Involvement

OUTLINE

- ▶ Introduction
- ▶ Qualifications and Experience of the Team
- ▶ Qualifications of the Project Manager
- ▶ Understanding and Approach
- ▶ Why The BCC Team?

INTRODUCTION

ONE TEAM. ONE OBJECTIVE: GET THIS PROJECT BUILT

- ✓ The BCC Team has completed **50+ plus PD&E projects.**
- ✓ We are familiar with the Broad Causeway Drawbridge and working with the Town of Bay Harbor Islands.
- ✓ We have worked together successfully and are unparalleled to any other team.
- ✓ Our PD&E's get built. ✓ We are **LOCAL TO THE TOWN OF BAY HARBOR ISLANDS AND FDOT DISTRICT 6.**

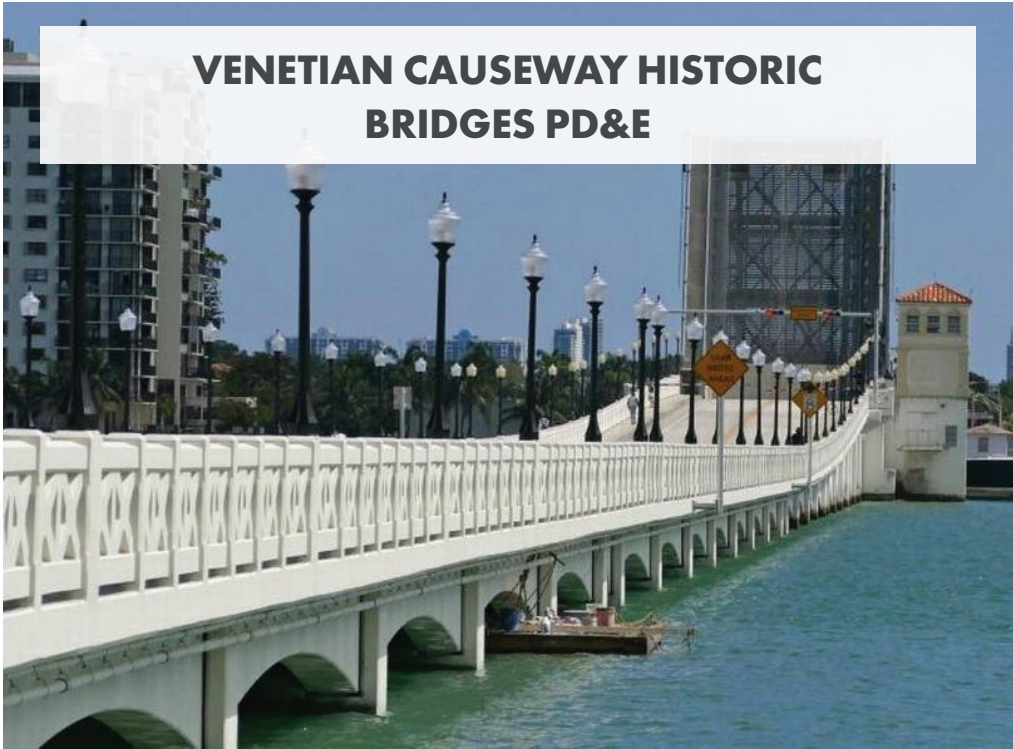


ZYSCOVICH



QUALIFICATIONS & EXPERIENCE

PD&E PROJECTS



QUALIFICATIONS & EXPERIENCE

COASTAL BRIDGES - FDOT BRIDGES



LONG KEY BRIDGE REHABILITATION



**I-275 HOWARD FRANKLAND BRIDGE
DESIGN-BUILD**



**SOUTHERN BOULEVARD (SR 80)
BRIDGE REPLACEMENT**



SR 5/OVERSEAS HIGHWAY OVER CHANNEL 5



**SR 112/I-195 (JULIA TUTTLE CAUSEWAY)
OVER INTRACOASTAL WATERWAY BRIDGE**



PORT OF MIAMI/DODGE ISLAND BRIDGE

QUALIFICATIONS & EXPERIENCE



RELEVANT PROJECTS - RFP DEVELOPMENT & OWNERS REP

**CITY OF MIAMI DESIGN
CRITERIA PACKAGE**



**WEKIVA PARKWAY SECTION 6 OWNER'S
REPRESENTATIVE**



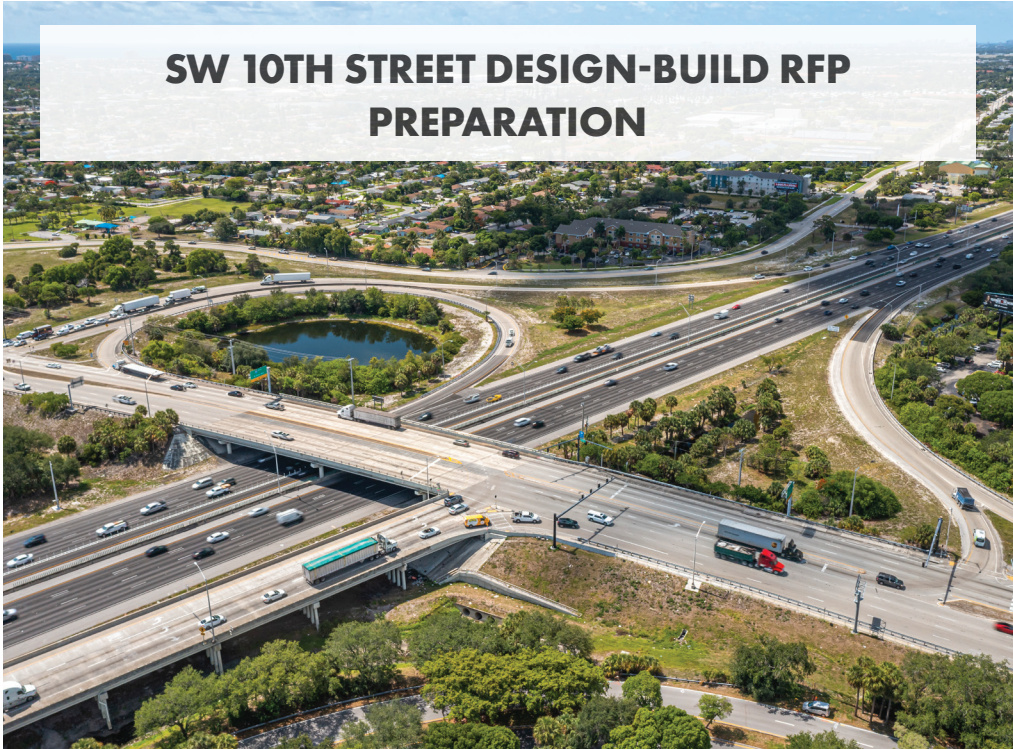
**DORAL PARKS BOND PROGRAM
MANAGEMENT SERVICES**



**I-395/SR 836/I-95 BRIDGE DESIGN-BUILD
OWNER'S REPRESENTATIVE**



**SW 10TH STREET DESIGN-BUILD RFP
PREPARATION**



**SR-80 SOUTHERN BLVD BRIDGES OWNER'S
REPRESENTATIVE**



QUALIFICATIONS OF THE PROJECT MANAGER

PROJECT MANAGER BIO

STEPHANIE ROMERO, PE

Project Manager



- ▶ 15 Years of Engineering Experience
- ▶ Engineer of Record and Deputy Project Manager for Planning and Design Projects
- ▶ Experience Managing Bridge PD&E Studies in Florida
- ▶ Experience with NEPA and Public Involvement
- ▶ Experience with bridge design including movable bridges

VENETIAN CAUSEWAY HISTORIC BRIDGES PD&E



**NW 17TH AVENUE HISTORIC BRIDGE
OVER MIAMI RIVER PD&E**



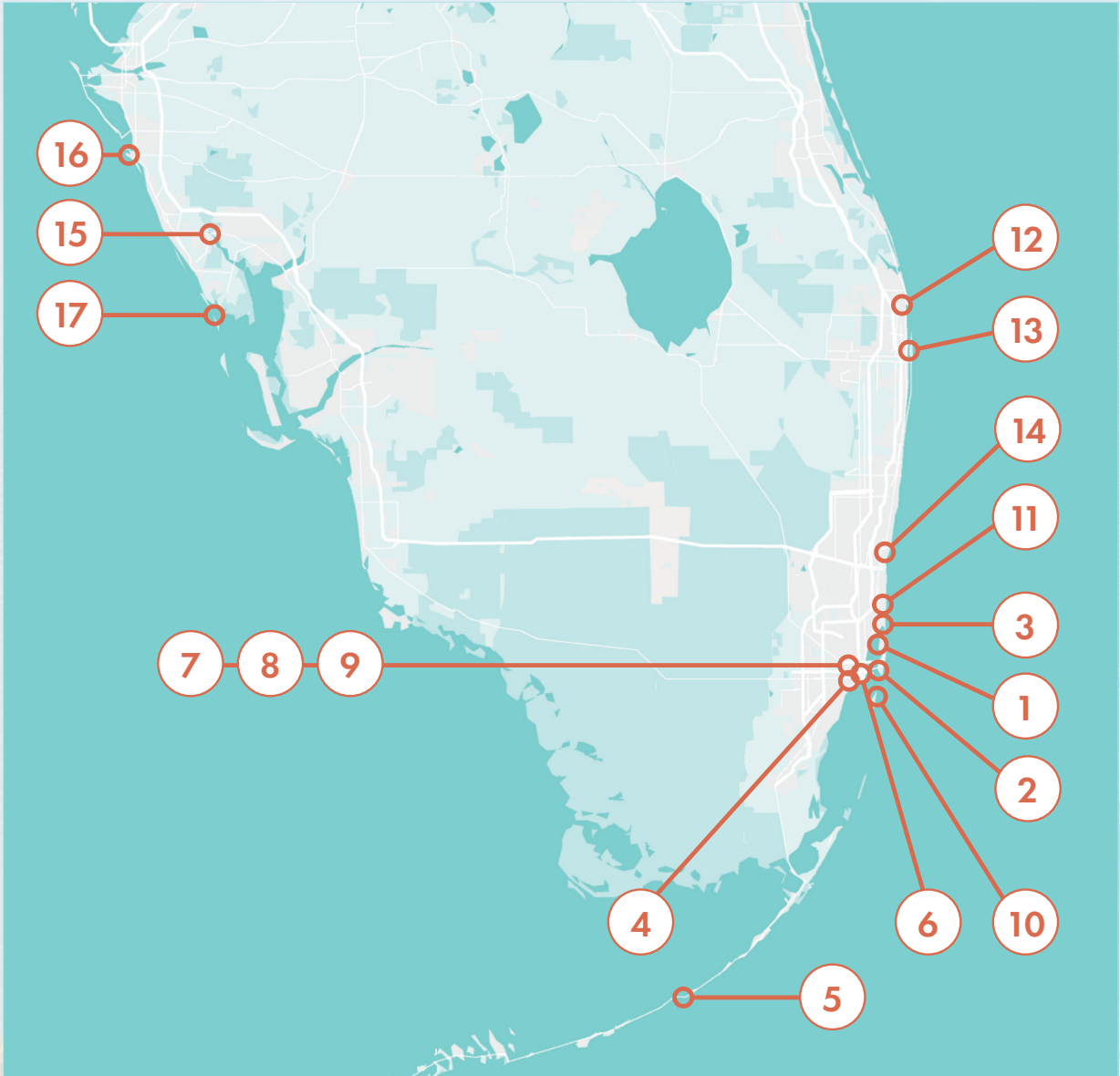
BROAD CAUSEWAY BRIDGE REHABILITATION



QUALIFICATIONS OF THE PROJECT MANAGER



PROJECT MANAGER EXPERIENCE



STEPHANIE ROMERO'S BRIDGE EXPERIENCE		BRIDGE TYPE
1	Broad Causeway Bridge Rehabilitation, Miami, FL Town of Bay Harbor Islands	Bascule
2	PD&E Study for Venetian Causeway, Miami & Miami Beach, FL FDOT District 6	10 Low-Level Fixed Spans & 2 Movable Bascules
3	Sunny Isles Bascule Span Retrofit, Miami-Dade County, FL FDOT District 6	Bascule
4	SR 7/ NW 5th Street Bridge, Miami, FL FDOT District 6	Bascule
5	Overseas Highway US1 over Channel 2, Craig Key, FL FDOT District 6	Open-Spandrel Arch
6	SR 968/SW 1st Street Bridge over the Miami River, Miami-Dade County, FL FDOT District 6	Bascule
7	NW 36th Street Bridge over the Miami River, Miami-Dade County, FL FDOT District 6	Bascule
8	NW 12th Avenue Bridge over the Miami River, Miami-Dade County, FL FDOT District 6	Bascule
9	NW 17th Avenue Bridge over the Miami River, Miami, FL FDOT District 6	Bascule
10	Bear Cut and West Bridges of the Rickenbacker Causeway, Miami-Dade County, FL FDOT District 6	AASHTO Type II Girders
11	SR 820/ Hollywood Blvd. Bridge over Intercoastal Water Way (ICWW), Hollywood, FL FDOT District 4	Bascule
12	Parker Bridge (US 1) over ICWW, North Palm Beach, FL FDOT District 4	Bascule
13	Flagler Memorial Bridge SR A1A over ICWW, West Palm Beach, FL FDOT District 4	Bascule
14	South Florida Rail Corridor over the New River, Fort Lauderdale, FL FDOT District 4	Single Leaf Rail Bridge
15	Hillsborough Avenue Bascule over Hillsborough River, Hillsborough County, FL FDOT District 7	Bascule
16	Siesta Key Bridge over ICWW, Sarasota County, FL FDOT District 1	Bascule
17	Boca Grande Causeway North Swing Bridge Replacement, Placida, FL Gasparilla Island Bridge Authority	Swing



QUALIFICATIONS OF THE PROJECT MANAGER

RECENT PROJECT EXPERIENCE

Venetian Causeway PD&E

- ▶ FDOT D6 PD&E under the new National Environmental Policy Act (NEPA)
- ▶ Multi-agency coordination
- ▶ Technical Expertise:
 1. Project Management
 2. Bridge Design
 3. NEPA Process
 4. Section 106 and Section 4(f) Process for a NRHP listing
 5. Hurricane Evacuation Routes
 6. One way on and off for residents and businesses
 7. Pedestrians and Bicycle Facilities
 8. Public Involvement

PREFERRED ALTERNATIVE - BRIDGE REPLACEMENT

Fixed Bridges - Alternative 7 – Arched Beams



PREFERRED ALTERNATIVE - BRIDGE REPLACEMENT

Alternative M4 – Double Leaf Bascule Bridge



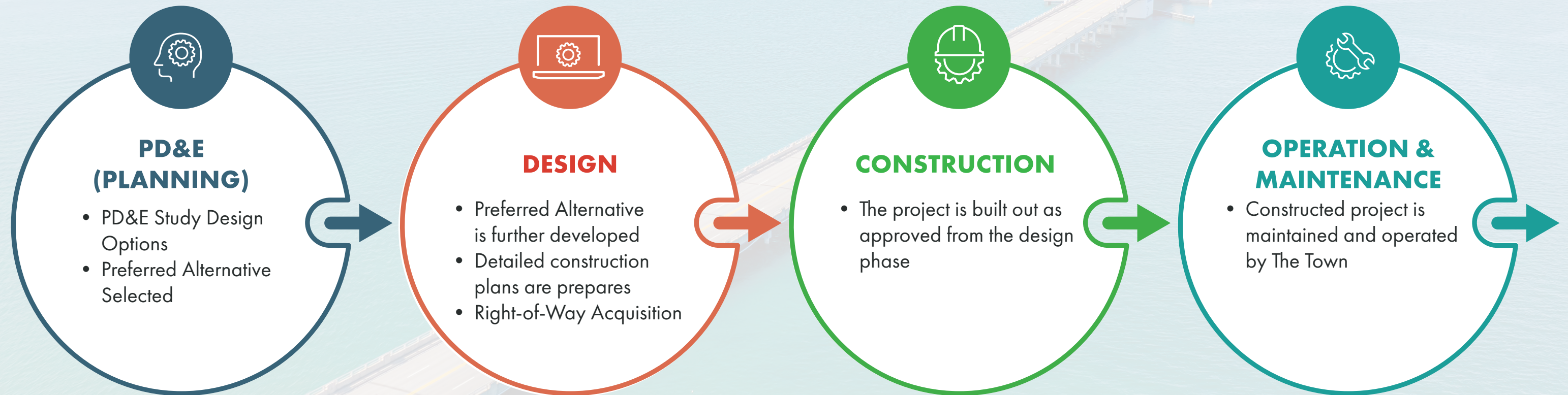
PREFERRED ALTERNATIVE - BRIDGE REPLACEMENT

Fixed Bridge Typical Section



PROJECT UNDERSTANDING & APPROACH

TRANSPORTATION DEVELOPMENT PROCESS

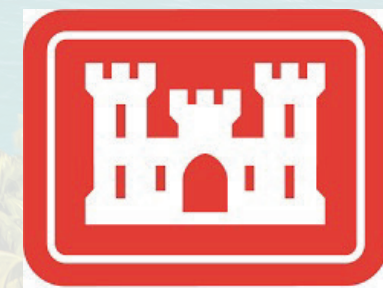


PROJECT UNDERSTANDING & APPROACH

PRE-PLANNING ACTIVITIES

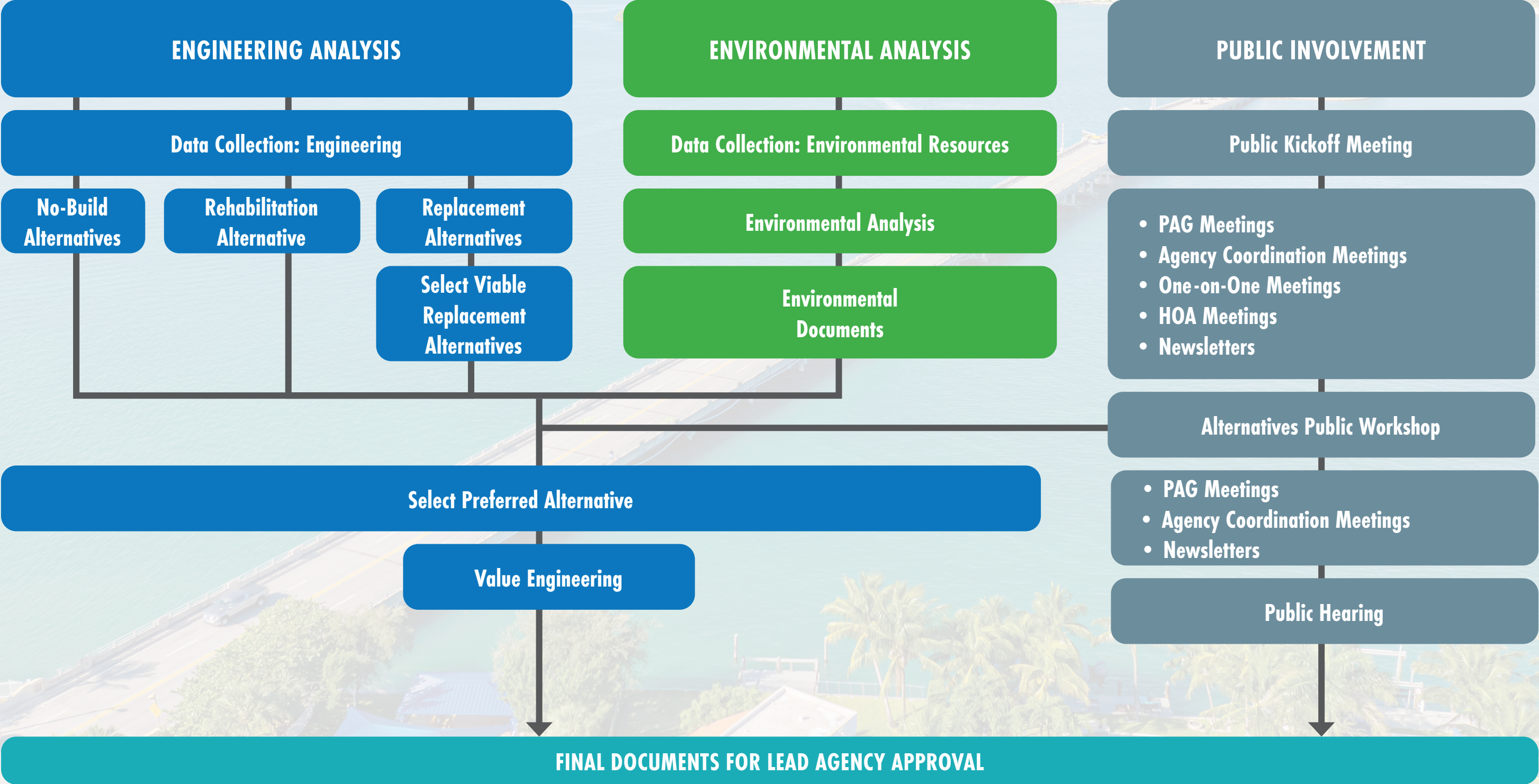
ETDM Screening

- ▶ Develop Project Description
- ▶ Develop Purpose and Need
- ▶ Prepare Preliminary Environmental Discussion (PED)
- ▶ Advanced Notification (AN) to ETAT Members
- ▶ Identify Significant Environmental Issues
- ▶ Agency Participation
 - ▶ Identify Lead Agency: Office of Environmental Management (OEM), US Coast Guard
 - ▶ Cooperating and Participating Agencies: USACE, FDEP
 - ▶ Identify Anticipated Permits



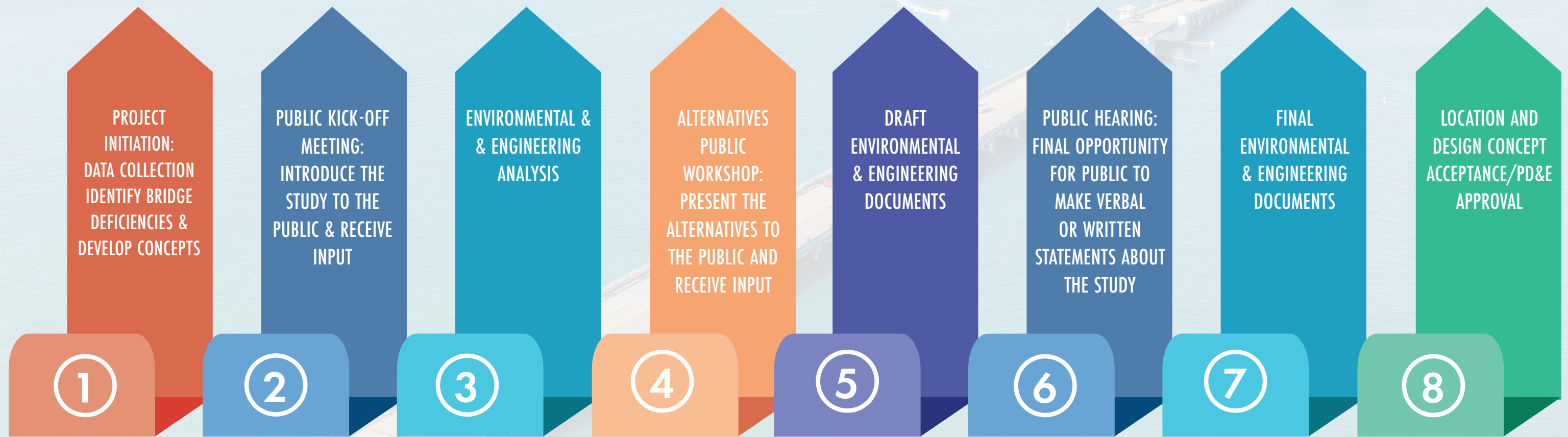
PROJECT UNDERSTANDING & APPROACH

PD&E PROCESS



PROJECT UNDERSTANDING & APPROACH

TRANSPORTATION DEVELOPMENT PROCESS – PD&E STUDY PROCESS



PUBLIC INVOLVEMENT

A community outreach approach that runs parallel with the engineering and environmental analysis. This process ensures the Town's residents, elected officials, businesses and public, and other entrusted parties participate throughout the selection and approval of the preferred alternative.

PROJECT UNDERSTANDING & APPROACH

PURPOSE AND NEED OF THE PROJECT

Bridge was built in 1951 (71 years ago)

► Existing Condition

- Bridge is Functionally Obsolete
- Sufficiency Rating is 46.1
- High Maintenance and Repair Costs
- Traffic Backup due to bascule openings

BROAD CAUSEWAY DRAWBRIDGE			
FDOT BRIDGE NO.	SUFFICIENCY RATING	DEFICIENCY RATING	HEALTH INDEX
875101	46.1	FO	95.49
* A BRIDGE WITH A SUFFICIENCY RATING BELOW 50 IS CONSIDERED ELIGIBLE FOR FEDERAL REPLACEMENT DOLLARS			

► Operational Improvements

- Narrow Traffic Lanes and Sidewalks
- Shared Bike Lanes

Project Issues

- Vehicular, Navigational, Pedestrian and Bicycle Traffic Considerations
- Movable Bridge
- Roadway Alignment
- Right-of-Way Constraints
- Environmental Considerations
- Maintenance of Traffic
- Public Involvement

ALTERNATIVES ANALYSIS

NO BUILD ALTERNATIVES	
1	No Action – The bridge remains as is with routine maintenance.
2	Transportation System Management & Operations (TSM&O) – The bridge remains as is with routine maintenance only. Transportation System Management & Operational improvements are made to facilitate transportation along the corridor.
3	Multimodal – The bridge remains as is with routine maintenance only. Transit, bicycle, pedestrian and any other non-motorized improvements are made to facilitate transportation along the corridor.
BUILD ALTERNATIVES	
4	Rehabilitation – Rehabilitate the existing movable bridge
5	Low-Level Bascule – Replace existing bridge with a low- level bascule bridge (Vertical Clearance of 22 ft.)
6	Mid-Level Bascule – Replace existing bridge with a mid- level bascule bridge (Vertical Clearance of 30 ft.)
7	High-Level Fixed – Replace existing bridge with a high-level fixed bridge (Vertical Clearance of 65 ft.)

REPLACEMENT

PROJECT UNDERSTANDING & APPROACH

ALTERNATIVES ANALYSIS

ALTERNATIVE 1

No Action

- ▶ Existing Deficiencies will remain
- ▶ Continued Deterioration
- ▶ Extensive Periodic Repair and Maintenance

ALTERNATIVE 2

Transportation System Management & Operations (TSM&O)

- ▶ Existing Deficiencies will remain, but safe bridges required for effective TSM&O
- ▶ Transportation system improvements will be provided

ALTERNATIVE 3

Multimodal

- ▶ The Existing Deficiencies will remain, but operational improvements will be provided.
- ▶ Facilitate transit, bike and ped facilities.

DOES NOT MEET PURPOSE AND NEED FOR PROJECT. THESE ALTERNATIVES DO NOT CORRECT THE BRIDGES' STRUCTURAL AND FUNCTIONAL DEFICIENCIES, NOR DOES IT EXTEND THE ANTICIPATED SERVICE LIFE OF THE BRIDGE.

PROJECT UNDERSTANDING & APPROACH

ALTERNATIVES ANALYSIS

ALTERNATIVE 4 - Rehabilitation



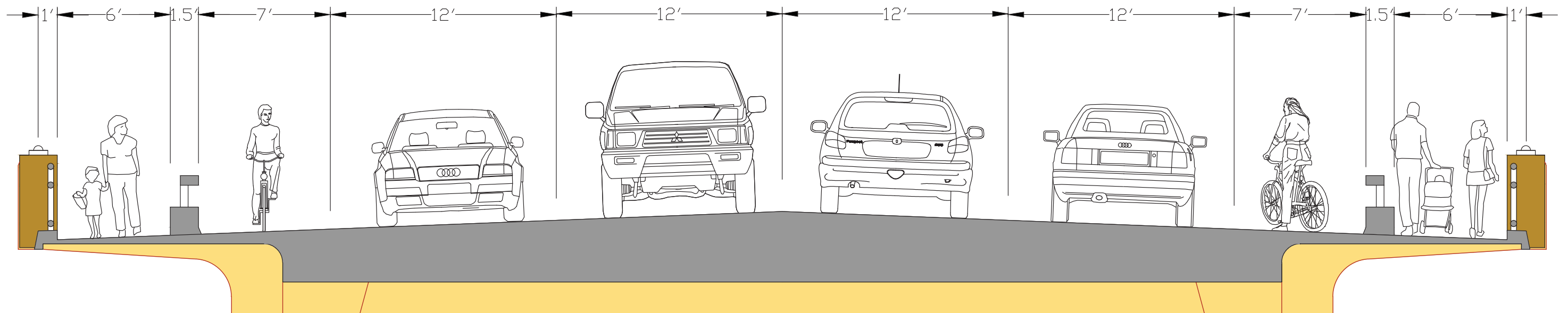
**DOES NOT MEET PURPOSE
AND NEED FOR PROJECT.
THIS ALTERNATIVE
DOES NOT CORRECT THE
BRIDGE STRUCTURAL AND
FUNCTIONAL DEFICIENCIES
DO NOT CORRECT THE
BRIDGES' STRUCTURAL
AND FUNCTIONAL
DEFICIENCIES, NOR
DOES IT EXTEND THE
ANTICIPATED SERVICE LIFE
OF THE BRIDGE.**

PROJECT UNDERSTANDING & APPROACH

TYPICAL SECTION

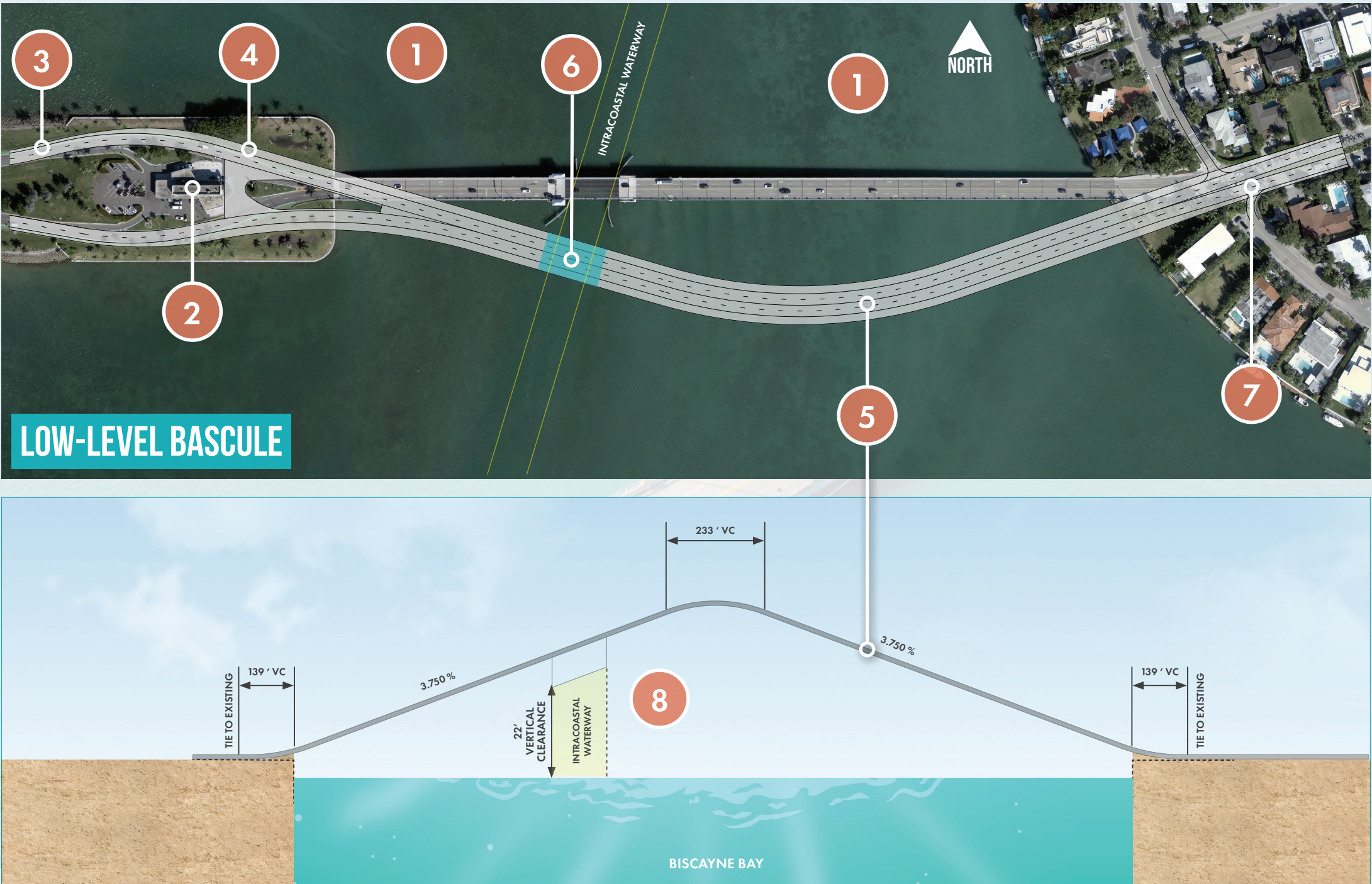
Bridge Typical Section

- ▶ (4) - 12-ft. Travel Lanes
- ▶ (2) - 7-ft. Bike Lanes
- ▶ (2) - Protected 6-ft. sidewalks



ALTERNATIVES ANALYSIS

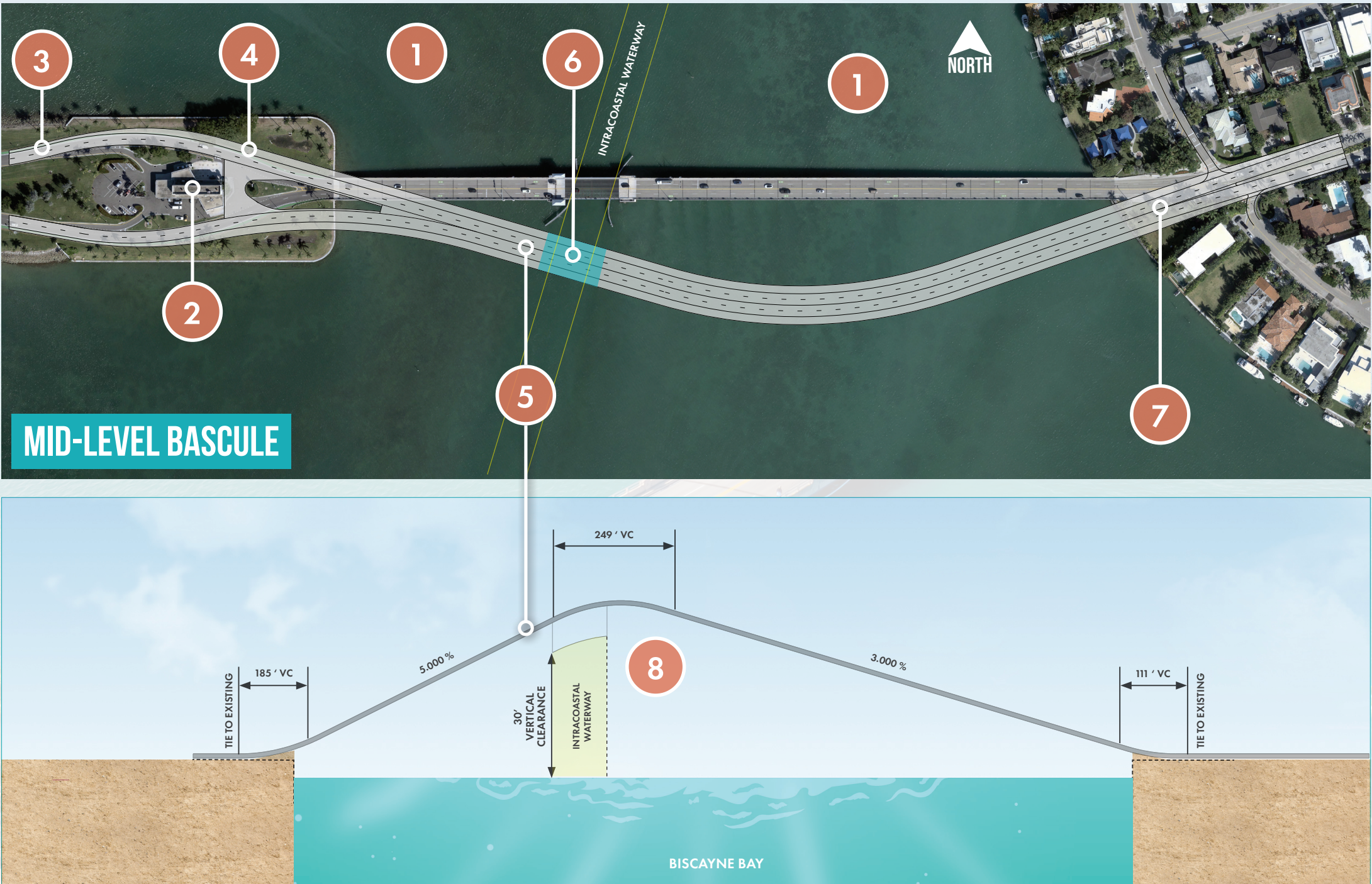
ALTERNATIVE 5 – Low-Level Bascule Bridge (VC= 22 ft.)



BENEFITS	
1	Avoids impact to existing habitat
2	Maintains existing access to gas station
3	Familiar route for drivers
4	Improves lines of sight which results in reduced bike/pedestrian accidents
5	Provides comfortable slope for bicyclists and pedestrians
6	Crosses channel at 90 degrees
7	Minimal disruption to adjacent owners
8	Increases vertical clearance by 6 feet

ALTERNATIVES ANALYSIS

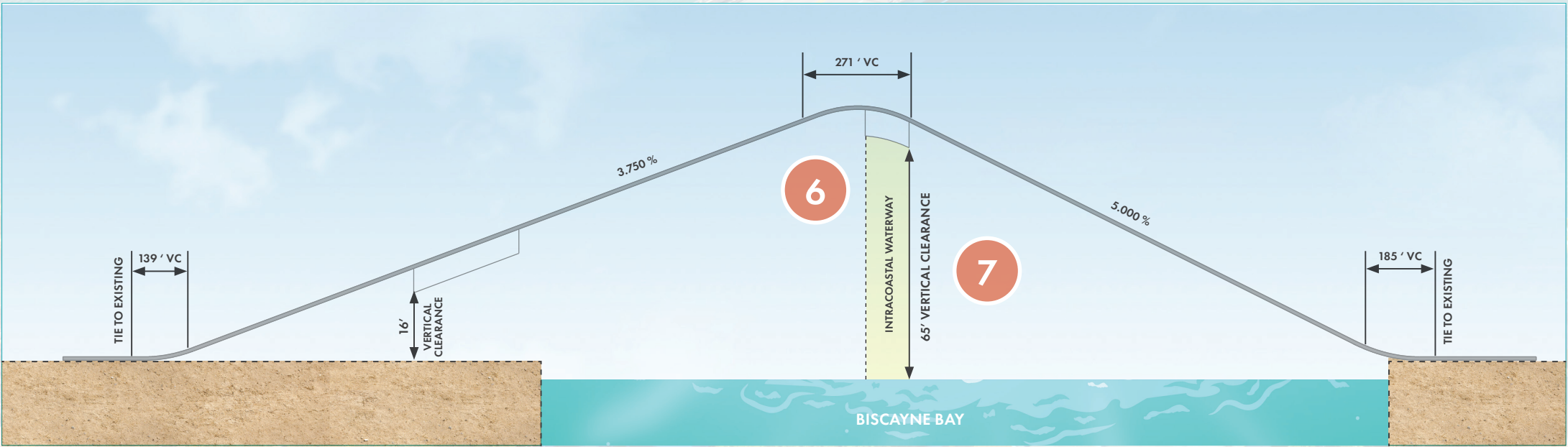
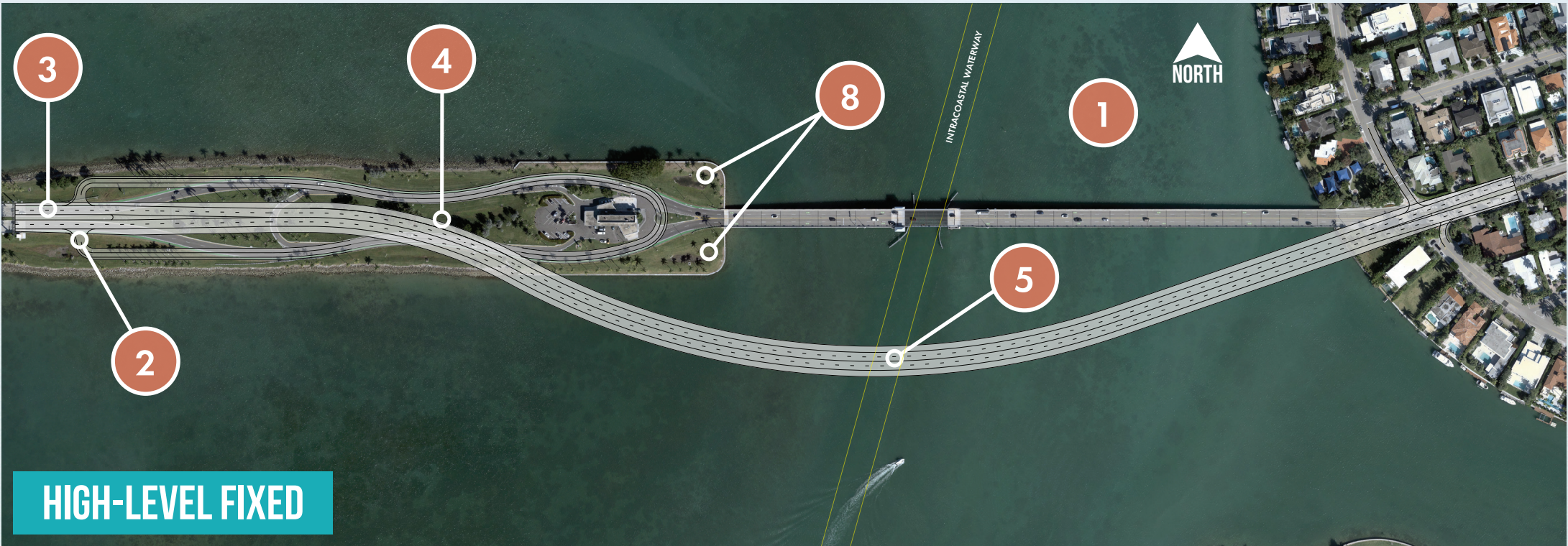
ALTERNATIVE 6 – Mid-Level Bascule Bridge (VC = 30 ft.)



BENEFITS	
1	Avoids impact to existing habitat
2	Maintains existing access to gas station
3	Familiar route for drivers
4	Improves lines of sight which results in reduced bike/pedestrian accidents
5	Higher vertical clearance may lead to drastic reduction in bascule openings
6	Crosses channel at 90 degrees
7	No additional ROW acquisition anticipated
8	Increases vertical clearance by 14 feet

ALTERNATIVES ANALYSIS

ALTERNATIVE 7 – High- Level Fixed Bridge (VC=65 ft.)



BENEFITS	
1	Avoids impact to existing habitat
2	Maintains existing access to gas station
3	No impacts to tolling structure or interruptions to tolling
4	Improves lines of sight which results in reduced bike/pedestrian accidents
5	Elimination of bascule and need for bascule maintenance
6	Increases vertical clearance by 49 feet
7	Provides 65' fixed clearance
8	Available areas for park enhancements

PROJECT UNDERSTANDING & APPROACH



PROJECT UNDERSTANDING & APPROACH

MOT-LOW-LEVEL & MID-LEVEL BASCULE

Phase 1:

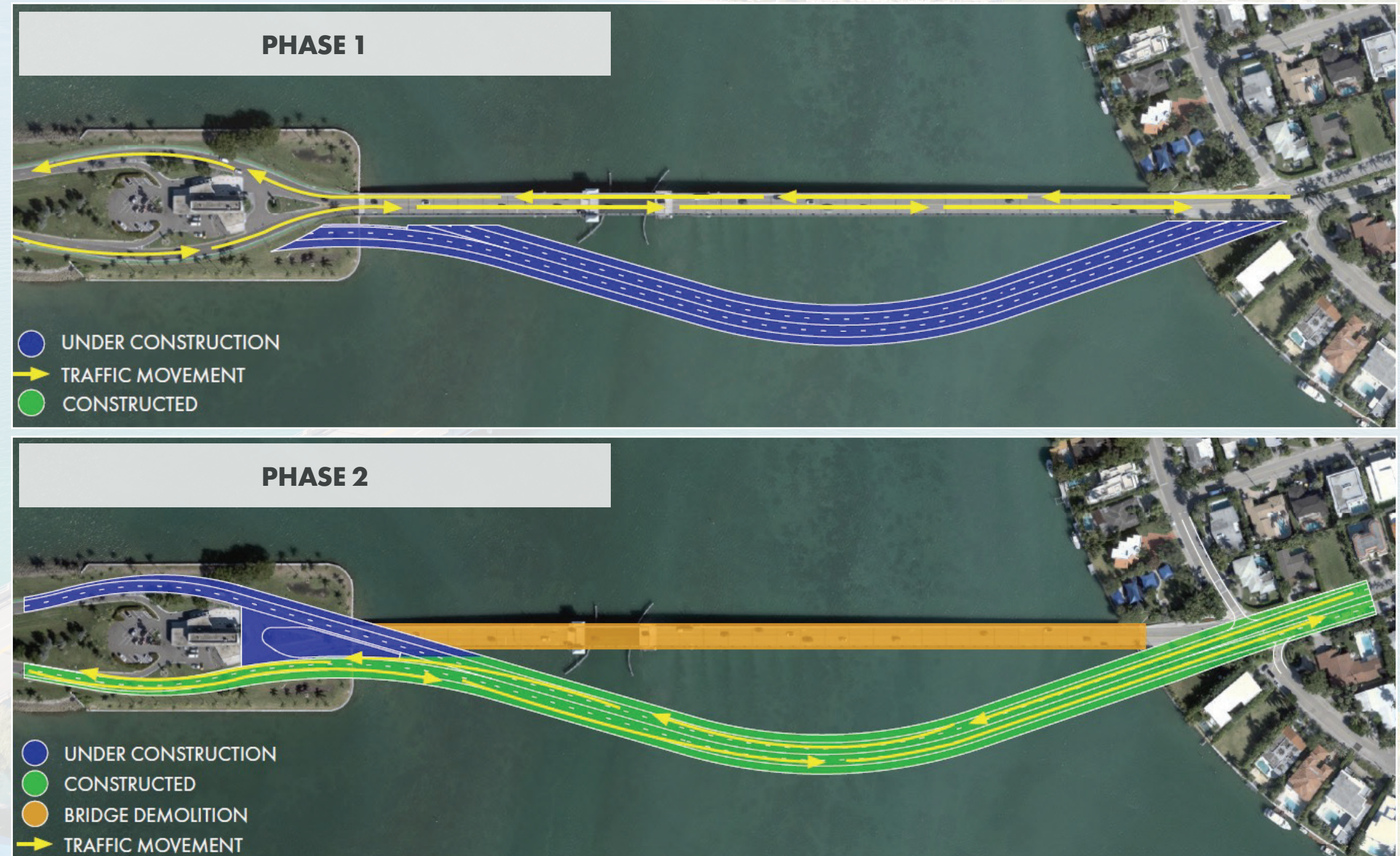
- ▶ Construct majority of new bridge south of the existing structure
- ▶ Maintain traffic in its existing configuration

Phase 2:

- ▶ Construct remaining spans of the westbound lanes and connection to gas station
- ▶ Shift eastbound and westbound traffic onto the newly constructed bridge

Phase 3:

- ▶ Remove temporary transitions, apply final friction course and pavement markings
- ▶ Shift traffic onto its final configuration



PROJECT UNDERSTANDING & APPROACH

MOT-HIGH-LEVEL FIXED

Phase 1:

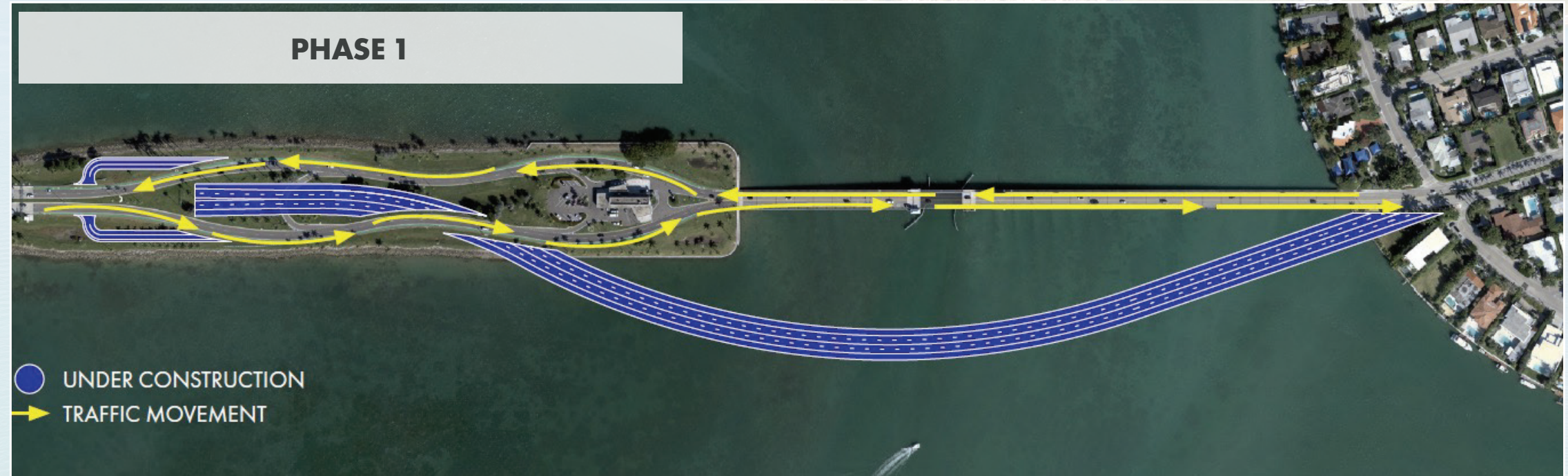
- ▶ Construct entire bridge and eastern approach
- ▶ Maintain traffic in its existing configuration

Phase 2:

- ▶ Shift EB lanes to the north
- ▶ Construct connection between east approach and bridge

Phase 3:

- ▶ Shift traffic onto final configuration
- ▶ Remove temporary transitions and apply final friction course and markings



PROJECT UNDERSTANDING & APPROACH

ENVIRONMENTAL ANALYSIS

Social

- ▶ Section 4(f) Parks- Tot Lot, Broad Causeway, Paddling Trail
- ▶ Closely tied to Public Involvement

Cultural

- ▶ Bridge is historic, 2 Historic Districts, 4 Historic Buildings to indicate there may be more
- ▶ Additional surveys needed (possibly in-water)
- ▶ Bridge Removal is an Adverse Effect
 - ▶ Individual 4f Evaluation likely, possible schedule implications
- ▶ Cultural Resources Assessment Survey report

Natural

- ▶ **Endangered Species:**
 - ▶ Manatee, sea turtles, corals, bonneted bat
- ▶ **Wetlands and Essential Fish Habitat:**
 - ▶ Mangroves, seagrasses, corals
- ▶ In-water surveys anticipated
- ▶ Impacts result in mitigation costs

Physical

- ▶ Noise
- ▶ Water Quality - Biscayne Bay Aquatic Preserve (an Outstanding Florida Water)
- ▶ Contamination - Gas station is FDEP Cleanup Site



PROJECT UNDERSTANDING & APPROACH

ENVIRONMENTAL ANALYSIS

Environment & NEPA Process

- ▶ Addresses all Federal, state, and local environmental regulations
- ▶ Coordination with SHPO, USFWS, NMFS, FWC, FDEP, Biscayne Bay Commission
- ▶ Identifies (and Communicates) Least Overall Harmful Alternative
- ▶ Building consensus with stakeholders through Public Involvement is key
- ▶ Goals: Reach LDCA and set up a permissible project for RFP development/construction
- ▶ Provide process and documentation that allows for Federal Funding options
- ▶ ID impacts to Social, Cultural, Natural, Physical Environments
- ▶ Iterative Alternative Development Process
- ▶ Uses Weighted and Scored Matrices

Environmental Documentation

- ▶ Sociocultural Effects Evaluation
- ▶ Section 4(f) de minimis, Programmatic or Individual Evaluation
- ▶ Cultural Resources Assessment Survey
- ▶ Natural Resources Evaluation
- ▶ Essential Fish Habitat Assessment
- ▶ Noise Study Report
- ▶ Water Quality Impact Evaluation checklist
- ▶ Contamination Screening Evaluation Report
- ▶ Conceptual Stage Relocation Plan
- ▶ Type II Categorical Exclusion

Permitting

- ▶ Anticipated Permits from USACE, SFWMD, USCG, FDEP, Miami-Dade County during design



PROJECT UNDERSTANDING & APPROACH



PUBLIC INVOLVEMENT

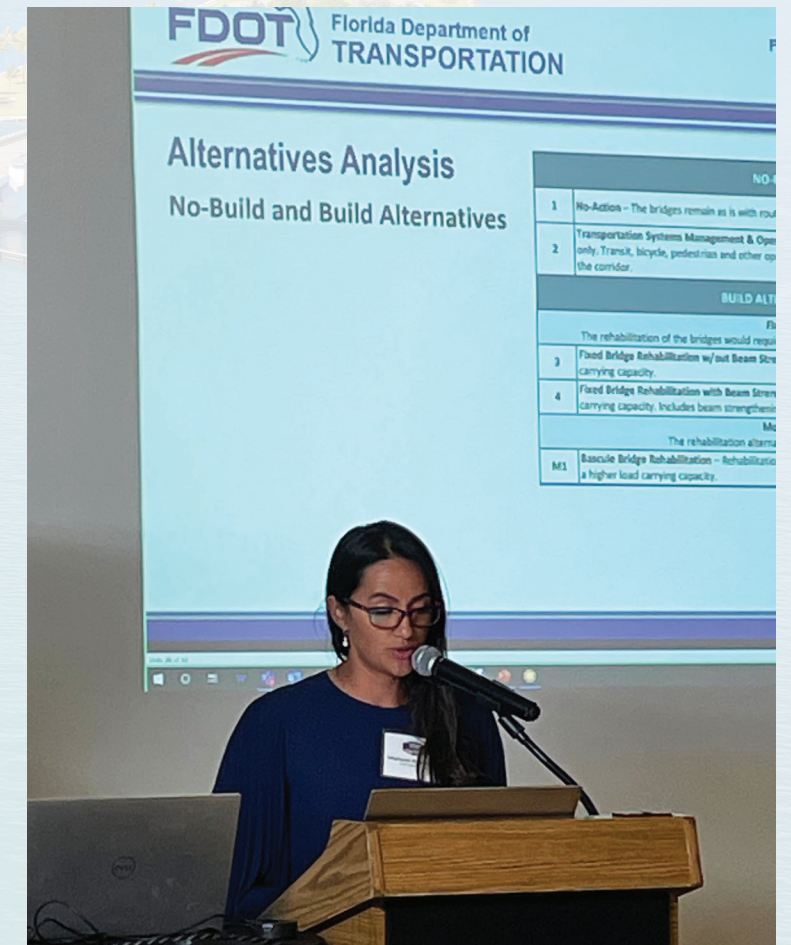
Key Stakeholders

	Town of Bay Harbor Islands elected and appointed officials		Keystone Point Neighborhood Association (KPNA Meeting – Held on the third Thursday of every month) www.keystonepoint.net		Bal Harbour Gourmet Market
	Miami-Dade County Commissioner Sally Heyman (termed out)		Morris N. Broad Community Center		Manna Spa & Wellness
	Town of Bay Harbor Islands, Bal Harbor and City of North Miami Police		Chevron Gas Station		Grand Beach Hotel Bay Harbor
	BHI Marine Patrol Unit		Ruth K. Broad Bay Harbor K-8 Center		French Bakery Cafe & Bistro
	Miami-Dade Fire House 76		Bank of America		
	Coordination with neighboring cities and key agencies		Ocean Reef Academy		

PROJECT UNDERSTANDING & APPROACH

PUBLIC INFORMATION APPROACH

- ▶ Public Involvement Plan
- ▶ Elected official/Agency briefings
 - ▶ Including City Officials/County Commissioner Heyman
- ▶ Public Kickoff Meeting
- ▶ Alternatives Workshop
- ▶ MPO Board and Committee Presentations
- ▶ Collaterals
- ▶ Pop up events - Bike Rodeo, Annual Picnic, etc.



PROJECT UNDERSTANDING & APPROACH

GRANT APPLICATIONS

Grant Writing and Administration Experience

- ▶ Our team has successfully supported 50 projects in TIGER & FASTLANE grants for a total of \$1.2 billion in federal funds used to build key transportation projects.
- ▶ In the first round of FASTLANE, our team supported 40 percent of the total funds awarded, including the largest award of \$165 million for the Atlantic Gateway project.
- ▶ We provide full-service grant application support including general guidance, narrative writing, preparation of the required benefit-cost or cost-effectiveness analysis, and compliance with all requirements.
- ▶ Experience with LAP

50

TIGER &
FASTLANE Grants

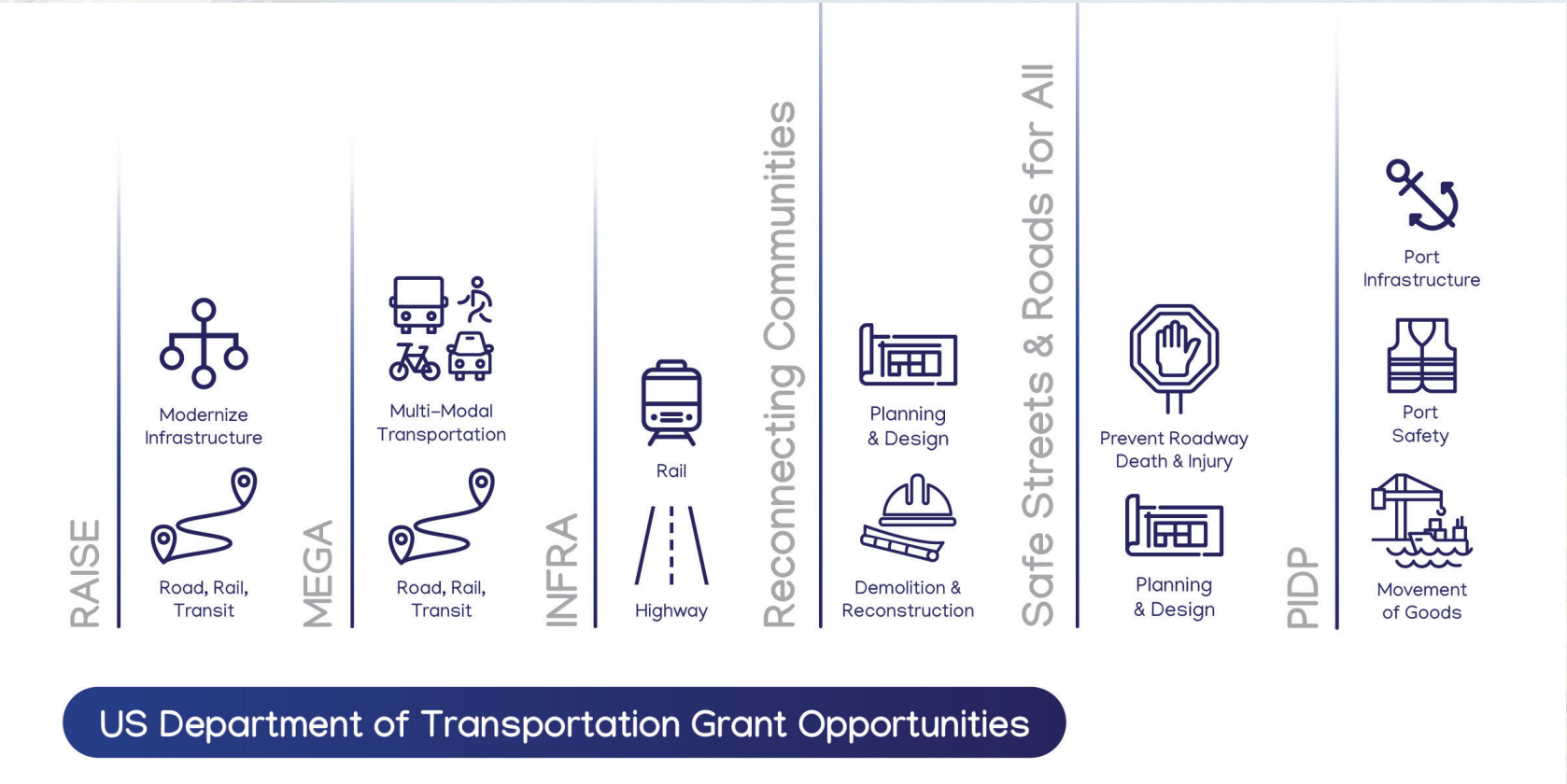
\$1.2B

Federal
Transportation
Projects

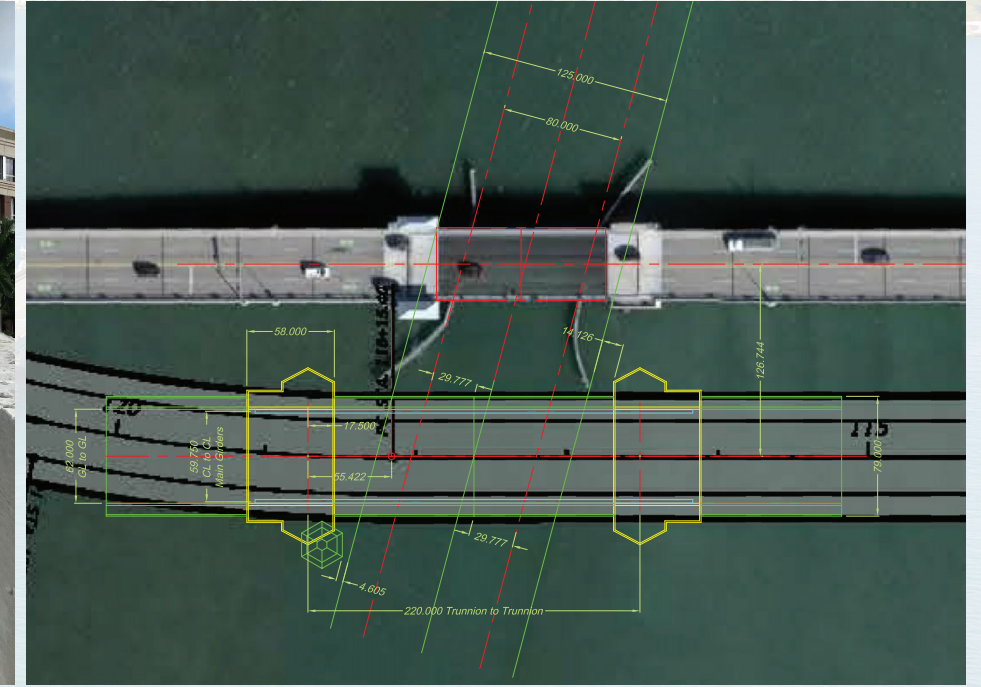
PROJECT UNDERSTANDING & APPROACH

FEDERAL FUNDING

- ▶ The Bipartisan Infrastructure Law is a once-in-a-generation investment of \$550 billion over fiscal years 2022 through 2026 in new Federal investment in infrastructure, including in roads, bridges, and mass transit, water infrastructure, resilience, and broadband.



- ▶ Engineering and environmental documents
- ▶ Cost estimate
- ▶ RFP development



PROJECT UNDERSTANDING AND APPROACH

PUBLIC INVOLVEMENT DURING RFP DEVELOPMENT & CONSTRUCTION

- ▶ Community Awareness Plan
- ▶ Public Workshop
- ▶ Use existing communication resources and mailing lists to communicate updates
- ▶ Updated fact sheet/web page
- ▶ Project fact sheet
- ▶ Construction Alerts
- ▶ Website/social media updates
- ▶ Dedicated Construction PIO

BCC IN-HOUSE RENDERINGS



PRELIMINARY SCHEDULE

Preliminary Schedule for Concept Design Completion from NTP to 30% Design Completion

PROJECT MILESTONES	2022						2023												2024											
	Q3			Q4			Q1			Q2			Q3			Q4			Q1			Q2			Q3			Q4		
	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
Notice to Proceed																														
Pre-Planning																														
Data Collection																														
Public Kick-off Meeting																														
Engineering & Environmental Analysis																														
Alternatives Public Meeting																														
Select Preferred Alternative																														
Develop 15% Line & Grade																														
Engineering & Environmental Reports																														
Phase I (30%) Design Plans																														
Public Hearing																														
OEM Rev. of Final CatEx Type II																														
LDCA Acceptance																														
Public Involvement																														

- General Project Tasks
- General Project Milestones
- Public Meetings
- Critical Project Milestones



NTP TO 30% PLANS WITHIN 28 MONTHS

WHY THE BCC TEAM?

- ✓ A qualified and dedicated Project Manager
- ✓ Clear understanding and demonstrated commitment to comprehending the Town's needs
- ✓ Team with the technical expertise on all stages of your project
- ✓ Preliminary concepts that identify issues along with proposed solutions
- ✓ A track record of delivering complex FDOT bridge projects in South Florida

ONE TEAM. ONE OBJECTIVE:
GET THIS PROJECT BUILT

BROAD CAUSEWAY DRAWBRIDGE REPLACEMENT CONCEPT DESIGN



exp.



#875101 SR922

REPLACEMENT CONCEPT DESIGN

PRESENTATION

MAY 9th, 2022



**PROJECT
MANAGER**
Jose Clavell, PE

*22+ years of
experience*



**DEPUTY
PROJECT
MANAGER**
Jose Santiago, PE

*25+ years of
experience*



**Roadway
Design**
*Roxana
Matamoros, PE*

*21+ years of
experience*



**Fixed
Bridge**
*Roberto Vasquez,
PE*

*28+ years of
experience*



**Public
Involvement**
Maggie Bruno

*27+ years of
experience*



**Design-Build
Owner's Rep.**
Carmine Borea, PE

*11+ years of
experience*





QA/QC
Silvia Beltre, PE

30+ years of experience



Movable Bridge
G. Alan Klevens, PE

38+ years of experience



**Environmental
NEPA**
Jeffry Marcus, PhD

35+ years of experience



**Landscape
Architecture**
Adriana Savino, AIA

29+ years of experience



**Senior Grant
Specialist**
Robert A. Mariner

25+ years of experience





AVIATION



BRIDGES



CIVIC



HOSPITALITY +
GAMING



JUSTICE +
CORRECTIONAL



LAND
DEVELOPMENT



COMMERCIAL +
RETAIL



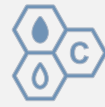
EDUCATION



ENERGY



INDUSTRIAL



OIL, GAS +
CHEMICALS



PIPELINES



ENTERTAINMENT
+ SPORTS



FEDERAL



HEALTHCARE



PORTS +
MARINE



RAIL + TRANSIT



SCIENCE +
TECHNOLOGY



HIGHWAYS +
ROADS



WATER



MINING

GLOBAL REACH

115

years of service

#26

Top 500
Design Firms,
ENR, 2021

90+

Offices globally

3700+

employees



LOCAL ROOTS



10

offices locally

300+

employees

40

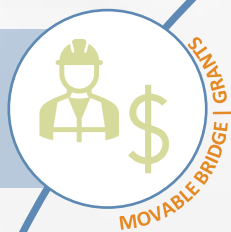
years of service

#5

Top 75 Local Government Sector
Engineering +EA Firms, BD+C
Giants
2021

#6

Top 40 Engineering Architecture
Firms by BD+C Giants
2021



exp.
LEED



DBE

CMPLEX

CUMMINS | CEDERBERG
Coastal & Marine Engineering



HYDRAULICS / SCOUR



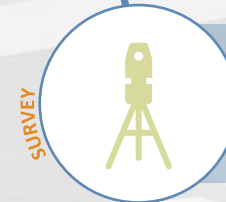
DBE



TYLIN INTERNATIONAL

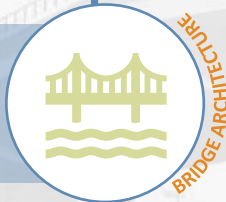


ENVIRONMENTAL



SURVEY

DBE



BRIDGE ARCHITECTURE



GEOTECHNICAL

DBE



CULTURAL RESOURCES



LANDSCAPE ARCHITECTURE

DBE

savinomiller
DESIGN STUDIO

DAVIS
environmental
SOLUTIONS

DBE



NATURAL RESOURCES



PUBLIC INVOLVEMENT

M R G Media Relations Group, LLC



THE TEAM

AGENDA

Understanding of Scope of Services

Awareness of Project Issues



PD&E Study



Grants Management



Owner's Representation

PROJECT LOCATION



**BROAD CAUSEWAY
DRAWBRIDGE**

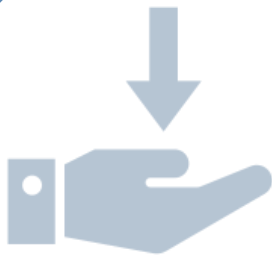


PROJECT AREA



PURPOSE

To provide documented information necessary for the Town of Bay Harbor Islands to reach a decision on the feasibility, location, and conceptual design of a potential replacement for the existing Broad Causeway Drawbridge



NEED

The need for a replacement is due to increased maintenance cost, existing multimodal accommodations constraints, existing safety hazards at the approaches due to lane width limitations, and existing emergency power generation limits due to an undersized power generator unable to fully lift the existing wings of the movable bridge when power outages occur.

UNDERSTANDING OF SCOPE OF SERVICES



PD&E



**GRANTS
MANAGEMENT**



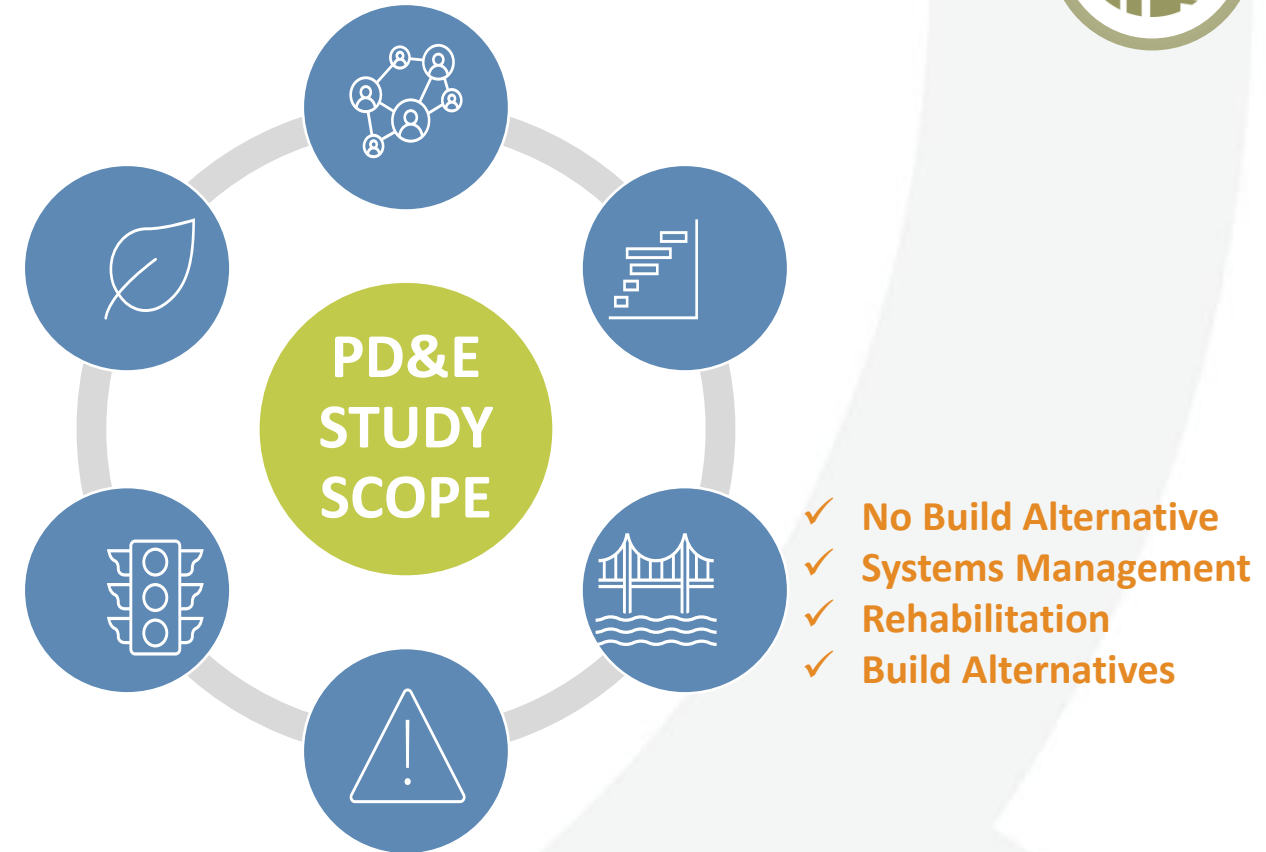
**OWNER'S
REPRESENTATION**

- **UNDERSTANDING SCOPE OF SERVICES**
- **PD&E STUDY SCOPE**



- **PD&E Study Scope**

- **Public Involvement Plan**
- Planning Consistency
- **Develop Bridge Alternatives**
- Traffic Counts, O-D Survey, Operational Analysis
- **Safety Analysis – Vision Zero**
- Typical Section Analysis
- Utilities Assessment Package
- **Maintenance of Traffic**
- **Constructability and Phasing**
- **Engineering and environmental analysis**
- Cost estimates
- Preliminary bridge development report
- **Environmental and engineering documentation**
 - Review of pre-work and on-going studies by Agencies
 - Section 4(f)
 - **Benthic(Seagrass) survey**
 - **Cultural Resources Assessment Study CRAS**
 - Asbestos Survey
 - Sociocultural effects and resources
 - Natural and physical resources
- Location hydraulics report
- Bridge hydraulics evaluation
- Floodplain Compensation Analysis
- Signalization Analysis
- Final design
- Public involvement additional renderings and virtual meetings
- Production Items



PRINCIPLES OF RISK MANAGEMENT

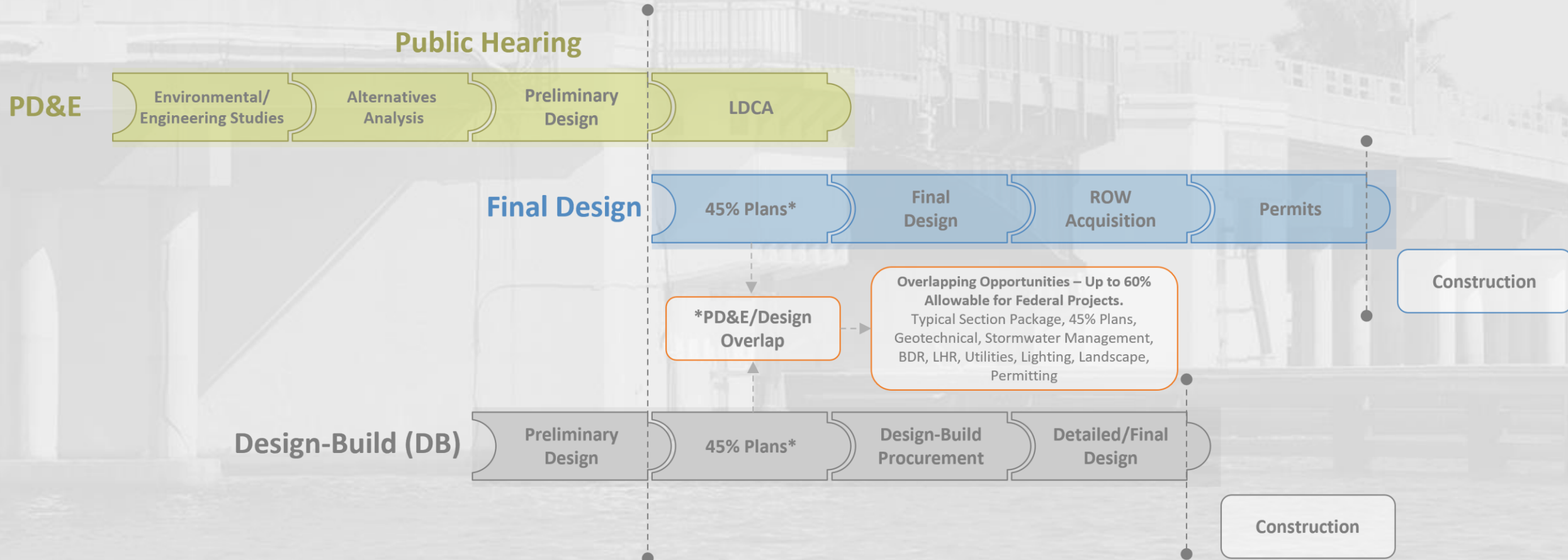
- Combining cost risk assessment with the proven tools and process of value engineering
- Assist project delivery as well as minimize and mitigate quantified risks

UNDERSTANDING OF SCOPE OF SERVICES

PROJECT DELIVERY PROCESS

Streamlining opportunities overlapping PD&E with Design or Design-Build Alternatives

- **Expedite** project development
- **Eliminate** rework
- **Reduce** redundancy
- **Accelerate** schedules





PROJECT MANAGEMENT PLAN





PROJECT MANAGER
Jose Clavell, PE

PROJECT MANAGEMENT

APPROACH



APPROACH

Project Management Responsibilities:

- ✓ Client point of Contact
- ✓ Scope
- ✓ Schedule
- ✓ Budget
- ✓ Subconsultant Management
- ✓ Document Development

Jose Clavell, P.E. will be **the main point of contact** with the Town and will lead and coordinate the design team with the support of **Jose Santiago, P.E., Deputy Project Manager**

22+ years of experience managing:

- ✓ Project Development and Environment (PD&E) studies
- ✓ Multimodal Planning and Preliminary Design projects
- ✓ Existing Conditions Assessments
- ✓ Feasibility Studies
- ✓ Master Plans
- ✓ Scoping Unit/
- ✓ Conceptual Design Support Projects

Contributing author of the PD&E Manual updated in 2017 by FDOT.

HANDS ON

Involved in each aspect of the project

RESPONSIVE

to FDOT PM and Project Stakeholders; heavily involved in public outreach

PROACTIVE

90-day look ahead, track critical path items and earned value analysis approach

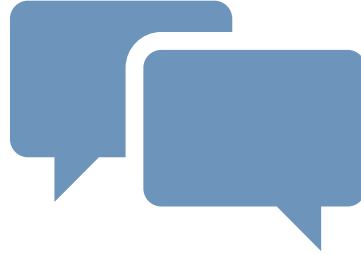
DELIVER

Build consensus to deliver Location Design Concept Acceptance on schedule



FDOT

- Monthly status meetings
- Weekly updates
- Available 24/7
- In-person and virtual meetings
- Challenges and recommendations



FDOT



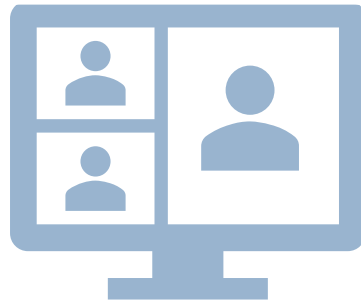
COOPERATING AGENCIES

COOPERATING AGENCIES

- Early and on-going communication
- In-person and virtual meetings

TEAM MANAGEMENT

- Weekly status briefings
 - Completed and upcoming tasks
 - Critical issues and schedule
- Discipline coordination meetings
 - Multi-discipline input
 - Challenges/options/ solutions



TEAM MANAGEMENT



PUBLIC ENGAGEMENT

PUBLIC ENGAGEMENT

- Information sharing and feedback
- Commitment documentation
- Plan to involve the public in Section 4(f) and Section 106



SCHEDULE

Conceptual & Preliminary Schedule for Concept Design completion from NTP to 30% Design Completion																			
Broad Causeway Drawbridge (#875101) - SR-922 Replacement Concept Design - Town Of Bay Harbor Islands - Project No. – BC – 160																			
Main Task Name	Sub Task Name	Duration in Months from Notice To Proceed																	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Engineering	Data Collection	■	■																
	Traffic Analysis		■	■	■														
	Analysis & Comparison of Bridge Alternatives			■	■	■	■	■											
	Alternative Selection & Risk Assessment						■	■											
	30% Draft Design						■	■	■	■	■	■	■						
	30% Final											■	■	■	■	■	■	■	
Enviromental	Data Collection	■	■	■															
	Draft Documents				■	■	■	■	■	■	■								
	Draft NEPA Document								■	■	■	■	■	■	■	■			
	Final Documents															■	■	■	
Public Involvement	Kickoff Meeting				□														
	Stakeholders Meetings		□			□			□			□				□			
	Public Information Meeting												□						
	Public Hearing																□		
	Location Design Concept Approval																	□	



QUALITY CONTROL PROCESS

COMMITMENT TO QUALITY

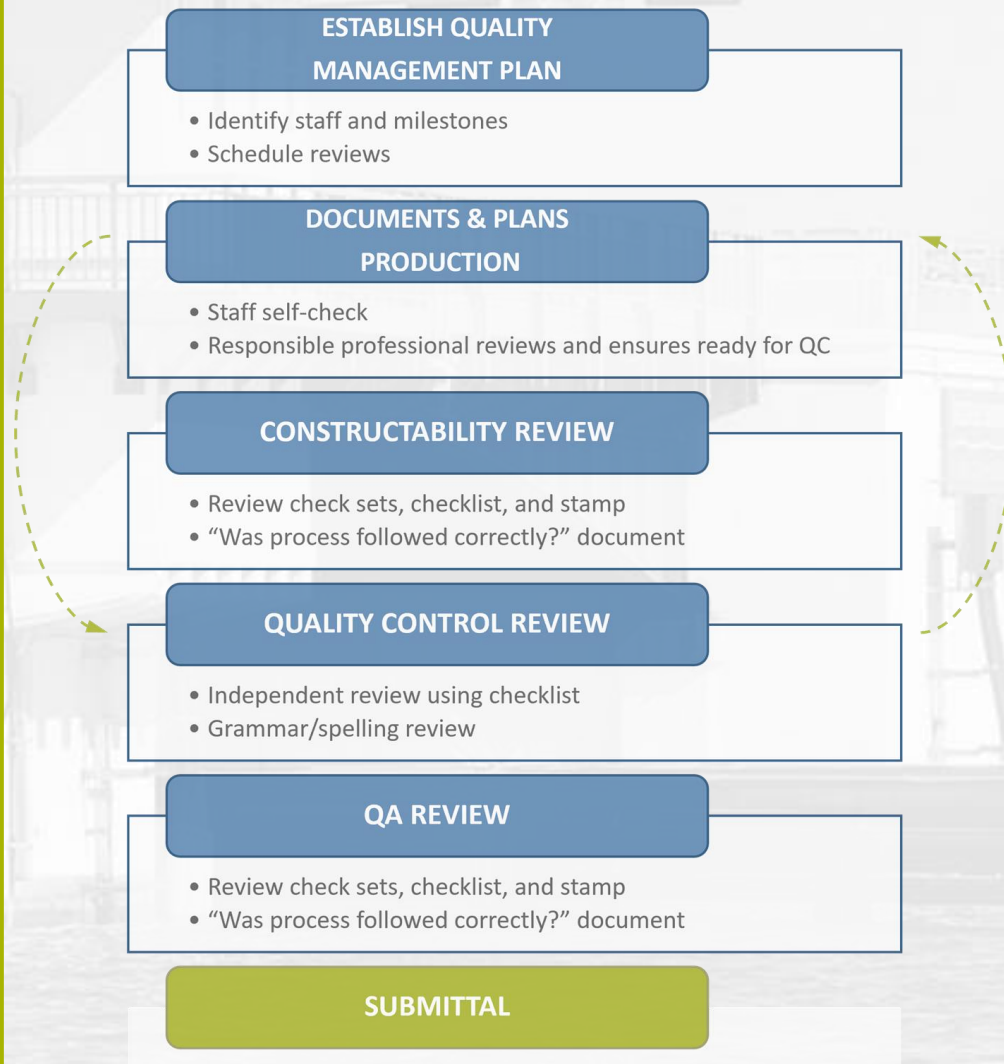
- ISO 9001 Certified
- Quality management Plan
- QA/QC system
- Independent Review Team selected
- Use checklists for plans and documents
- Concept plans are interdisciplinary
- Documents are subjected to grammar and spelling review
- Track changes
- Plain language reviews for public documents
- Random audits
- Certification letter
- Style guideline

LESSONS LEARNED

- ✓ Filing organization and storage
- ✓ Coordination with subs
- ✓ Front end document
- ✓ Allow time and budget
- ✓ NEPA assignment
- ✓ SWEPT process familiarity



EXP'S QUALITY CONTROL



UNDERSTANDING OF SCOPE

Statewide Environmental Project Tracker (SWEPT)/Office of Environmental Management (OEM)

- **Anticipated Class of Action – Type 2 CE**
- SWEPT Tools Familiarity
 - Assign and coordinate document reviews
 - Provide for consistent and reliable file management and retention
 - Report quality and performance management results
- SWEPT Processes Familiarity
 - Utilize the SWEPT forms creation tools
 - Upload the supporting documents into SWEPT
 - Coordination of the OEM Review of Environmental Document
 - Final District Approval of Environmental Document
- **Final Approved Documents**
 - Final Type 2 Categorical Exclusion (CE)
 - Final Preliminary Engineering Report

Project Documents

- Preliminary Engineering Report
- Type 2 Categorical Exclusion
- Preferred Alternative Concept Plans
- Natural Resources Evaluation
- Water Quality Impact Evaluation Checklist
- Cultural Resource Assessment Survey
- Noise Study Report
- Location Hydraulics Report
- Pond Siting Report
- Contamination Screening Evaluation Report
- Project Traffic Analysis Report

CRITICAL COMPONENTS OF THE PD&E STUDY



ENGINEERING

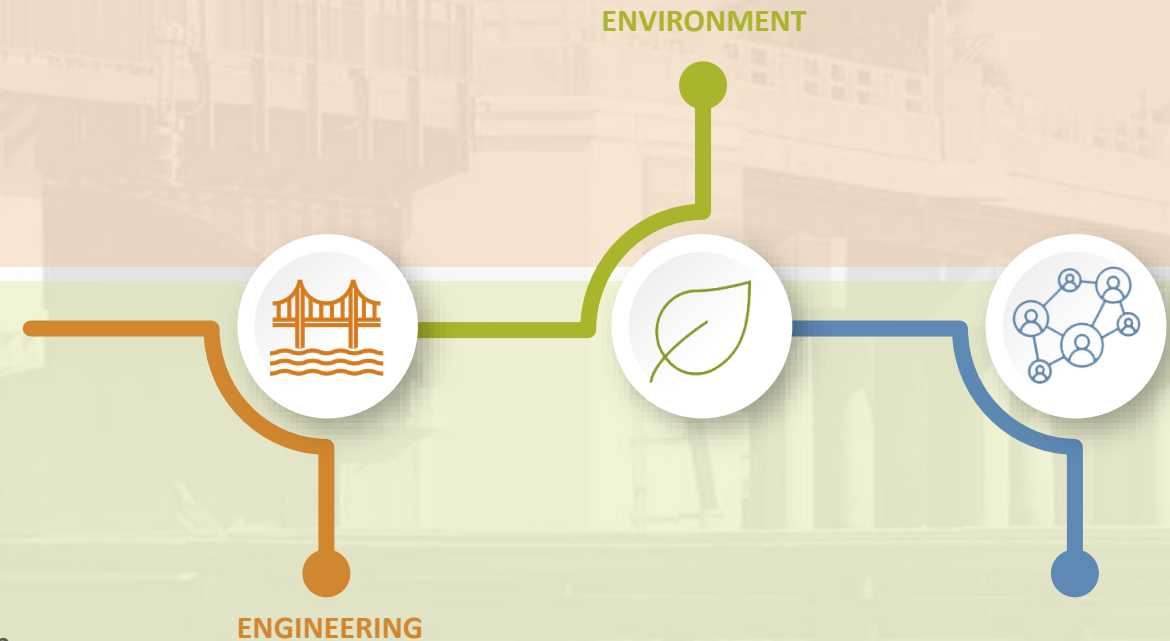
- Bridge is not structurally deficient, but it is functionally obsolete
- Early coordination with Coast Guard
- Bridge/roadway alignment
- Gap in multimodal facilities
- Avoid, minimize, mitigate
- ROW requirements
- Temporary traffic control plan
- Bridge construction phasing
- Accelerate project delivery as needed to match funding

ENVIRONMENT

- Minimize natural resources impact
 - Section 7 formal consultation
- Minimize water resource impacts
- Bridge NRHP eligible
 - Section 4F impacts
 - Section 106 process
 - Potential schedule impacts due to Section 106 consultation

PUBLIC AND AGENCY INVOLVEMENT

- Regulatory Agency coordination
- Town officials' coordination and county commission
- Stakeholder and user engagement
- Ongoing and continuous throughout the project



PUBLIC & AGENCY
INVOLVEMENT



EXISTING CONDITIONS: PROJECT PURPOSE & NEED

Bridge built in 1951

- Exceeded design life
- Rehabilitated 2014

Condition Ratings

- Deck 5 (Fair)
- Superstructure 5 (Fair)
- Substructure 7 (Good)

Sufficiency Rating: 46.3

- Eligible for state bridge replacement funding

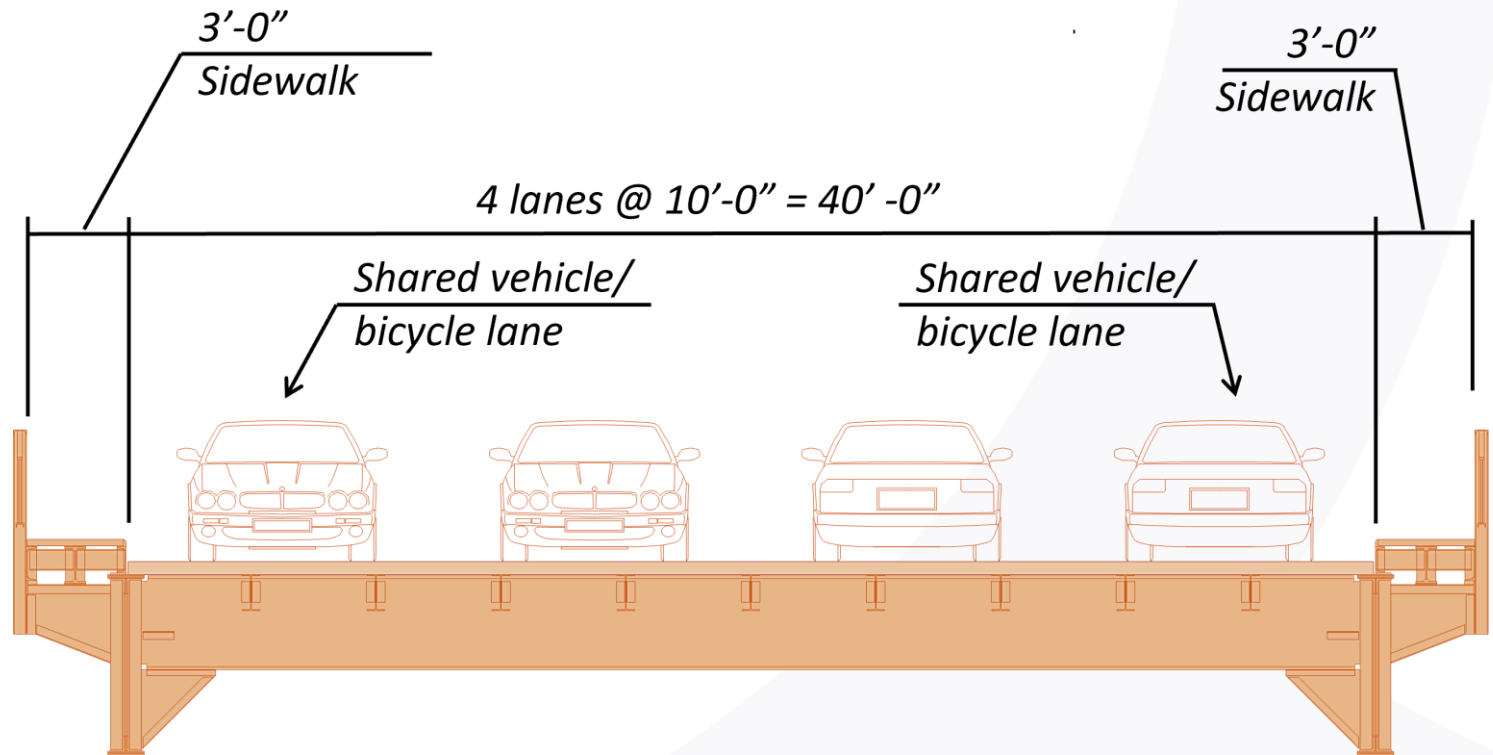
Functionally Obsolete

- Narrow lanes
- Narrow sidewalks
- Sharrow bicycle facilities

Existing Clearances

- Vertical: 16 feet
- Horizontal: 84 feet

High Maintenance Costs





ALTERNATIVES ANALYSIS

NO-BUILD

(Will not meet Purpose & Need)

EXISTING BRIDGE REHABILITATION

(Will not meet Purpose & Need)

BRIDGE REPLACEMENT

Bridge Types:

High-level Fixed Bridge Alternatives

Movable Bridge Alternatives

Bridge Alignments

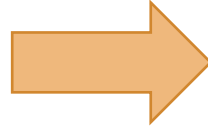
Existing Alignment (Detour required)

North (Greatest ROW Impacts)

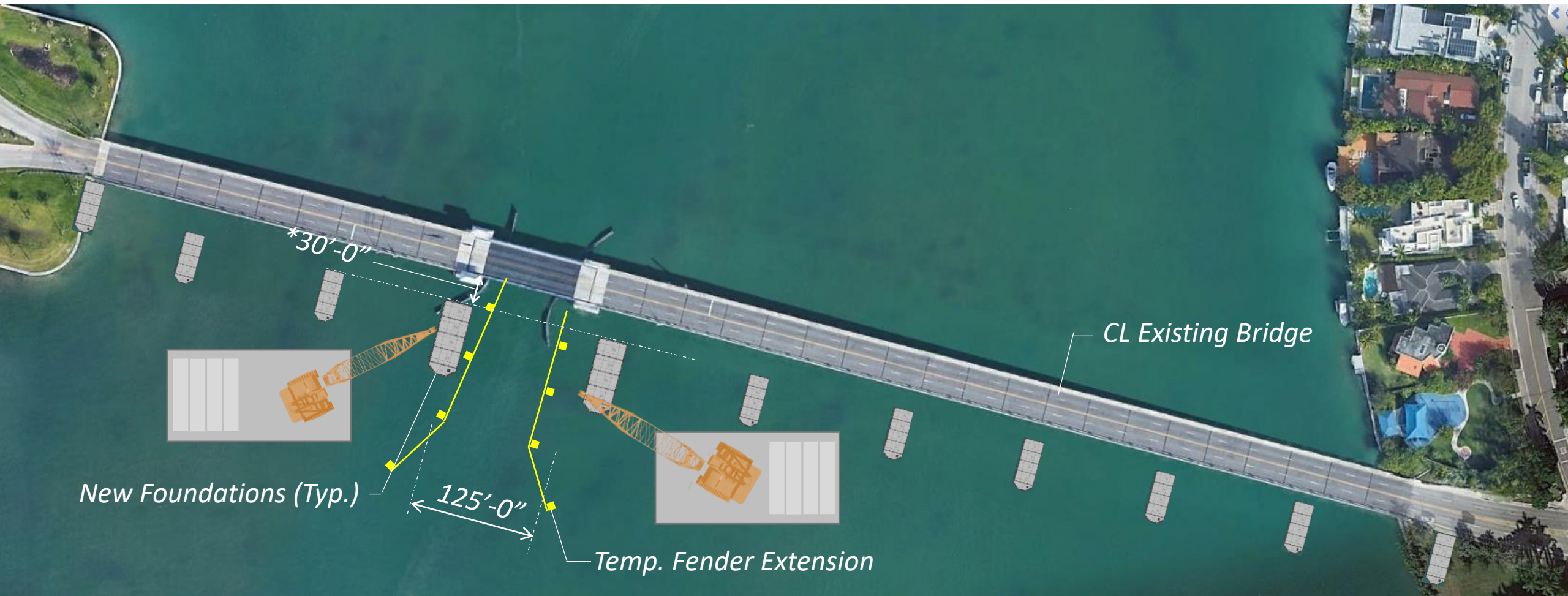
South



CONSTRUCTION PHASING CONSTRAINTS



- ✓ Maintain at least 2 lanes of traffic throughout construction
- ✓ Protect & monitor existing bascule piers – Maintain distance of new foundations*
- ✓ Lessons Learned from Flagler Memorial Bridge – FDOT District 4





CONCEPT 1





ENGINEERING – BRIDGE PRELIMINARY CONCEPTS



CONCEPT 2



CONCEPT 3

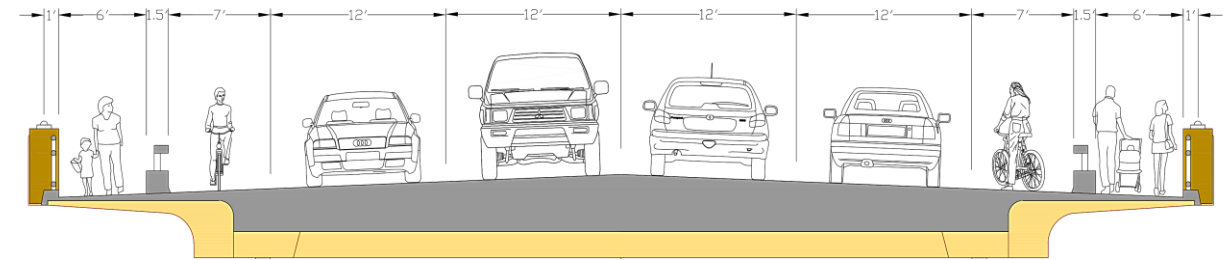


ENGINEERING – BRIDGE PRELIMINARY CONCEPTS



DESIGN PLAN VIEW

- Bridge Architecture
- Accessibility
- Site / Aesthetics
- Lighting
- Utilities
- MOT



SR-922 (BROAD CAUSEWAY DRAWBRIDGE) DESIRED TYPICAL SECTION





ENVIRONMENT CONSIDERATIONS

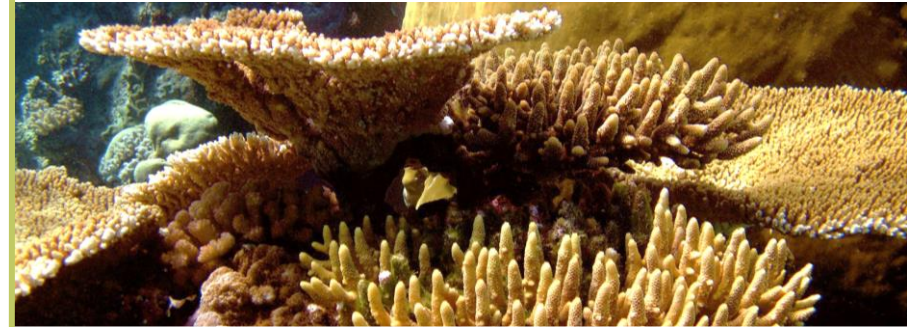
NATURAL RESOURCES

Broad Causeway Bridge In North Biscayne Bay

- Biscayne Bay Aquatic Preserve
- Outstanding Florida Waters
- Essential Fish Habitat
- Damage to Ecosystem from sewer/septic contamination
- Cumulative effects from multiple bridge projects

Threatened and Endangered Species

- Smalltooth Sawfish
- Florida Manatee
- Sea turtles
- Seagrass
- Corals





OTHER ENVIRONMENT CONSIDERATIONS

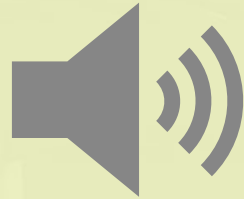
PHYSICAL AND SOCIO-CULTURAL



CONTAMINATION

Chevron Gas Station

- Soil and groundwater impacts identified in the 90's. BTEX, PAH, and used oil/unknown products are compounds of concern in the groundwater, and PAH and arsenic are the main constituents of concern in soil.
- On-going assessment.
- Existing Bridge Hazardous Materials Assessments



NOISE



NAVIGATION



CULTURAL RESOURCES



sfwmd.gov



**US Army Corps
of Engineers®**



ENVIRONMENT REGULATORY CONTROL

PERMITTING AGENCIES

- Miami-Dade County Department of Regulatory and Economic Resources (RER) Division of Environmental Resources Management (DERM)
- South Florida Water Management District (SFWMD)
- Florida Department of Environmental Protection (FDEP)
- U.S. Army Corps of Engineers (USACE)
- U.S. Coast Guard (USCG)

COMMENTING AGENCIES

- U.S. Fish & Wildlife Service (USFWS)
- National Marine Fisheries Service (NMFS)
- Florida Fish & Wildlife Commission (FWC)



ENVIRONMENTAL OBJECTIVES

Conduct studies, evaluate alternatives, and develop documentation that WILL FULFILL NEPA

- Define the Class of Action.
 - ETDM is generally used by FDOT to make this determination. Purpose and Need required and FDOT oversees.
 - Federal Funding requires Federal Approval of NEPA Documents now delegated to FDOT OEM -Serving as Lead Agency
 - Categorical Exclusion Type 2 or Environmental Assessment...based on project controversy, environmental impacts, 4(f) or Section 106, USCG and USACE as cooperating agencies
 - State Funding: SEIR-also requiring FDOT approval
 - Local/Private Funding-PEIR-approval from FDOT not required USACE as Lead Agency
- Recommendation: Prepare Documentation to Federal Requirements to ensure eligibility of Federal and State funds at any future phase of the project.

Streamlining the permitting process in PD&E

- Cumulative Impact Analysis
- Using NEPA documentation in PD&E for Federal and State permit applications
- Establishing early agency concurrence in PD&E and memorandum of understandings
- Early and frequent interagency meetings
- Early determination of preferred alternative
- Establish early consultation with NMFS, USFWS, and FWC and have concurrence of “no effect” or “may affect not likely to adversely affect” keeping the project in informal consultation
- Avoidance and minimization of environmental impacts
- Avoid 4(f) properties
- Early mitigation plan if required
- Early determination of drainage plan, construction methods, staging areas
- Proactive Public Involvement



GOVERNMENT & AGENCY STAKEHOLDERS



- Bay Harbor Islands Town Officials
- Miami Dade County
- Miami-Dade County Department of Transportation and Public Works (DTPW)
- Miami-Dade Transit
- Florida Department of Transportation
- Town of Surfside
- Bal Harbour Village
- City of North Miami
- Federal & State Environmental Regulatory Permitting Agencies
- Bay Harbor Island Police and Marine Patrol
- US Coast Guard



COMMUNITY & AGENCY STAKEHOLDERS



COMMUNITY

- Keystone Point NA
- Morris Broad Community Center
- Ruth K. Broad K8 Center
- Ocean Reef Academy

BUSINESSES

- Chevron
- Bank of America
- Bal Harbour Gourmet Market
- Rx Home Health Services
- Grand Beach Hotel
- French Bakery Café & Bistro

CIVIC GROUPS / COMMUNITY RESOURCES

- Bay Harbor Islands Florida
Chamber of Commerce
- Rotary Club
- Bike305
- **LEP Required**





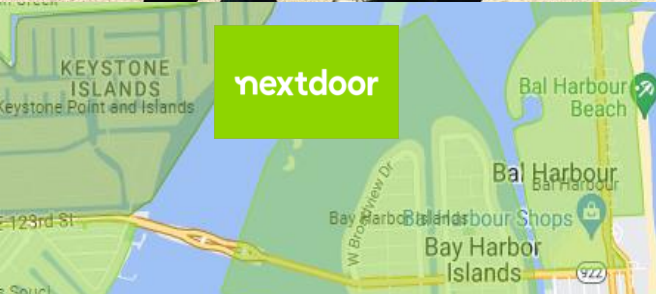
COMMUNITY CONCERNS

- **Access Management**
 - Business and Residential Access
 - Emergency Service Access
 - Maintenance of Traffic
- **Aesthetics**
- **Emergency Evacuation**
- **Noise**
- **Safety**
- **Schedule**



Town of Bay Harbor Islands Bicycle Safety Rodeo





PUBLIC INVOLVEMENT APPROACH



- **Public Involvement Plan (PIP)**
- **One-On-One Briefings Town Officials**
- **District 4 County Commissioner Sally Heyman**
- **Notifications / meeting materials**
 - Four Project Newsletters
 - Extended Mailing List
 - Digital Message Signs (DMS) Along the Corridor
 - Project Website
 - Informational Videos
 - Florida Administrative Register (FAR)
 - Miami Herald
 - Town and Miami Dade County Websites
 - Keystone Point Community
 - Website
 - Newsletter
 - Facebook
- Nextdoor



- **Innovative Technologies**
 - Interactive Website Maps
 - 3D Visualizations
 - Drone Photography
 - Social Media
 - Facebook Live
 - Virtual Meetings
- **Comment Tracking Log**



- **Comments & Coordination Report**
- **Design**
 - Help prepare the RFP
 - Develop the Community Outreach Plan (CAP)
- **Construction**
 - Community Outreach Coordinator
 - Construction Alerts including lane closures & detours





PUBLIC MEETINGS

Small Group Meetings

- Environmental Agencies
- Miami-Dade County
- City of North Miami
- Keystone Point Community (if requested)

Potential Meeting Locations

- Morris N. Broad Community Center
- Mayor Joseph J. Gardner Government Center

Two Public Meetings

- Public Information
- Public Hearing



Public Information

- Tentative Fall 2022
- Present alignment alternatives
- Receive public comment



Public Hearing

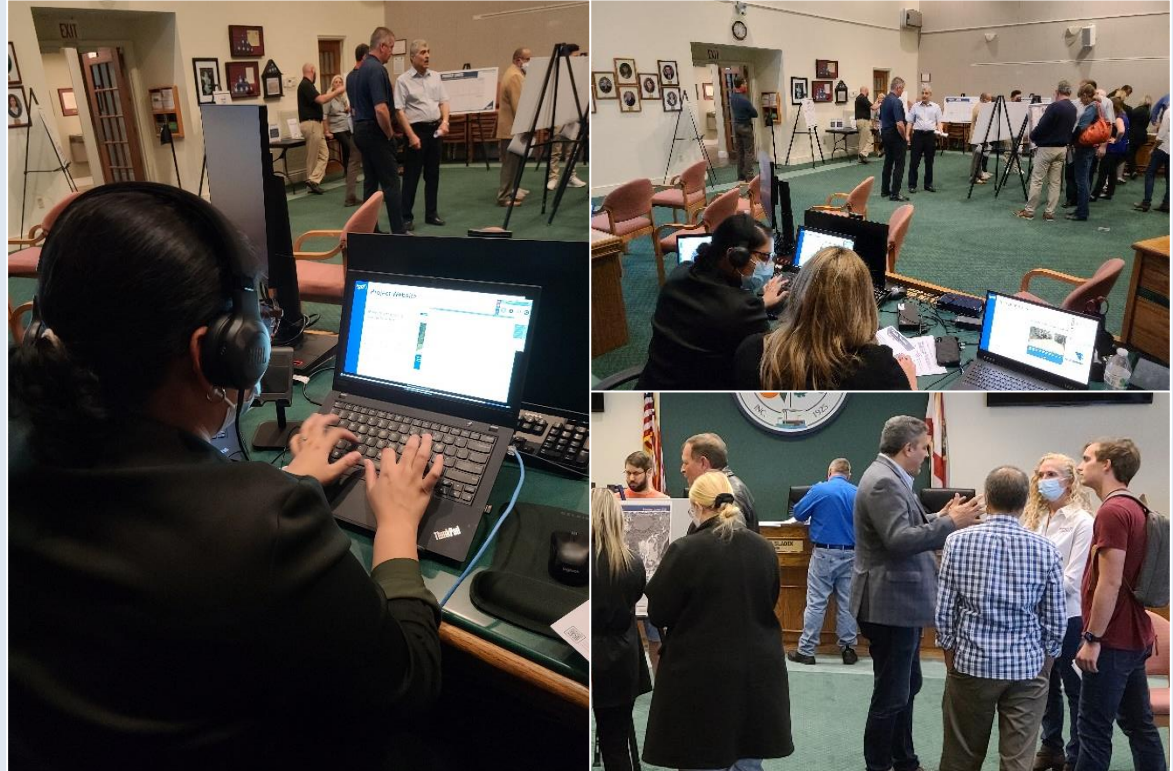
- Tentative Spring 2023
- Present preferred alternative
- Document public comment/testimony





VIRTUAL / HYBRID PUBLIC MEETING

- **Follow FDOT's Guiding Principles**
- **Venue planning**
 - Survey / poll
 - Adequate capacity / overflow room
- **Notifications / meeting materials**
 - Develop plan (at least 150 days prior)
- **Incorporate CDC requirements**
 - Personal protective equipment (PPE)
 - Disinfectant / sanitation stations
 - Masks / protective shields
 - Safety instructional signage
- **Technology**
 - GoToWebinar or Zoom
 - Internet / Wi-Fi access
 - Video camera connected to computer
 - Microphone / speakers





PD&E



**GRANTS
MANAGEMENT**



OWNER'S
REPRESENTATION

GRANTS MANAGEMENT

OUR 4P's APPROACH



PRIORITIZATION

Grant Funding Needs Analysis

PRESENTATION

Grant Proposal Development Phase I



PREPARATION

Grant Funding Needs Analysis

PROMOTION

Grant Proposal Development Phase II



FEDERAL GRANT PROGRAMS

BRIDGE

Bridge Investment Program

\$12.5 Billion (FY 22-26)

NOFO: May 2022

RAISE

*Rebuilding American Infrastructure
with Sustainability and Equity*

\$7.5 Billion (FY 22-26)

NOFO: FY 2022 Application

Deadline Recently Closed

(April 14, 2022)

DISCRETIONARY GRANT FUNDING



Grant Name	Grant \$	Details
Federal Highway Administration (FHWA) competitive grants for nationally significant bridges and other bridges	\$12.5B	This new competitive grant program will assist state, local, federal, and tribal entities in rehabilitating or replacing bridges, including culverts. Large projects and bundling of smaller bridge projects will be eligible for funding.
MEGA Projects	\$15B	This new National Infrastructure Project Assistance grant program will support multi-modal, multi-jurisdictional projects of national or regional significance.
Promoting Resilient Operations for Transformative, Efficient, and Cost-saving Transportation (PROTECT) Program	\$8.7B	PROTECT will provide \$7.3 billion in formula funding to states and \$1.4 billion in competitive grants to eligible entities to increase the resilience of our transportation system. This includes funding for evacuation routes, coastal resilience, making existing infrastructure more resilient, or efforts to move infrastructure to nearby locations not continuously impacted by extreme weather and natural disasters.
Rural Surface Transportation Grant Program	\$2B	This new competitive grant program will improve and expand surface transportation infrastructure in rural areas, increasing connectivity, improving safety and reliability of the movement of people and freight, and generate regional economic growth.
Strengthening Mobility and Revolutionizing Transportation (SMART) Grant Program	\$1B	The SMART Grant program will be a programmed competition that will deliver competitive grants to states, local governments, and tribes for projects that improve transportation safety and efficiency.



PD&E



GRANT
MANAGEMENT



OWNER'S
REPRESENTATION

The EXP Team is committed to act as the Town's advocate, partner and represent your best interest.



How the Town will benefit from the EXP Team:

✓ The EXP Team will look out for the Town and stakeholders' best interests

We will work as an extension of the Town, to ensure that all project and Town goals and objectives are met

✓ Informed Decision Making

We will bring our extensive design and construction experience, to explain complex issues, manage conflicts, and assist the Town in making informed decisions, to keep the project on track.

✓ The EXP Team will provide:

- Risk Management and Mitigation (Budget, Schedule, Stakeholders)
- Project Communication Plan
- Quality Management and Contract Administration (including aesthetical requirements)
- Managing Requests for Proposals and Bid





The **EXP Team** will support **the Town** to determine the feasibility of any proposed changes to the design, including items such as ROW impacts, environmental re-evaluations, other agency coordination, and additional public outreach efforts to avoid future impacts to the project during construction.

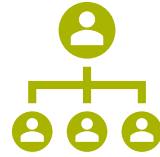
The EXP Team will perform post design services:

- Plan Review
- Response to RFI
- Shop drawing reviews for all disciplines
- Independent design review, following the FDOT peer review approach to ensure sound structural design and detailing.



WHY OUR TEAM STANDS OUT

A **Project Manager** with an extensive knowledge and experience on **PD&E** projects in the Miami Dade area



A Team that understands **Alternative Delivery Projects** and has a strong **Construction Background** to serve as the Town's Representative

A Team with extensive knowledge and familiarity with **LAP Projects** and **FDOT requirements**



A uniquely licensed **Architect** specializing in bridges

knowledgeable
experienced
focused
proven
dedicated
consistent
committed



Thank You!
exp • com



Town of Bay Harbor Islands Broad Causeway Drawbridge Replacement

SR 922 Replacement Concept Design – Project No. BC-160



TRUSTED PARTNERS. PROVEN RESULTS.



Oral Presentation
May 9, 2022

PRESENTING TEAM



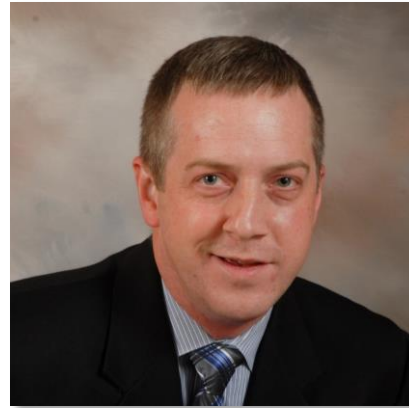
Jeff V. Easley, PE
35 Years of Experience

Project Manager



Julieta Manso, PE
18 Years of Experience

PD&E Task Leader



Howard Gotschall, PE
23 Years of Experience

**Structures Analysis
Task Leader**



Jorge Leon, PE
25 Years of Experience

**Structures Analysis
Movable Bridges**



Justin Freedman, MS
19 Years of Experience

**Environmental Analysis
Task Leader**



SCOPE OF SERVICES



Town of Bay Harbor Islands – Broad Causeway Drawbridge Replacement

SR 922 Replacement Concept Design – Project No. BC-160



Project Location

- Bridge Length: 2,000 Feet
- Functional Classification: Urban Minor Arterial
- Posted Speed Limit: 30 MPH
- Municipalities: Town of Bay Harbor Islands



Project Purpose

- A. Evaluate the **existing conditions** along the Broad Causeway Drawbridge to determine proposed project improvements.
- B. Complete a **PD&E Study** to comply with the National Environmental Policy Act (NEPA) requirements.
- C. Develop **Concept Designs** for a new bridge option over the Intracoastal Waterway.
- D. Develop the **Design Criteria Package for the Design-Build** project.
- E. **Coordinate with all regulatory agencies.**
- F. Conduct **public meetings** and meetings with Town staff and elected officials.
- G. Provide assistance and support to the Town in the procurement of Federal, State, and Local Grants for the **funding** of the project.
- H. Provide assistance and support to the Town on the procurement of **permits** required for the project.
- I. Serve as **Owner's Representative** for the duration of the Design-Build project.



Project Goals

- **Develop viable bridge replacement concepts**
- **Meet the Purpose and Need of the project**
- **Complete all NEPA requirements to obtain LDCA from FDOT**

Team Objectives

- Enhance overall mobility of area and multimodal connectivity
- Enhance bicycle and pedestrian facilities
- Improve safety
- Minimize R/W needs and environmental effects
- Develop a proactive Public Involvement Plan to win public and agency support
- Adhere to the PD&E Manual and follow NEPA process



PD&E Study Process

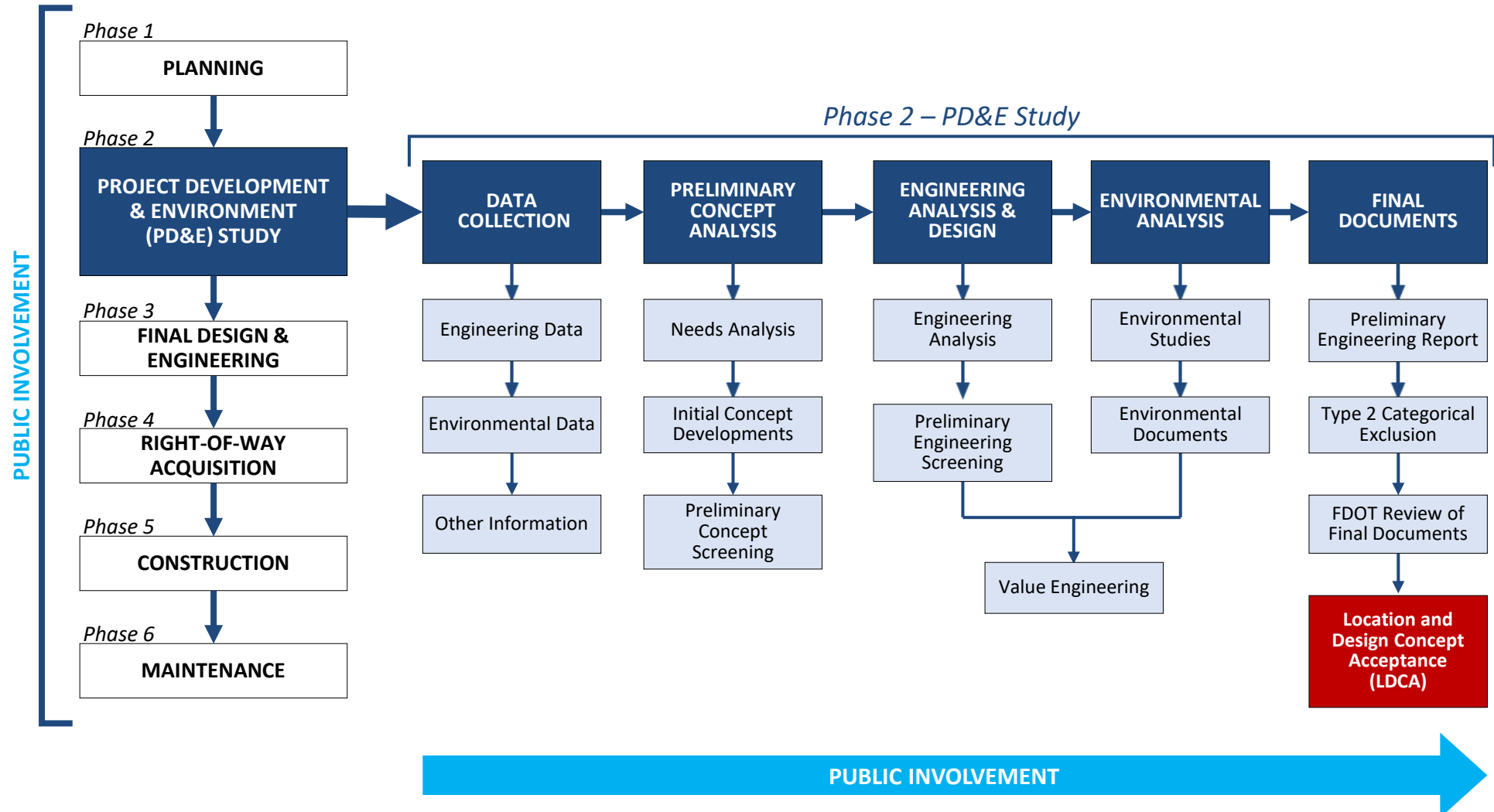
- National Environmental Policy Act (NEPA) Documentation
- Coordination with FDOT – D6 and Office of Environmental Management
- Efficient Transportation Decision Making (ETDM) Process
 - Advanced Notification
 - Environmental Screening Tool
 - Coordinate with Environmental Technical Advisory Committee
 - Develop Project Description and Purpose and Need
 - Initial Screening of Build Alternatives
 - ETDM Summary Report
- Class of Action
 - Anticipated to begin as Environmental Assessment
 - Narrow Build Alternatives to one – Build vs. No Build
 - Isolate environmental resource impacts
 - Seek opportunities to reduce to Categorical Exclusion (Type 2)
 - Reduce PD&E Schedule



Anticipated Class of Action:
Environmental Assessment



FDOT PD&E Study Process

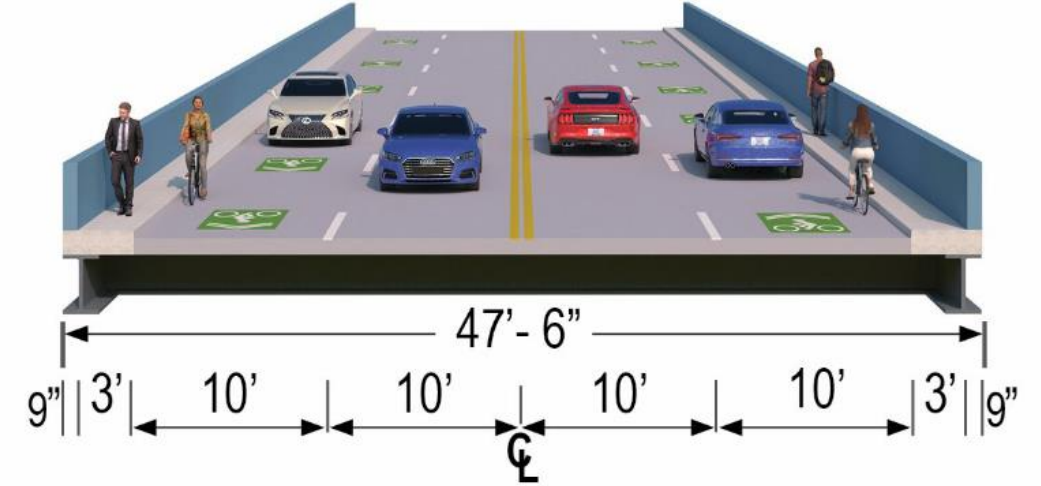


PROJECT UNDERSTANDING AND APPROACH



Existing Conditions

- 10 ft. Lanes
- Sidewalks 1.5 – 4 ft.
- No Bike Lanes – Bikes share outside lane
- Vertical Clearance over navigational channel – 16 ft.
- Horizontal Clearance at navigational channel – 80 ft.
- Span Lengths – 50 ft.
- Frequent Bridge Openings



Existing Conditions

- Span motor seals are over lubricated and broken, and the corroded span motor enclosure electrical wiring color convention has been ignored which represents a violation of the national electrical code (NEC).
- The bridge Automatic Transfer Switch (ATS) is poorly wired and full of dust which is a safety hazard to maintenance personnel.
- Some equipment is wired using extension cords.
- The bridge Manual Transfer Switch (MTS) enclosure is heavily corroded.
- Submarine cable supports are damaged and/or missing hardware.
- Position indication limit switches are no longer operational, bypassed, and corroded.
- Lighting panels are missing parts and protective covers and some of the circuit breakers are not properly installed.
- Some of the control house fire alarm devices are either missing or non-functional.



Safety Analysis

- Crash Data
 - Reviewed Signal4 Analytics
 - Five-year period (2017 to 2021) – 91 total crashes
 - 0 Fatalities
 - 6 Bicycle related crashes
 - 1 Pedestrian related crash
 - Predominant Crash Type: Rear End (35%)
 - Most crashes occurred at bridge approaches
 - Pedestrian entering Causeway important factor
 - 4 crashes at W. Broadview Drive Intersection

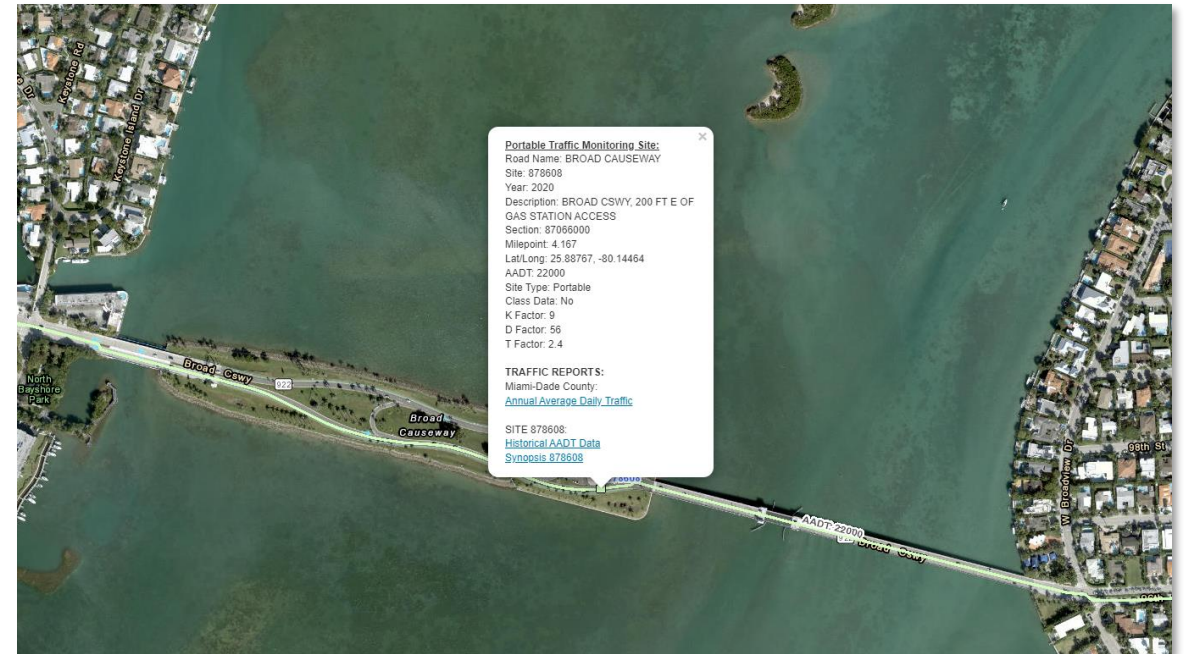
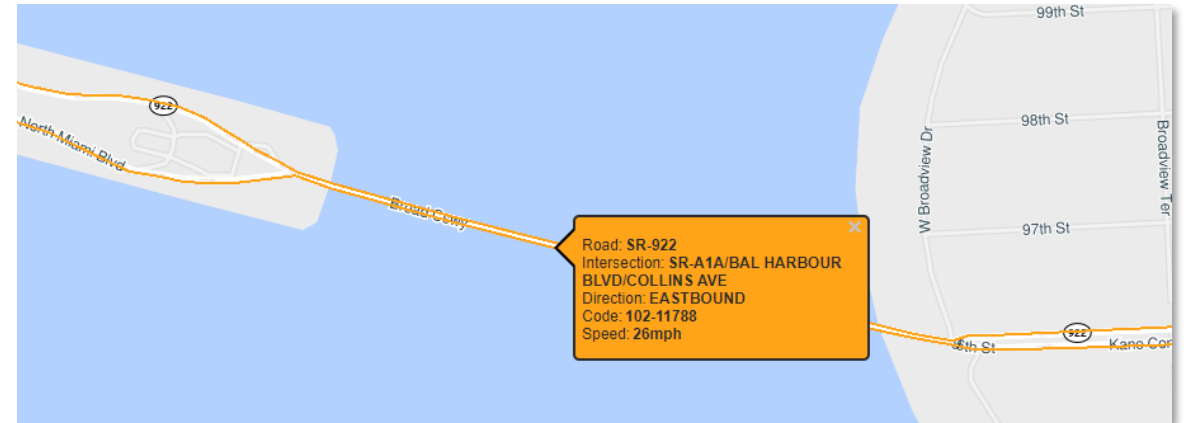
Countermeasures

- ✓ Upgraded and extended sidewalks
- ✓ Eliminate bridge opening frequency
- ✓ Evaluate sight distance at all intersections
- ✓ Add 10-ft shoulders for bicycles



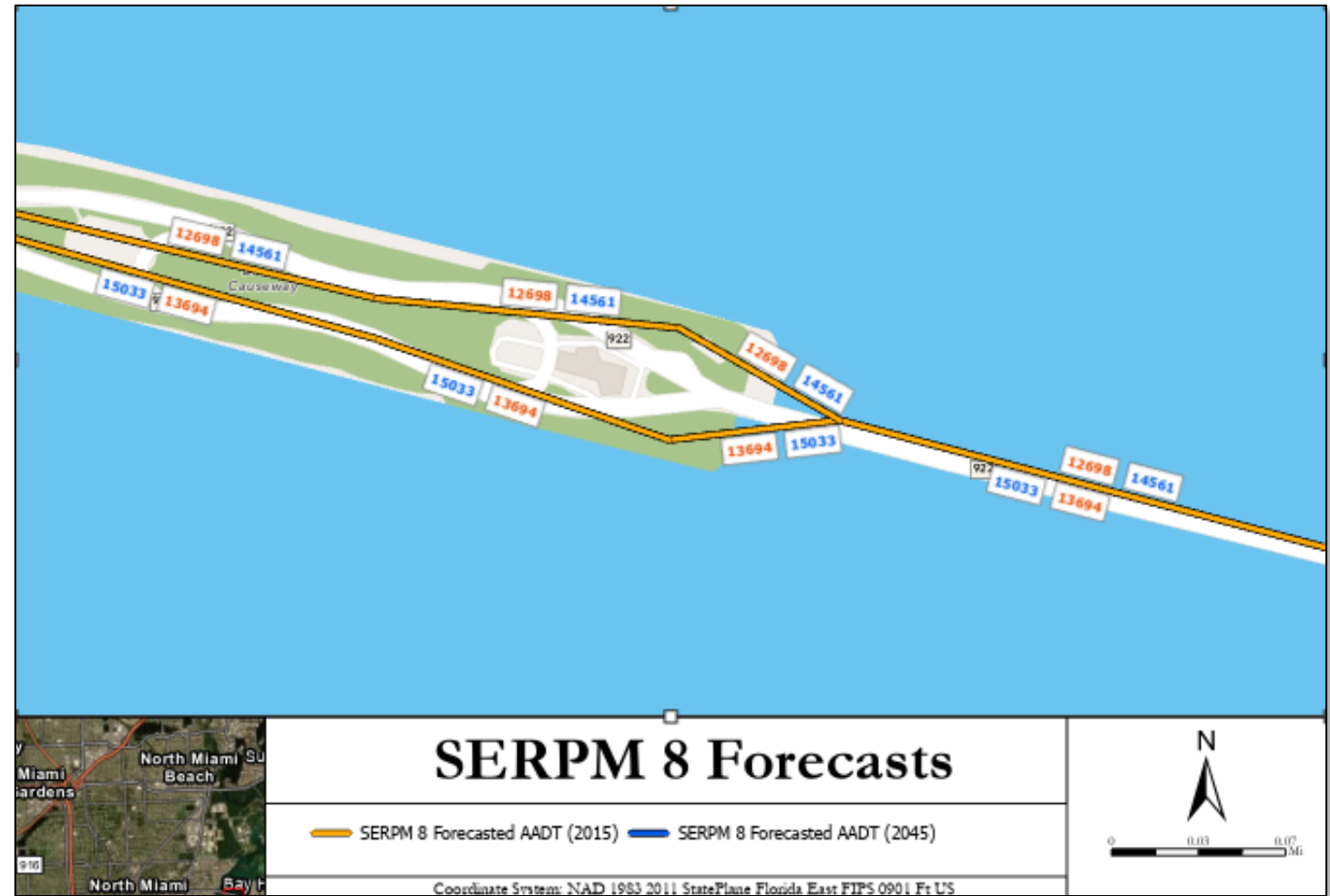
Traffic – Existing Conditions Analysis

- Review of RITIS Big Data source shows in 2021, average speed along the Causeway is 25.1 mph for EB direction and 26.5 mph for WB which is lower than the posted speed limit of 30 MPH.
- FDOT TMS 87-8608 is located on Broad Causeway, 200 Ft. E of Gas Station Access shows AADT of 22,000 in 2020. The synopsis report shows the daily directional peak volume is 1,144 occurred at 6 PM along WB.
- Multimodal traffic data will be collected as 4-hr TMCs at two ends of the Causeway along 72-hr classification counts along the Causeway.
- Boat traffic, size, and number, will be recorded at the navigational channel.

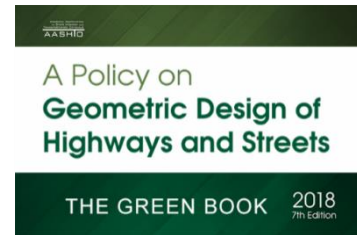
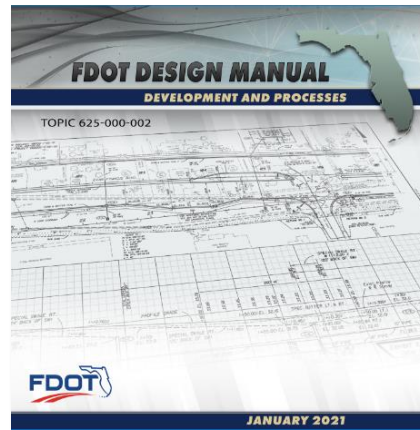
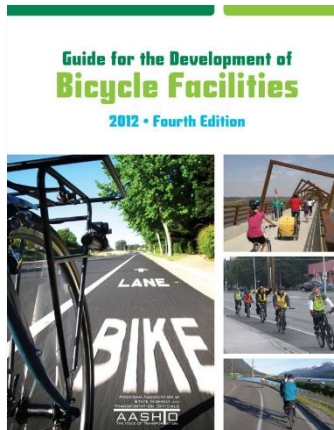
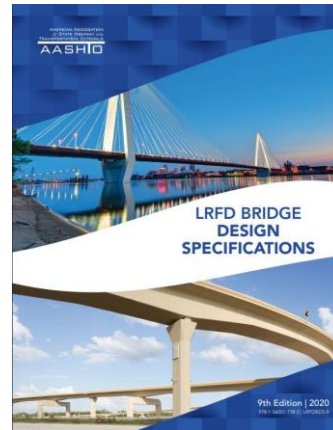
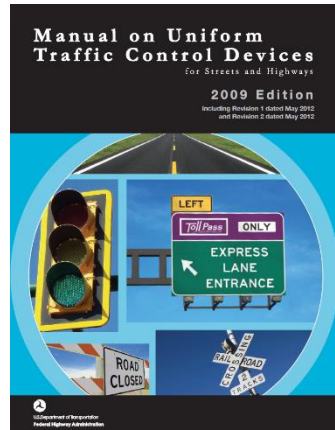


Traffic – Future Conditions Analysis

- Southeast Regional Planning Model (SERPM) and Historical Data will be used for growth analysis
- SERPM data shows 0.4% annual growth and historical data shows negative growth
- Assuming a 1% conservative growth rate, the AADT in 2047 would be 28,780 with peak hour traffic of 1,467; LOS D.
- Future design traffic volumes developed based on FDOT Project Traffic Forecasting Handbook.



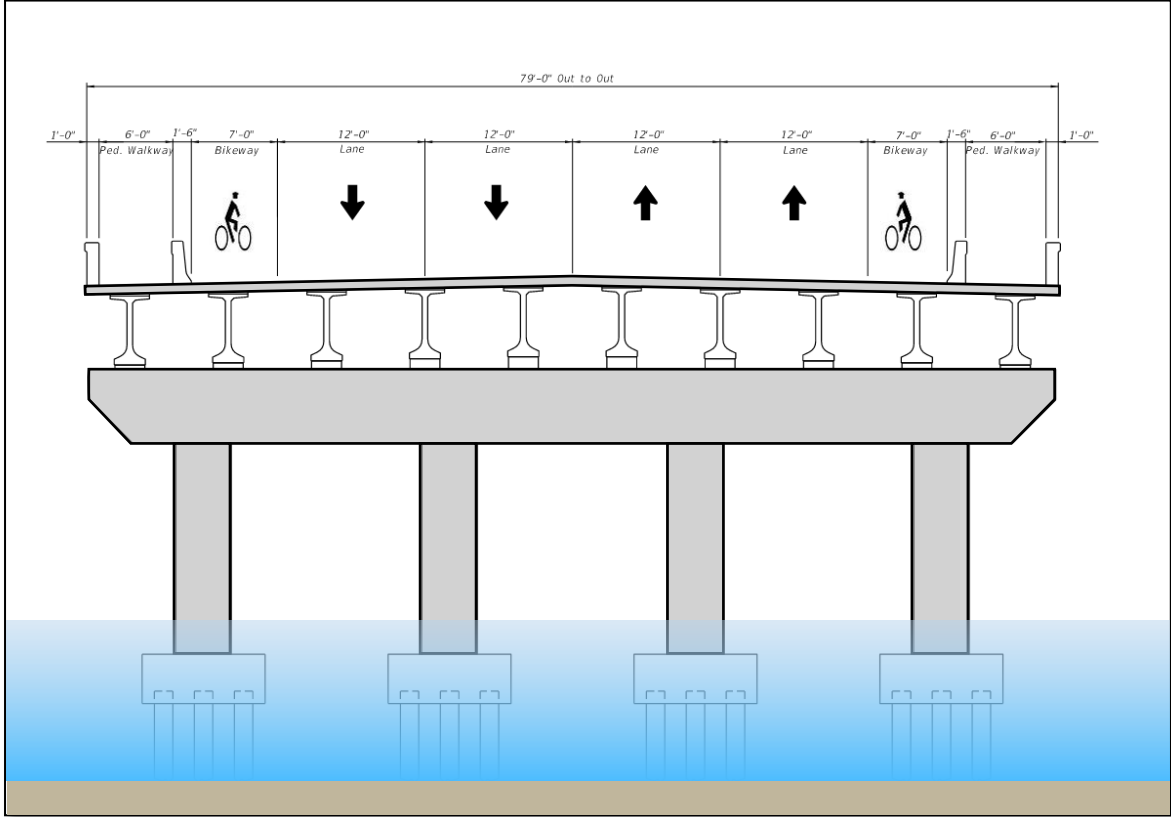
Engineering Analysis



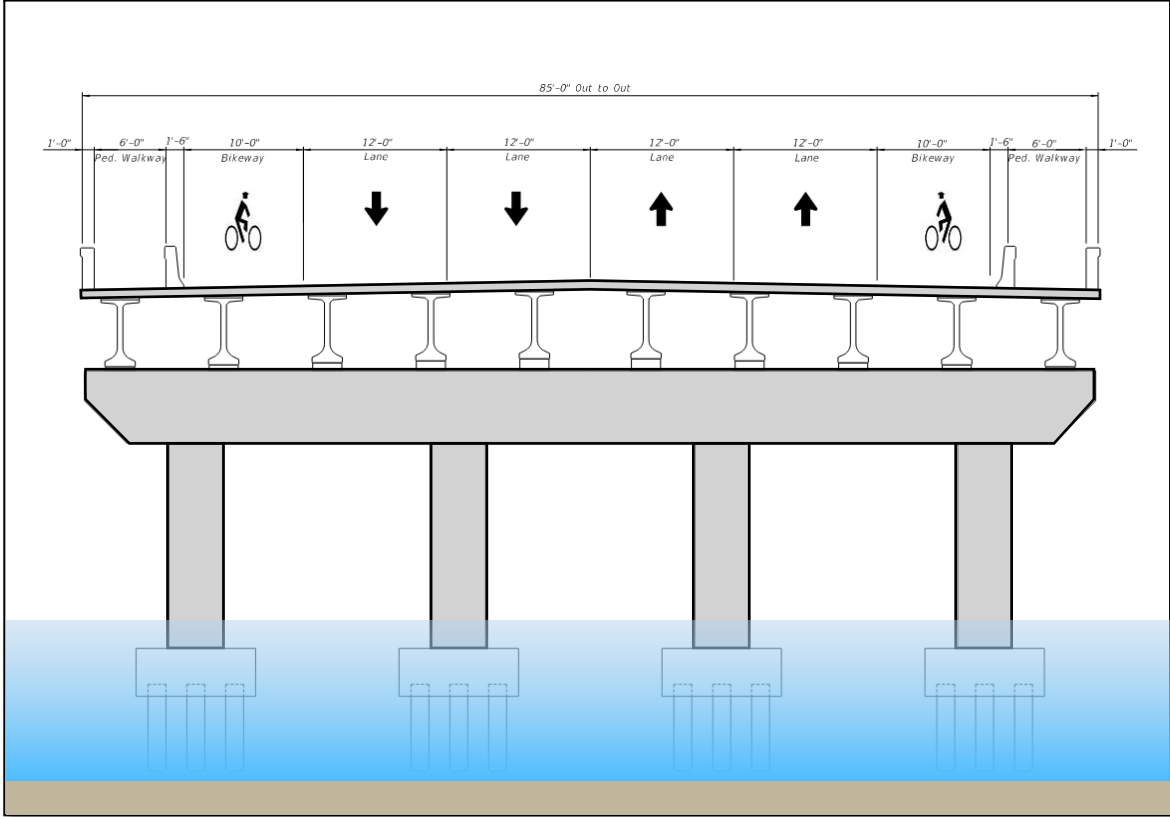
	FDM Design Criteria		
	Design Vehicle	WB-62FL	FDM 201.6
Typical Section	AADT	22,000	FDOT
	Context Classification	Mixed	FDOT
	Functional Classification	Urban Minor Arterial	FDOT SLD
	Design Year	2047	FDOT
	Design Speed	35 mph	FDOT
	Travel Lane Width (Approach)	11-ft (Min.)	FDM Table 210.2.1
Horizontal	Travel Lane Width (Bridge)	11-ft (Min.)	FDM 260.2
	Pavement Cross Slope	0.02 - 0.035	FDM Figure 210.2.1
	Shoulder Width Approach	10-ft/5-ft paved	FDM Table 210.4.1
	Shoulder Width (Bridge)	10-ft (Min.)	FDM Figure 260.1.1
	Minimum Stopping Sight Distance	Downgrade 2-7%: 250-276-ft Upgrade 2-7%: 250-226-ft	FDM Table 210.11.1
	Maximum Deflection without Horizontal Curve	Design Speed ≤ 40 mph is 2°00'00"	FDM 210.8.1
	Length of Horizontal Curve	525-ft (Desirable) / 400-ft (Min.)	FDM Table 210.8.1
	Maximum Degree of Curve	14°15'	FDM Table 210.9.2
	Superelevation Transition: On Tangent On Curve	80% 20%	FDM 210.9
	Maximum Superlevation	5%	FDM 210.9.2
Vertical	Maximum Degree of Curve without Superlevation	5°	FDM Table 210.9.2
	Maximum Change In Grade Without Vertical Curve	0.90%	FDM Table 210.10.2
	Max. Grades	7%	FDM Table 210.10.1
	K Value (min) Sag	49	FDM Table 210.10.3
	K Value (min) Crest	47	FDM Table 210.10.3
	Curve Length (min)- Sag	105-ft	FDM Table 210.10.4
	Curve Length (min) - Crest	105-ft	FDM Table 210.10.4

Typical Section Analysis

Typical Section – Alternative 1

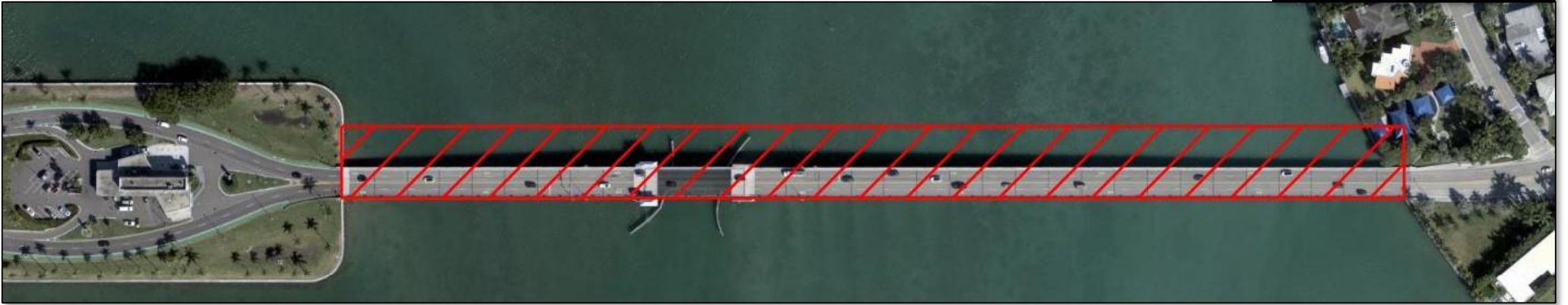


Typical Section – Alternative 2



Bridge Alignment Analysis

North Alignment



South Alignment



Bridge Alternatives Analysis

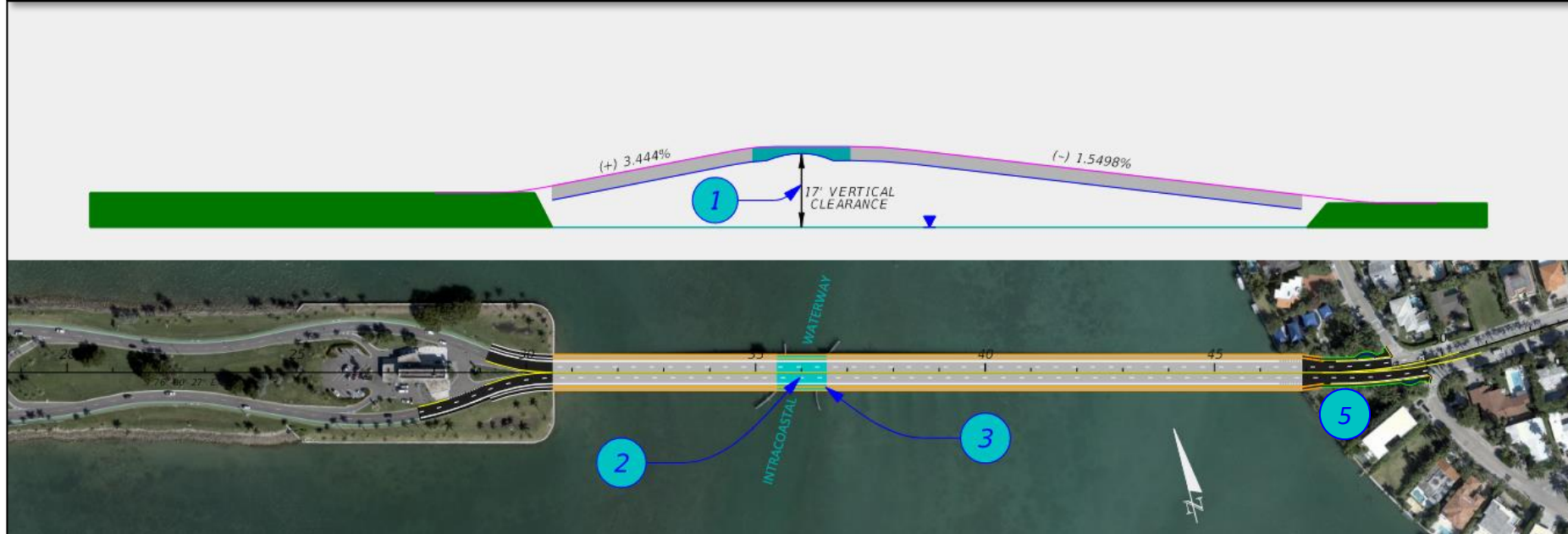
- Navigation Channel Improvements
 - Navigation clearances dictated by US Coast Guard
 - I-195/Julia Tuttle Bridge – vertical clearance over Intracoastal Waterway = 55 ft.
 - Proposed minimum vertical clearance for Broad Causeway high-level fixed-span bridge = 55 ft.
 - Early coordination with US Coast Guard to confirm
 - US Coast Guard requires a boat survey
 - Horizontal clearance at main channel will be increased with longer bridge spans (Min. 120 ft.)



Bridge Alternatives Analysis

Alternative 1 New Movable Bridge

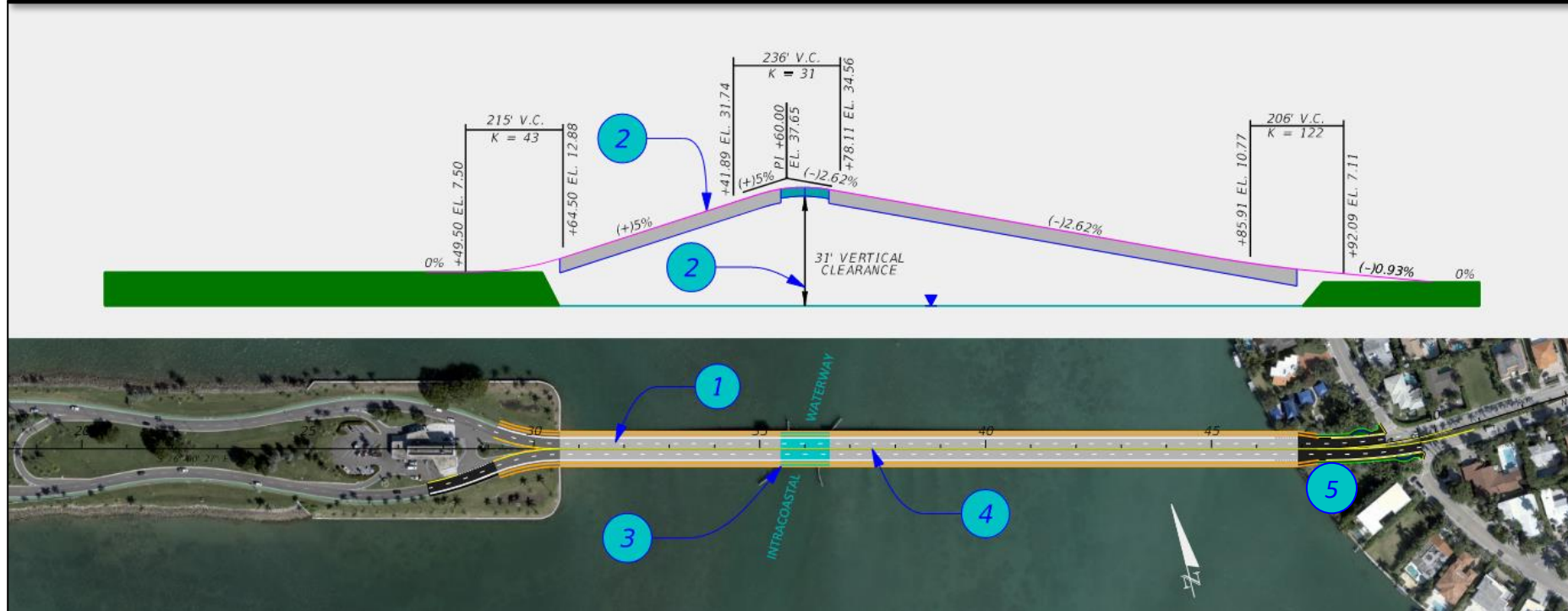
1. Maintains existing vertical clearance over Intracoastal Waterway of 17 ft.
2. New movable bascule bridge with two 12-ft lanes; 10-ft shoulders (designated for bicycles) and 6-ft. sidewalks in each direction
3. Barrier protected sidewalks and pedestrian gates for safety and operational improvements
4. Can be constructed on existing alignment using temporary bridge or on new alignment just south of existing bridge.
5. Minimal R/W impacts



Bridge Alternatives Analysis

Alternative 2 New Higher Level Movable Bridge

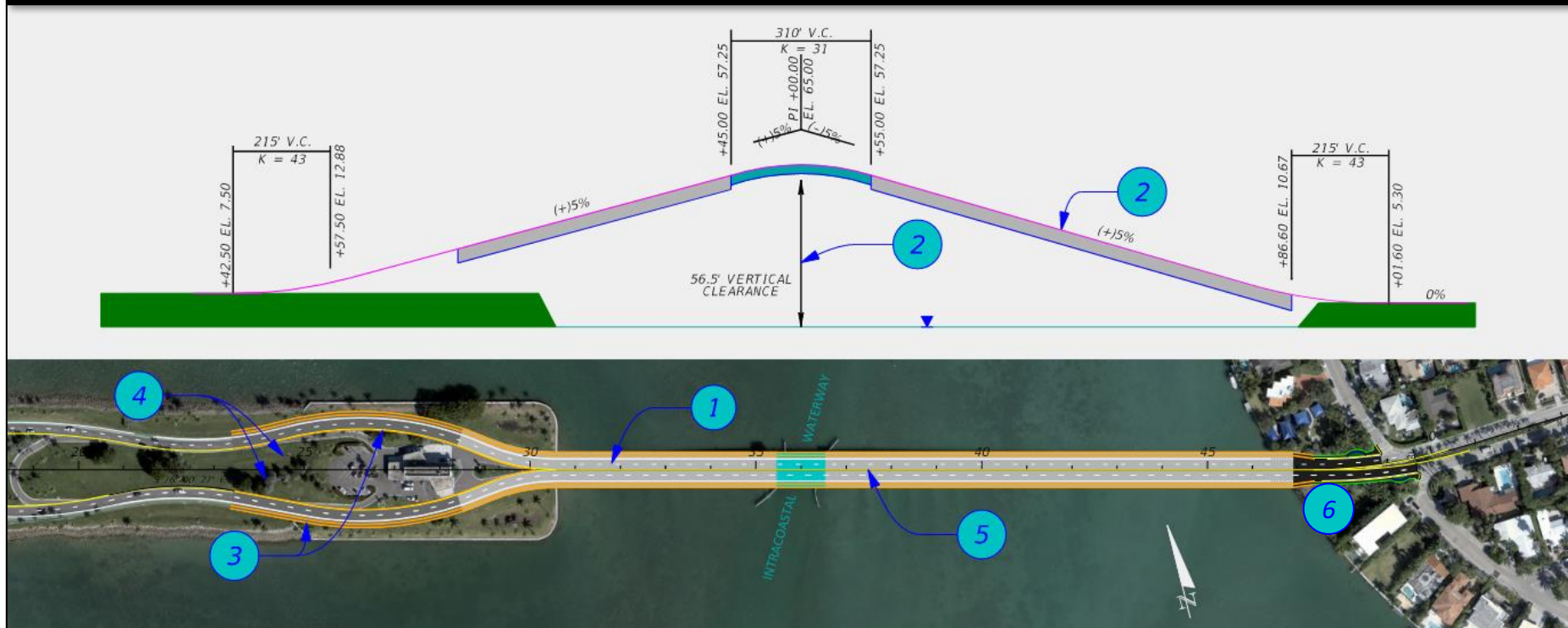
1. New movable bascule bridge with two 12-ft lanes; 10-ft shoulders (designated for bicycles) and 6-ft. sidewalks in each direction
2. 5% grade on vertical alignment and increased vertical clearance to 28 - 31 ft. over the Intracoastal Waterway
3. Barrier protected sidewalks and pedestrian gates for safety and operational improvements
4. Can be constructed on existing alignment using temporary bridge or on new alignment just south of existing bridge.
5. Minimal R/W impacts



Bridge Alternatives Analysis

Alternative 3 High-Level Fixed-Span Bridge

1. New movable bascule bridge with two 12-ft lanes; 10-ft shoulders (designated for bicycles) and 6-ft. sidewalks in each direction
2. 5% grade on vertical alignment and increased vertical clearance to 55 ft. over the Intracoastal Waterway
3. 8-10 ft. MSE Walls to minimize R/W impacts
4. Modified traffic access and circulation at service plaza
5. Can be constructed on existing alignment using temporary bridge or on new alignment just south of existing bridge.
6. Minimal R/W impacts



Bridge Alternatives Analysis – High-Level Fixed-Span Bridge – Visualization



Bridge Alternatives Analysis – High-Level Fixed-Span Bridge – Visualization



SIMILAR EXPERIENCE

Hanson has designed over water highway and railroad bridges in sensitive environmental conditions

Bridge Aesthetics

Examples of adding extradosed post-tensioning tendons to an FIB girder bridge to create a unique structure without the complexities of a typical 'signature' bridge.

SIMILAR EXPERIENCE

HANSON incorporates aesthetics in all designs and has an association with a bridge architect available for this project.



Geotechnical Analysis

- Project Challenges And New Foundation Selection:
 - Borings to be taken every 100 ft.-150 ft. based on conceptual pier layout to determine final foundations.
 - Based on existing information and to avoid settlement of the existing bridge or temporary bridge during the construction we recommend using drilled shafts for support of the new bridge.
 - Recommend installing the steel casing using a non-vibratory technology, including the twisting oscillating method of installation (see picture).
 - Drilled shafts allow for smaller foundation footprint.
 - Drilled shafts provide better tension resistance to withstand hurricane force winds and ship impact on the structure.

SIMILAR EXPERIENCE

HRES has successfully completed similar projects over Florida waters in extremely aggressive environments.



Constructability & Maintenance of Traffic

- Construction using a temporary bridge



Constructability & Maintenance of Traffic

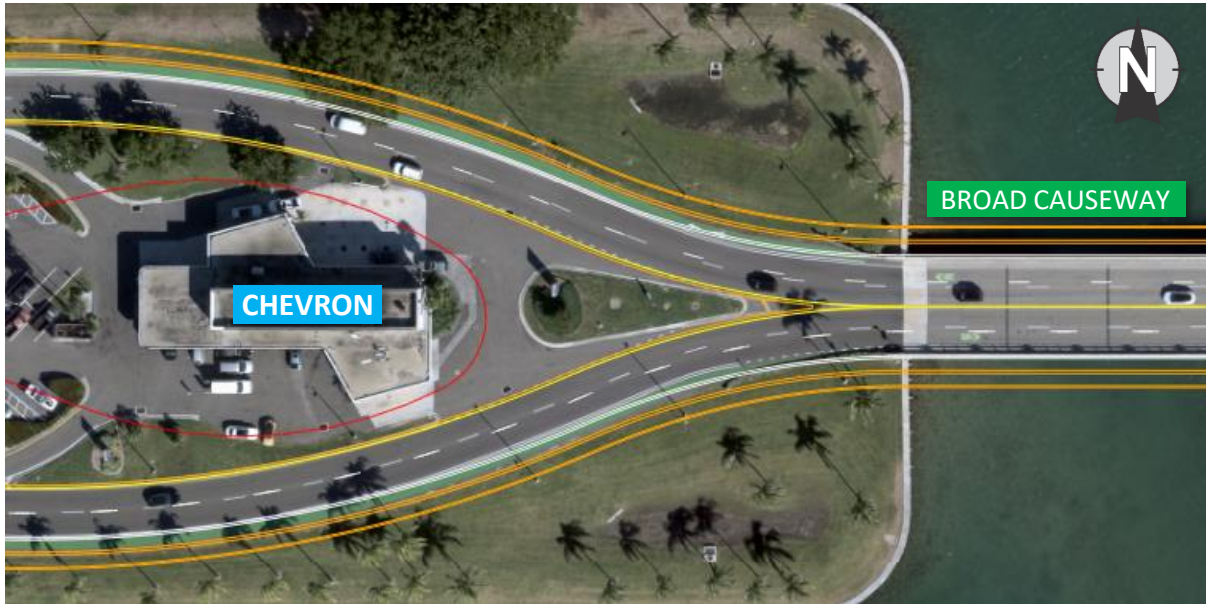
- Building a new bridge adjacent to the existing bridge



Right-of-Way Impacts

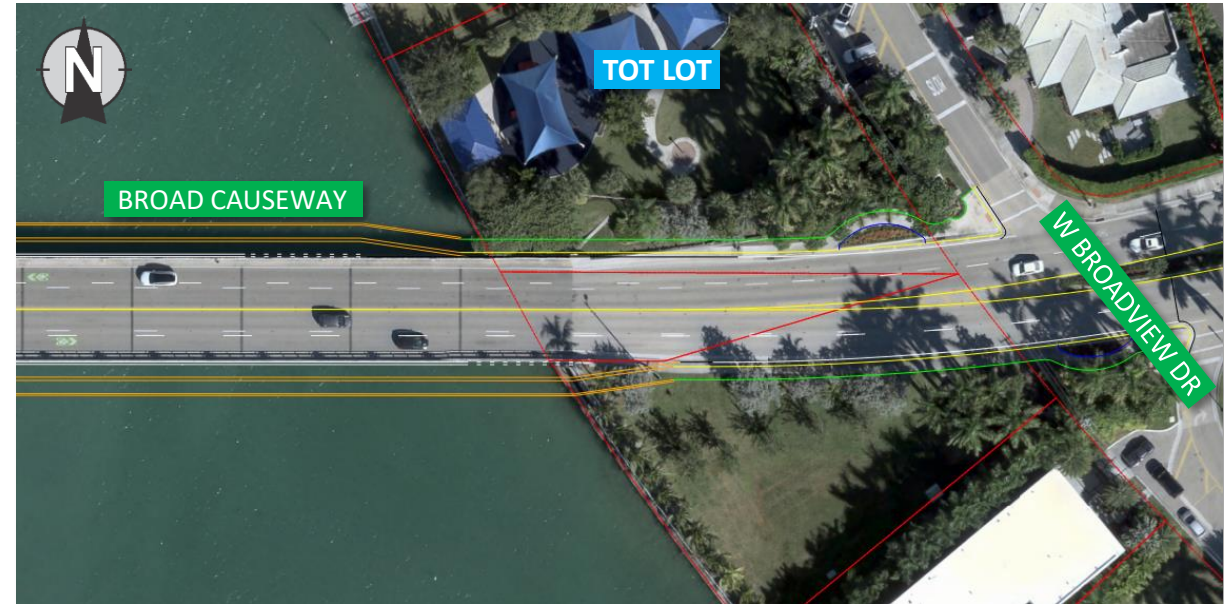
West side approach

Chevron service station access



East side approach

Vacant lot



Drainage Analysis

- Limited R/W
 - High Density
 - High Land Value
- Environmental (Drainage Related)
 - Sea Level Rise
 - Biscayne Bay Aquatic Preserve
 - Impaired for Nutrients
 - OFW
 - Wetlands
- FEMA Floodplains
- Tidal Fluctuations



Drainage Analysis



TSM&O/ITS Considerations

- **Evaluate** the need for modifications to the existing TSM&O infrastructure
 - Tolling Gantry at the western end
 - Draw Bridge Control Room and the Security CCTV cameras
- TSM&O strategies will be **incorporated** in all Alternatives and coordinated with other projects within the project limits.
- Consideration of new TSM&O Strategies
 - **Water Level and Wind Sensor** to support Hurricane Evacuation Event
 - **CCTV Camera for Bridge Monitoring**



Utility Coordination

- Comcast Cable
- Florida Power & Light – ½ in. Conduit on Bridge (Northside)
- Atlantic Communications – Conduit on Bridge (Southside)
- Miami-Dade Water & Sewer – PVC Water Pipe on Bridge (Southside)
- TECO Peoples Gas – South Florida
- ATT/Distribution

A Utility Assessment Package will be prepared in accordance with the FDOT procedures



Environmental Analysis

Social and Economic Effects



- Land Use Changes
- Social
- Relocation Potential
- Farmlands
- Aesthetic Effect
- Economic
- Mobility

Cultural Effects



- Historic Sites/Districts
- Archeological Sites
- Recreation Areas
- Section 4(f)

Natural Resources



- Wetlands
- Aquatic Preserves
- Water Quality and Quantity
- Wild and Scenic Rivers
- Floodplains
- Protected Species and Habitat
- Essential Fish Habitat
- Coastal and Marine

Physical Effects



- Traffic Noise
- Air Quality
- Contamination
- Infrastructure

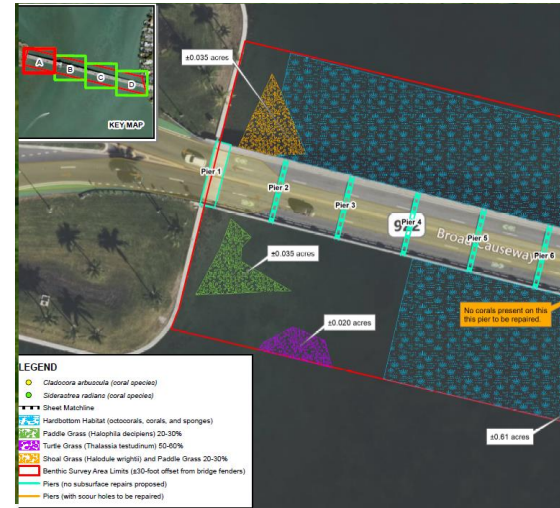
Sociocultural Effects Evaluation (SCE)

- An SCE Evaluation will be performed during the PD&E Study.
- The social , economic, mobility, land use, relocation potential, and aesthetic effects will be evaluated.
- Key issues include the project’s effects on the traveling public, including vehicular, pedestrian, bicyclist, and water vessel modes of transportation.
- RES DBA E Sciences has performed SCE Evaluations for several projects for FDOT PD&E Studies with Hanson as the prime.



Natural Resources Evaluation (NRE)

- An NRE will be performed during the PD&E Study to include:
 - Wetlands and Surface Waters
 - Protected Species and Habitat
 - Essential Fish Habitat
- **RES marine biologists conducted a benthic resource survey for this project in 2021 – we know the locations of seagrass beds and corals and have already begun using this information to minimize impacts in our concepts.**
- Impacts to corals will be minimized through relocation. Team will seek opportunities to avoid and minimize seagrass impacts.
- RES recently prepared an innovative mitigation plan for a similar project in Biscayne Bay Aquatic Preserve.



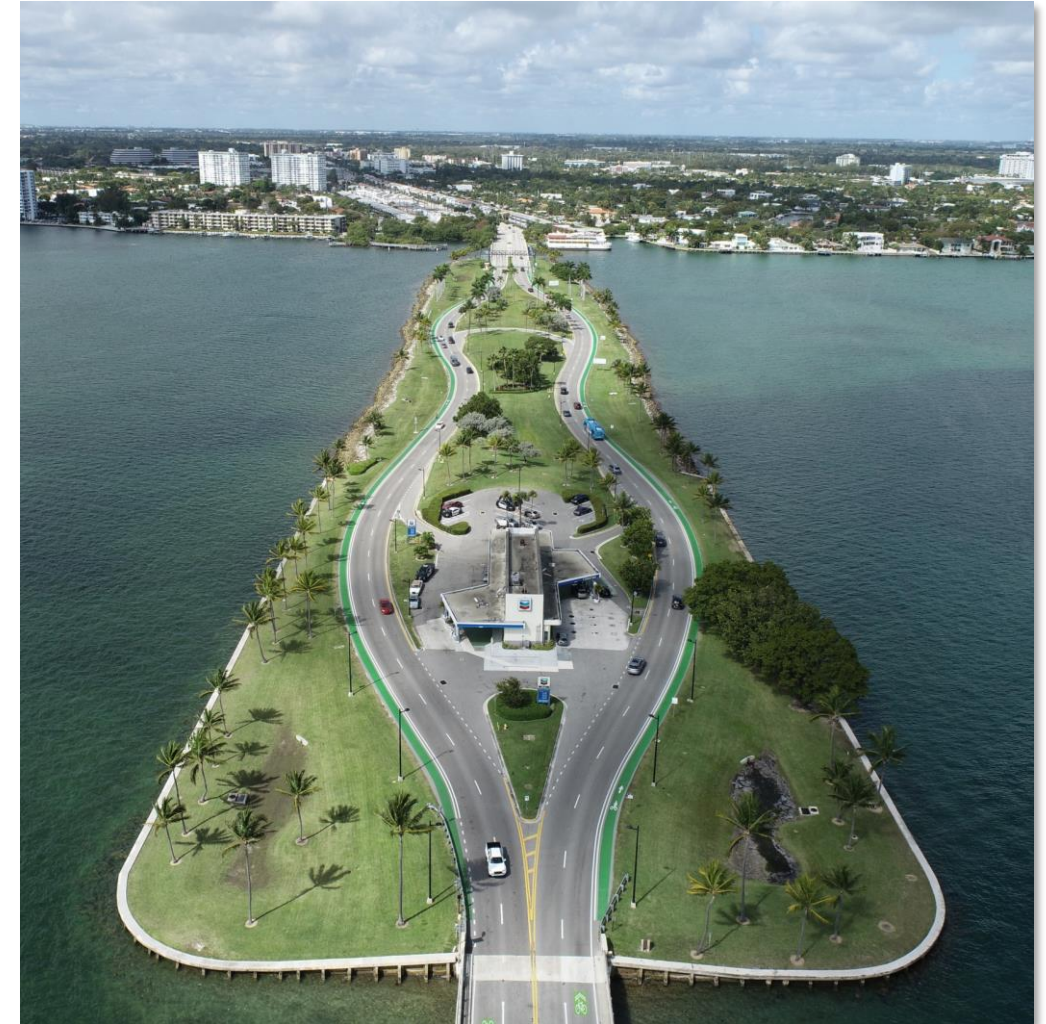
Submerged Lands and Special Designations

- Submerged Lands deeded to the Town of Bay Harbor Islands
 - State authorization for a public easement from FDEP State Lands not required
- Project is still in Biscayne Bay Aquatic Preserve (BBAP), an Outstanding Florida Water (OFW)
 - BBAP managed locally by FDEP
 - Leads to considerations for permitting from SFWMD regarding impacts and mitigation
- Designated Manatee Protection Zone by State, Federal, and County permitting agencies



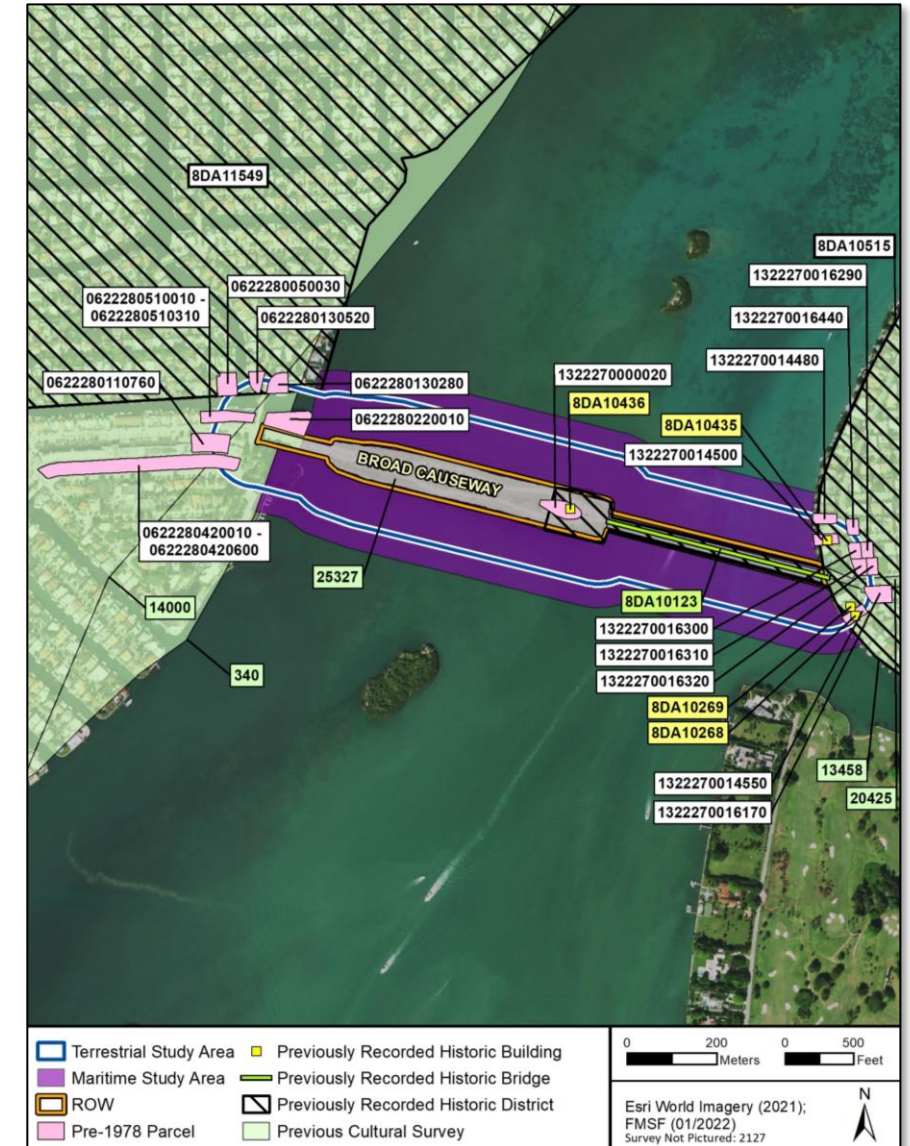
Contamination Screening Evaluation Report (CSER)

- A CSER will be performed during the PD&E Study
- The Chevron (Sunshine #08) on Broad Causeway is listed as a DEP Cleanup Site
- The effect of this site on the project will be evaluated in the CSER
- RES dba E Sciences will determine if Level II contamination testing is warranted based on the design
- If warranted, we can perform this service and acquire the necessary Class VI Permit from DERM



Cultural Resources and Section 4(f)

- A cultural resource assessment survey (CRAS) is required to identify and record all structures that are 45 years or older
 - CRAS: Identification and evaluation of historic resources and archaeological sites
 - Evaluation of newly recorded cultural resources
 - Assessment of the potential for National Register Historic Places (NRHP) eligibility for individual resources and historic districts
 - Recommendations regarding potential project impacts
- Preliminary research for the Broad Causeway project indicates:
 - Portions of the project area have been previously surveyed
 - 5 previously recorded historic resources
 - 15 unrecorded properties of historic age within study area
 - Maritime survey may be required for underwater construction footprint
- **The Bay Harbor Islands Tot Lot on the northeast quadrant of the bridge is a protected resource under Section 4(f) of the US Department of Transportation Act. Use of this property is to be avoided.**



Traffic Noise Analysis

- Noise analysis will be conducted in accordance with FDOT PD&E Manual, Part 2, Chapter 18 “*Highway Traffic Noise*”
- Nearby noise sensitive sites include:
 - Single-family homes on Bay Harbor Island.
 - Bay Harbor Island Tot Lot
- **No roadway capacity improvements or substantial alignment shifts planned.**
- New traffic noise impacts are not anticipated, and a detailed traffic noise analysis may not be required.
- **Potential for short-term noise and vibration impacts during construction**
 - Expected to be the primary noise (and vibration) issue for this project.
 - Bridge construction methods often involve particularly noise/vibration
 - Recommend the use of quieter construction methods
 - All nearby noise sensitive sites will be evaluated for construction noise/vibration.
 - Early coordination with the owner/occupants



SIMILAR EXPERIENCE

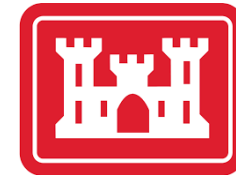
Tim Ogle has conducted noise analyses for several similar bridge projects, including a recent analysis for the FDOT’s Venetian Causeway and SW 1st Street Bridge projects.

Agency Coordination & Permitting

- US Coast Guard (USCG) Bridge Permit
 - Commenting Agencies: National Marine Fisheries Service (NMFS), US Fish and Wildlife Service (FWS), State Historic Preservation Office
 - US Army Corps of Engineers (USACE) Civil Works Section 408 Approval (for the Atlantic Intracoastal Waterway)
 - USACE Regulatory Dredge and Fill Permit may not be necessary (if there is no fill)
- South Florida Water Management District (SFWMD) Environmental Resource Permit (ERP)
 - Commenting Agencies: FDEP-BBAP, Florida Fish and Wildlife Conservation Commission (FWC), State Historic Preservation Office
- Miami-Dade County Department of Regulatory and Economic Resources (RER) Class I Coastal Construction Permit

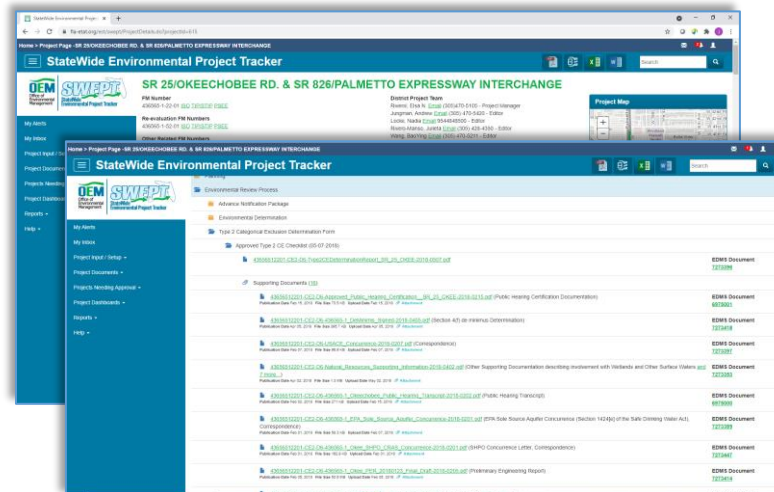
Permitting Approach

Early coordination with regulatory and commenting agencies to advance permitting



Final Documentation

- Follow NEPA Assignment
- Purpose and Need Statement
- Documentation consistency with P&N and project commitments
- Environmental Assessment
- ETDM Programming Screen
 - Streamline agency reviews and coordination
 - Assist with alternatives screening
- SWEPT
 - Environmental Assessment Documentation
 - Supporting documents uploaded
 - OEM document Review

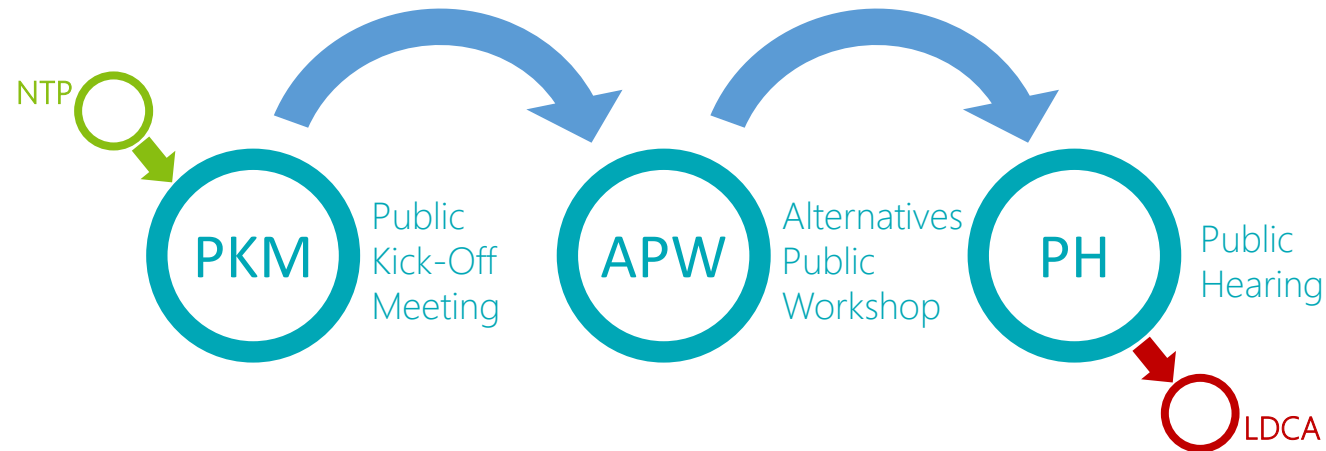


Documentation:

- Traffic Forecasting and Analysis Methodology Memorandum
- Existing Conditions Assessment Memorandum
- Project Traffic Analysis Report
- Safety Analysis Memorandum
- Bridge Analysis Report
- Location Hydraulic Report
- Bridge Hydraulic Report
- Pond Siting Report
- Alternative Analysis Memorandum
- Preliminary Engineering Report
- Conceptual Design Plan Set
- Typical Section Package
- Utilities Assessment Package
- Environmental Assessment
- Natural Resources Evaluation
- Noise Study Report
- Air Quality Technical Memorandum
- Cultural Resources Assessment Survey
- Conceptual Stage Relocation Plan
- Contamination Screening Evaluation Report
- Water Quality Impact Evaluation
- Public Involvement Plan
- Public Comments and Coordination Report
- Project Commitment Record

Public Involvement

- Establish an interactive Public Involvement Plan (PIP) early in the study and coordinate with the Town's Communications Office
- Develop a tailored outreach approach and identifying needs of diverse populations within the project area
- Utilize existing communication resources
- Strategic PI – grassroots media/organizations also critical



Preliminary List of Stakeholders

- Keystone Point Neighborhood Association
- Morris N. Broad Community Center
- Chevron Gas Station
- Ruth K. Broad Bay Harbor K-8 Center
- Bank of America
- Ocean Reef Academy
- Bal Harbour Gourmet Market
- Plastic Surgeon – Dr. Mel Ortega
- Rx Home Health Services
- Preferred Jewelers International
- Fred Astaire Dance Studios
- Manna Spa & Wellness
- Grand Beach Hotel Bay Harbor
- The French Bakery Cafe & Bistro
- O'Lima Signature Cuisine
- Bay Harbor Islands Police Department
- Homeowner's associations
- Bicycle groups

SIMILAR EXPERIENCE

MRG has been working with key stakeholders within the project limits for many years, who will be champions in harvesting support for this project from the community.

Elected Official Briefings



Knowledge and Approach:

- ✓ *PD&E Public Involvement Milestones*
- ✓ *Extensive experience working for and with cities and towns on behalf of FDOT on high profile PD&E Studies*
- ✓ *Depth of knowledge of community, key stakeholders, and project area*
- ✓ *Awareness of public concerns and needs*
 - *Maintenance of Traffic and Construction Impacts*
 - *Hurricane Evacuation Route*
 - *Project Schedule*
- ✓ *Proactive and continuous public outreach*

Community Outreach

- Conduct pop-up events to educate the community on the project
- Participate in the Bay Harbor Islands Police Department Bicycle Safety Rodeo and Bike Ride with the Chief
- Partner up with the Town and Police Department to attend events to promote project information
- Council Meeting Updates
- Conduct Public Meetings for both the PD&E and Design Phases
- Conduct Open House for Construction Phase

*Bay Harbor Islands Police Department
Bicycle Safety Rodeo and Group Ride*



Public Involvement should:

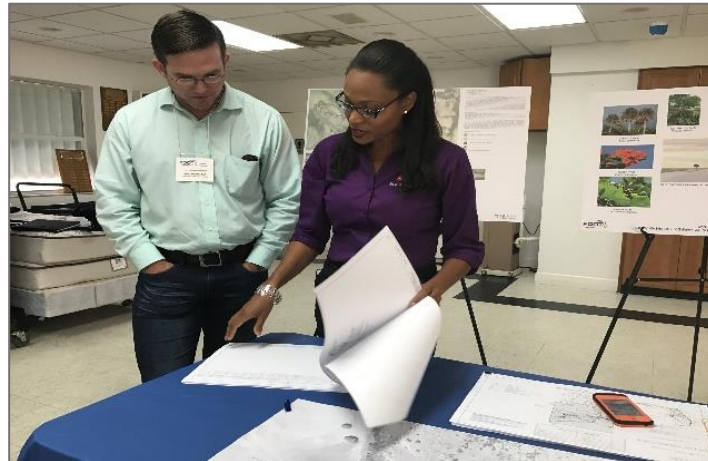
- 1. Be inclusive of decision-makers and stakeholders, especially those who will be most affected*
- 2. Emphasize partnering and consensus*
- 3. Begin early in the project process, be proactive and ongoing*
- 4. Be defined, structured, transparent, and clearly delineated at the beginning of the project*

Public Involvement Outreach

- Coordinate and host key outreach meetings

- Public Kick-off Meeting
- Alternative Public Meeting
- Public Hearing

Hybrid format: One virtual meeting and one in-person meeting for public outreach



SIMILAR EXPERIENCE

Our team has held countless virtual meetings in different communities throughout the State following current FDOT standards for same day, different days, and different location settings.

Potential Meeting Venues



Town of Bay Harbor Islands

- Council Chambers
- Morris N. Broad Community Center
- Ruth Broad Elementary School

Virtual Open House

In-person Meetings and Workshops





I-95 AT WOOLBRIGHT ROAD

PD&E STUDY

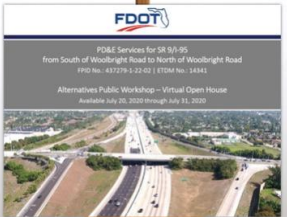
ALTERNATIVES PUBLIC WORKSHOP - VIRTUAL OPEN HOUSE

AVAILABLE JULY 20, 2020 THROUGH JULY 31, 2020

PLEASE SIGN IN

VIEW OUR PROJECT BOARDS

[Click here](#) to download a PDF of these boards.
[Click here](#) to download a high-resolution PDF of the presented alternatives.



FDOT PD&E Services for SR 92/95 from South of Woolbright Road to North of Woolbright Road
FDOT No. 222530-5-22-01 & 222530-6-22-01

Alternatives Public Workshop - Virtual Open House
Available July 20, 2020 through July 31, 2020



FDOT PD&E Services for SR 92/95 from South of Woolbright Road to North of Woolbright Road
FDOT No. 222530-5-22-01 & 222530-6-22-01

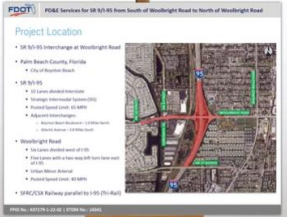
Title VI

The Florida Department of Transportation is required to comply with various non-discrimination laws and regulations, including Title VI of the Civil Rights Act of 1964. Public participation is valued without regard to race, color, national origin, age, sex, religion, disability or family status.

Persons wishing to express their concerns about Title VI may do so by contacting either:

District Office
Florida Department of Transportation
District Title VI Coordinator
Sharon Singh-Hughes
3400 West Commercial Boulevard
Fort Lauderdale, Florida 33309-3425
(954) 777-8200
Toll Free at (800) 368-6465, Ext. 4200
Sharon.Singh-Hughes@fdot.state.fl.us

Telephone Office
Florida Department of Transportation
State Title VI Coordinator
Jacqueline Parramore
600 Tennessee Street, MS 65
Tallahassee, Florida 32309-3425
(904) 634-4753
jacqueline.parramore@dot.state.fl.us



FDOT PD&E Services for SR 92/95 from South of Woolbright Road to North of Woolbright Road
FDOT No. 222530-5-22-01 & 222530-6-22-01

Project Location

- SR 92/95 interchange at Woolbright Road
- Palm Beach County, Florida
- City of Boynton Beach
- SR 92/95
 - 117 lanes divided median
 - 2-lane divided median (SR 92)
 - 2-lane divided median (SR 95)
 - 2-lane divided median (SR 95)
 - 2-lane divided median (SR 95)
 - 2-lane divided median (SR 95)
- Woolbright Road
 - 1-lane divided median (SR 92)
 - 1-lane divided median (SR 95)
 - 1-lane divided median (SR 95)
 - 1-lane divided median (SR 95)
 - 1-lane divided median (SR 95)
- SPRINGER Highway parallel to I-95 (SR 92)

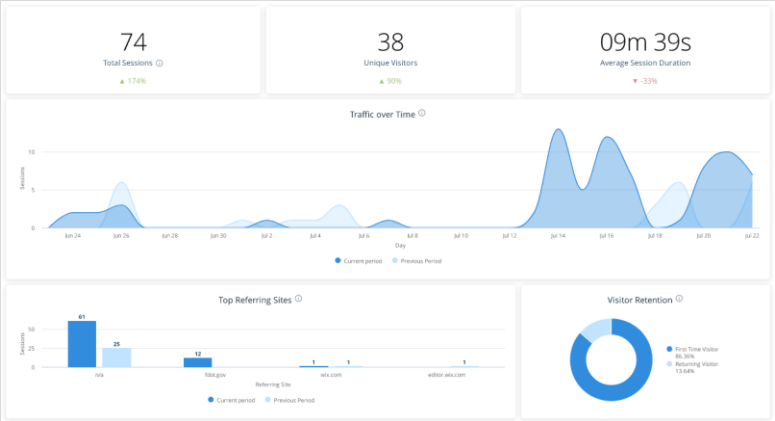


FDOT PD&E Services for SR 92/95 from South of Woolbright Road to North of Woolbright Road
FDOT No. 222530-5-22-01 & 222530-6-22-01

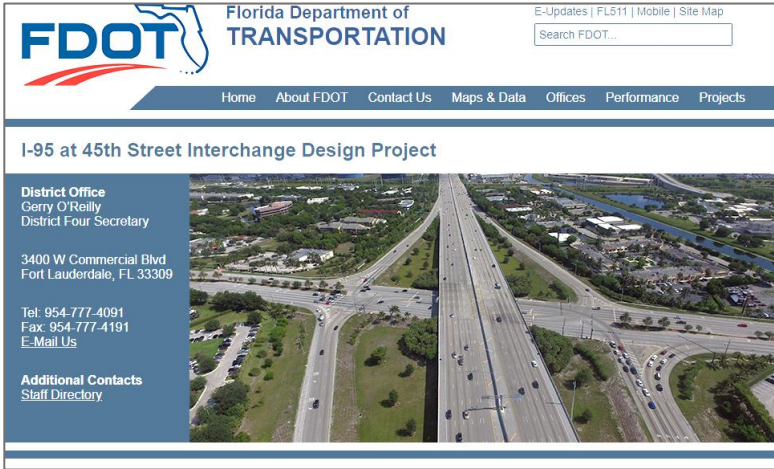
PD&E Study Process

The study process involves several steps: 1. Project Identification, 2. Project Definition, 3. Project Planning, 4. Project Design, 5. Project Construction, 6. Project Operation, 7. Project Maintenance, 8. Project Evaluation.

Virtual Open House Participation Metrics



Website,
Project Factsheet & Newsletter



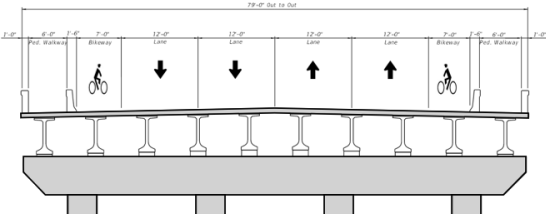
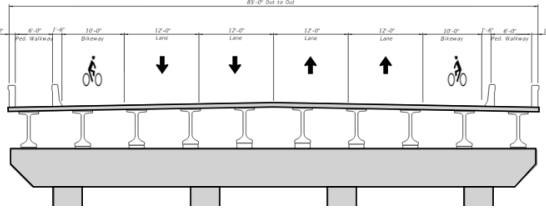
Visualization / Renderings



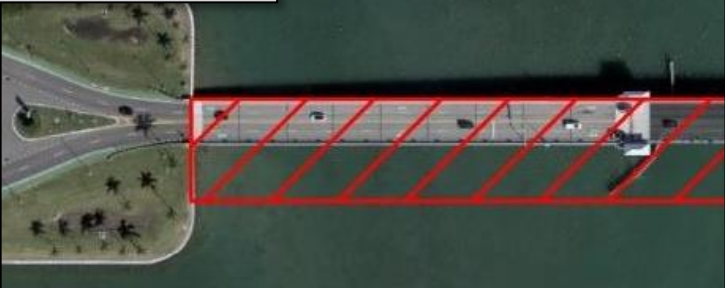
Virtual / Social Media Tool Kit



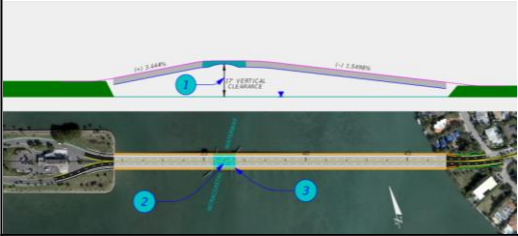
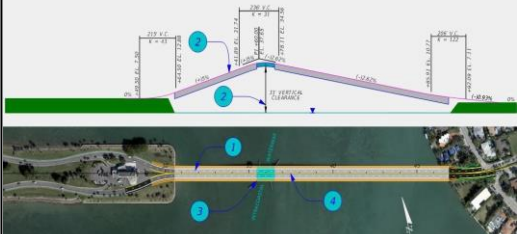
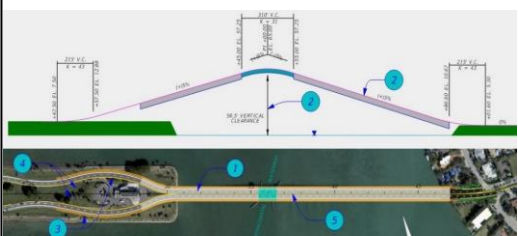
Evaluation Matrix – Typical Section

		Evaluation Factors						
		1	2	3	4	5	6	7
Typical Section	Description	LOS/Safety	Bicycle Safety	Pedestrian Safety	Hurricane Evacuation	Design Standards	Env. Impacts	Right-of-Way Impacts
ALTERNATIVE 1 	2047 LOS D; 7-ft. shoulder not safe for disabled vehicle 7-ft shoulder safer for bicycles compared to existing 6-ft. sidewalks 7-ft. shoulder could impede hurricane evacuation - Design variation for shoulder width (minimal = 10-ft) 79 ft. out-to-out is least footprint for new bridge - Moderate R/W impacts							
ALTERNATIVE 2 	2047 LOS D; 10-ft. shoulders safer for disabled vehicles 10-ft shoulder safer for bicycles 6-ft. sidewalks 10-ft. shoulder can be used as extra lane during hurricane evacuation - No design variations anticipated 85-ft. out-to-out is greatest footprint for new bridge - Moderate R/W impacts							

Evaluation Matrix – Bridge Alignments

Bridge Alignment	Description	Evaluation Factors				
		1	2	3	4	5
		Section 4(f) Impacts	Maintenance of Traffic (MOT)	Constructability	Environmental Impacts	Right-of-Way Impacts
North Alignment 	1. Bay Harbor Island Cot Lot Park located on NE side of bridge. Impacts to park would require 4(f) Impact Statement and delay project. 2. Location of park would make MOT during construction difficult. Could not route traffic through park. 3. Due to location of park, contractor access would be limited. 4. Seagrass beds present on north side. 5. Major impacts to public park; Access impacts to service plaza on west end.					
South Alignment 	1. New bridge can be built on south side with no impacts to 4(f) resources. 2. MOT is much more manageable on the south side to route traffic east and west during construction. 3. Constructability is improved with better MOT. 4. Less impacts on south side. 5. Town owns vacant lot on SE side of bridge. Access impacts to service plaza on west end.					

Evaluation Matrix – Bridge Alternatives

		Evaluation Factors						
		1	2	3	4	5	6	7
Bridge Alternative		Safety Enhancements	Navigational Improvements	Hurricane Evacuation	Design Standards	MOT/Const. Sequence	Environmental Impacts	Right-of-Way Impacts
ALTERNATIVE 1: New Movable Bridge 	1. New movable bridge would provide current safety features. Frequent bridge openings cause traffic back-ups that impact safety. 2. Horizontal clearance at main channel will be increases to 120 ft. No improvements to vertical clearance. 3. New movable reduces malfunctions that can impede hurricane evacuation. 4. Design variations for horizontal curve lengths on Causeway Island. 5. Limited alignment flexibility as moveable span cannot be easily staged. This bridge alternative would most like require temporary movable bridge to be constructed next to the existing bridge. Traffic will be shifted to temporary bridge for the duration of construction (3-4 years). 6. Construction of bascule bridges requires deep bascule piers which contain the leaf counterweights. 7. Minimum adjustment in vertical alignment and least impacts to Causeway Island and Bay Harbor Island.							
ALTERNATIVE 2: New Higher-Level Movable Bridge 	1. New movable bridge would provide current safety features. Frequent bridge openings cause traffic back-ups that impact safety. 2. Horizontal clearance at main channel will be increases to 120 ft. Vertical clearance at main channel increased to 31 ft. 3. New movable reduces malfunctions that can impede hurricane evacuation. 4. Design variations for horizontal curve lengths on Causeway Island. 5. Limited alignment flexibility as moveable span cannot be easily staged. This bridge alternative would most like require temporary movable bridge to be constructed next to the existing bridge. Traffic will be shifted to temporary bridge for the duration of construction (3-4 years). 6. Construction of bascule bridges requires deep bascule piers which contain the leaf counterweights. 7. Vertical grade adjustment to 5% causes minimal impacts to Causeway Island and Bay Harbor Island.							
ALTERNATIVE 3: High-Level Fixed-Span Bridge 	1. High-level bridge eliminates bridge openings. 2. Vertical clearance over main channel is minimum of 55 ft. and horizontal is 120 ft. 3. No bridge openings improves hurricane evacuation and emergency response times. 4. Design variations for horizontal curve lengths on Causeway Island. 5. This bridge can be built south of the existing bridge on new alignment. The existing bridge will remain open for the duration of construction. A temporary bridge can also be constructed south of the existing bridge and the new bridge build on the same alignment as existing bridge. 6. Environmental impacts will be reduced if new bridge is built on new alignment. 7. Adjustment in vertical alignment requires 8-10 ft. retaining walls on each side of the service plaza on Causeway Island and modification of access. Minimal impacts on the east end.							

Evaluation Matrix – Construction Options

Evaluation Matrix – Construction Options		Evaluation Factors						
		1	2	3	4	5	6	7
Typical Section	Description	Env. Impacts	Constructability	Right-of-Way Impacts	Navigational Impacts	MOT	Construction Time	Cost
	Temporary Bridge Option 1. Construction and removal of the temporary bridge would cause more impact to marine environment. Contractor access on north side cause impact to seagrass beds. 2. Temporary movable bridges are more difficult to install, maintain and remove. Also, contractor access is more difficult. 3. Temporary bridge will need more space between center spans which will widen transition angle at approaches. 4. Temporary bridge would impact boat traffic at main channel. 5. Connecting the approaches to the temporary bridge will shift traffic and the width of the movable bridge is limited. 6. Construction time would be much longer with the temporary bridge. 7. Temporary bridge adds \$40M to total costs.							
	Build on New Alignment Option 1. New bridge next to existing bridge would have longer spans than temporary bridge with fewer piers in water. No removal of temporary bridge. 2. Contractor has better access to new bridge from south side. 3. New bridge is closer to existing bridge which improves transition at approaches. 4. Impacts to boat traffic would be same as existing bridge. 5. This option provides better MOT phasing with the construction of the west and east approaches. Less construction time. 6. Construction time would be about 50% less with this option. 7. Does not have cost of temporary bridge.							

Funding Opportunities

- Federal
 - American Rescue Plan Act
 - Mega Grant Program – National Infrastructure Project Assistance Program
- State
 - Florida FY 2022-23 – \$10.3B - FDOT
 - Local Agency Program
- Competitive and most reserved for “shovel-ready” Projects
- Fastrack PD&E Study and Advance Permitting

Design-Build Package

- RFP document that outlines all project goals and defines all design and construction criteria
- Provide special provisions for resiliency and sustainability of the new bridge
- Outline special details for temporary traffic control during construction
- Allow flexibility for the D-B firm to help the Town achieve the best value
- Anticipate and evaluate potential D-B cost savings opportunities and determine appropriate RFP restrictions if necessary
- Prepare design plans for recommended alternative that detail line and grade, signing and markings, drainage master plan, preliminary pier placement and span lengths, approved typical section package, utility assessment package, conceptual permit packages, and preliminary temporary traffic control plan.

GOAL:

Develop balanced document that promotes innovation while protecting the best interests of the Town.

Owner's Representative

- Provide responses to pre-bid questions
- Review technical proposals for conformance with the RFP and design criteria
- Develop technical questions to be asked by the Town as part of the technical proposal Q&A process.
- Attend design progress meetings, as needed
- Review contract plans, reports, and calculations prepared by the D-B firm
- Review other construction submittals (e.g., RFIs and shop drawings), as needed
- Provide technical support for questions that may arise related to the preliminary design, RFP, or procurement phase services

Approach:

- *Serve as an extension of the Town's staff*
- *Insure adherence to project special provisions*
- *Review of design plans*
- *Construction Management*

*I-595 Improvements Program
FDOT – D4 Corridor Design Consultant
Fort Lauderdale, Florida*



*DPW Burnside Bridge Replacement
Multnomah County, Oregon*





PROJECT MANAGEMENT



Town of Bay Harbor Islands – Broad Causeway Drawbridge Replacement

SR 922 Replacement Concept Design – Project No. BC-160



Project Management Approach

- Single point of contact for Town of Bay Harbor Islands and staff
- Monthly progress meetings with Town PM
- Monthly progress meetings with project team
- Bi-weekly team meetings ahead of major milestones
- Document emails, phone calls, and all meetings
- Available immediately for meetings or teleconferences
- Provide immediate responses to stakeholder emails to Town PM
- Coordinate with other ongoing projects within the region
- Take advantage of lessons learned
- Control of Project Budget
- Control of Project Schedule

Project Management Approach:

1. Anticipate your problems
2. Develop some “what-if” scenarios
3. Maintain close client contact
4. Communicate with the team
5. Document everything





Quality Control Process

- Develop a Customized Quality Control Plan
 - QA/QC Officer – Brian Lemieux, PE
 - **QC Process independent for each discipline**
 - Starts at NTP
 - **Constructability Reviews by CEI staff**
 - Subconsultants must follow QC Plan
 - Quality Assurance audits for QC Compliance
 - **All deliverables are subject to QC review**
 - QA/QC log to document all submittals
 - QA/QC Certification Form signed by PO, PM, and QC Manager

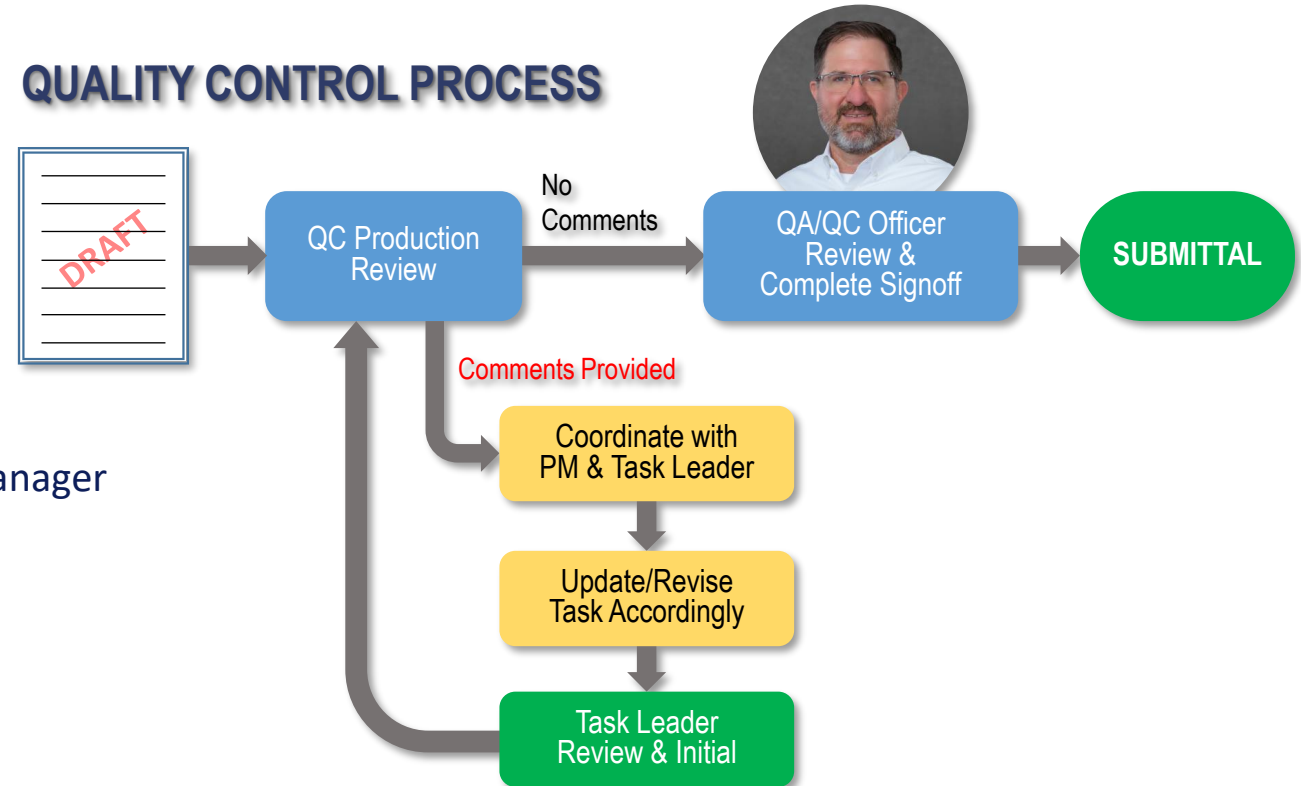
Quality Control Process:

- ✓ Scope of Services
- ✓ NEPA Process
- ✓ PD&E Manual
- ✓ FDOT Design Manual Standards
- ✓ OEM PD&E Checklists

Hanson FDOT-D6 Performance grades:

Work Group 2.0 Grade: 4.4
 Work Group 3.2 Grade: 4.4
 Work Group 4.0 Grade: 4.8

QUALITY CONTROL PROCESS





PROJECT STAFFING



Town of Bay Harbor Islands – Broad Causeway Drawbridge Replacement

SR 922 Replacement Concept Design – Project No. BC-160

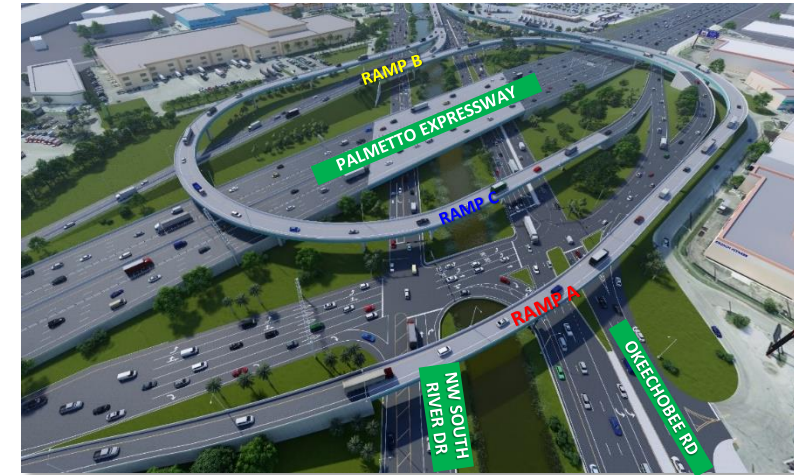


Project Manager



Jeff V. Easley, PE, who has more than 35 years of experience in transportation planning and design, has managed some of the most complex PD&E studies in South Florida for roadways, interchanges, bridges, tunnels, and rail. He has served as Project Manager for 13 successful FDOT PD&E Studies in South Florida ranging in Class of Action (COA) of Environmental Impact Statement to Categorical Exclusion Type 2, with each project either constructed or in the final design phase. Jeff was instrumental in the planning, concept development, permitting, and identification of funding sources for the Port of Miami Tunnel. That project, which had a COA Environmental Impact Statement, included over 100 presentations to stakeholders, elected officials, and permitting agencies. Mr. Easley is recognized as an accomplished public speaker who has presented projects throughout South Florida.

100% Available



Experience with FDOT – D6

- SR 826 at Okeechobee Road Interchange PD&E Study
- SR 826/Palmetto Expressway PD&E Study – From I-75 to the GGI
- SW 1st Street/Flagler Street PD&E Study – From 27th Avenue to 2nd Avenue
- US 1 Keys Turn Lanes PD&E Study – From MM 72 to MM 77
- SR 997/Krome Avenue Truck By-Pass PD&E Study
- Port Miami Tunnel PD&E Study

Experience with FDOT – D4

- I-95 at Woolbright Road PD&E Study
- I-95 at 45th Street Interchange PD&E Study
- I-75 PD&E Study – From Miami-Dade/Broward County Line to I-595
- I-95 PD&E Study – St. Lucie and Indian River Counties
- I-595 PD&E Study – From I-75 to I-95

Experience with MDX

- SR 836/Dolphin Expressway PD&E Study – From NW 57th Avenue to NW 17th Avenue



Project Team



Hanson Professional Services Inc.

- Prime Consultant
- Project Management
- Traffic Operations
- Roadway & Concept Design
- Structural Analysis
- Drainage & Permitting
- Constructability Review
- Maintenance of Traffic
- Public Involvement



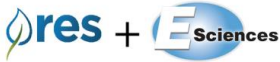
STV Incorporated
Bridge Analysis – Movable Bridge



Caltran Engineering Group, Inc. (DBE/SB)
Data Collection, Traffic Operations & Safety



Southeastern Archaeological Research, Inc.
Cultural Resources



RES + E Sciences, Inc. (SB)
Environmental Analysis
Permitting



Florida ITS Engineers, LLC (DBE/SB)
ITS Analysis



MG Vera & Associates, Inc. (DBE/SB)
Surveying & Mapping



Media Relations Group, LLC (DBE/SB)
Public Involvement



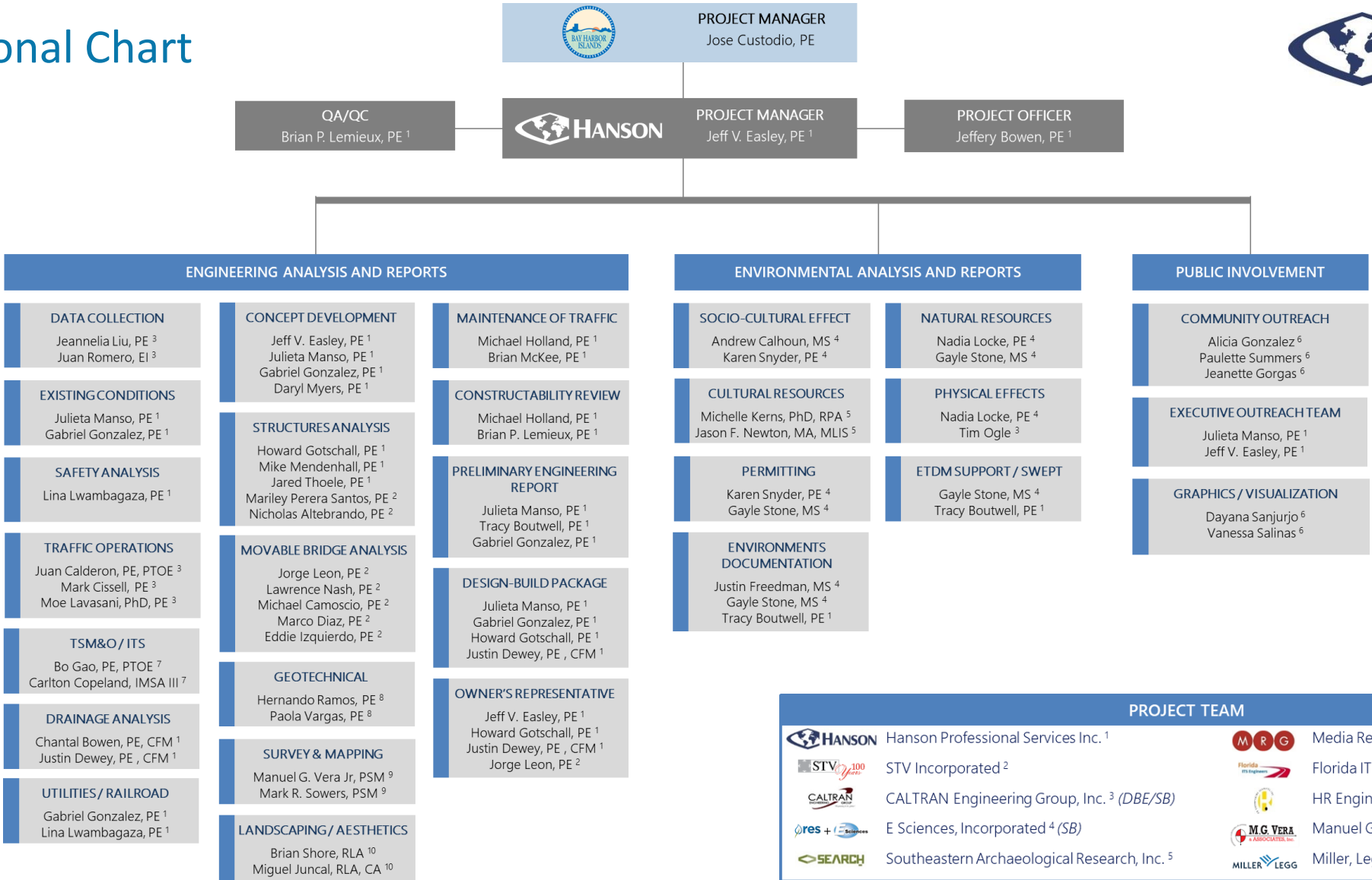
HR Engineering Services, Inc. (DBE/SB)
Geotechnical Surveys



Miller Legg & Associates, Inc. (SB/UU)
Landscape Architecture



Organizational Chart



Key Staff



Brian Lemieux, PE – QA/QC Officer
23 Years of Experience



Mr. Lemieux is experience in the NEPA/PD&E, planning, design, and management of public and private sector transportation projects. He has been responsible for environmental studies, master plans, concept development, preliminary design, public involvement, and final design elements of local roadway system projects and improvements to interstate facilities.

65% Available



Julieta Manso, PE – PD&E Task Leader
18 Years of Experience



Mrs. Manso has extensive experience working on corridor analysis, feasibility studies, and PD&E Studies. She has experience in alternatives analysis and evaluation, access management, benefit/cost analyses, scheduling, and public involvement. She has worked on PD&E Studies that required extensive coordination with federal, state, and local agencies as well as community involvement.

85% Available



Chantal Bowen, PE, CFM – Drainage
36 Years of Experience



Mrs. Bowen experience includes site planning, roadway geometric design, paving, and drainage, as well as a comprehensive background in water resources and environmental permitting with local, state, and federal regulatory agencies. She has extensive knowledge in drainage and environmental permitting with the regulatory agencies.

85% Available



Howard Gotschall, PE – Structures
23 Years of Experience



A structural engineer, his experience includes superstructure and substructure bridge design and development of construction plans and specifications for bridge and retaining wall structures. He also has seismic design experience conducting single mode and multi-modal seismic analyses for highway and railroad bridges.

XX% Available



Justin Dewey, PE, CFM – Drainage
20 Years of Experience



Mr. Dewey experience includes water resources engineering, experience in aviation and roadway drainage design, flood routing/analysis, bridge scour analysis, hydraulic and hydrologic analysis of watersheds, and plans preparation. Mr. Dewey is also an FAA-Certified Drone Pilot and leads Hanson’s Unmanned Aircraft Systems (UAS) flight efforts for Florida.

85% Available



Gabriel Gonzalez, PE – Concept Development
9 Years of Experience



Mr. Gonzalez has experience in roadway, drainage, and site civil design. His specialization is in roadway design and 3D modeling. He is proficient in many engineering software applications such as MicroStation V8i, GEOPAK Roadway, FDOT SS2, FDOT SS4 (3D Modeling), FDOTConnect for OpenRoads Designer.

XX% Available

Key Staff



Jorge Leon, PE – Movable Bridge Analysis
25 Years of Experience

Mr. Leon is a senior electrical engineer experienced in the design, inspection, owner representation, plan review, and construction management of heavy movable structures. He also has expertise in the fabrication, installation, and repair of electromechanical structures. Mr. Leon has supervised condition inspections, evaluations, ratings, and analysis for new and rehabilitated movable spans.



80% Available



Lawrence Nash, PE – Movable Bridge Analysis
25 Years of Experience

Mr. Nash is a senior engineer with more than 25 years of experience providing mechanical design services with notable expertise in the design and inspection of heavy movable structures. He is skilled at conducting condition inspections of existing bridge machinery components as well as preparing design drawings, specifications, and construction estimates.

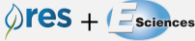


80% Available



Justin Freedman – Environmental Analysis
19 Years of Experience

Mr. Freedman is an experienced environmental professional serving public and private clients throughout Florida. He provides expertise in diverse service areas including urban forestry, environmental permitting and transportation related services. He has managed complex, multidisciplinary projects that include a variety of environmental and engineering related tasks.

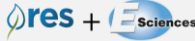


80% Available



Gayle L. Stone, MS – Environmental Analysis
28 Years of Experience

Mrs. Stone expertise include preparation of National Environmental Policy Act (NEPA) documents, wetland delineations, wetland functional assessments, protected species surveys and environmental permitting. She has participated in numerous PD&E Studies for FDOT, municipalities, city housing authorities, community redevelopment agencies and county transportation agencies.



80% Available



Juan Calderon, PE, PTOE – Traffic Analysis
23 Years of Experience

Mr. Calderon is intimately familiar with transportation projects that involve traffic analyses, planning, traffic calming, traffic safety studies, and transit. He is also specialized in traffic and transit data collection, traffic and transit data analysis, mapping using Geographic Information System (GIS) platforms, and roadway design software.



75% Available



Moe Lavasani, PhD., PE – Traffic Analysis
10 Years of Experience

Mr. Lavasani is experienced in conducting planning and ArcGIS studies, transportation model studies including SERPM, NERPM, GTCRPM, and also various types of traffic studies including traffic counts, turning movement studies, travel time and delay studies, parking studies and traffic impact studies. He is responsible for developing different scenarios for future traffic forecasts.



85% Available

Key Staff



Tim Ogle – Noise Analysis
30 Years of Experience



Mr. Ogle expertise includes project oversight, field assessment, computerized air quality and traffic noise analyses, noise abatement design, project design change analyses and public involvement for air quality and traffic noise assessments. He has played a prominent role in conducting and reporting on air quality and traffic noise assessments for over 100 PD&E projects.

60% Available



Hernando Ramos, PE – Geotechnical
36 Years of Experience



Mr. Ramos experience includes design, planning, execution of new geotechnical projects and the remedial procedures to correct foundation problems of existing structures, extensive involvement with axial and lateral pile analyses, slope stability evaluation on retaining walls and embankment projects using geosynthetic reinforcement.

50% Available



Mechelle Kerns, PhD, RPA – Cultural Resources
22 Years of Experience



Dr. Kerns has extensive experience with analysis, data collection, and preparation for curation, research design development, report writing, public outreach, and education programs, as well as supervisory experience managing staff for projects in both terrestrial and underwater archaeology, fieldwork, and laboratory processing of artifacts.

50% Available



Bo Gao, PE – ITS
22 Years of Experience



Mr. Gao is experienced on Transportation Systems Management & Operations (TSM&O), Intelligent Transportation System (ITS) design and implementation, and adaptive traffic signal control (ATSC) deployment. His ITS design and implementation experience include self-healing fiber optic communication system, CCTV, DMS, Bluetooth, ramp metering, DSRC, and vehicle detection.

50% Available



Mark R. Sowers, PSM – Surveying
34 Years of Experience



Mr. Sowers is proficient in the latest industry technology, as well as developing and implementing successful management strategies. His responsibilities include managing field operations and establishing standards for consultants as well as final quality assurance / quality control of all deliverables before client submission.

50% Available

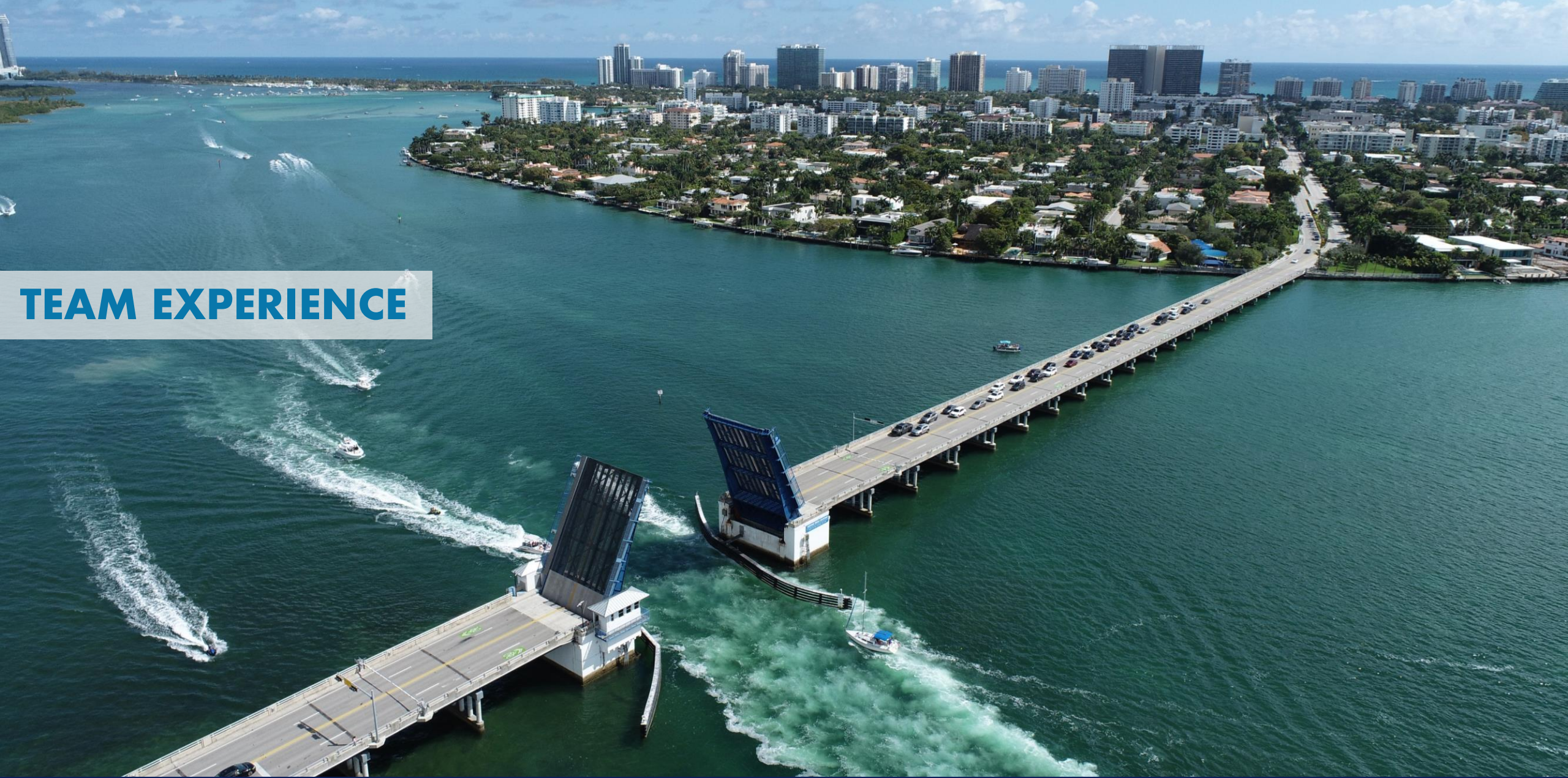


Brian Shore, RLA – Lanscaping
22 Years of Experience



Mr. Shore has significant experience in landscape architectural design and landscape construction services for a variety of public and private projects. Specialties include landscape, hardscape, and irrigation design services for streetscape and roadway projects, all aspects of active and passive park design, health-care campuses, and environmental wetland habitat creation.

50% Available

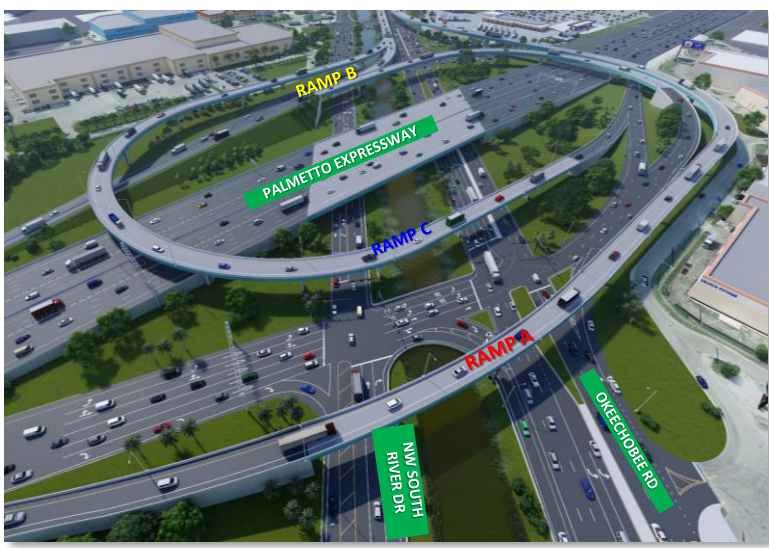


TEAM EXPERIENCE

Relevant Project Experience



SR 826 at US 27/Okeechobee Road
PD&E Study & Design Services
FDOT – District 6



SR 9/I-95 at 45th Street Interchange PD&E Study
FDOT – District 4 (2019 ACEC Award)



SR 26/Newberry Road PD&E Study
FDOT – District 2 (2021 ACEC Award)



SR 9/I-95 at Woolbright Road Interchange PD&E Study
FDOT – District 4 (Completed in 2021)



I-10 PD&E Study – from W of US 90 to W of SR 263
FDOT – District 3 (Completed in 2021)



Relevant Project Experience



Bear Cut Bridge Rehabilitation
Miami-Dade County



Alaska Railroad over Tanana River
Alaska Railroad Corporation



McCluggage Bridge over the Illinois River
Illinois DOT



Relevant Project Experience



Fore River Bridge Replacement | Boston, MA



Dania Bascule Bridge, Ft. Lauderdale | FDOT – District 4



5th Street Bridge, Miami | FDOT – District 6



Mathers Swing Bridge, Merritt Island | FDOT – District 5



Christa McAuliffe Bridge, Merritt Island | FDOT – District 5



SR 84 Bascule Bridge, Ft. Lauderdale | FDOT – District 4



Relevant Project Experience



- Broad Causeway Bridge Repairs
Permitting | Town of Bay Harbor Islands
- Little Lake Worth Bridge Seagrass Survey
FDOT – District 4
- SR 811 Bridge over the Hillsboro Canal
PD&E Reevaluation | FDOT – District 4
- SR 836 Bridge over Miami River – Seagrass
Shade Impact Monitoring | MDX

MDC SMART Plan Beach Corridor Rapid Transit
Miami-Dade County



SR 826 at US 27/Okeechobee Road PD&E & Design
Services | FDOT – District 6



NASA Causeway Bridge Replacement PD&E & Design
FDOT District 5



Tamiami Canal – Historic Bridge PD&E Study
FDOT District 6



Why Hanson?

- Our pre-award preparation is unmatched – met with permitting agencies
- Proven FDOT Track Record
 - Work Group 2.0 Grade: 4.4
 - Work Group 3.2 Grade: 4.4
 - Work Group 4.0 Grade 4.8
- Qualified Team of Engineers, Scientists, and Planners
- **Only Firm that has delivered a D6 PD&E Study (LDCA 25 months) and 100% Design Plans (24 Months) = Total 49 months**
- We will proactively manage tasks and resources to meet the committed schedule and budget
- We work to deliver the project from PD&E to Construction – saving time and money



- ✓ 13 successful PD&E Studies in South Florida
- ✓ PM Support for NW 17th Avenue Bridge over Miami River Replacement PD&E Study
- ✓ Worked on PD&E Studies entire 36-year career
- ✓ Known as someone who gets things done
- ✓ Recognized as an accomplished public speaker throughout South Florida

READILY AVAILABLE TEAM



TRUSTED PARTNERS. PROVEN RESULTS.



THANK YOU



TRUSTED PARTNERS. PROVEN RESULTS.

CONTRACT NO BC-160
BROAD CAUSEWAY
DRAWBRIDGE REPLACEMENT
(#875101)-SR-922 CONCEPT DESIGN



MAY 9TH, 2022



AGENDA, PRESENTERS & ATTENDEES

1. Introduction
2. Team Qualifications
3. Project Manager Qualifications
4. Project Understanding & Approach
5. Closing
6. Questions & Answers

**PRESENTATION & PROPOSAL
ADHERE TO THE
INSTRUCTIONS OF THE RFP**

PRESENTERS :

- **Henri Sinson, PE** – Project Manager
- **Tom Fucigna** – Environmental Lead
- **Satiar Shirazi, PE** – Roadway Lead
- **Jim Phillips, PE** – Engineering Lead
- **Alicia Gonzalez** – Public Outreach Lead
- **Harold Desdunes, PE** – FDOT/TPO Coordination Lead

ATTENDEES :

- **Mike Sileno, PE** – Project Principal
- **Rick Crooks, PE** – PD&E Lead
- **Steve Nappi, PE** – Constructability/CEI Lead
- **Lowell Clary, CPA** – Finance Lead



OVERVIEW – KEYS TO SUCCESS

WE WILL MANAGE THE TOWN'S
RISK AND LOOK FOR
OPPORTUNITIES TO
ADD VALUE

1. Funding Early Project Funding &
Financing Identification and Application
Submittal

2. Community Open and Transparent
Communication with Town Leadership and
Community Buy-In

3. PD&E LDCA Meet Schedule for Agency Clearance
and Acceptance

4. DB-RFP Expedite Design-Build RFP Development
and Manage Contract After Award

5. Traffic Flow Ensure Continuous Access, Toll
Collection, and Operations of Bascule Bridge
During Construction



THE H&H TEAM



PROJECT PRINCIPAL
MICHAEL SILENO, PE H&H

PROJECT IMPLEMENTATION EXPERTS

FDOT / TPO
HAROLD DESDUNES, PE EAC

OWNER'S REPRESENTATIVE
ENRIQUE (RICK) CROOKS, PE EAC

FUNDING / FINANCE
LOWELL CLARY, CPA CCC

PROJECT MANAGER
HENRI SINSON, PE H&H

QUALITY MANAGER
STEVE HEDGE, PE H&H

**AVERAGE
EXPERIENCE OF
LEADERSHIP IS
28 YEARS**

TEAM	
H&H	Hardesty & Hanover
AIR	AirQuest Environmental (DBE)
CCC	Clary Consulting Company
CTS	CTS Engineering (DBE)
EAC	EAC Consulting
HR	HR Engineering (DBE)
INT	INTERA
MRG	Media Relations Group (DBE)
MGV	M.G. Vera (DBE)
PE	Pritchard Environmental (DBE)
SEA	SEARCH, Inc. (DBE)
SMART	Smart-Sciences (DBE)
UG	Urban Group

**DBE
PARTICIPATION
IS
27%**

PHASE 1: Planning and PD&E Development
ENRIQUE (RICK) CROOKS, PE EAC

ENVIRONMENTAL ANALYSIS
TOM FUCIGNA H&H

ENGINEERING ANALYSIS
JAMES PHILLIPS, III, PE H&H

PHASE 2: Concept/RFP Development
RODGER ROCHELLE, PE H&H

BRIDGE AND ENVIRONMENTAL PERMITTING
TOM FUCIGNA H&H

30% PLANS, SPECS & COSTS
ROBERTO VICIEDO, PE H&H
SATIAR SHIRAZI, PE EAC

PHASE 3: Owner's Representative
DAVID DELUCA, PE H&H

RFI'S/COMPLIANCE REVIEWS
ROBERTO VICIEDO, PE H&H

CONSTRUCTABILITY/CEI OVERSIGHT
STEVE NAPPI, PE H&H

PUBLIC INVOLVEMENT/OUTREACH
ALICIA GONZALEZ MRG

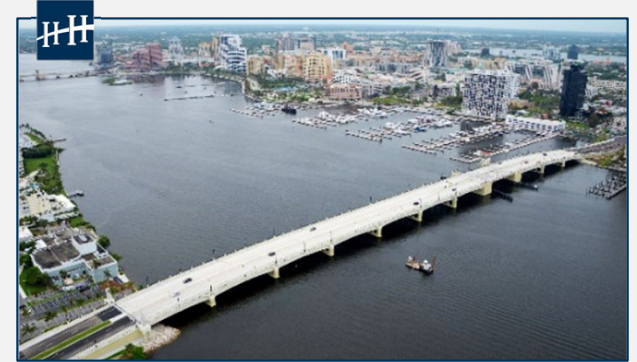
TEAM QUALIFICATIONS – FL WATERWAY CROSSING BRIDGES



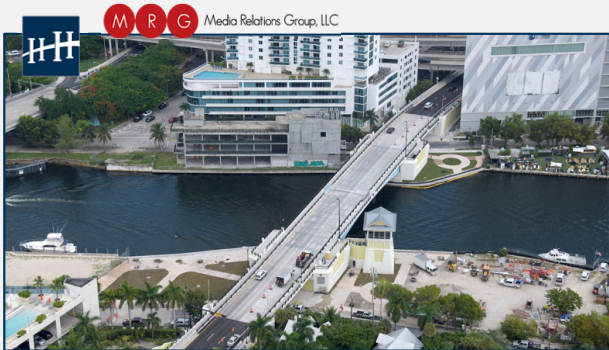
NORTH CAUSEWAY BRIDGE, FT PIERCE



US 1/JUPITER BRIDGE, JUPITER



FLAGLER MEMORIAL BRIDGE, PALM BEACH



SW 1ST STREET, MIAMI



NW 5TH STREET, MIAMI



TAMIAMI CANAL, MIAMI

TEAM QUALIFICATIONS – FL TOLL FACILITY CAUSEWAYS



TREASURE ISLAND CAUSEWAY



VENETIAN CAUSEWAY



RICKENBACKER CAUSEWAY



GASPARILLA ISLAND CAUSEWAY



SANIBEL ISLAND CAUSEWAY

**DELIVERED MORE TOLL
FACILITY WATER CROSSING
BRIDGE REPLACEMENTS IN
FLORIDA THAN ANY OTHER
CONSULTANT**

PROJECT MANAGER QUALIFICATIONS

Henri Sinson, PE

90%
AVAILABILITY

- 23 years of bridge design and project management
- Leadership to drive the project to success
- Experience to anticipate and mitigate issues
- Bridge project consensus-building experience



ACEC GRAND AWARD – GASPARILLA ISLAND BRIDGE

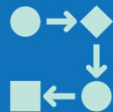
Project Management & Leadership Dedicated To:



Provide Excellent
Service



Manage Scope,
Schedule & Budget



Execute
Processes



Track
Progress



Coordinate
Team



Mitigate
Risks



Deliver
Quality

PROJECT MANAGER QUALIFICATIONS

**TWO PROJECTS COMBINED EXACTLY
MATCH BROAD CAUSEWAY SCOPE**



GASPARILLA ISLAND CAUSEWAY BRIDGE

- PD&E for Historic Bridge over the Intracoastal Waterway
- Public Outreach Program
- Complex Bridge Permitting and Design
- Funding Assistance for Toll Facility Agency
- Owners Representative Services



NORTH CAUSEWAY BRIDGE

- Overlapping PD&E for Historic Bridge over the Intracoastal Waterway
- Public Outreach Program
- Complex Bridge Permitting and Design
- Avoidance of sensitive coastal environmental resources
- 4000 ft long Fixed Bridge Replacement of a Bascule Span Bridge

THE H&H DIFFERENCE

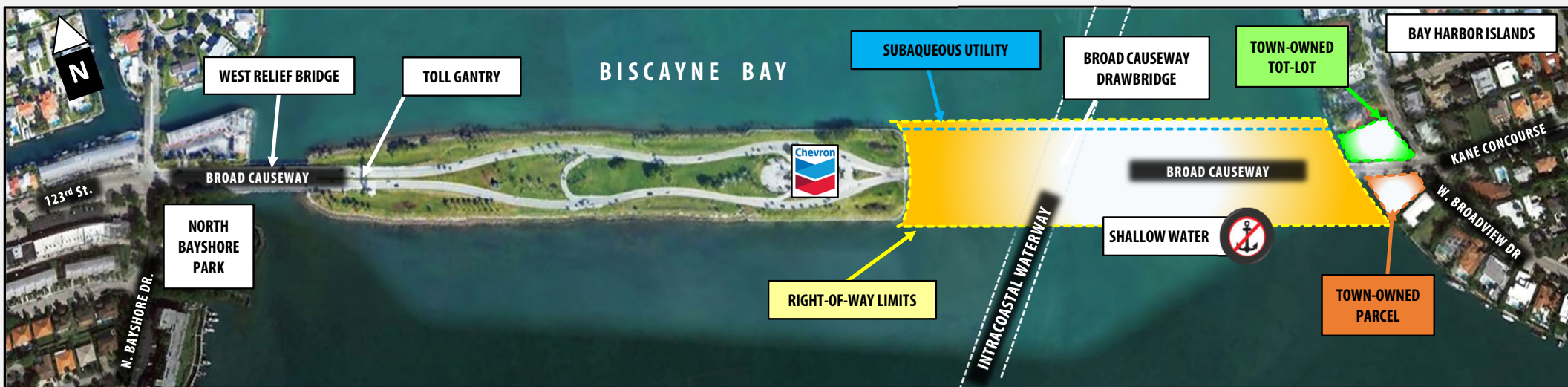
- **INTIMATE KNOWLEDGE OF CAUSEWAY & TOWN**
 - Decade of delivering important existing bridge projects
- **UNMATCHED EXPERTISE & LEADERSHIP**
 - Unique experience with intracoastal crossing bridges, toll facilities, and PD&E studies
- **UNPARALLELED LOCAL KNOWLEDGE**
 - Unmatched knowledge of Biscayne Bay and surrounding stakeholders and agencies
- **IMPLEMENTATION EXPERTS**
 - Expertise in TPO coordination, funding development, and owners representative services.
- **UNINTERRUPTED SERVICE & REVENUE APPROACH**
 - Concept with continuous traffic flow and revenue throughout project.



SCOPE OF PROJECT

Fixed Bridge Replacement With USCG Approved Vertical Clearance Over ICWW

Continuity Of Traffic Flow During All Construction Phases



SCOPE OF SERVICES

PHASE 1: PLANNING AND PD&E SERVICES

Environmental Services

- Navigation Study
- R/W Maps and Title Reports
- Bike & Ped Enhancement
- Traffic Counts/ Origin-Destination
- Section 4(f) Research
- Benthic Survey
- Cultural Resources Assessment Study (CRAS)
- Asbestos Survey
- Sociocultural Effects
- Section 4(f), Use of Historic Bridges
- Natural Resources
- Wetlands, EFH, Wildlife (NRE)
- Physical Effects
- Cumulative Effects Evaluation
- Project Commitments Record

Engineering Services

- Existing Conditions Analysis
- Survey
- Traffic Analysis & Safety
- Signage
- Utilities
- Roadway Analysis
- Drainage
- Cost Estimates
- Alternatives Evaluation
- Concept Plans
- Risk Management
- VE Study
- Planning Consistency

Public Involvement

- Presentations to Town of Bay Harbor Islands
- Key Stakeholder Meetings
- Public Informational Meeting(s)
- Alternatives Public Information Meeting
- Outreach and Consensus Building Meetings
- Community / Stakeholder Forum(s)
- Environmental Forums - ETAT
- Local Law Enforcement and First Responders
- Public Hearing
- Comments and Coordination Report
- Notification of Approved Environmental Document
- Project Website Development

Public Involvement

PHASE 2: RFP DEVELOPMENT/CONCEPT DESIGN SERVICES

Funding Development Services

- Development of State and Federal Funding so opportunities
- Development of State Infrastructure & Tolling Loan opportunities

RFP Development Services

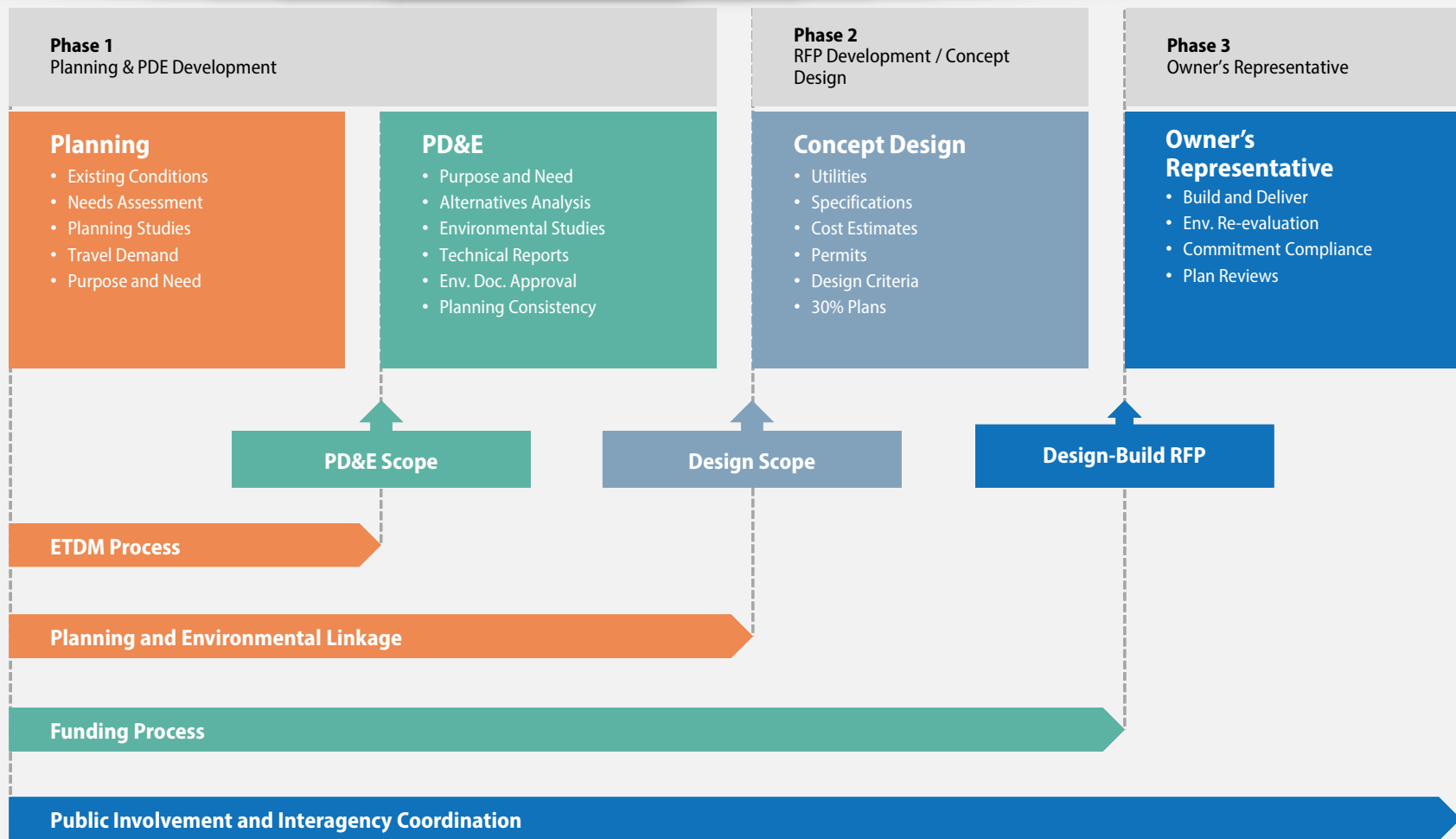
- Concept Plans, Specifications, Cost Estimates
- Bascule Bridge Maintenance & Operation Specifications

PHASE 3: OWNER'S REPRESENTATIVE SERVICES

- Plans Review
- Design-Build Advertisement Phase services (e.g., RFIs, ATCs)

- Post Award Design-Build Construction Review services
- Supervising or Providing CEI services

BRIDGE DEVELOPMENT PROCESS

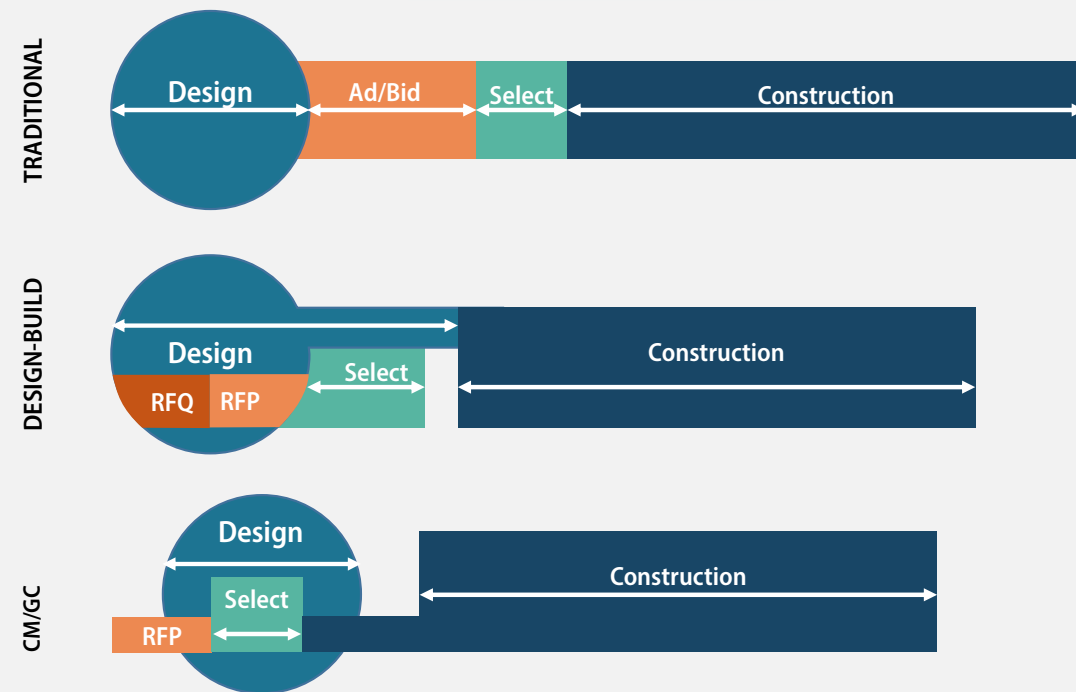


PROJECT DELIVERY TYPE OPTIONS

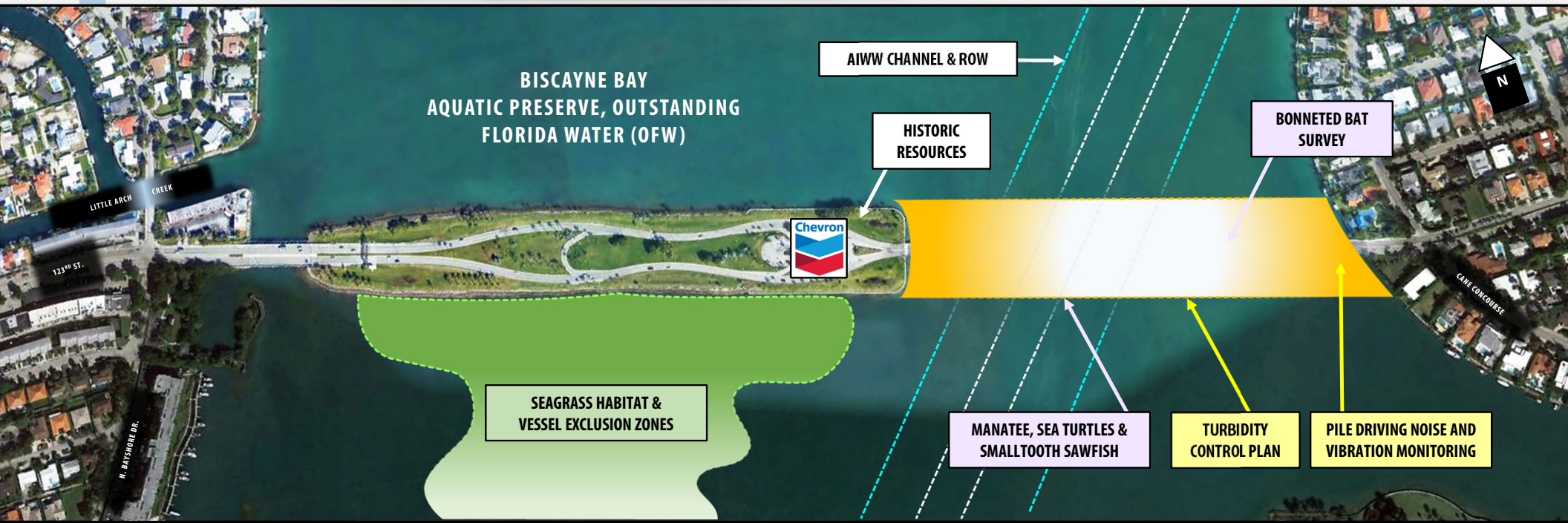
OUR TEAM HAS THE EXPERIENCE TO DELIVER A SUCCESSFUL PROJECT UNDER ANY PROCUREMENT TYPE

H&H HAS DELIVERED 6 CMGC TRANSPORTATION PROJECTS IN FLORIDA

- Good candidate for alternative delivery
- Discussion of other alternative delivery types that may have benefits
- Construction Manager/General Contractor (CM/GC) is an alternative procurement type that should be considered



ENVIRONMENTAL ANALYSIS



ENVIRONMENTAL IMPACTS

PERMITS REQUIRED



FEDERAL

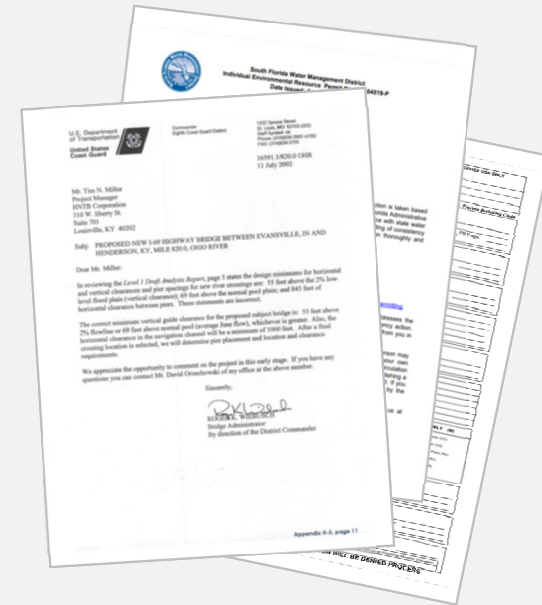
- USCG Bridge Permit
- USCG will coordinate with EPA, USFWS, NMFS
- USACE Nationwide Permits, Section 408 review for AIW channel

STATE

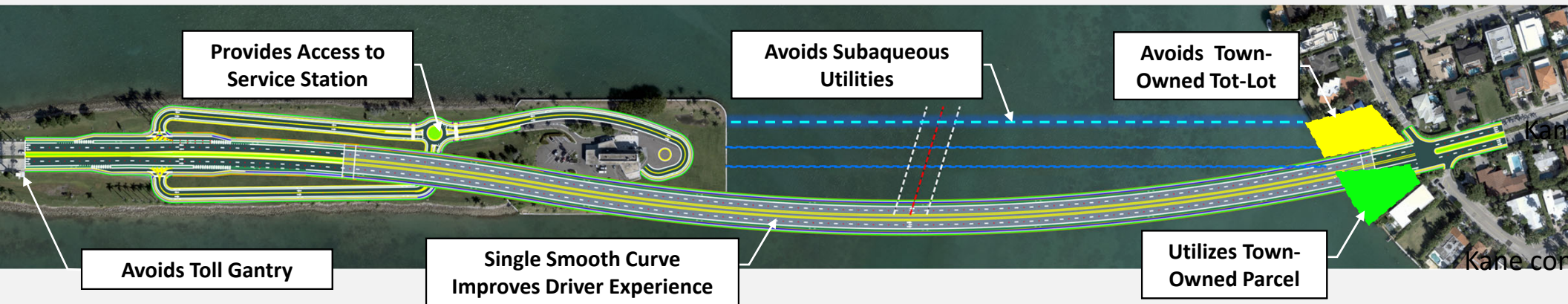
- SFWMD Environmental Resource Permit (ERP)
- Stormwater plan, impacts to water resources & seagrass, dewatering
- SFWMD will coordinate with FWC, FDEP Submerged Lands & Aquatic Preserves, State Historic Preservation Office (SHPO)

COUNTY

- Class I, Permit tidal waters or coastal wetlands; Class II, stormwater; Class V, dewatering
- Review and approval by the Board of County Commissioners



ENGINEERING ANALYSIS - ALIGNMENT OPTION



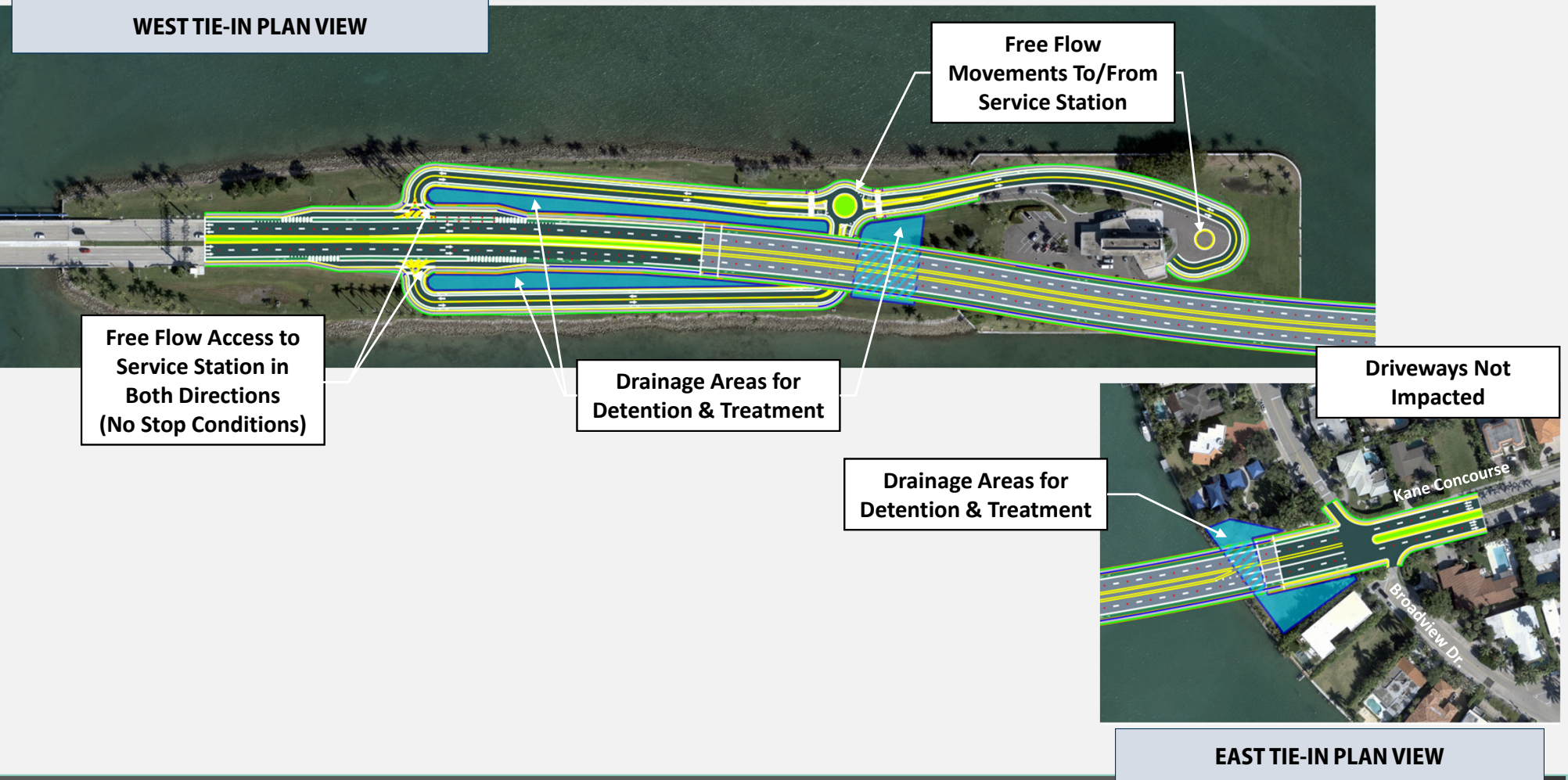
ROADWAY PLAN VIEW



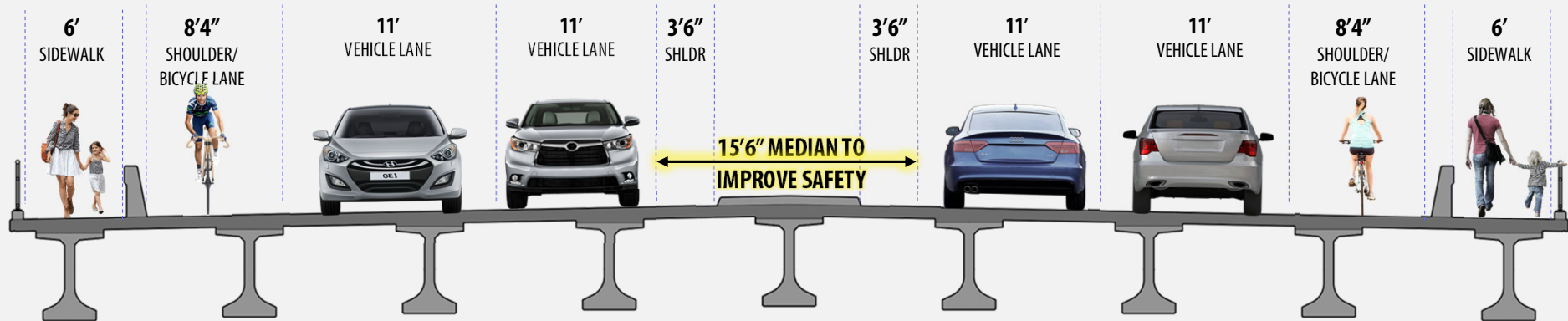
ROADWAY PROFILE VIEW

ENGINEERING ANALYSIS – TIE-IN POINTS

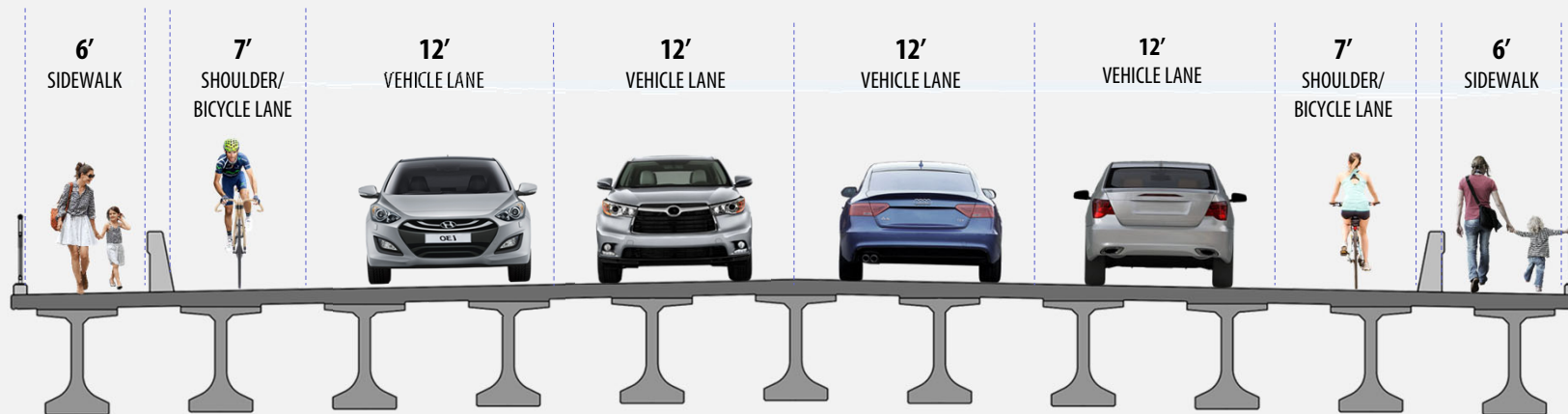
WEST TIE-IN PLAN VIEW



ENGINEERING ANALYSIS - BRIDGE STRUCTURE



ENHANCED TYPICAL SECTION

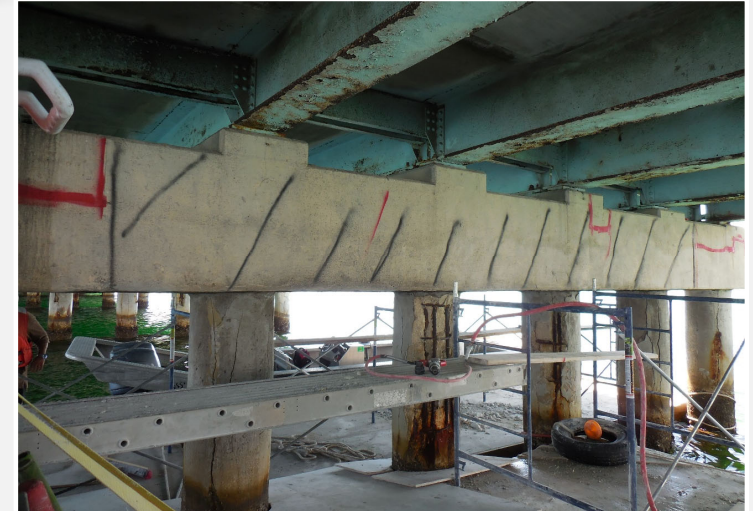


RFP TYPICAL SECTION

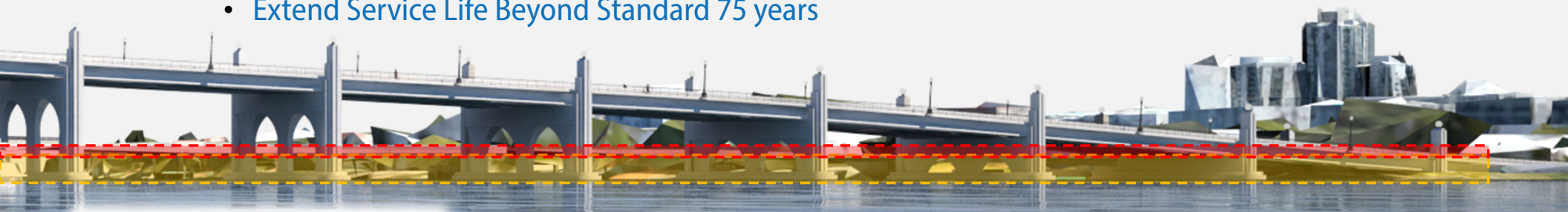
ENGINEERING ANALYSIS - BRIDGE STRUCTURE

Sustainable Design

- Vessel Collision Resistance
- Resiliency
 - Coastal Storm Events
 - Sea Level Rise
 - Wave Loading
- Durability
 - Extremely Corrosive Environment
 - Extend Service Life Beyond Standard 75 years



EXISTING BRIDGE DETERIORATION



- Storm Wave Elevation
- Extremely Corrosive (Splash) Zone

EAST SIDE OF NEW BRIDGE

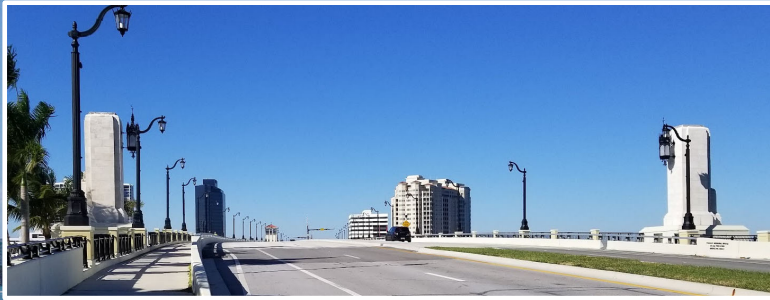
Low Spans More Vulnerable

BRIDGE AESTHETICS

Aesthetic Solutions Through Functional Design and/or Architectural Style



CAUSEWAY GATEWAY FEATURES



**FLAGLER MEMORIAL BRIDGE GATEWAY
PYLONS TO THE TOWN OF PALM BEACH**



**FLAGLER MEMORIAL BRIDGE GATEWAY
HISTORIC PLAQUES**



MAINTENANCE OF TRAFFIC & CONSTRUCTABILITY

PHASE 1

- Maintain 4 Lanes of traffic on Existing Bridge
- Maintain Bicycles/Pedestrians on Existing Bridge
- Shift Eastbound Road on Island to the North (Create Space for New Bridge)
- Construct Majority of New Bridge Off-line
 - Work Trestle for Shallow Water
- Construct New Eastbound Service Station Access Road



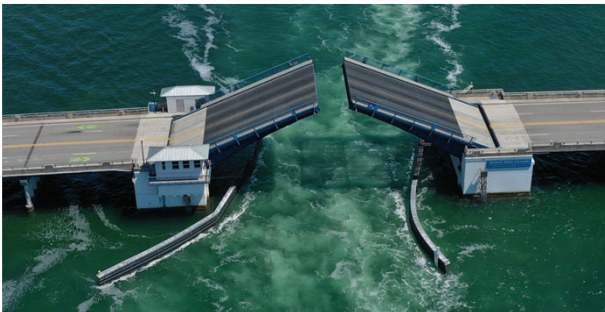
MAINTAIN BASCULE SPAN BRIDGE OPERATION



MAINTENANCE OF TRAFFIC & CONSTRUCTABILITY

PHASE 2

- Maintain 2 Westbound Lanes of traffic on Existing Bridge
- Maintain Bicycles/Pedestrians on Existing Bridge
- Shift 2 Eastbound Lanes of traffic onto Partial New Bridge
- Shift EB Service Station Access to New Access Road
- Continue Construction of New Bridge



MAINTAIN BASCULE SPAN BRIDGE OPERATION



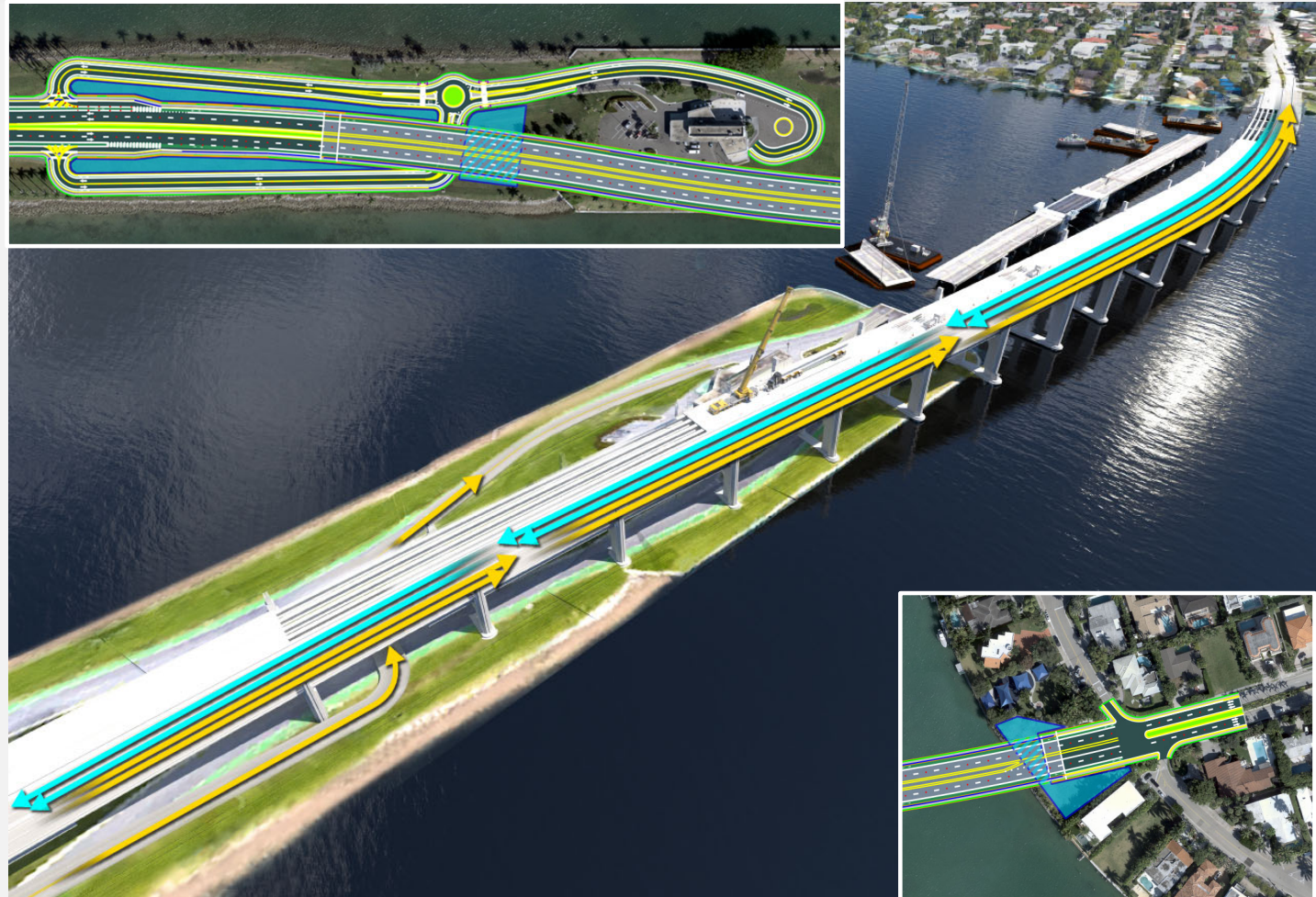
MAINTENANCE OF TRAFFIC & CONSTRUCTABILITY

PHASE 3

- Shift 2 Westbound Lanes to New Bridge – All 4 Lanes of traffic now on New Bridge
- Shift Bicycles/Pedestrians to New Bridge
- Reconfigure Westbound Access to Service Station
- Demolish Existing Bridge
- Complete East Tie-In
- Complete Miscellaneous Roadway/Bridge Construction



PHASE 3 BRIDGE SECTION



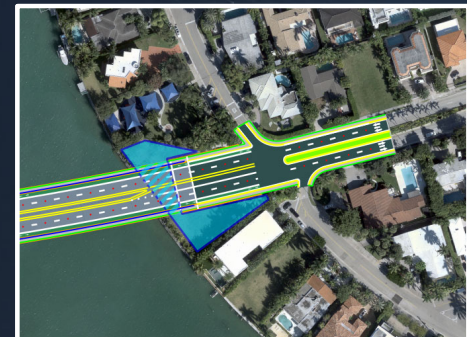
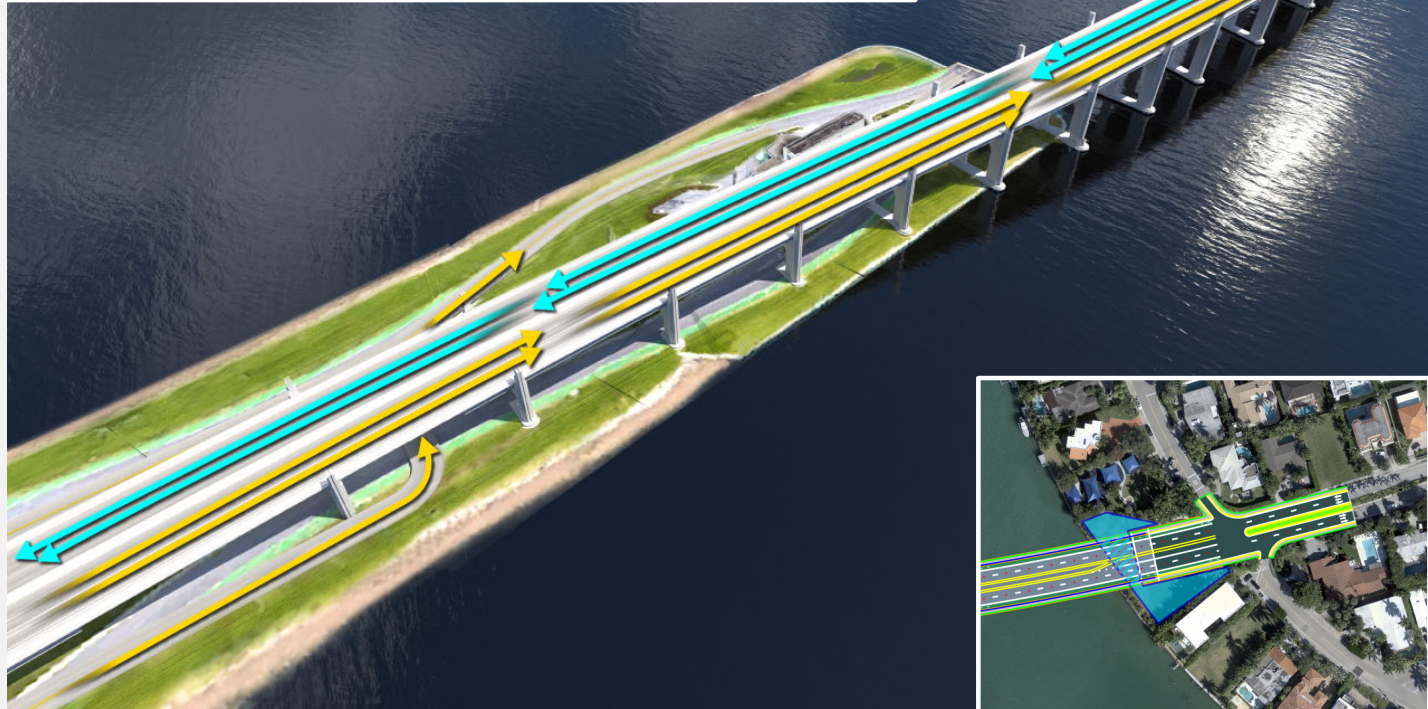
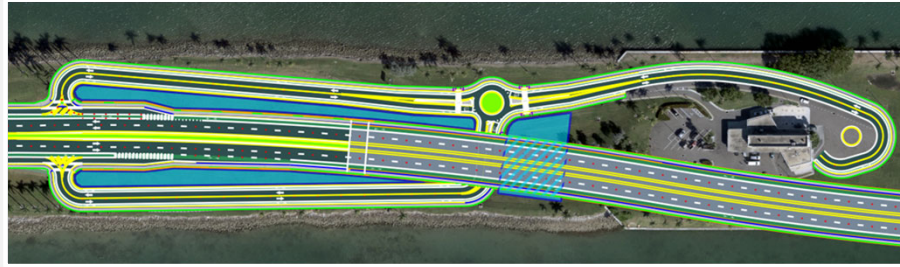
MAINTENANCE OF TRAFFIC & CONSTRUCTABILITY

FINAL CONFIGURATION

- 4 Lanes of traffic on new Bridge
- Bicycles/Pedestrians on new Bridge
- Reconfigured Access to Service Station

PHASING BENEFITS

- Maintain 4 Lanes of traffic
- Maintain Bicycle/Pedestrian Access
- Maintain Service Station Access
- Provide Shallow Water Construction Access via Work Trestle
- Uninterrupted Toll Revenue Throughout Construction



PUBLIC OUTREACH

Phase 1 Planning and PD&E

- Public Involvement Plan
- Develop mailing lists
- Elected official briefings
- Secure communication resources/outlets
- Public Kickoff Meeting
- Project Advisory Group (PAG)
- Alternatives Workshop
- Public Hearing
- Documentation/Commitments
- Engage with emergency responders

THE FRENCH BAKERY
CAFE & BISTRO

PLASTIC SURGEON
DR. MEL ORTEGA

MORRIS N. BOARD
COMMUNITY CENTER



BANK OF AMERICA



PUBLIC OUTREACH

Phase 2 RFP Development/Concept Design

- Community Awareness Plan
- Public Meeting
- Individual stakeholder meetings
- Update mailing lists and PI record



PUBLIC OUTREACH

Phase 3 Owner's Representative

- Community Awareness Plan for Construction
- Update mailing lists
- Provide 24/7 PIO available to community
- Weekly construction alerts
- Door hangers/website updates
- Manage daily log of inquiries
- Keep elected officials updated



PROJECT SCHEDULE – PHASE 3

- Design-Build Construction Phase
 - 9 Month Procurement
 - 2.5 Year Construction
- Incentive/Disincentive
 - Key Milestones incentivized
 - Phase 3 Complete prior to seasonal traffic increase
- Concept Plans Facilitating Construction
 - Constructability as a key design criteria
 - Majority of bridge constructed in Phase 1
- Reduce Contractor Risk
 - Vibration Risk mitigating design
 - Proximity of construction to bascule span
 - Utility avoidance
 - Maintaining operation of bascule span



PHASE 3 – EXISTING BRIDGE NO LONGER USED

CONSTRUCTION COST & BUDGETING

- Long Range Construction Cost Estimate
- Risk Analysis Approach
 - Assign percentages to components representing risk
 - Rational approach to developing contingencies
 - Accounts for market volatility and site specific conditions
- Potential Cost Savings
 - Pier Mounted Fender **\$ 1.5M**
 - Minimal Bridge Section **\$ 5.0M**
 - Total Potential Savings **\$6.5M**

LONG RANGE CONSTRUCTION COST ESTIMATE	
Component	Cost
Bridge	\$ 48,300,000
Fender	\$ 2,000,000
Seawalls	\$ 3,000,000
Walls	\$ 500,000
Roadway	\$ 1,000,000
Lighting	\$ 300,000
Signing & Pavement Marking	\$ 200,000
Bridge Demolition	\$ 1,600,000
Reef Disposal	\$ 300,000
Vibration Monitoring	\$ 500,000
Movable Bridge Operator	\$ 400,000
Movable Bridge Maintenance	\$ 200,000
Subtotal (2022 \$)	\$ 58,100,000
Bridge Aesthetics (3%)	\$ 1,800,000
Maintenance of Traffic (7%)	\$ 4,100,000
Phased Construction (20%)	\$ 11,700,000
Construction Over Water (3%)	\$ 1,800,000
Mobilization (8%)	\$ 4,700,000
Total (2022 \$)	\$ 82,200,000
Total (2025 \$) (7% Escalation)	\$ 100,200,000

FUNDING & IMPLEMENTATION EXPERTS



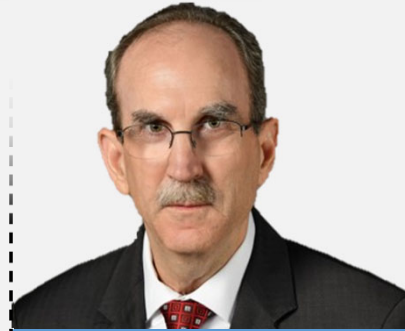
Unparalleled experience in transportation planning and extensive knowledge of related Federal, state and local requirements and funding.

HAROLD DESDUNES, PE

- Former FDOT District 6 Transportation Director responsible for Planning to construction contract procurement for all State Roads in Miami-Dade & Monroe Counties and the FDOT Work Program.
- Former member of the TPO Transportation Planning Council and member of the TPO Board responsible for managing and implementation of the TIP/LRTP for Miami-Dade TPO.
- Experienced in all aspects of Transportation Development

RELEVANT PROJECTS:

- Port of Miami Tunnel - \$1.1 billion
- I-395/SR 836/I-95 - \$840 million
- SR 826 Express Lanes - \$262 million
- American Recovery and Reinvestment Act Stimulus Projects - \$184 million



National expert on transportation funding and finance. Former chair of TRB Funding and Finance Committee. Funding and finance expert for Miami-Dade TPO.

LOWELL R. CLARY, CPA

- Former FDOT Assistant Secretary for Finance and Administration.
- Registered Municipal Advisor Principal.
- Expert in funding, finance and project delivery approaches.
- Expert in toll projects funding and finance.

RELEVANT PROJECTS:

- Miami-Dade TPO – Advisor on SMART Plan rapid transit program financing
- Underline – Advisor assisting in securing \$22M Federal Discretionary Grant
- Port of Miami Tunnel – P3 Advisor of the Year Award (by ARTBA)
- Various Toll Projects – Orchard Pond Parkway – Tallahassee; Treasure Island Causeway; Hood River Bridge, Oregon; 95 Express

MIAMI-DADE TRANSPORTATION PLANNING ORGANIZATION

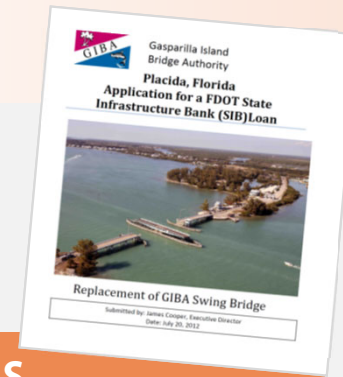
	FEDERAL DOLLARS (any FHWA, FTA, or FRA funds, or Federal Authorization)		STATE DOLLARS (TRIP, Transit/Intermodal System Grants, etc.) No Federal Dollars Involved		LOCAL DOLLARS ONLY	
	Responsible Agency	ETDM Screening	Responsible Agency	ETDM Screening	Responsible Agency	ETDM Screening
SYSTEM						
Highways on the State Highway System (SHS) and on the Strategic Intermodal System (SIS)	FDOT	Yes FDOT Lead	FDOT	Yes	FDOT	Yes
	Local		Local and FDOT	Local Option	Local and FDOT	Local Option
Highways on the SHS but not on the SIS	FDOT	Yes FDOT Lead	FDOT	Yes	FDOT	Yes
	Local		Local and FDOT	Local Option	Local and FDOT	Local Option
Highways not on the SHS but on the SIS	FDOT	Yes FDOT Lead	FDOT	Yes	FDOT	Yes
	Local		Local and FDOT	Local Option	Local and FDOT	Local Option
Highways not on the SHS nor on the SIS	FDOT	Yes FDOT Lead	FDOT	Yes	Local	N/A
	Local		Local	Local Option	Local	N/A
Major Transit Projects (new fixed guideway, New Starts) or Major Freight Projects	FDOT	Yes	FDOT	Yes	Local	N/A
	Local	Local Option	Local	Local Option		

PROJECT FUNDING OPPORTUNITIES



FUNDING OPTIONS	PROS	CONS
Causeway Toll Revenues (cash on hand and future)	In place, secure source, accepted by public	Outstanding debt consumes part of capacity
Increase Toll Rate	Easy to technically implement	Increases cost on causeway users, public acceptance
Federal Off-System in FDOT Work Program	Major increase in Federal Infrastructure Act	Competition for funds – may need environmental work before FDOT making commitment
Federal Discretionary Programs	Increase in Federal Infrastructure Act – focus on bridges	Competition for funds is intense, will want environmental more advanced before applying
State “Earmarks”	State revenues currently growing	Competition for funds is intense, budget vetos
CITT/County Sales Surtax	Revenues currently growing	Limits on uses, competition for funds
General Town Taxes	None	Burden falls on general public

PROJECT FINANCING OPPORTUNITIES



FINANCING OPTIONS	PROS	CONS
Toll Revenue Bonds/Loans	Known credit, established practice	Outstanding debt consumes part of capacity
Design-Build Finance	Design-Build Team provides timely financing, assumes some project risk	May be slight financing costs increase
Florida State Infrastructure Bank Loan	Lower costs of financing, normally up to 75% of project costs	Meeting eligibility, need environmental mostly done, time to accomplish
Federal Transportation Infrastructure Finance and Innovation Loan	Lower costs of financing	May be limited to 33% of project costs, need environmental done, time to accomplish
Public-Private Partnership	P3 Team provides timely financing, assumes more project risk, ensures timely maintenance	May be increase in financing costs, less control by Town

OWNER'S REPRESENTATIVE SERVICES

- Breadth and variety of experienced staff
- Streamlining public involvement transition
- Ensure work performed by DB firm is compliant
- Control cost and schedule
- Grant & Loan Management
- LAP Implementation
- Project closeout documentation
- Lessons learned from other projects

DELIVERED OVER \$2.5B OF DESIGN-BUILD PROJECTS FOR OWNERS BIG AND SMALL



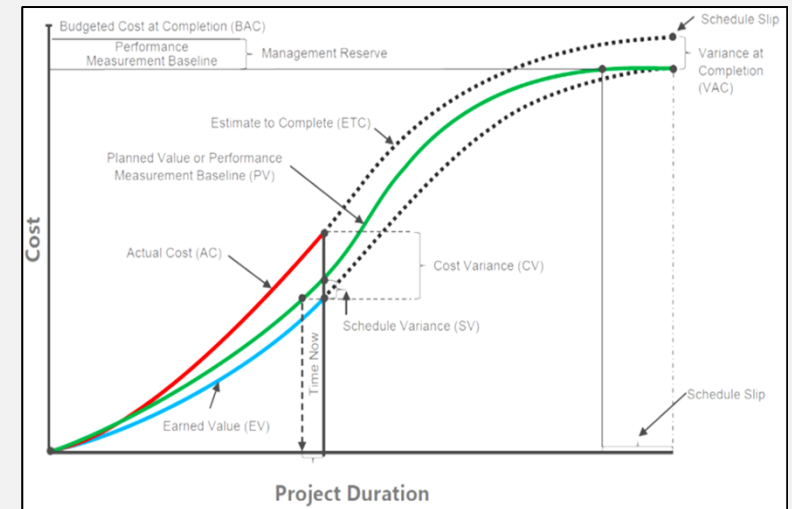
PROJECT MANAGEMENT

Comprehensive Project Management Plan

- Scope & Contractual Terms
- Budget
- Schedule Milestones
- Quality Management
- Communications Plan - Internal & External

Monthly Progress Reports

- Schedule Tracking
- Scope Progress Tracking
- Budget Tracking – Earned Value Reporting
- Meetings & Stakeholder Outreach
- Issue Resolution
- Risk Item Tracking and Mitigation



QUALITY MANAGEMENT

- Quality Management Plan
 - 5-Step Quality Control Process for Deliverables
 - Fully auditable Quality Assurance Process
 - Custom Checklists from Lessons Learned
- Steps Beyond QC Plan
 - Agency Comment Responses Back Check
 - Independent Technical Reviews
 - Constructability Reviews
- Culture of Quality
 - 135 years of continuous operation



CLOSING - WHY THE H&H TEAM

- **INTIMATE KNOWLEDGE OF CAUSEWAY & TOWN**
 - Decade of delivering important existing bridge projects
- **UNMATCHED EXPERTISE & LEADERSHIP**
 - Unique experience with intracoastal crossing bridges, toll facilities, and PD&E studies
- **UNPARALLELED LOCAL KNOWLEDGE**
 - Unmatched knowledge of Biscayne Bay and surrounding stakeholders and agencies
- **IMPLEMENTATION EXPERTS**
 - Expertise in TPO coordination, funding development, and owner's representative services.
- **UNINTERRUPTED SERVICE & REVENUE APPROACH**
 - Concept with continuous traffic flow and revenue throughout project.

