Beckett Bridge PD& E Study

Presentation to:

Tarpon Springs Historic Preservation Society

Pinellas County





URS

JANUS RESEARCH

January 16, 2014

Introduction

Study Began **January 2012**

Alternatives Presented to Commission October 2013

Alternatives Presented to Public January 2013

Alternatives Considered

- No-Build
- No-Build with Permanent Removal of Existing Bridge
- Rehabilitation (No Widening)
- Replacement
  - Fixed Bridge – 28 feet Vertical Clearance
  - Movable Bridge - 7.8 feet Vertical Clearance

Overview of NEPA

National Environmental Policy Act of 1969

Federal Highway Administration (FHWA)

- Assures NEPA Compliance
- Final Authority – Approval of "Recommended Alternative"
- Approval required if federal funds are used
- Approval required to qualify for federal funds

Overview of NEPA – FHWA Process

FHWA Policy:

Alternatives are to be evaluated and decisions are to be made in the best overall public interest based on balanced consideration of:

- Need for safe and efficient transportation
- Social, economic and environmental impacts
- National, state and local environmental protection laws

PD&E Process – Assures Compliance with NEPA

PD&E Process – Public/Agency Input

Public Input – Important Component

- Decisions not made by a public vote
- Many other factors also considered

Input from Federal and State Agencies

- Policies, laws and procedures that govern how FHWA considers agency input
- USFWS, NMFS, USCG
- State Historic Preservation Officer (SHPO)

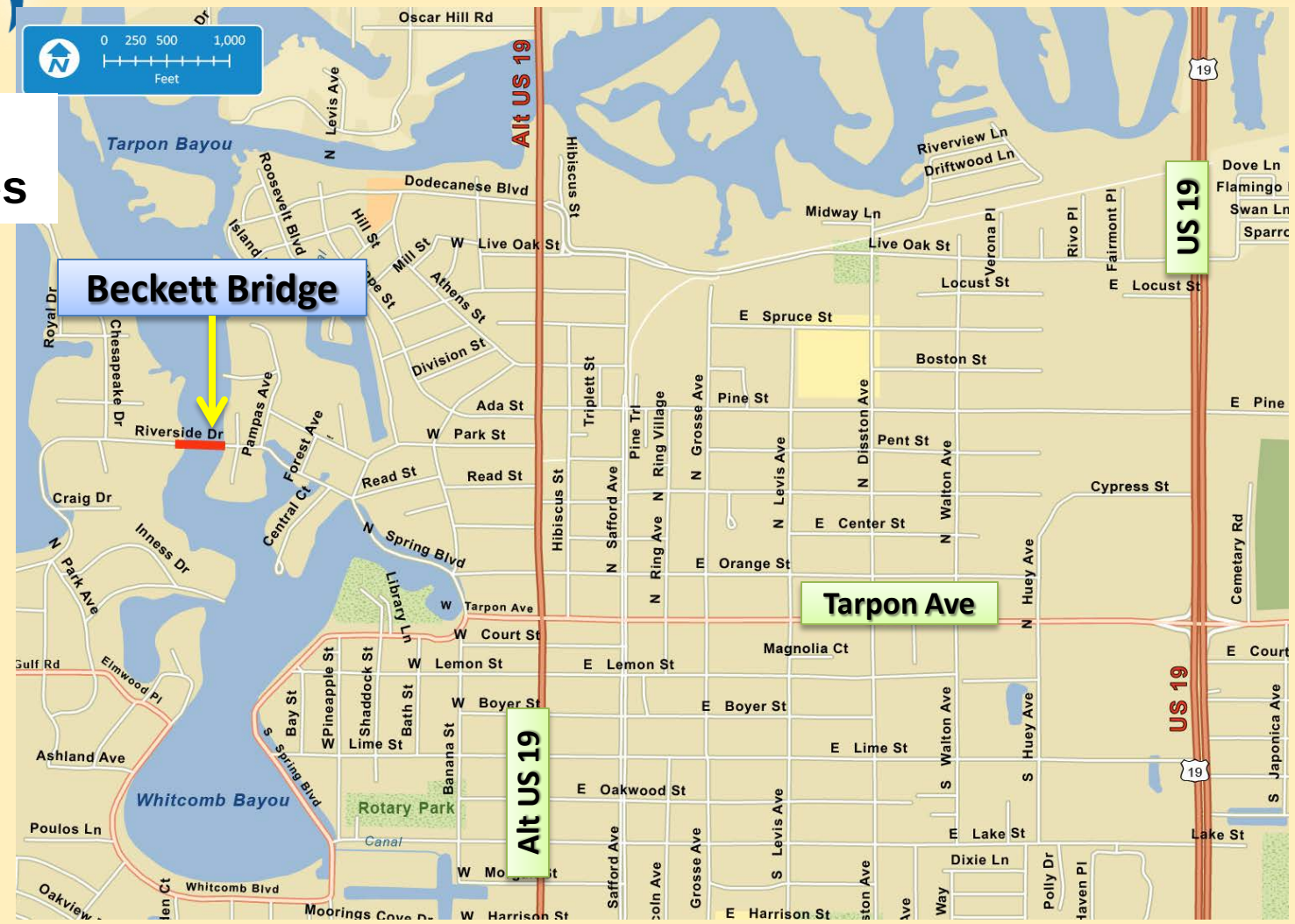
  Concurring agency on decisions regarding historic resources

PD&E Process – Affected Stakeholders

- Property Owners/ Residents
- Boaters
- Commuters
- County and City Emergency Services
- School Board
- Local Governments
- Bicyclists
- Special Interest Groups

Project Location

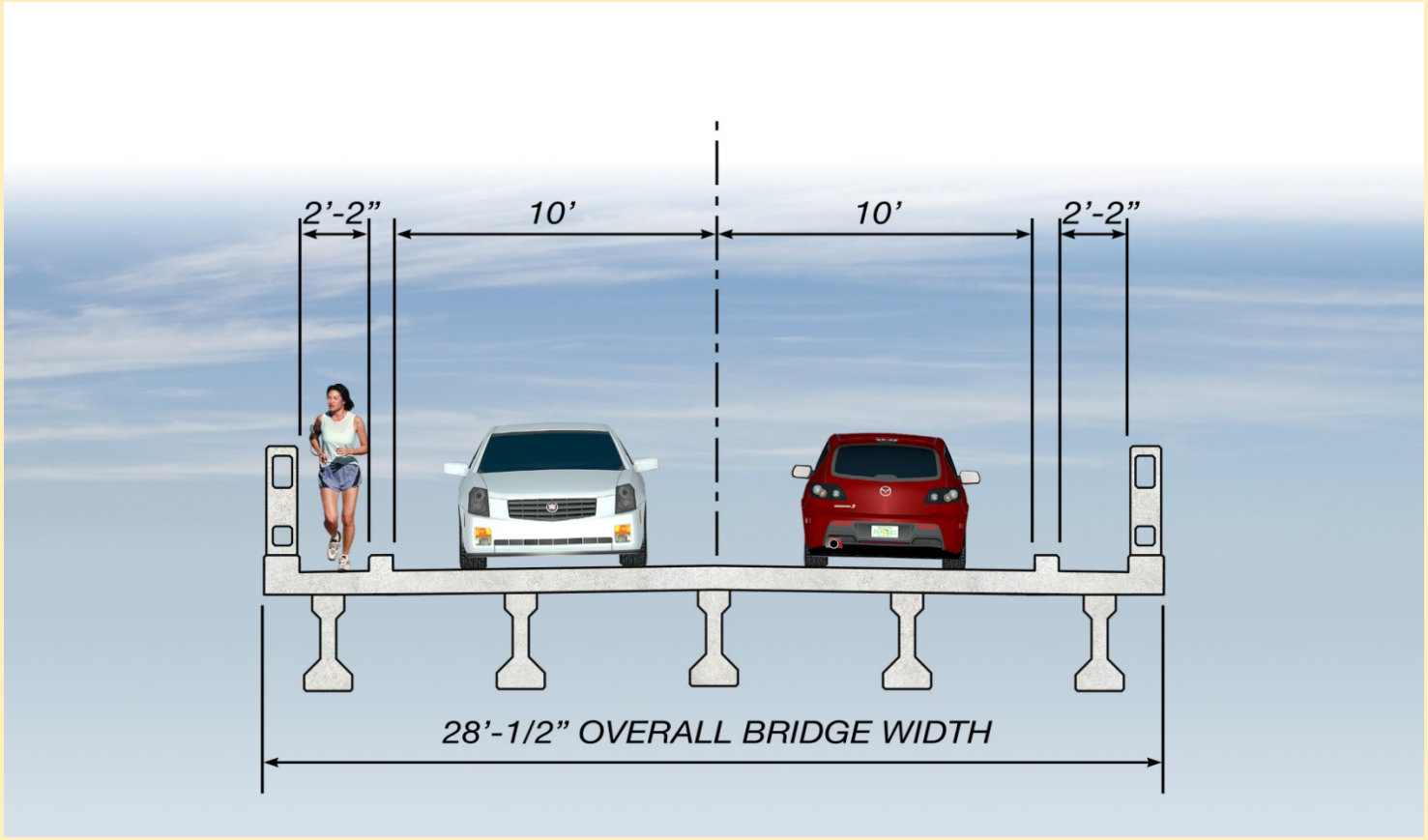
2012 AADT
7,700 vehicles



Beckett Bridge

- Constructed 1924
  - Original timber construction
- Substantially Rehabilitated 1956
  - Original steel bascule span, bascule pier and machinery retained
- Major Repairs in 1979, 1998 and 2011
  - Machinery replaced “in-kind”
- Sufficiency Rating 44.7

Existing Typical Section



No Shoulders **Narrow Sidewalks**

National Register Eligible

- **Determined Eligible for listing in the National Register of Historic Places**
  - One of a few remaining pre-1965, Single-Leaf Rolling-Lift Bascule Highway Bridges in Florida
  - Eligible in Areas of Community Planning and Development, Transportation and Engineering
  - Contributed to Westward Expansion of the City of Tarpon Springs

Existing Bridge

- Vertical Clearance – 6 ft
- Horizontal Clearance – 25 ft
- Opens with 2-hr Notice

Total # Bridge Openings

2009 - 10

2010 - 20

2011 - 18

2012 - 14

Project Need

Condition Assessment

- Health & Sufficiency
  - Deterioration
  - Wear
  - Corrosion
  - Damage
- Shortcomings of original design and/or construction
- Unforeseen conditions

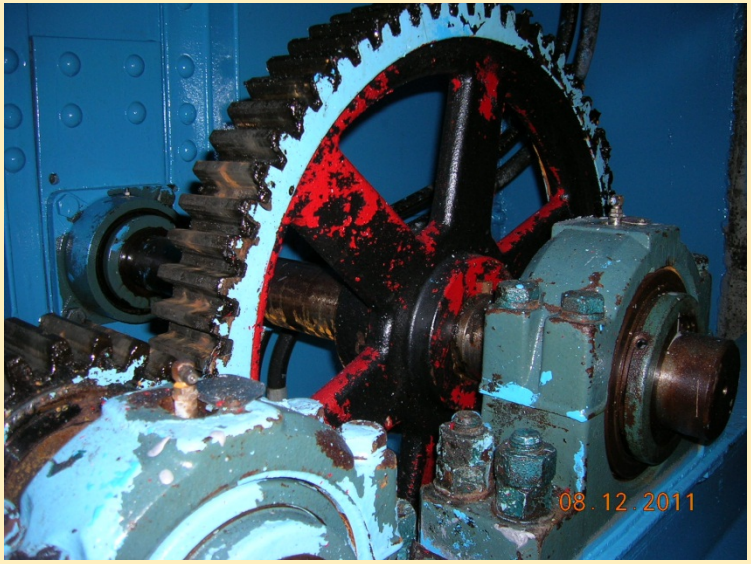
Project Need

Structural Condition

- Cracked and spalled concrete throughout
- Corrosion of reinforcing steel throughout
- Corroded structural steel
- Distorted steel flanges at tread plates
- Deteriorated timber piles & wales of fender system

Project Need

- Mechanical & Electrical Issues
  - Existing systems are old, worn and no longer reliable



Project Need

- **Functionally Obsolete**
  - Narrow Lanes
    - No Shoulders
    - No bicycle lanes
  - Narrow Sidewalks
    - Do Not Meet ADA Requirements
- **Structural Deficiencies**
  - Load Posted
  - Not designed for current heavier vehicles

Project Need

- Unforeseen Conditions
  - Foundations susceptible to settlement
  - Scour susceptible

Existing Crutch Bents

Project History

Stakeholder/Local Government Presentations
October – November 2012

- Chamber of Commerce
- Rotary Club
- Tarpon Springs Yacht Club
- MPO Board
- MPO Advisory Committees
- City of Tarpon Springs
- Pinellas County BCC
- Cultural Resource Committee (CRC)

Community Input

- Alternatives Public Meeting - January 2013
  77 Written Comments Received

Preferences for Alternatives

No-Build	7
No-Build, Remove Bridge	2
Rehabilitation	11
Rehabilitation or New Movable	12
New Movable Bridge	32
New Fixed Bridge	4

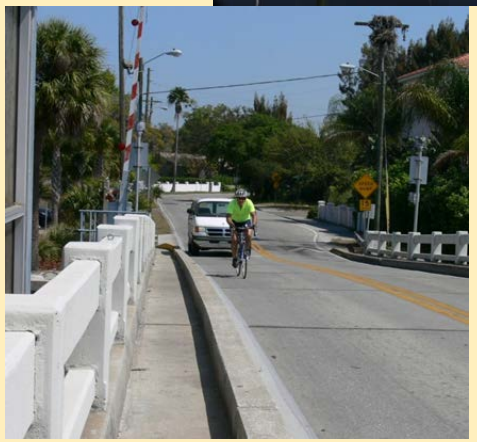
(28 ft Vertical Clearance)

Community Input

- Alternatives Public Meeting - January 2013

Community Concerns

- Need for safer pedestrian facilities
- Bridge should provide adequate vertical clearance
- Bridge should not adversely affect historic character of the community
- Duration of detour should be minimized



Historic Bridge Issues

Section 106 Process

- Avoid, minimize or mitigate adverse impacts
- Conduct "Good faith consultation" with affected parties
  - Consider affected party concerns
  - Solicit Input on possible mitigation if required

- FHWA is the lead final agency
- SHPO is the concurring agency

Historic Bridge Issues

Cultural Resource Committee – CRC

Affected Parties included:

- Federal/State agencies
  - SHPO, USCG, FDOT, FHWA,
- Stakeholders with special interest in historic preservation
- Local government representatives
- Local community representatives

October 2012, March 2013 CRC Meetings

Historic Bridge Issues

March - June 2013

SHPO requested evaluation of two new Rehabilitation Alternatives with Improved Sidewalks

- **Rehabilitation with Widening**
  - Provide sidewalks on both sides
- **Reconfiguration of Existing Bridge (No Widening)**
  - Provide sidewalk on one side

Original Rehabilitation Concept

Rehabilitation

- No Widening, No Sidewalk Improvements
- Not Feasible or Prudent

Major Issues

- Structural concerns – unknown foundations
- Vehicular/pedestrian safety
- Link in future Howard Park Trail
- Life-cycle costs higher compared to replacement
- Bascule Span and Pier Only Remaining Original Elements
- Crutch Bents and Pile Jackets Required

Rehabilitation – No Widening

- Replace bascule leaf
  - Including counterweight, open steel and concrete filled grid deck

Rehabilitation – No Widening

- Replace substandard concrete bridge railings with new traffic rails meeting crash testing requirements

Rehabilitation – No Widening

- Install new pile jackets with cathodic protection on all existing concrete piles and steel crutch bents

Rehabilitation - No Widening

- Repair deteriorated concrete deck underside, beams and diaphragms
  - Provide zinc spray metalizing – cathodic protection

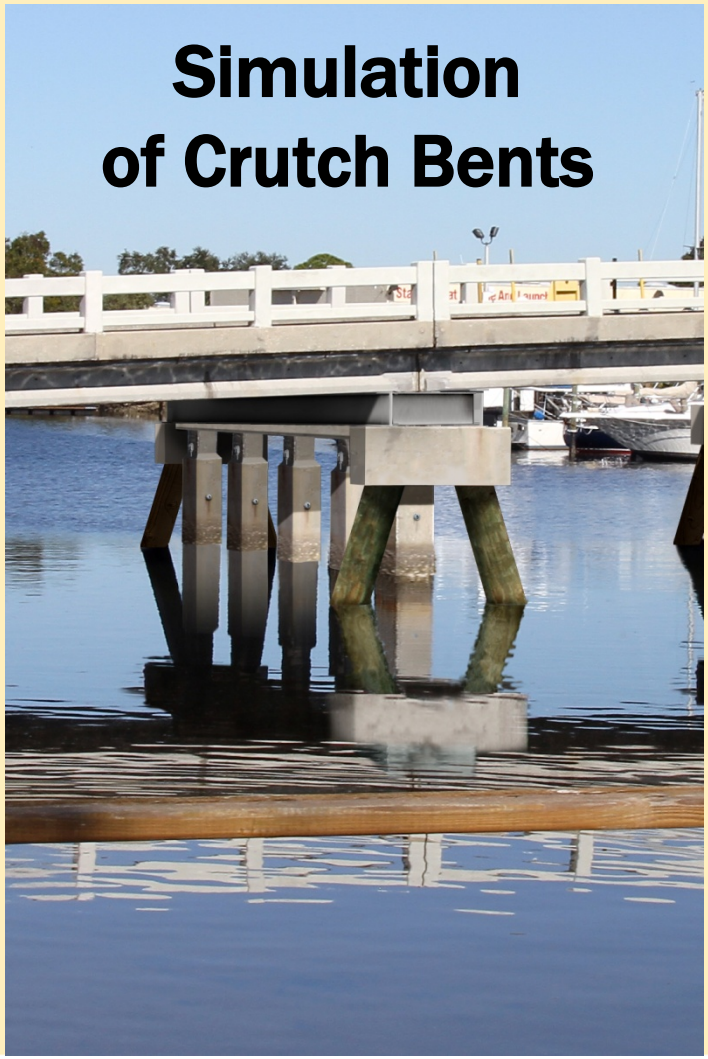
Rehabilitation – No Widening

- Install Crutch Bents at bents 2,4,5, 8, 10

Rehabilitation – No Widening

Existing Bridge

Simulation of Crutch Bents



Evaluation - Rehabilitation to Improve Sidewalks

Conclusion of Extensive Engineering Evaluation

- Sidewalk improvements require bridge widening Span
- Replacement of Bascule (Movable) Span
- Replacement of Bascule Pier

No elements of original bridge will remain

Details of Rehabilitation Evaluation?

Rehabilitation Options - Costs

Original Rehabilitation Concept - $9.5 M

No Widening/No Sidewalk Improvements

Remaining Service Life – 25 years

Rehabilitation (with Widening) - $12.5 M

Provides two 5.5 ft sidewalks

Remaining Service Life – 25 years

Reconfiguration of Existing Bridge

No widening, one 5.5 ft sidewalk

Not Feasible

New Movable Bridge - $15.8 M

Provides two 6 ft sidewalks

Service Life – 75 years

Life Cycle Cost Analysis

Costs Compared over a 100 Year Period

- Rehabilitate the bridge in 2020 then replace it with a new movable bridge in 2038

  (25 years from 2013)

  Versus

- Replace the bridge in 2020 with a new movable bridge

Result - More Cost Effective to Replace Bridge in 2020

Rehabilitation Options – SHPO Evaluation

SHPO Evaluation

- Engineering Analysis provides "*ample evidence to support the project team's opinion that a new bridge would be preferable to the rehabilitation.*"

- Mitigation will be required if existing bridge is demolished

FHWA Evaluation

Sufficient documentation to determine Fixed Bridge alternatives not feasible

- USCG determined that 28 feet of vertical clearance "Does Not Meet the Needs of Navigation"
- Substantial right-of-way impacts
- Substantial visual impacts
- Not consistent with historic character of community
- Requires two-year detour during construction
- Cost $14 M - $15 M (including Right-of-way) compared to New Movable $15.8 M

Recommended Alternative

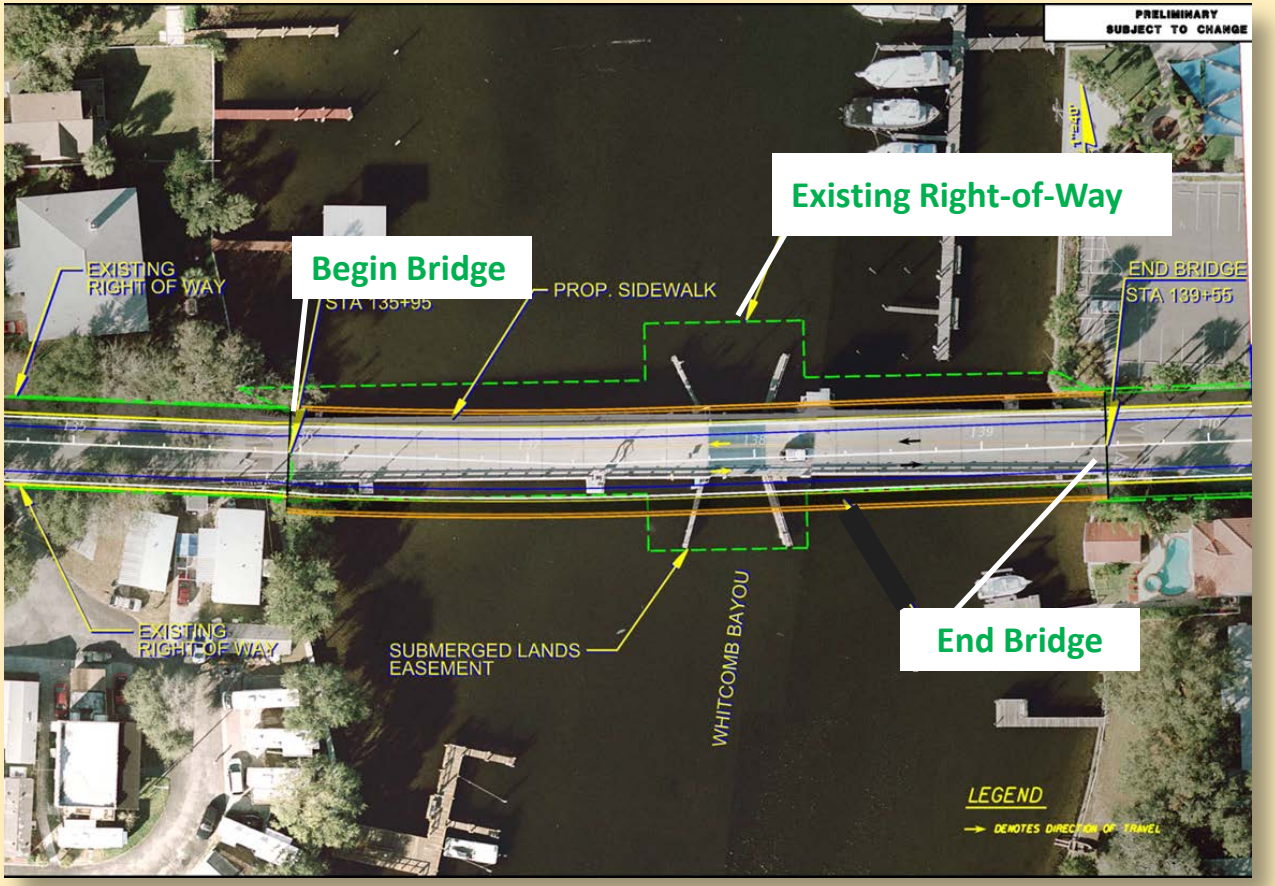
Based on extensive evaluation and consideration of:

- Engineering and Costs
- Safety of vehicles, bicyclists and pedestrians
- Potential socioeconomic and community impacts
- Impacts to the natural and physical environment
- Impacts to cultural resources
- Impacts to adjacent properties
- Impacts to the boating community
- Consideration of public input
- Other potential impacts

Replacement with a New Movable Bridge "Recommended Alternative" for presentation at Public Hearing

Movable Bridge

No Impacts to Adjacent Property



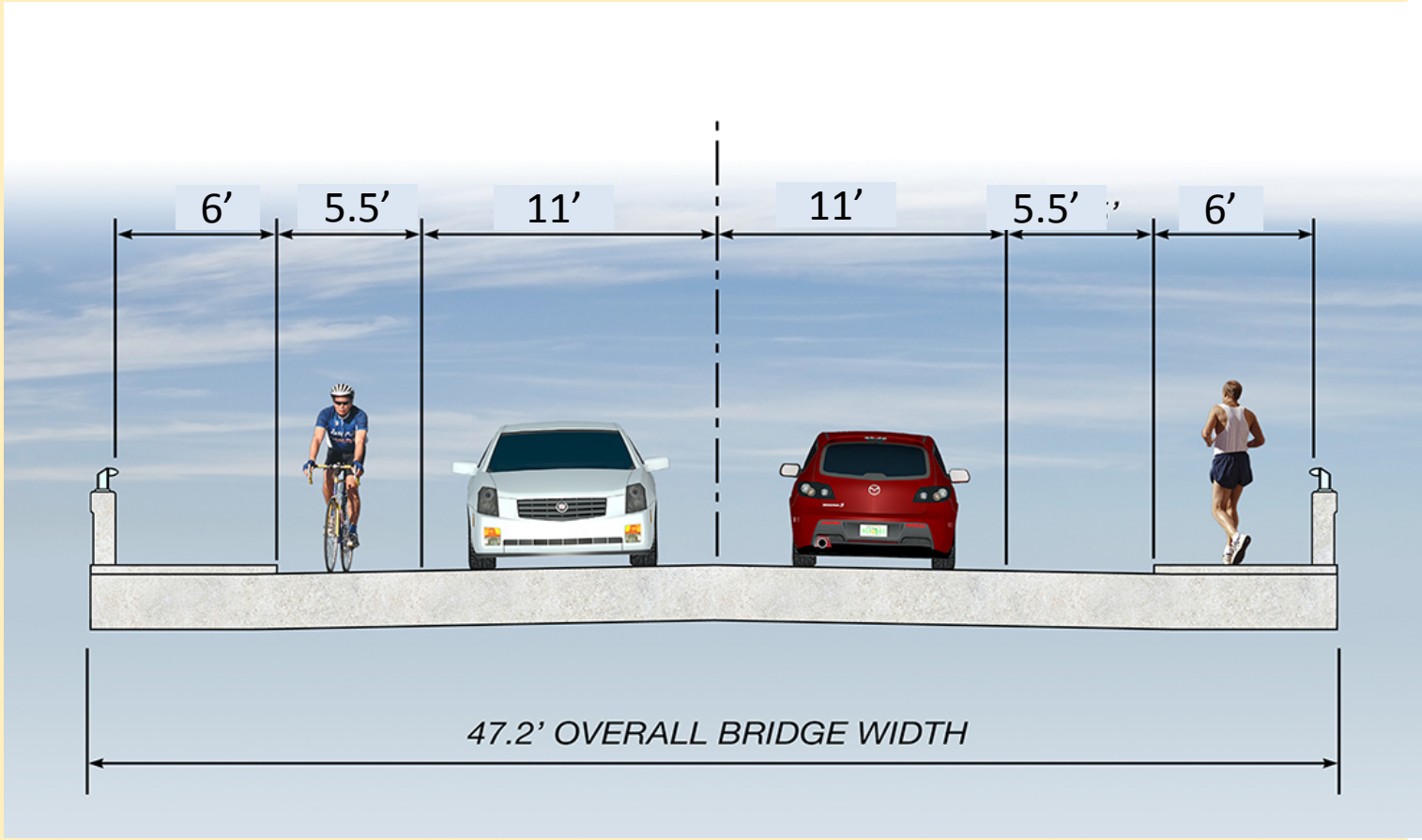
New Movable Bridge

Description

- No right-of-way impacts
- Vertical Clearance 7.8 feet
  - (existing 6 feet)
- Horizontal Clearance 25 feet
  - (same as existing)
- Total Width 47.2 feet
  - Approximately 19 feet wider than existing
  - 11 ft travel lanes
  - 5.5 ft shoulders and 6 foot sidewalks – both sides

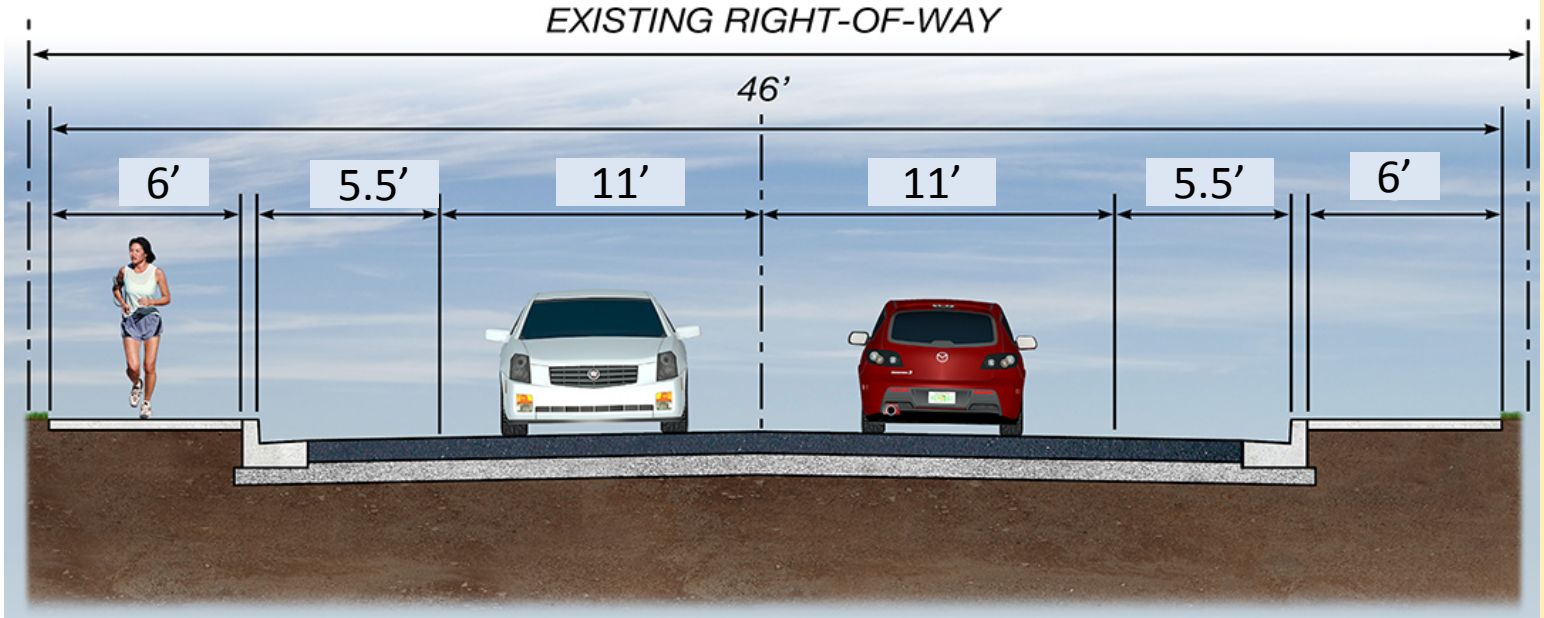
Movable Bridge Typical Section

Total Bridge Width – 47.2 feet



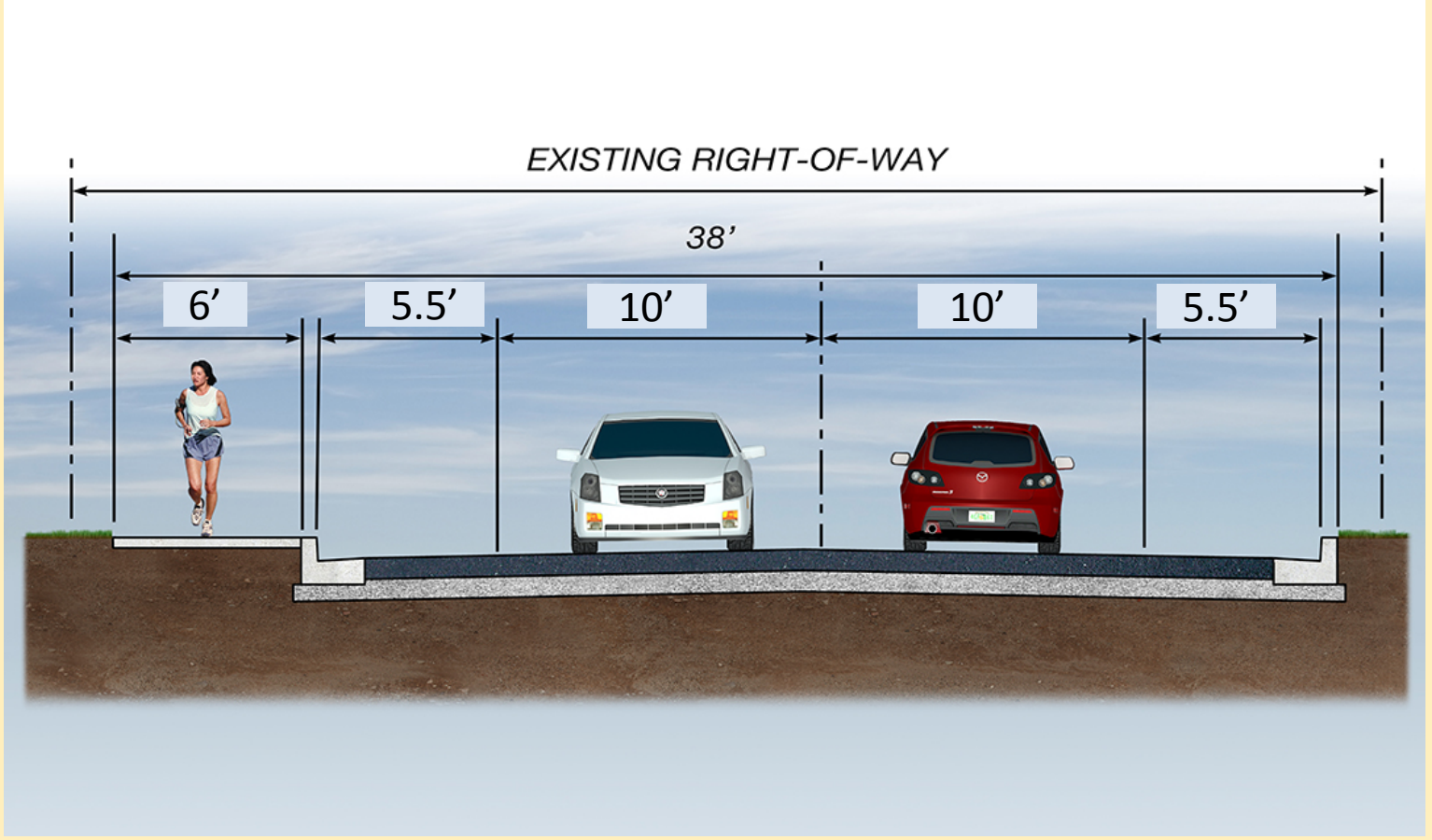
Proposed Roadway Typical Section – East of Movable Bridge

Total Width – 46 feet



Proposed Roadway Typical Section – West of Movable Bridge

Total Width – 38 feet



Existing Bridge

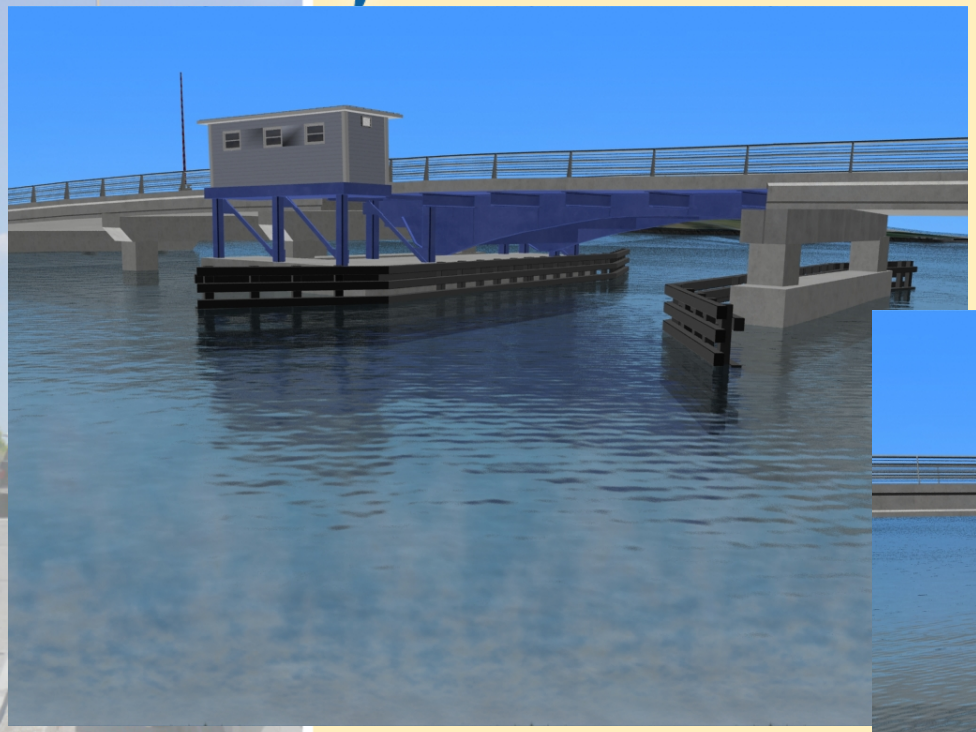
New Movable Bridge

"Generic" Movable Bridge

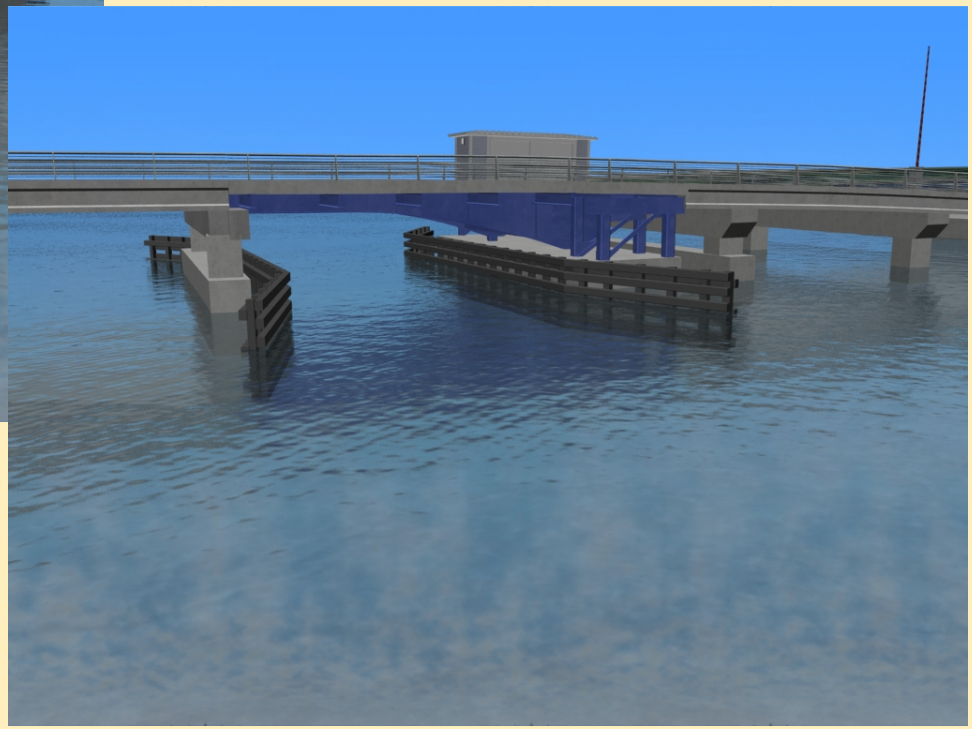
New Movable Bridge

"Industrial" Style
Rolling-Lift Bascule Bridge

New Movable Bridge

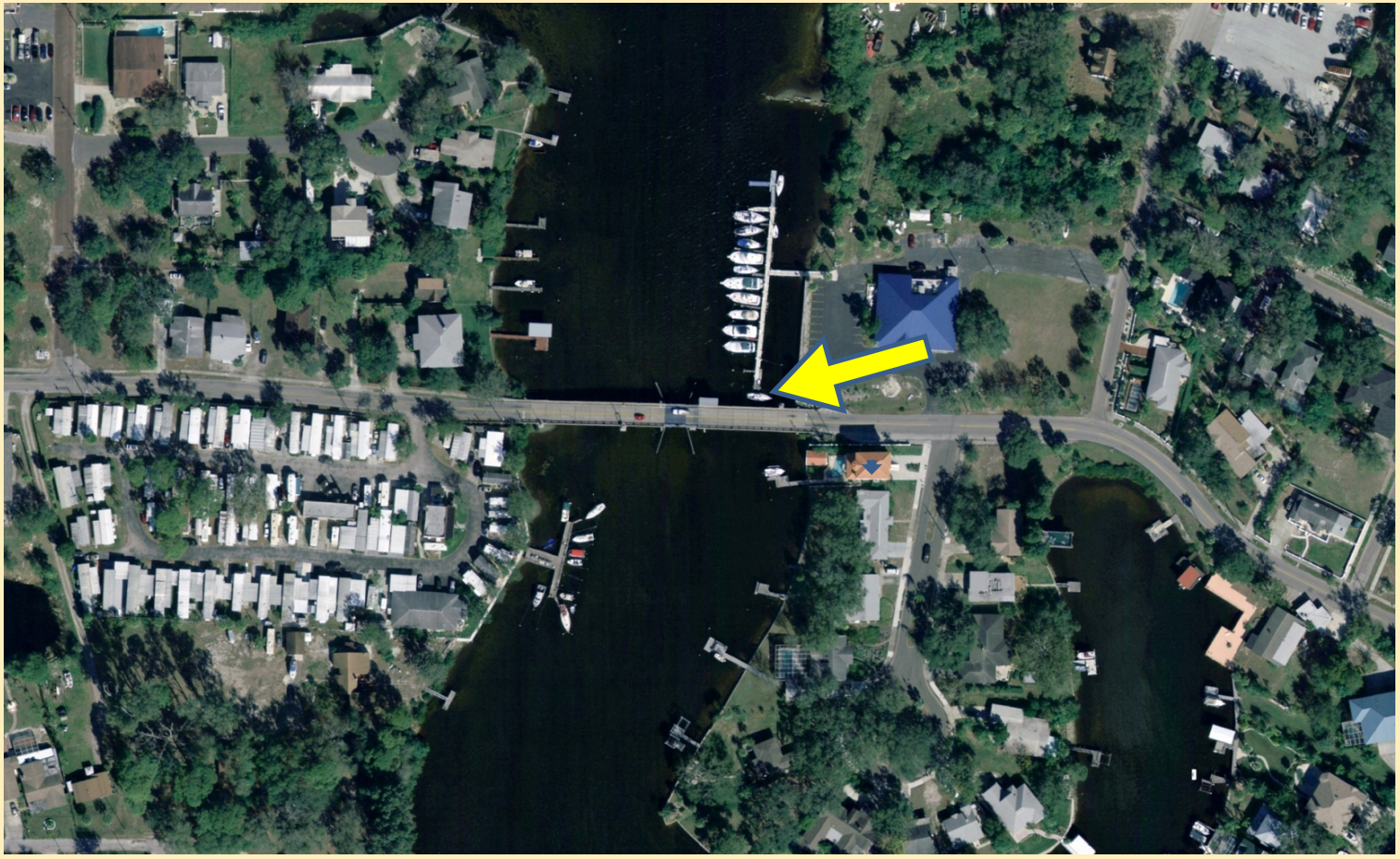


3D Model Views
Industrial Style



View from Tarpon Springs Yacht Club Entrance

Photo Location and View Direction



View from Tarpon Springs Yacht Club Entrance

Existing Bridge

View from Tarpon Springs Yacht Club Entrance

Proposed Movable Bridge

Pinellas County

View from Dock Southeast of Bridge

Photo Location and View Direction

View from Dock Southeast of Bridge

Existing Bridge

Pinellas County

View from Dock Southeast of Bridge

Proposed Movable Bridge

View from Dock Northwest of Bridge

Photo Location and View Direction

View from Dock Northwest of Bridge

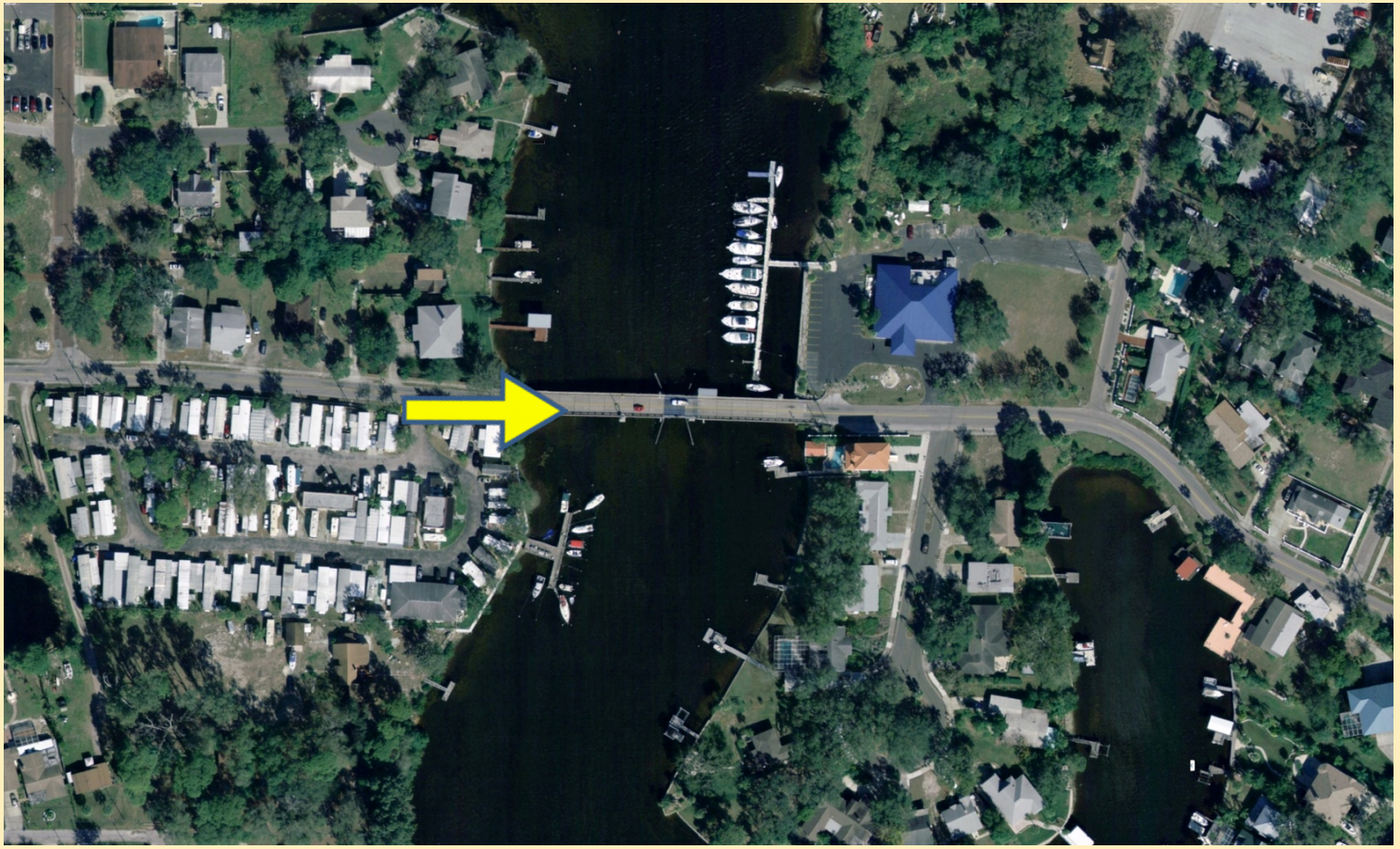
Existing Bridge

View from Dock Northwest of Bridge

Proposed Movable Bridge

View from Mobile Home Park Entrance Driveway

Photo Location and View Direction



View from Mobile Home Park Entrance Driveway

Existing Bridge

Pinellas County

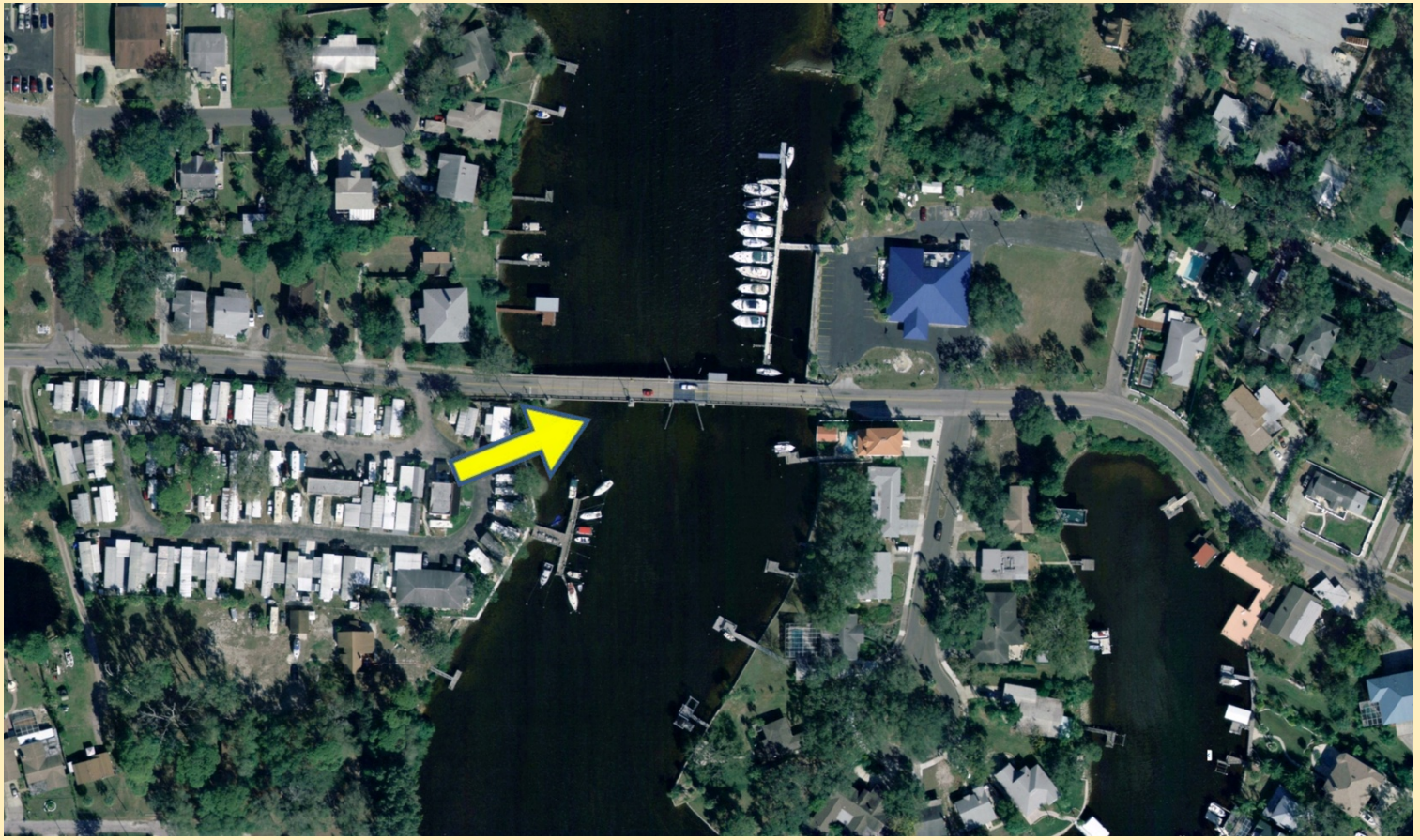
View from Mobile Home Park Entrance Driveway

Proposed Movable Bridge

ECDriver & Associates, Inc.

View from Mobile Home Park Waterfront

Photo Location and View Direction



View from Mobile Home Park Waterfront

Existing Bridge

View from Mobile Home Park Waterfront

Proposed Movable Bridge

New Movable Bridge - Aesthetics

If Conceptual Design for the Movable Bridge is

- Selected as "Preferred Alternative" after the Public Hearing

and

- Approved by FHWA

Aesthetics will be determined in Design Phase

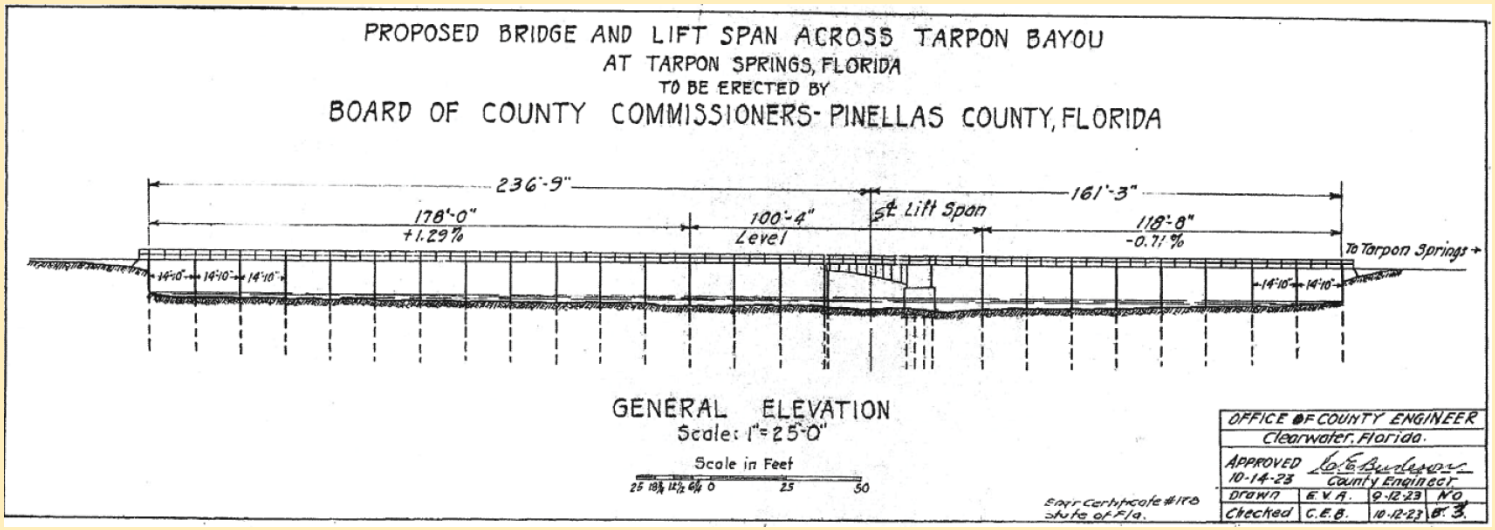
Future Opportunities for Public Input

Minimization/Mitigation Options

Required Mitigation

Historic American Engineering Record (HAER) Documentation

- Large format photographs
- Written history/narrative
- Historic bridge plans copied on archival paper



Minimization/Mitigation Options

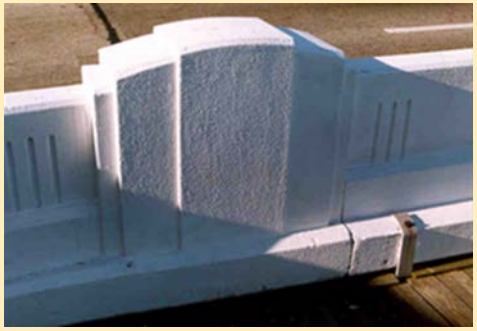
Possible Mitigation

- Choose Bridge Rail to Preserve Viewshed from Bridge
- Educational Kiosk/Monument in Public Space
  - On or Near Bridge
  - In City Park or Museum
- Incorporate Monument into Second Control House
- Incorporate Portion of Original Bridge into New Bridge

Minimization/Mitigation Options

Example – Treasure Island

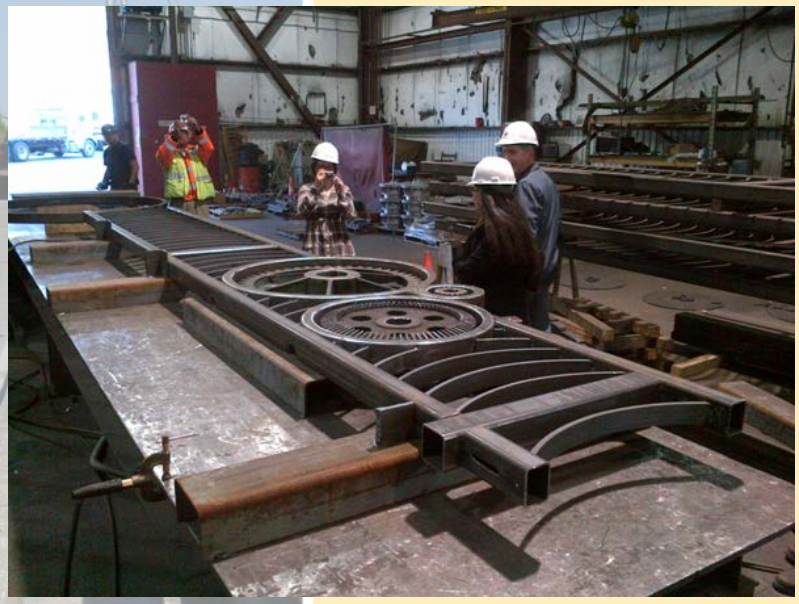
Monument Bridge in City Park – Treasure Island

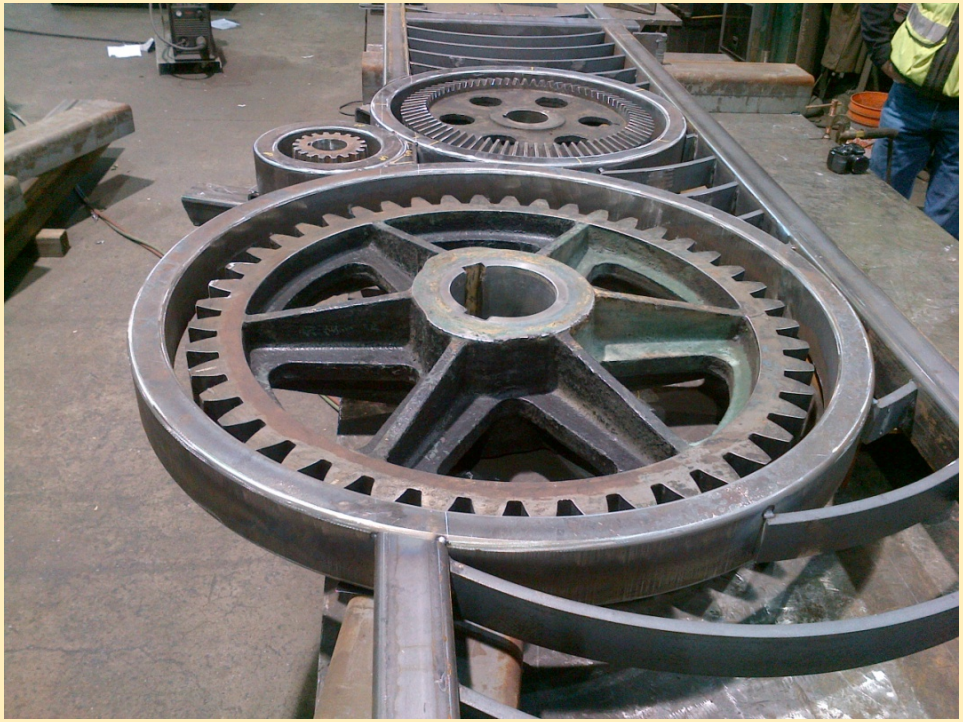


Minimization/Mitigation Options

Example - South Park Bridge, Seattle, WA

Incorporating Part of Existing Bridge into New Bridge





Minimization/Mitigation Options

Incorporating Part of Existing Bridge into New Bridge

Example:

South Park Bridge

Next Steps in PD&E Process

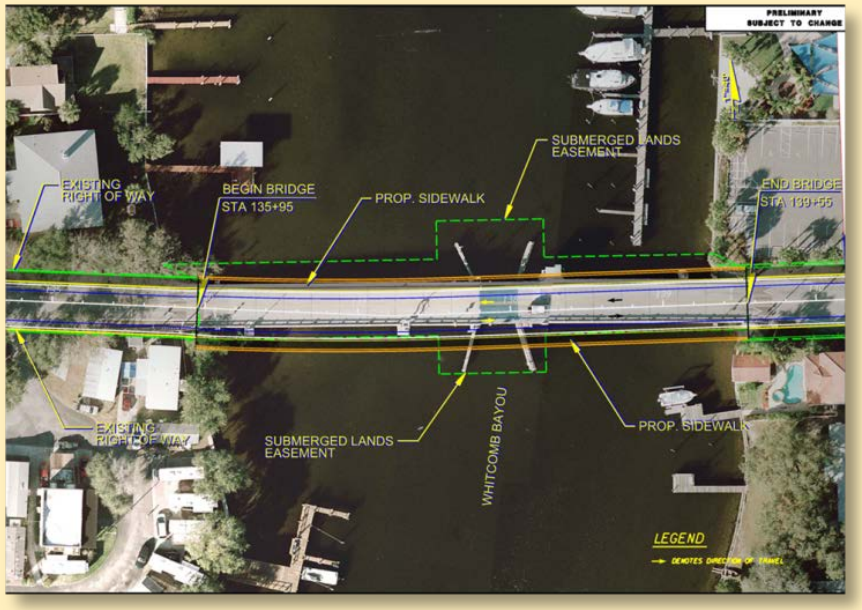
Present Recommended Alternative at Public Hearing - February 26, 2014

(Notices will be mailed January 29)

- Presentation will include discussion of all alternatives considered
- Public comments rec reporter
- Comments included in Project Record

Next Steps in PD&E Process

- CRC Meeting
  - Continue coordination of Section 106 Issues
  - Solicit input on possible mitigation if Movable Bridge is selected as “Preferred Alternative”



Next Steps in PD&E Process

- Consider Public Hearing Input
- Finalize Engineering/Environmental Documents
- Continue SHPO Coordination
  - Complete Section 106 documents
  - Develop MOA
    - SHPO, FHWA, FDOT,
    - USCG, County

Submit Final Documents to FHWA for Approval

Thank You!

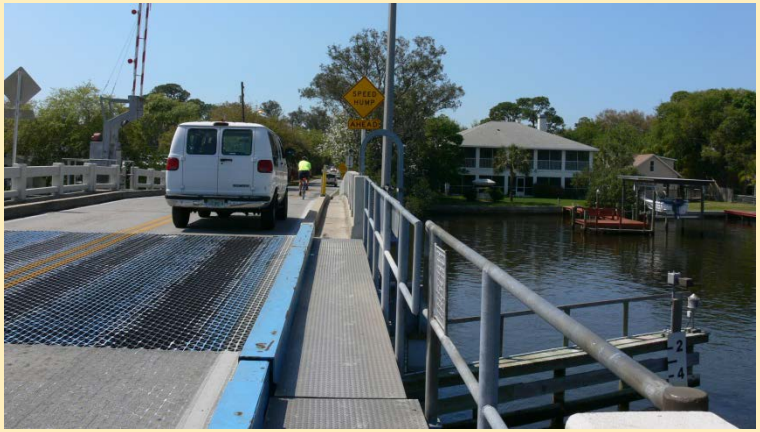
Questions and Discussion

Details of Rehabilitation Evaluation

Rehabilitation with Widening

Objectives

- Widen sidewalks to meet minimum current standards (5.5’)
- Widen roadway to meet minimum current standards (11’ lanes & 3’ shoulders)
- Other objectives are the same as for the rehabilitation without widening



Rehabilitation with Widening

Objectives

- Utilize wider crutch bents to support widening of the approach spans (crutch bents were already proposed for rehabilitation without widening)

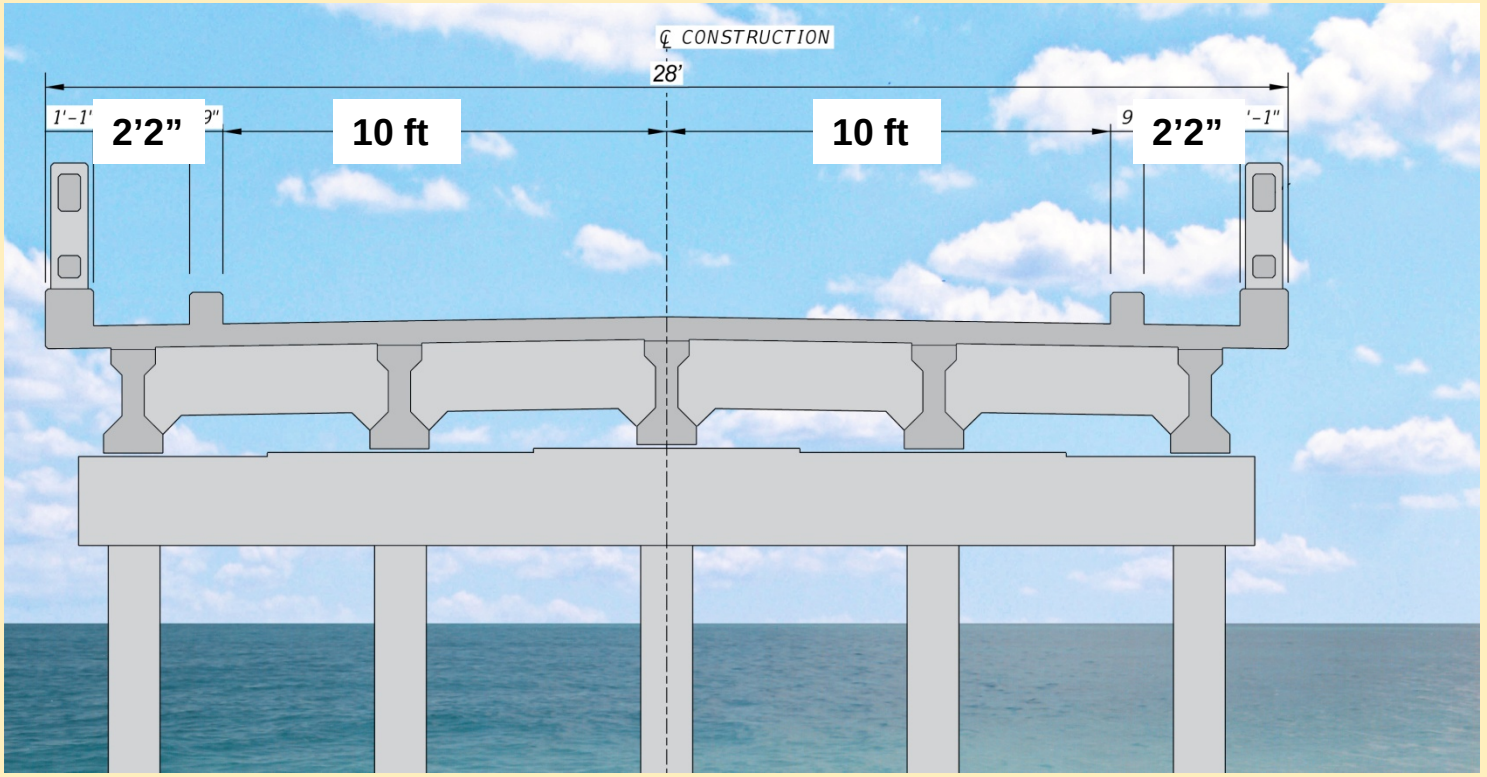
- Utilize wider replacement bascule span, but retain main girder spacing so that existing bascule pier can remain with strengthening (the one element of the 1929 bridge still to remain)

Existing Approach Typical Section

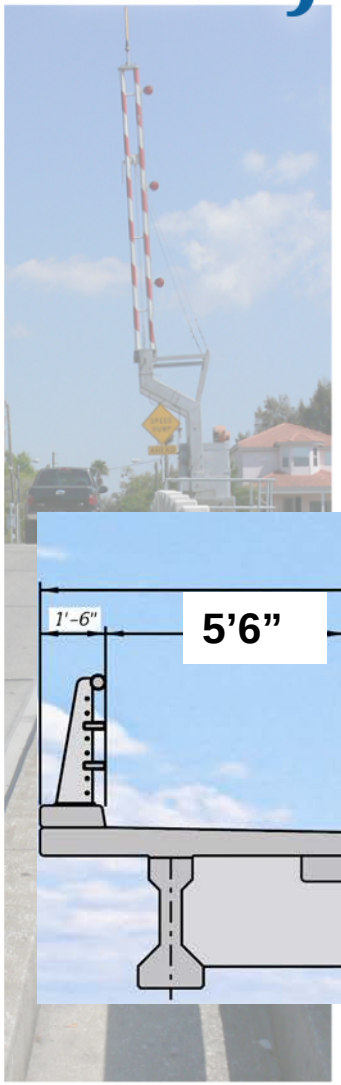
28 feet Total Width

10 ft lanes, no shoulders

2’2” sidewalks

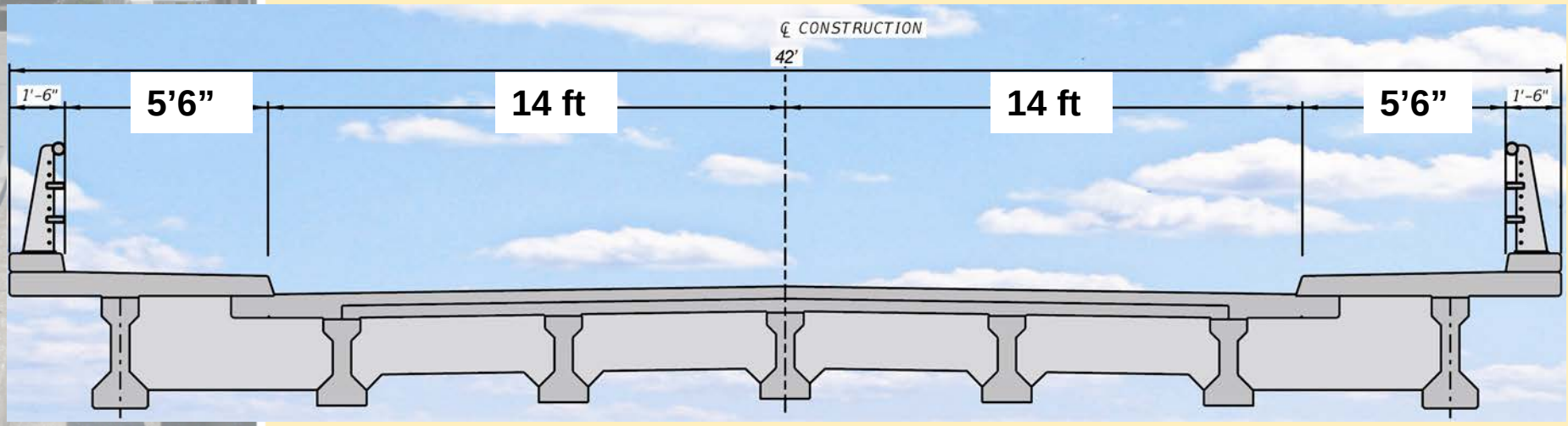


Acceptable Minimum Typical Section



Total Width – 42 feet

- 5’6” sidewalks – both sides
- 11 ft lanes
- 3 ft shoulders

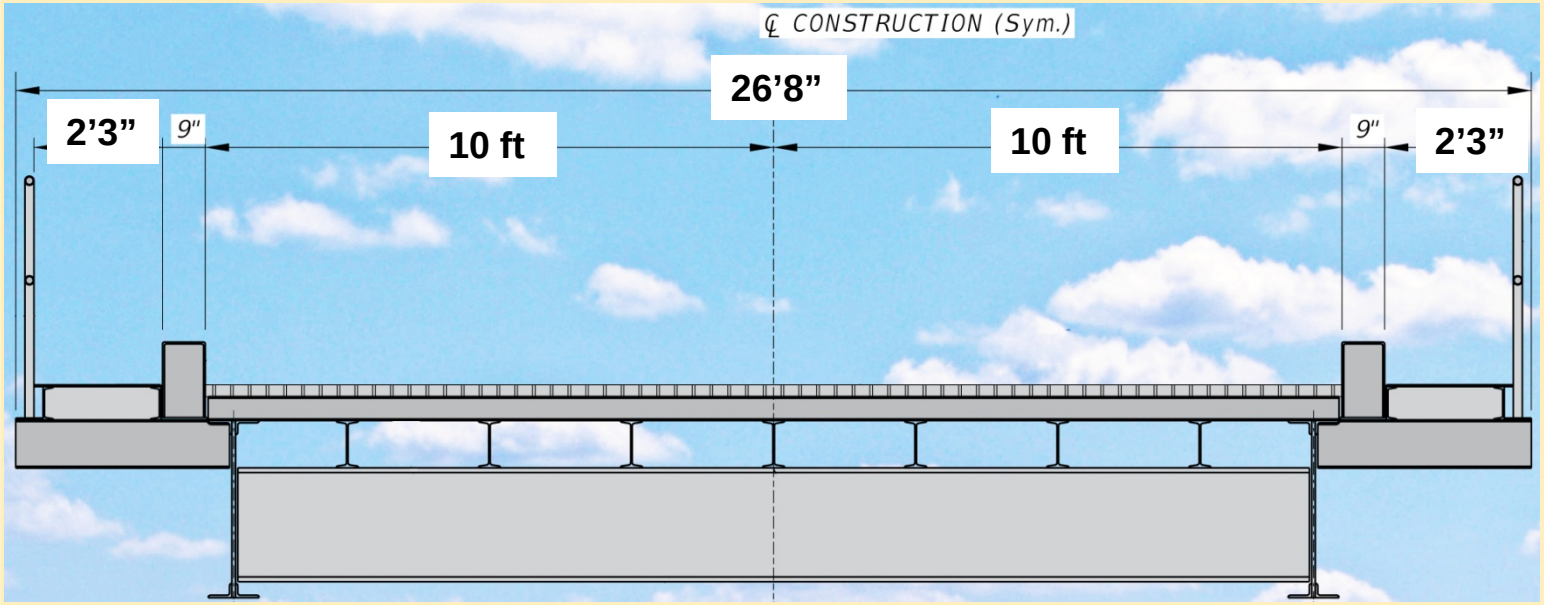


Existing Bascule Typical Section

26’- 8” Total Width

10 ft lanes, no shoulders

2’3” sidewalks



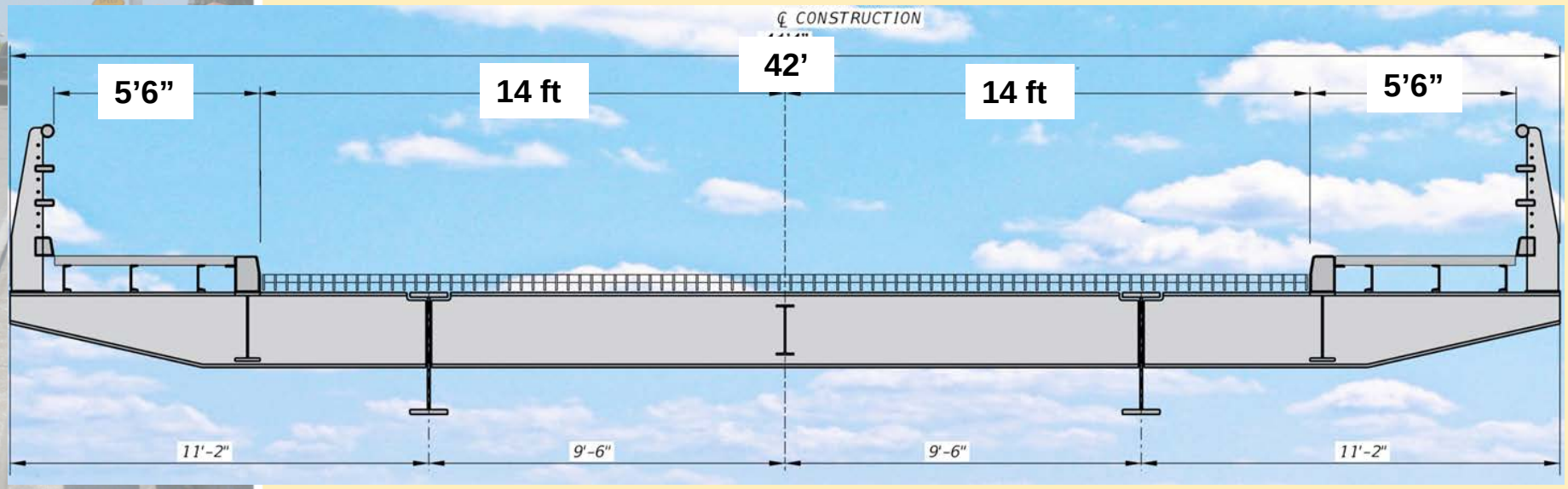
Proposed Bascule Typical Section Retaining Existing Piers

42’ Total Width

11 - foot lanes

3 – foot shoulders – both sides

5’- 6” sidewalks – both sides



Rehabilitation – With Widening

Bascule Span Engineering

- Current design loading (HL-93) is heavier than existing bridge design load (most likely HS-15)
- Current standards require designing sidewalks for occasional vehicle load (which was not the case for the existing bascule span)
- Bridge rails are currently designed for much higher impact loads and specific “crash tested” geometry
- Minimum width roadway results in higher live loads on the girders, floorbeams and cantilever brackets (at least a 32 percent increase in main girder loading)
- Current design loadings for bridge rails will result in larger loads on the cantilever brackets as will the wider sidewalk

All main members of the bascule span need to be stronger (larger, heavier steel sections) than the existing

Rehabilitation – With Widening

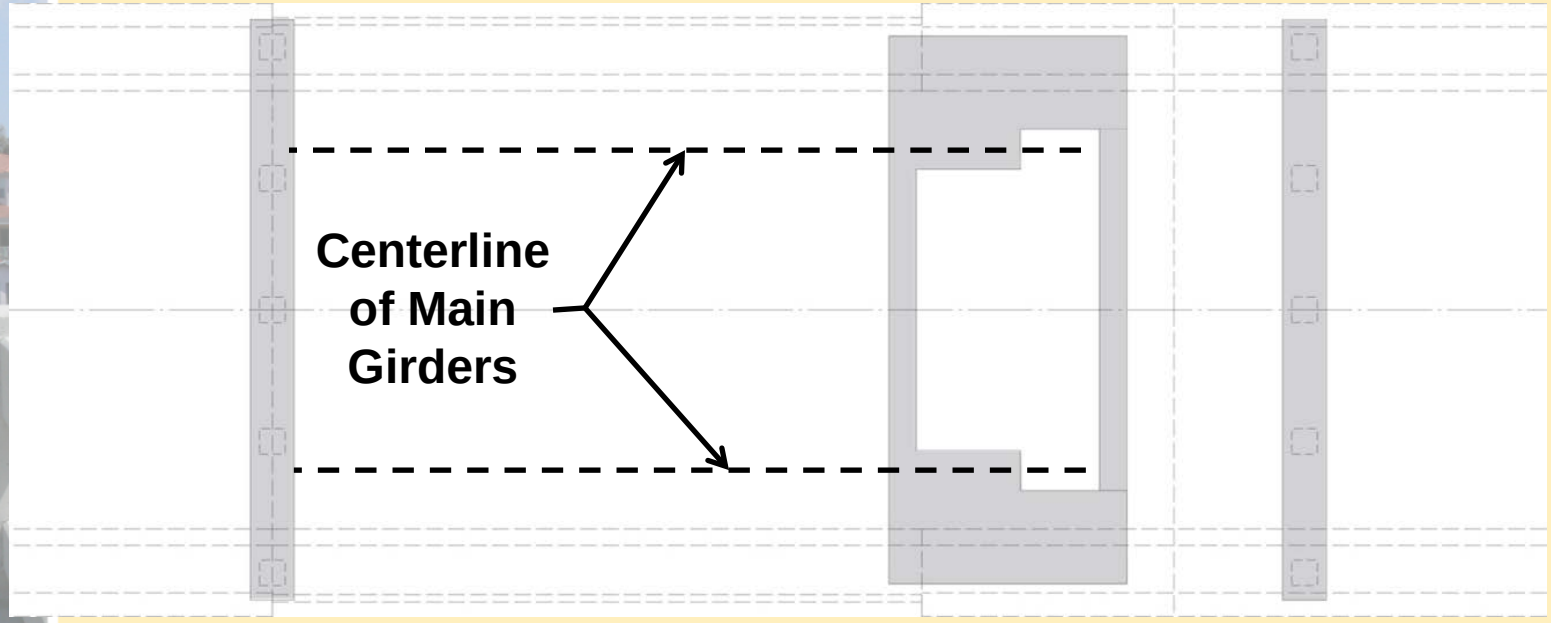
Bascule Span Engineering

- New bridge deck will be approximately 37% wider than the existing
- New bascule span will be approximately 62% heavier than the existing
- Counterweight volume is limited by geometry of the existing bascule pier

Counterweight volume is not sufficient to provide the mass required to balance the span (would require 390 pcf concrete (AASHTO limits counterweight concrete to 315 pcf)

Rehabilitation – With Widening

Plan View of Existing Bascule Pier



Exist.
Rest Pier

Exist.
Bascule Pier

Rehabilitation – With Widening

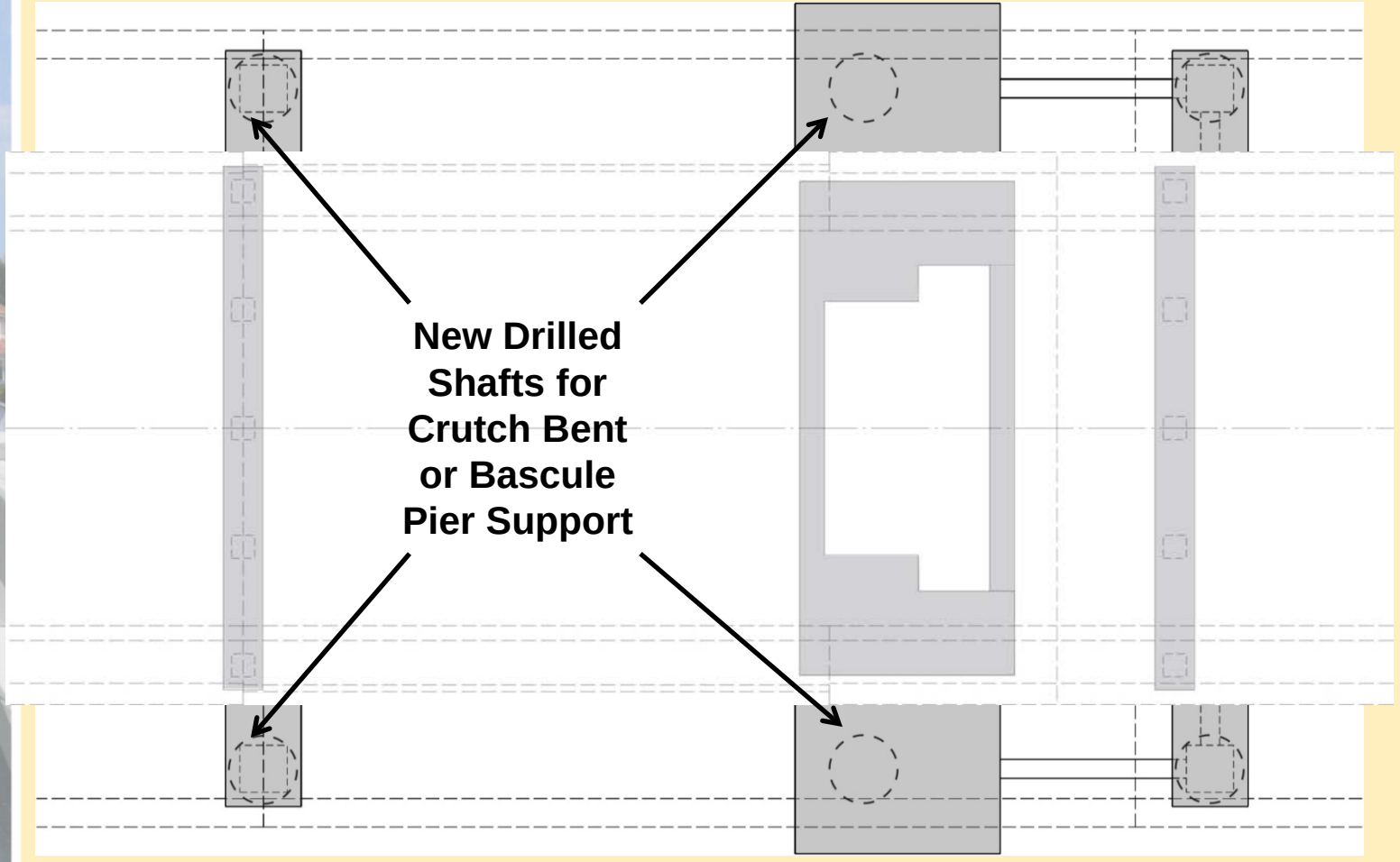
Bascule Span Engineering

- Existing bascule pier is supported on timber piles of unknown number, length and/or capacity
- Helper piles installed in 1996 are not fully effective in supporting the bascule piers – they were designed to stabilize the pier, not support dead load or live load
- New bascule span will be approximately 62% heavier than the existing

Existing piers do not have capacity for the added dead and live loads resulting from widening

Rehabilitation – With Widening

Plan View of Widened Bascule Pier



Rehabilitation – With Widening

Bascule Span Engineering

Conclusions

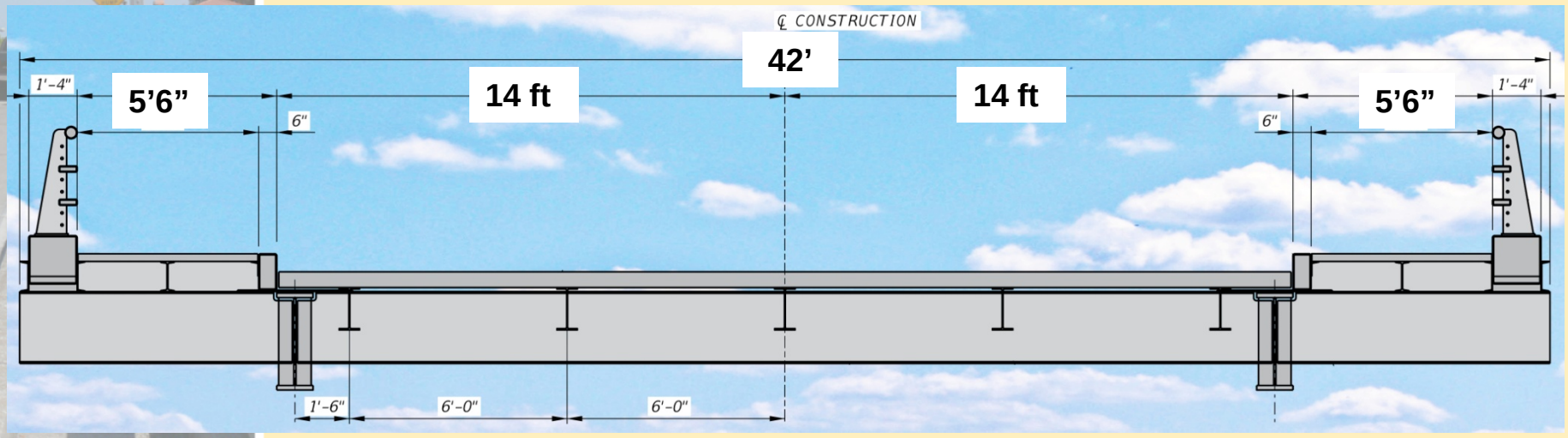
- To widen the bridge will require replacement of the bascule span with a new bascule span having a wider main girder spacing

- To accommodate the wider girder spacing, the existing bascule pier will need to be replaced

Proposed Bascule Typical Section Widened Piers

42’ Total Width

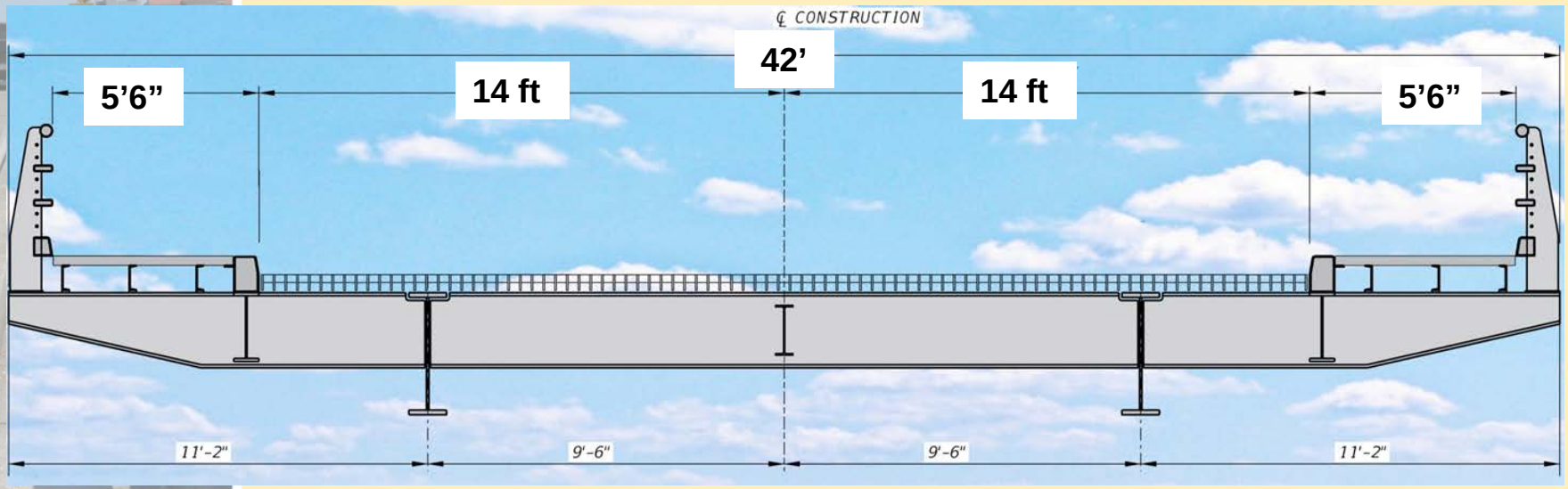
- 27 foot main girder spacing



Proposed Bascule Typical Section Existing Piers

42’ Total Width

- 19’ main girder spacing



Meeting Notes

Date: October 17, 2012
Time: 7:30 pm
Place: Tarpon Springs Yacht Club
RE: Alternatives Presentation
Beckett Bridge PD&E Study
FDOT PID: 424385-1-28-01

Recorded by: Andy Hayslip and Jim Phillips

Concerns raised by attendees at the presentation included:

The anticipated two year construction time for a replacement bridge was considered unacceptable by a number of attendees. The detour caused substantial problems and delays during past repairs. Another concern was that the route would not be available during an emergency evacuation during the two-years the bridge is under construction.

Jim Phillips explained that there are ways to shorten construction time, but they would increase the cost of construction. At this time, the worst case scenario is used for comparison of construction time among the alternatives.

During a hurricane or tropical storm event some boaters move their boats into Whitcomb Bayou, which they consider a "safe harbor". A 28-foot fixed bridge would prohibit some sailboats from entering the bayou in that situation.

It was noted that there are large numbers of manatees in the vicinity of the bridge, particularly in the winter. The concern was raised about protection of manatees during construction.

Some believe that construction of a fixed bridge with a higher clearance would encourage more boats to enter Whitcomb Bayou and therefore increase overall boat traffic through the channel.

Concern was raised about the noise of traffic traveling over the steel grate of the bascule span. Jim Phillips explained that if a new bascule bridge were constructed, the spans could be filled with concrete which would reduce the noise.

There were concerns raised by the recent installation of navigational markers in the waterway in the vicinity of the bridge by Pinellas County. Tony Horrnik responded that he did not believe the County was involved. Mr. Horrnik offered to follow up with Pinellas County Coastal Management.

It was noted that flooding on the approach roadways prevented evacuation in the past via the Beckett Bridge prior to an official voluntary or mandatory evacuation order by the County Emergency Service Agency is issued. A discussion about whether or not a replacement bridge would resolve this problem ensued. The conclusion was that because of the generally low elevation, flooding during storm events is still likely at the bridge approaches.

It was noted that the bridge remained open for boats for a prolonged time period during the January Epiphany Celebration, the Bayou Art Show and the local boat show. (This should be confirmed by County staff.)

Beckett Bridge PD& E Study

Presentation to:

Tarpon Springs Yacht Club

Pinellas County





URS JANUS RESEARCH

December 18, 2013

Introduction

Study Began **January 2012**

Alternatives Presented to Commission October 2013

Alternatives Presented to Public January 2013

Alternatives Considered

- No-Build
- No-Build with Permanent Removal of Existing Bridge
- Rehabilitation (No Widening)
- Replacement
  - Fixed Bridge – 28 feet Vertical Clearance
  - Movable Bridge - 7.8 feet Vertical Clearance

Overview of NEPA

National Environmental Policy Act of 1969

Federal Highway Administration (FHWA)

- Assures NEPA Compliance
- Final Authority – Approval of "Recommended Alternative"
- Approval required if federal funds are used
- Approval required to qualify for federal funds

Overview of NEPA – FHWA Process

FHWA Policy:

Alternatives are to be evaluated and decisions are to be made in the best overall public interest based on balanced consideration of:

- Need for safe and efficient transportation
- Social, economic and environmental impacts
- National, state and local environmental protection laws

PD&E Process – Assures Compliance with NEPA

PD&E Process – Public/Agency Input

Public Input – Important Component

- Decisions not made by a public vote
- Many other factors also considered

Input from Federal and State Agencies

- Policies, laws and procedures that govern how FHWA considers agency input
- USFWS, NMFS, USCG
- State Historic Preservation Officer (SHPO)

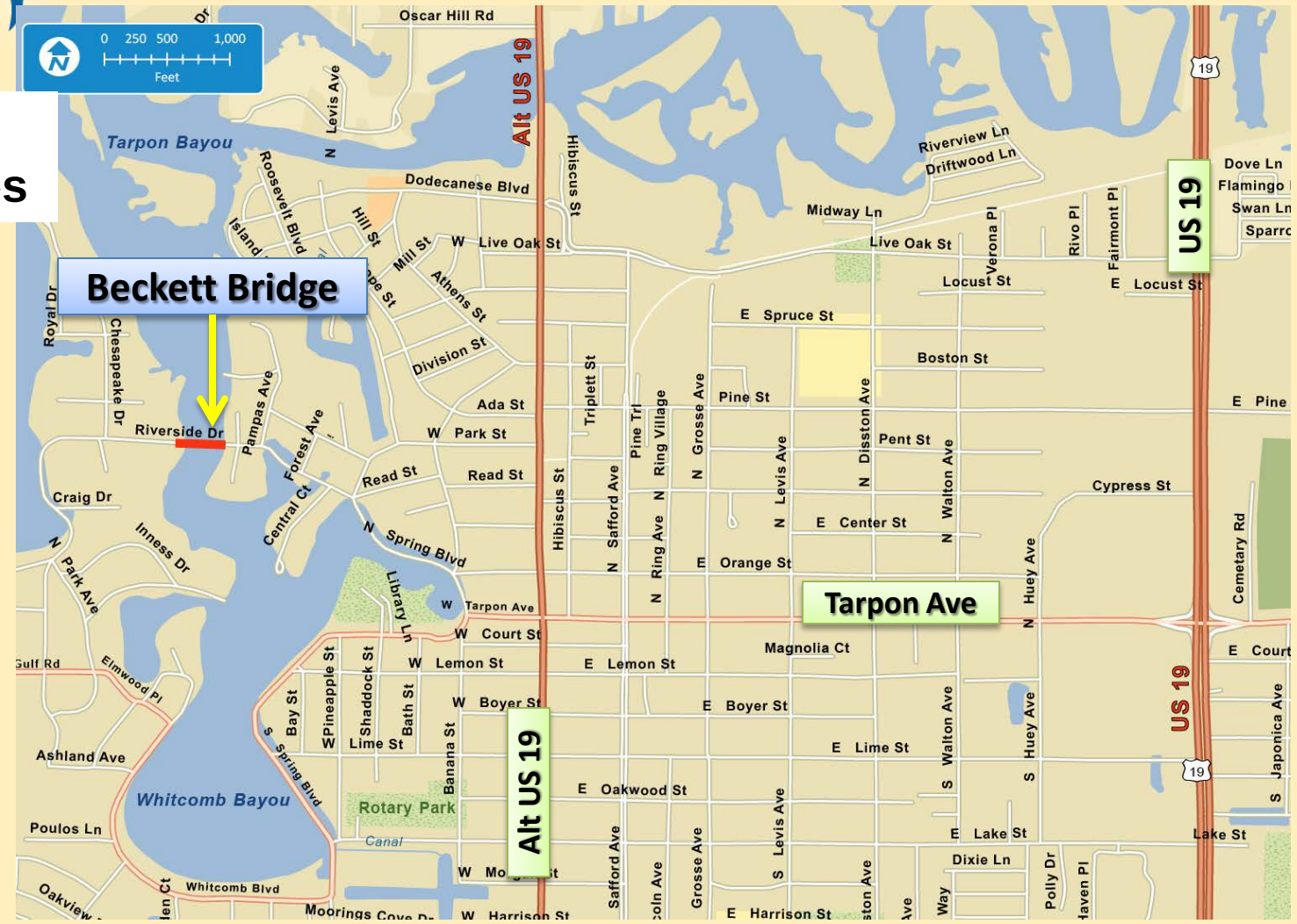
  Concurring agency on decisions regarding historic resources

PD&E Process – Affected Stakeholders

- Property Owners/ Residents
- Boaters
- Commuters
- County and City Emergency Services
- School Board
- Local Governments
- Bicyclists
- Special Interest Groups

Project Location

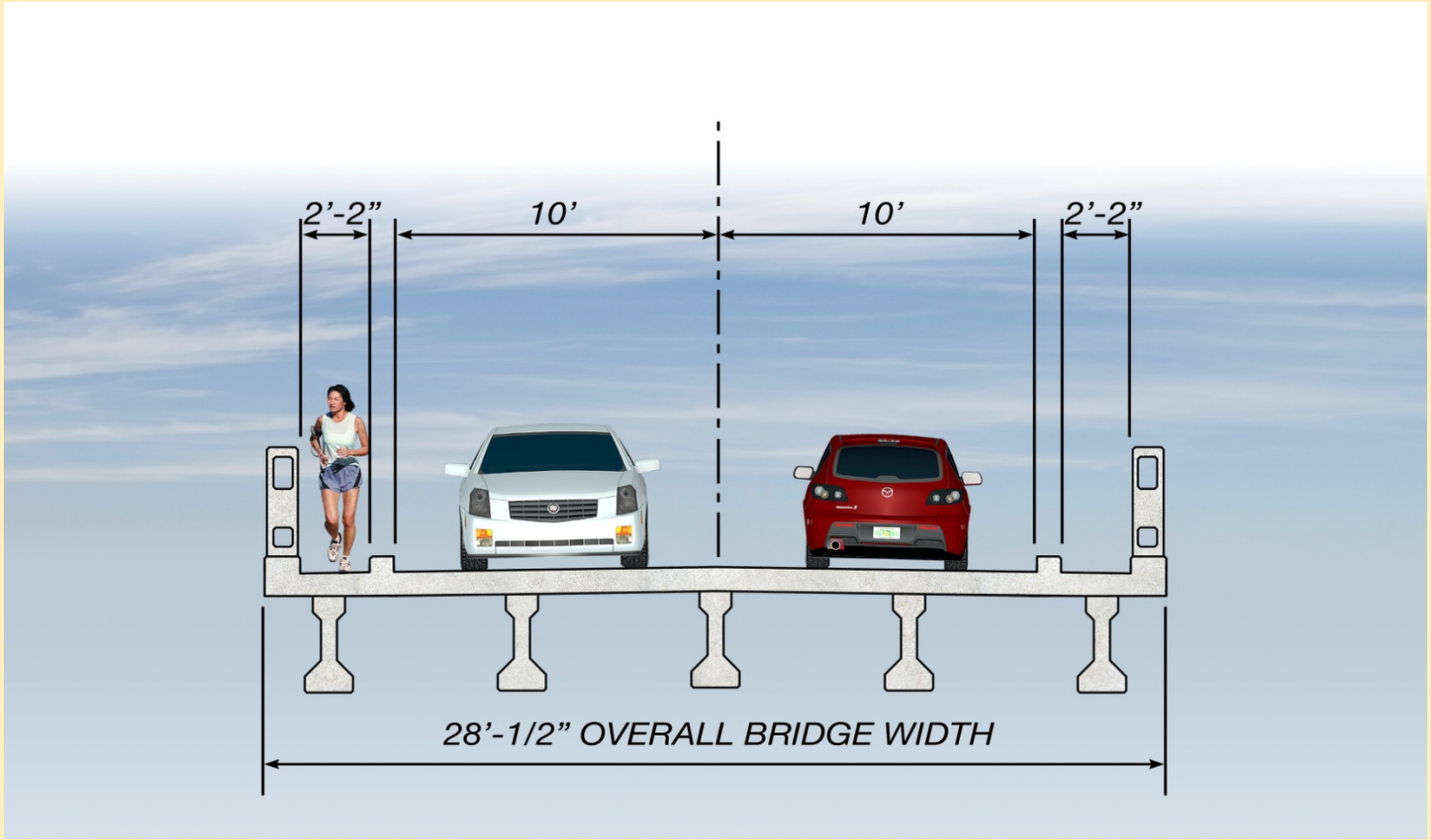
2012 AADT
7,700 vehicles



Beckett Bridge

- Constructed 1924
  - Original timber construction
- Substantially Rehabilitated 1956
  - Original steel bascule span and machinery retained
- Major Repairs in 1979, 1998 and 2011
  - Machinery replaced “in-kind”
- Sufficiency Rating 44.7

Existing Typical Section



No Shoulders **Narrow Sidewalks**

National Register Eligible

- **Determined Eligible for listing in the National Register of Historic Places**
  - One of a few remaining pre-1965, Single-Leaf Rolling-Lift Bascule Highway Bridges in Florida
  - Eligible in Areas of Community Planning and Development, Transportation and Engineering
  - Contributed to Westward Expansion of the City of Tarpon Springs

Existing Bridge

- Vertical Clearance – 6 ft
- Horizontal Clearance – 25 ft
- Opens with 2-hr Notice

Total # Bridge Openings

2009 - 10

2010 - 20

2011 - 18

2012 - 14

Project Need

Condition Assessment

- Health & Sufficiency
  - Deterioration
  - Wear
  - Corrosion
  - Damage
- Shortcomings of original design and/or construction
- Unforeseen conditions

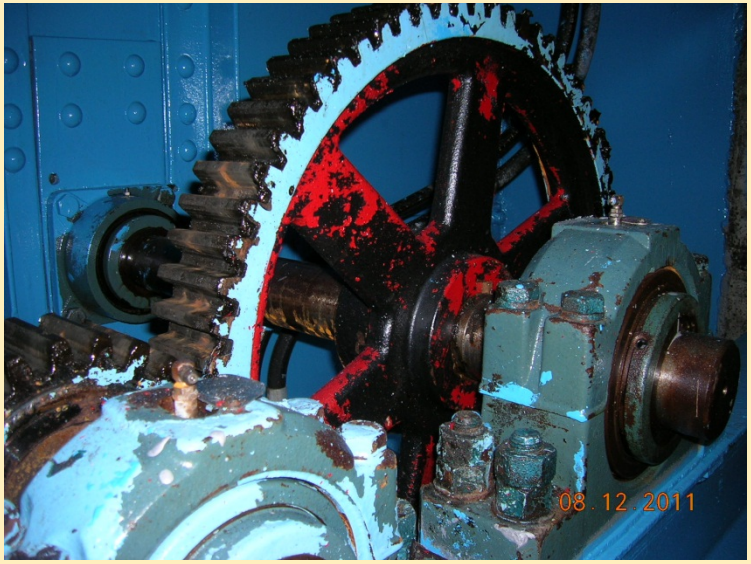
Project Need

Structural Condition

- Cracked and spalled concrete throughout
- Corrosion of reinforcing steel throughout
- Corroded structural steel
- Distorted steel flanges at tread plates
- Deteriorated timber piles & wales of fender system

Project Need

- Mechanical & Electrical Issues
  - Existing systems are old, worn and no longer reliable



Project Need

- **Functionally Obsolete**
  - Narrow Lanes
    - No Shoulders
    - No bicycle lanes
  - Narrow Sidewalks
    - Do Not Meet ADA Requirements
- **Structural Deficiencies**
  - Load Posted
  - Not designed for current heavier vehicles

Project Need

- Unforeseen Conditions
  - Foundations susceptible to settlement
  - Scour susceptible

Existing Crutch Bents

Project History

Stakeholder/Local Government Presentations
October – November 2012

- Chamber of Commerce
- Rotary Club
- Tarpon Springs Yacht Club
- MPO Board
- MPO Advisory Committees
- City of Tarpon Springs
- Pinellas County BCC
- Cultural Resource Committee (CRC)

Community Input

- Alternatives Public Meeting - January 2013

77 Written Comments Received

Preferences for Alternatives

No-Build	7
No-Build, Remove Bridge	2
Rehabilitation	11
Rehabilitation or New Movable	12
New Movable Bridge	32
New Fixed Bridge	4

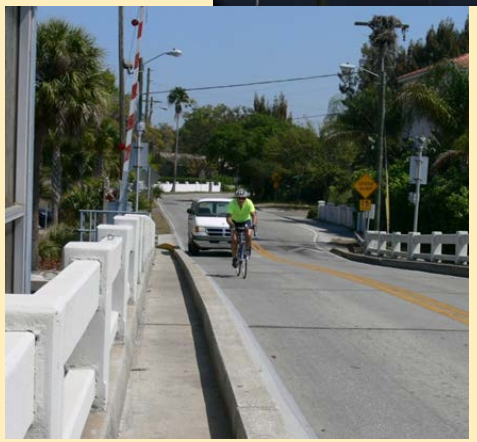
(28 ft Vertical Clearance)

Community Input

- Alternatives Public Meeting - January 2013

Community Concerns

- Need for safer pedestrian facilities
- Bridge should provide adequate vertical clearance
- Bridge should not adversely affect historic character of the community
- Duration of detour should be minimized



Historic Bridge Issues

Section 106 Process

- Avoid, minimize or mitigate adverse impacts
- Conduct “Good faith consultation” with affected parties
  - Consider affected party concerns
  - Solicit Input on possible mitigation if required

- FHWA is the lead final agency
- SHPO is the concurring agency

Historic Bridge Issues

Cultural Resource Committee – CRC

Affected Parties included:

- Federal/State agencies
  - SHPO, USCG, FDOT, FHWA,
- Stakeholders with special interest in historic preservation
- Local government representatives
- Local community representatives

October 2012, March 2013 CRC Meetings

Historic Bridge Issues

March - June 2013

SHPO requested evaluation of two new Rehabilitation Alternatives with Improved Sidewalks

- **Rehabilitation with Widening**
  - Provide sidewalks on both sides
- **Reconfiguration of Existing Bridge (No Widening)**
  - Provide sidewalk on one side

Evaluation - Rehabilitation to Improve Sidewalks

Conclusion of Extensive Engineering Evaluation

- Sidewalk improvements require bridge widening Span
- Replacement of Bascule (Movable) Span
- Replacement of Bascule Pier

No elements of original bridge will remain

Evaluation of Rehabilitation Original Concept

Rehabilitation

- No Widening, No Sidewalk Improvements
- Not Feasible or Prudent

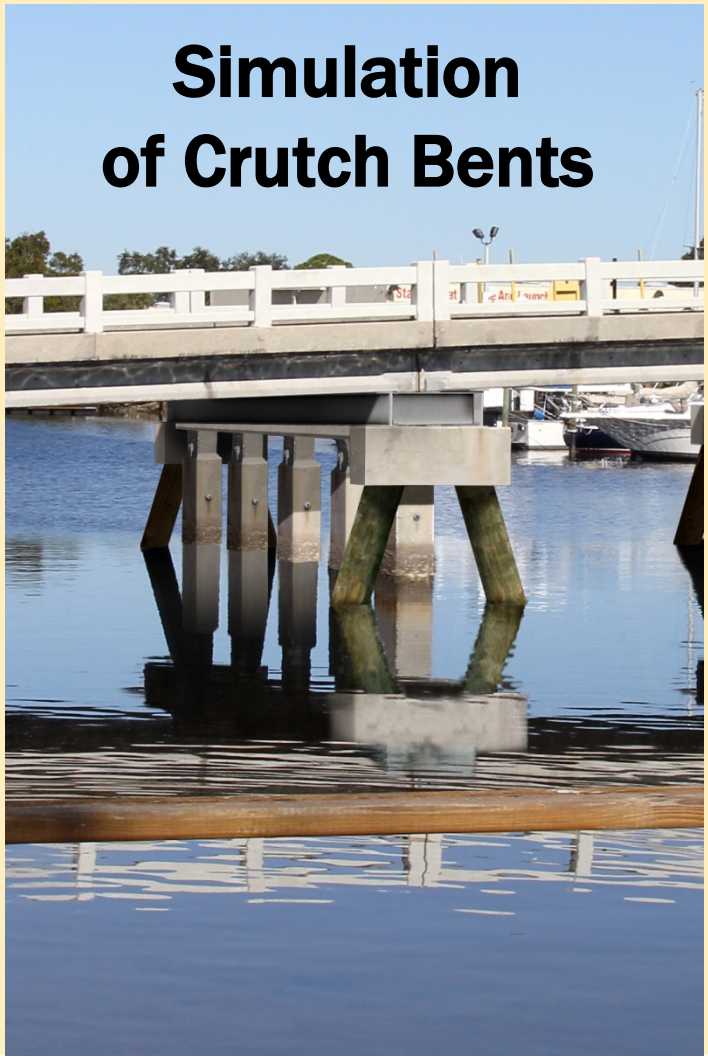
Major Issues

- Structural concerns – unknown foundations
- Vehicular/pedestrian safety
- Link in future Howard Park Trail
- Life-cycle costs higher compared to replacement
- Bascule Span and Pier Only Remaining Original Elements
- Crutch Bents and Pile Jackets Required

Rehabilitation – No Widening

Existing Bridge

Simulation of Crutch Bents



Rehabilitation Options - Costs

Original Rehabilitation Concept - $9.5 M

No Widening/No Sidewalk Improvements

Remaining Service Life – 25 years

Rehabilitation (with Widening) - $12.5 M

Provides two 5.5 ft sidewalks

Remaining Service Life – 25 years

Reconfiguration of Existing Bridge

No widening, one 5.5 ft sidewalk

Not Feasible

New Movable Bridge - $15.8 M

Provides two 6 ft sidewalks

Service Life – 75 years

Life Cycle Cost Analysis

Costs Compared over a 100 Year Period

- Rehabilitate the bridge in 2020 then replace it with a new movable bridge in 2038

  (25 years from 2013)

  Versus

- Replace the bridge in 2020 with a new movable bridge

Result - More Cost Effective to Replace Bridge in 2020

Rehabilitation Options – SHPO Evaluation

SHPO Evaluation

- Engineering Analysis provides "*ample evidence to support the project team's opinion that a new bridge would be preferable to the rehabilitation.*"

- Mitigation will be required if existing bridge is demolished

FHWA Evaluation

Sufficient documentation to determine Fixed Bridge alternatives not feasible

- USCG determined that 28 feet of vertical clearance "Does Not Meet the Needs of Navigation"
- Substantial right-of-way impacts
- Substantial visual impacts
- Not consistent with historic character of community
- Requires two-year detour during construction
- Cost $14 M - $15 M (including Right-of-way) compared to New Movable $15.8 M

Recommended Alternative

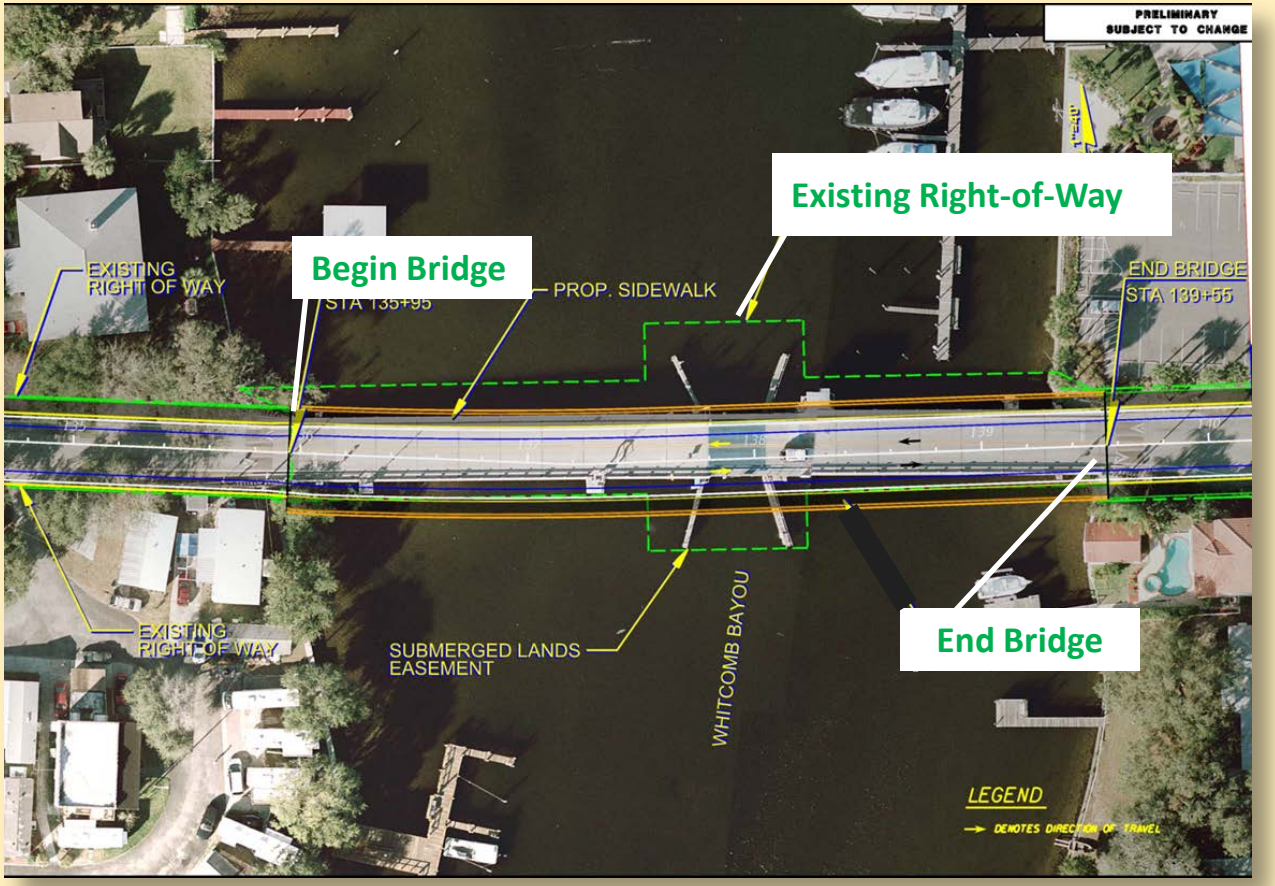
Based on extensive evaluation and consideration of:

- Engineering and Costs
- Safety of vehicles, bicyclists and pedestrians
- Potential socioeconomic and community impacts
- Impacts to the natural and physical environment
- Impacts to cultural resources
- Impacts to adjacent properties
- Impacts to the boating community
- Consideration of public input
- Other potential impacts

Replacement with a New Movable Bridge "Recommended Alternative" for presentation at Public Hearing

Movable Bridge

No Impacts to Adjacent Property



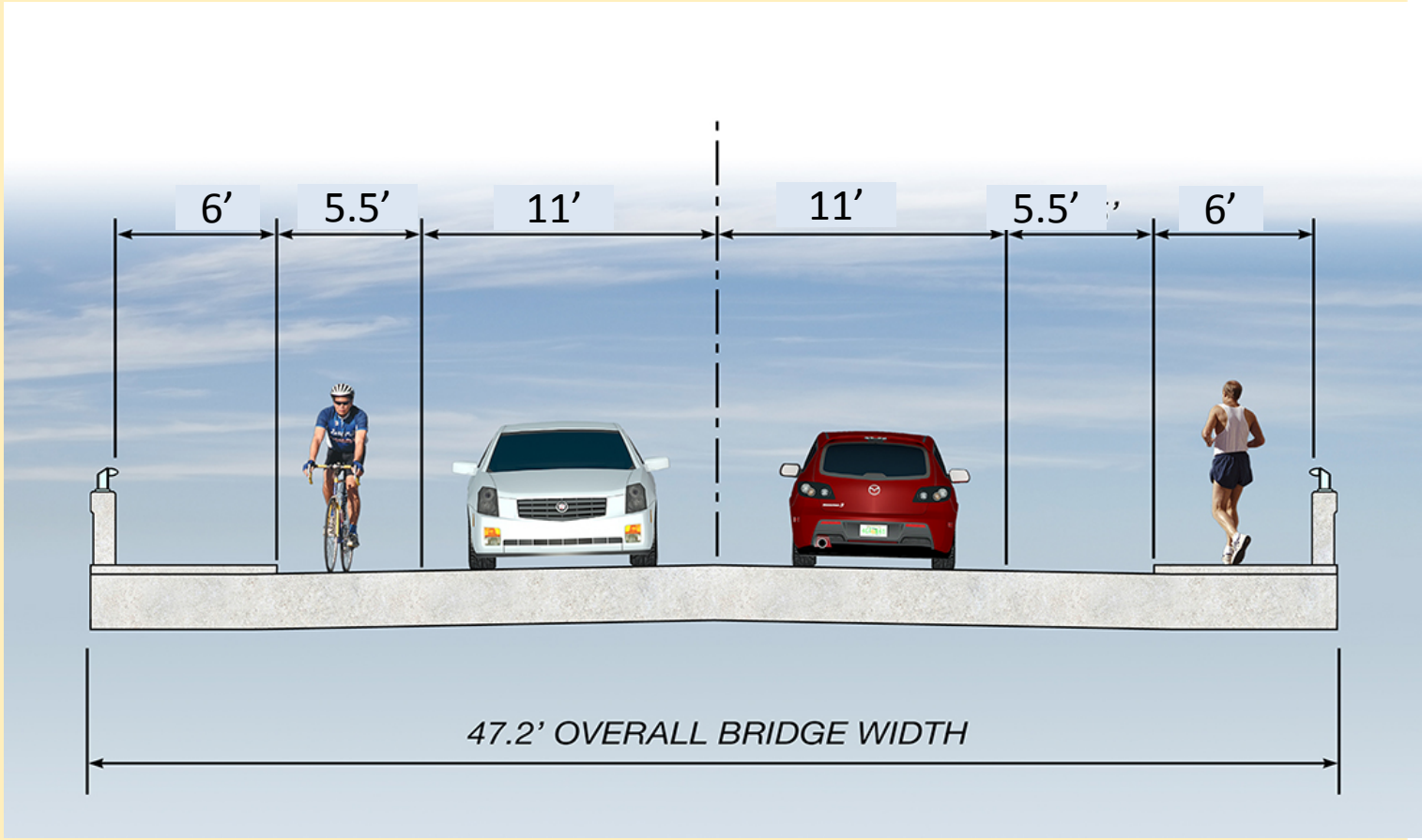
New Movable Bridge

Description

- No right-of-way impacts
- Vertical Clearance 7.8 feet
  - (existing 6 feet)
- Horizontal Clearance 25 feet
  - (same as existing)
- Total Width 47.2 feet
  - Approximately 19 feet wider than existing
  - 11 ft travel lanes
  - 5.5 ft shoulders and 6 foot sidewalks – both sides

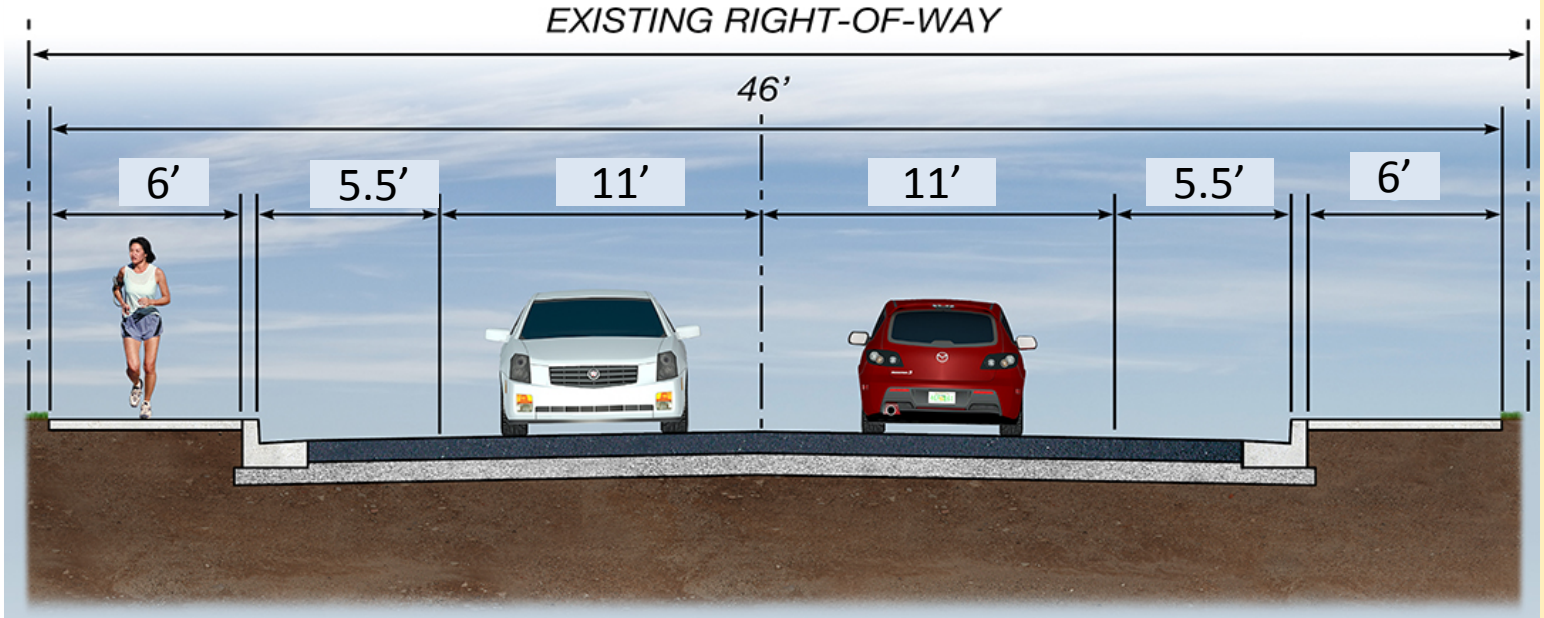
Movable Bridge Typical Section

Total Bridge Width – 47.2 feet



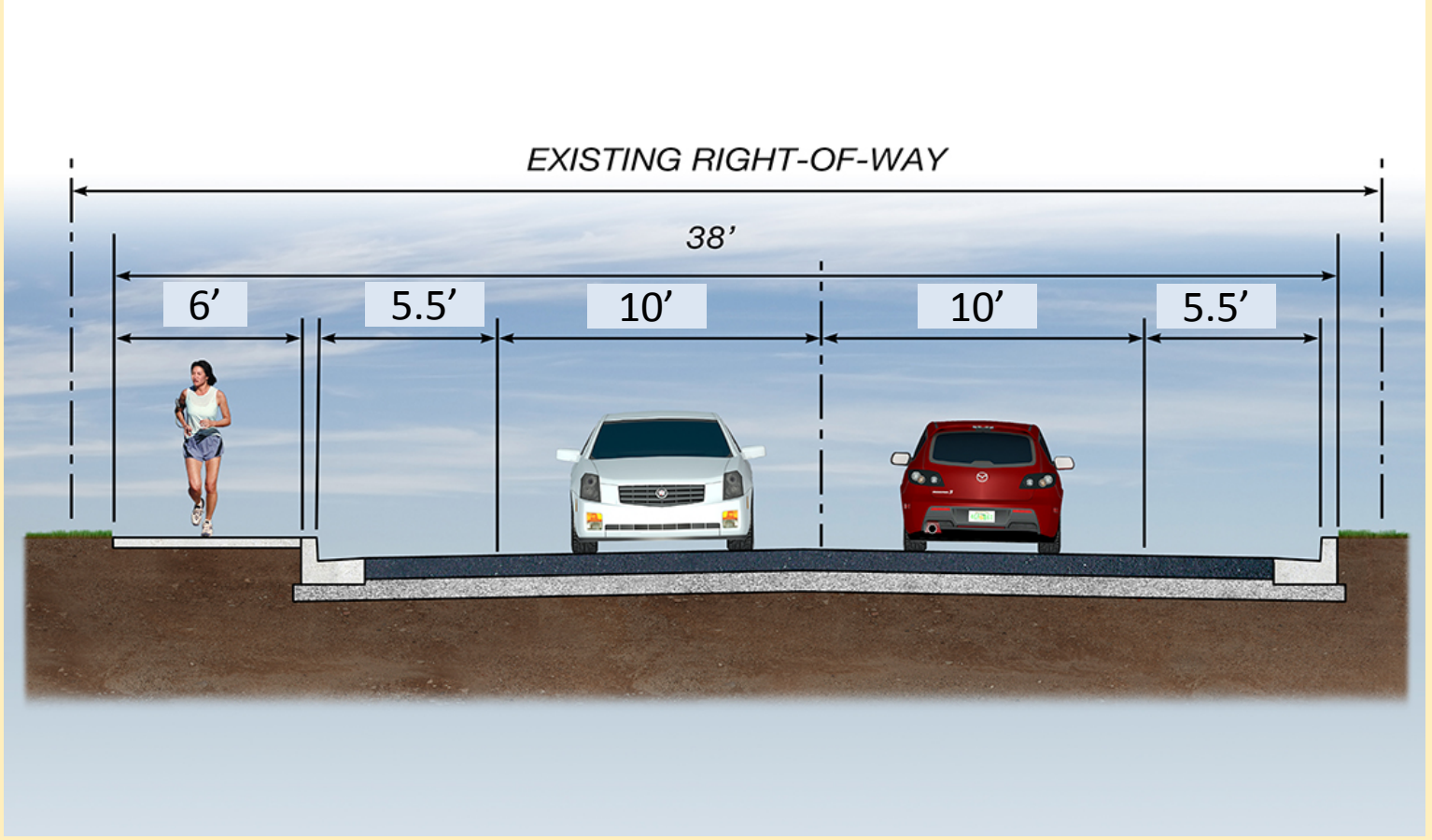
Proposed Roadway Typical Section – East of Movable Bridge

Total Width – 46 feet



Proposed Roadway Typical Section – West of Movable Bridge

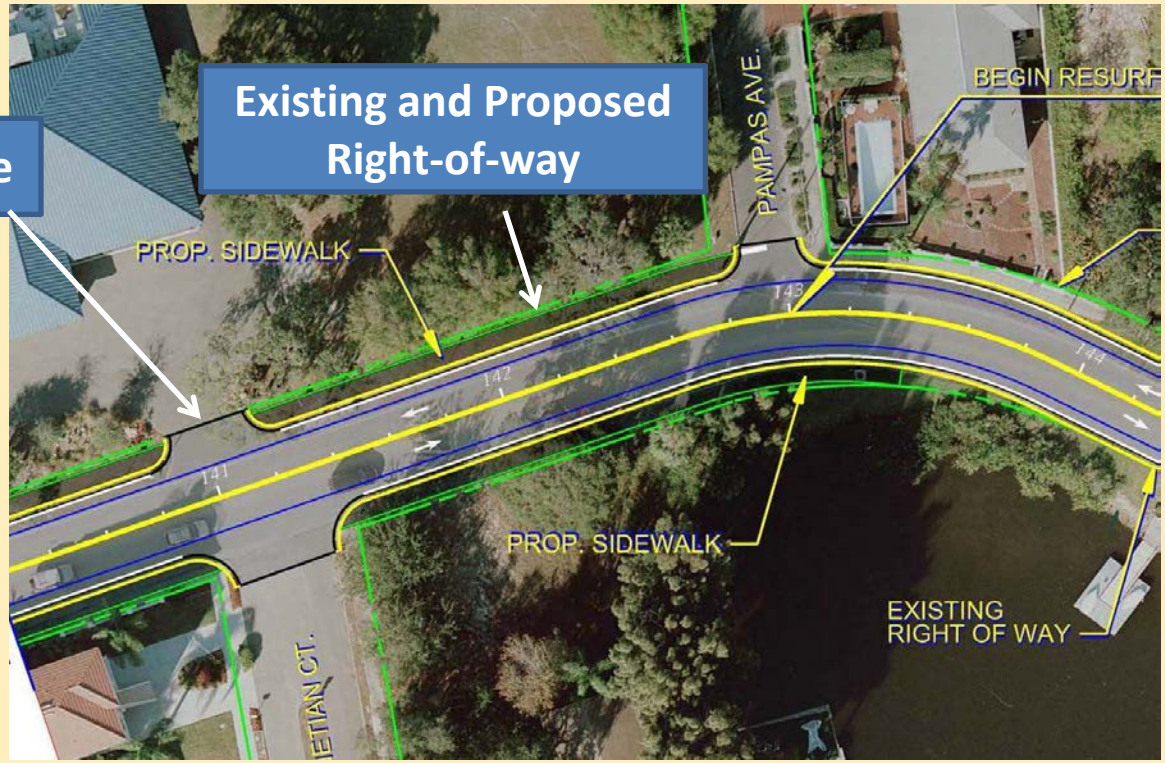
Total Width – 38 feet



New Movable Bridge Impacts to Yacht Club

- **No Impacts to Yacht Club Property**
- **No Impacts to Yacht Club Entrance**

(Less than 1 foot higher than existing grade)



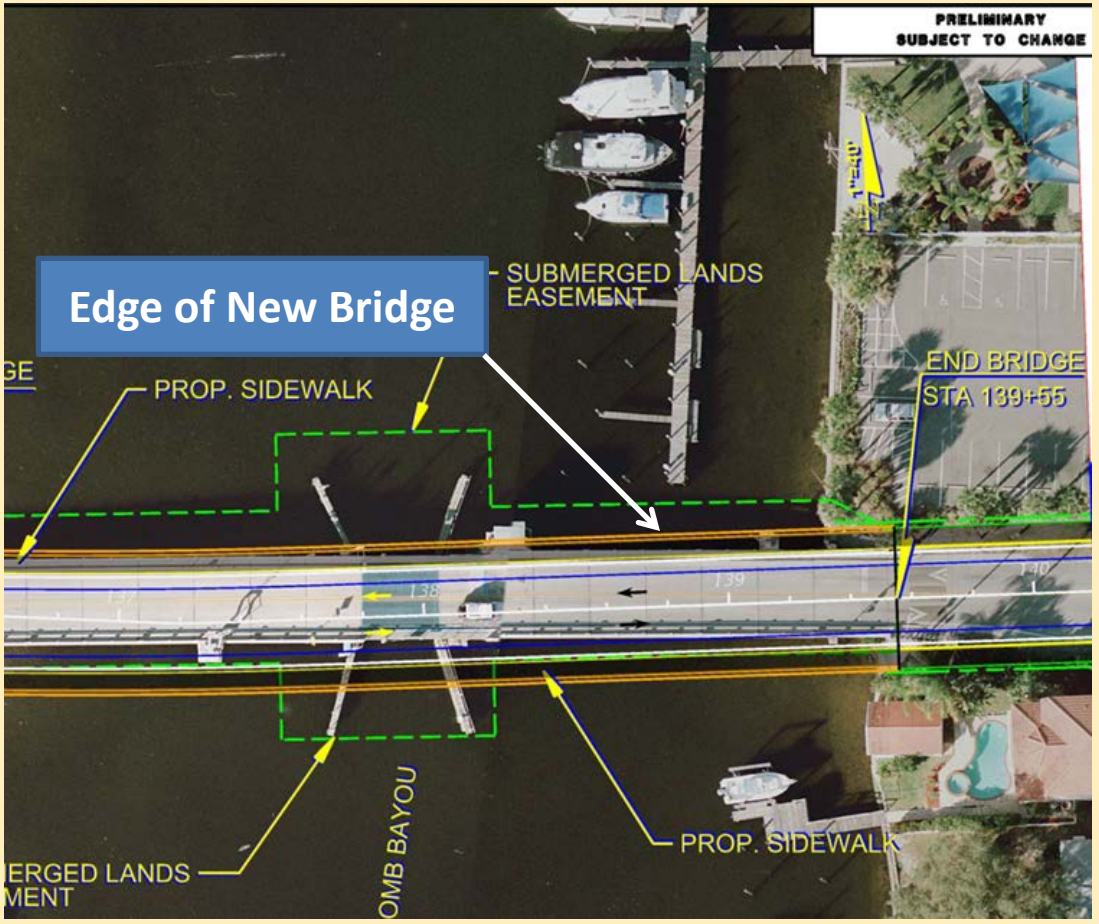
New Movable Bridge Impacts to Yacht Club

- Change in View looking to the South

(Bridge Profile Changes, limited gravity wall)

New Movable Bridge Impacts to Yacht Club

- South Edge of Bridge 8 feet closer to docks



Existing Bridge

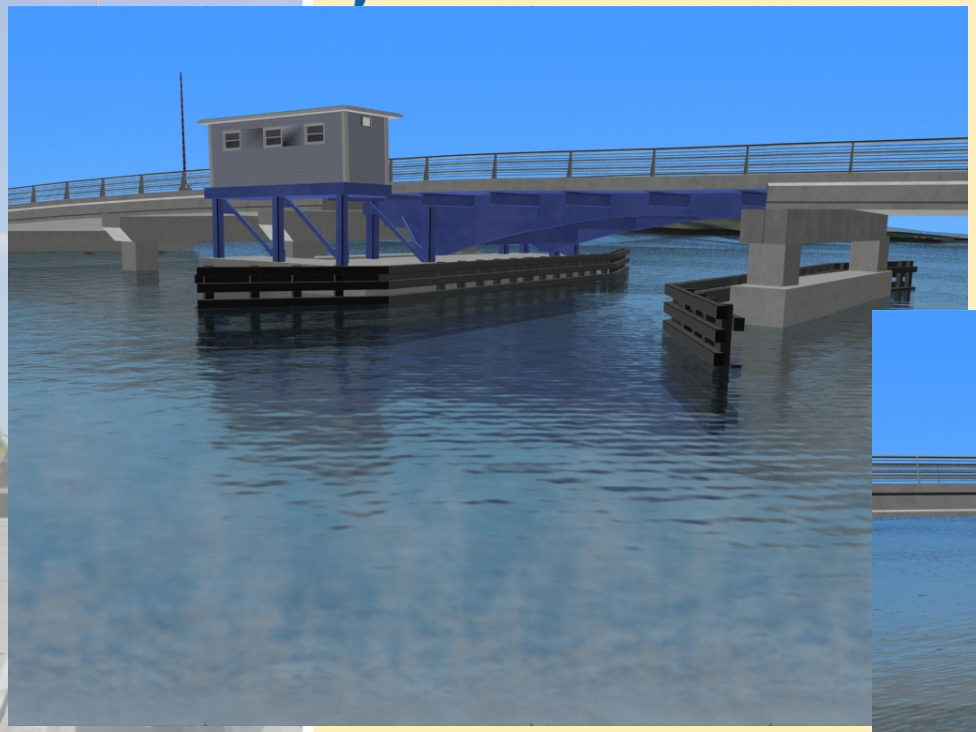
New Movable Bridge

"Generic" Movable Bridge

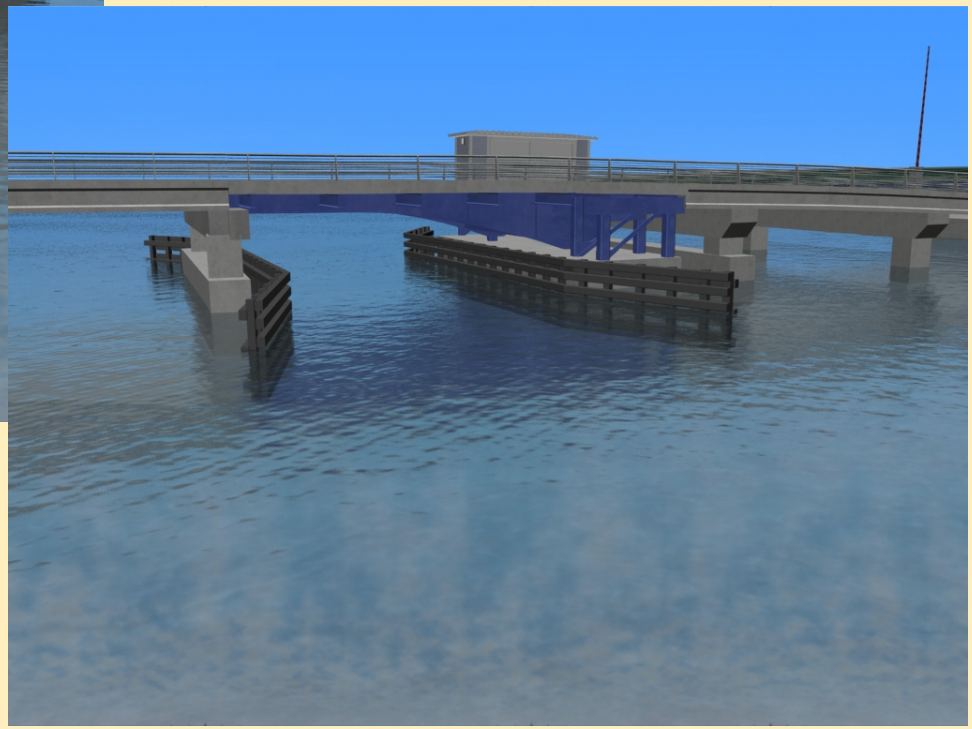
New Movable Bridge

"Industrial" Style
Rolling-Lift Bascule Bridge

New Movable Bridge



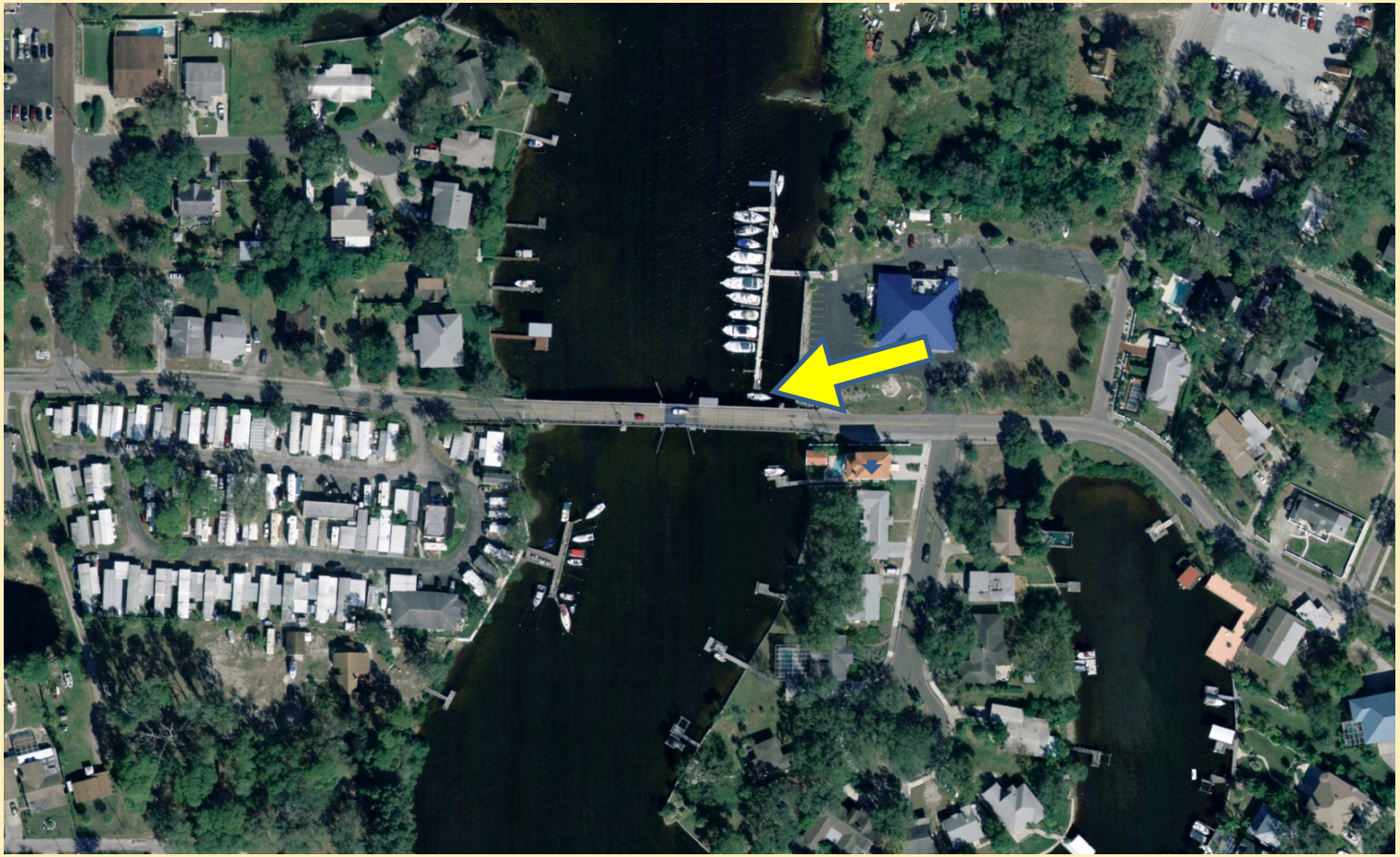
3D Model Views
Industrial Style



Pinellas County

View from Tarpon Springs Yacht Club Entrance

Photo Location and View Direction



View from Tarpon Springs Yacht Club Entrance

Existing Bridge

Pinellas County

View from Tarpon Springs Yacht Club Entrance

Proposed Movable Bridge

View from Dock Southeast of Bridge

Photo Location and View Direction

View from Dock Southeast of Bridge

Existing Bridge

Pinellas County

View from Dock Southeast of Bridge

Proposed Movable Bridge

View from Dock Northwest of Bridge

Photo Location and View Direction

View from Dock Northwest of Bridge

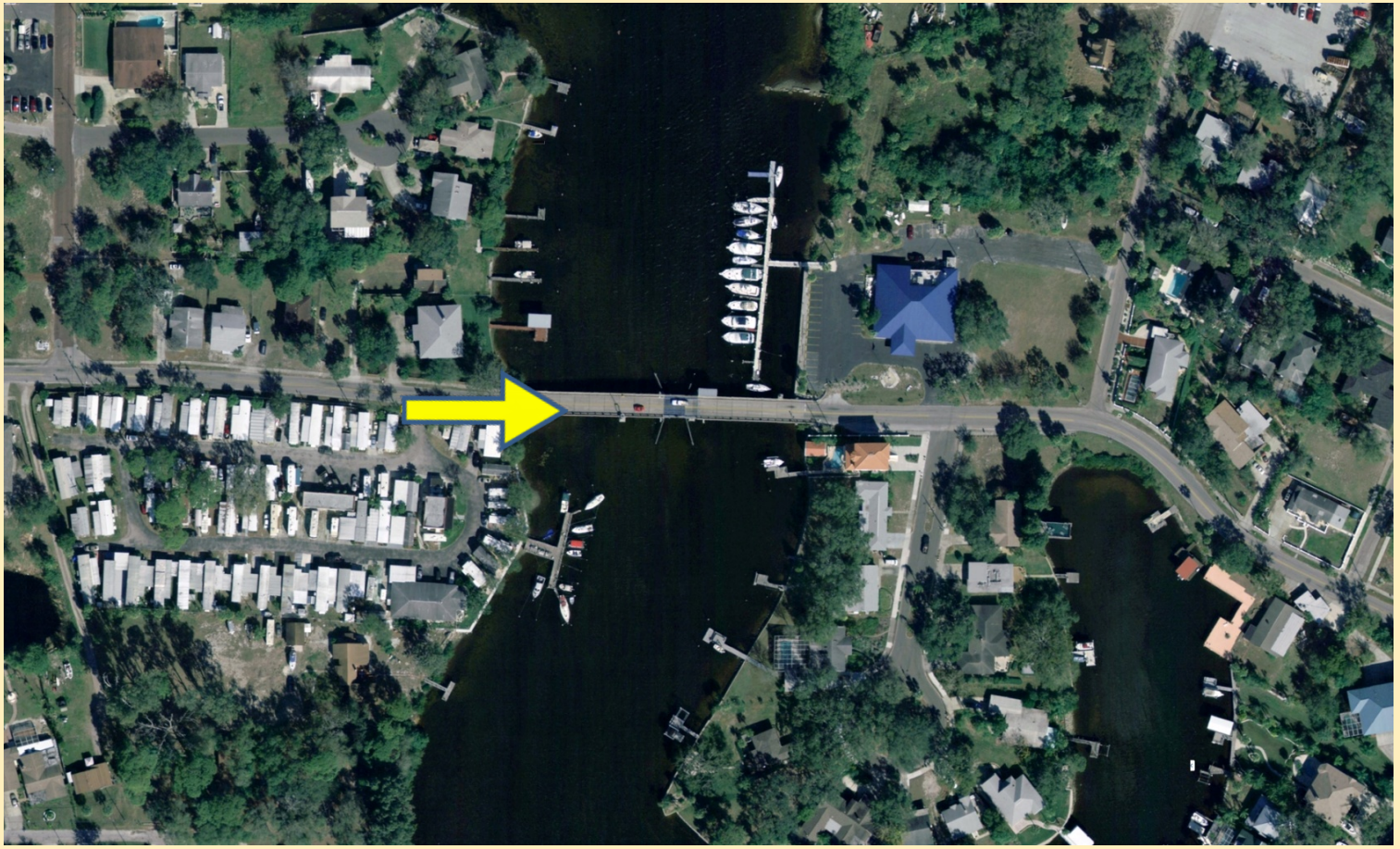
Existing Bridge

View from Dock Northwest of Bridge

Proposed Movable Bridge

View from Mobile Home Park Entrance Driveway

Photo Location and View Direction



View from Mobile Home Park Entrance Driveway

Existing Bridge

Pinellas County

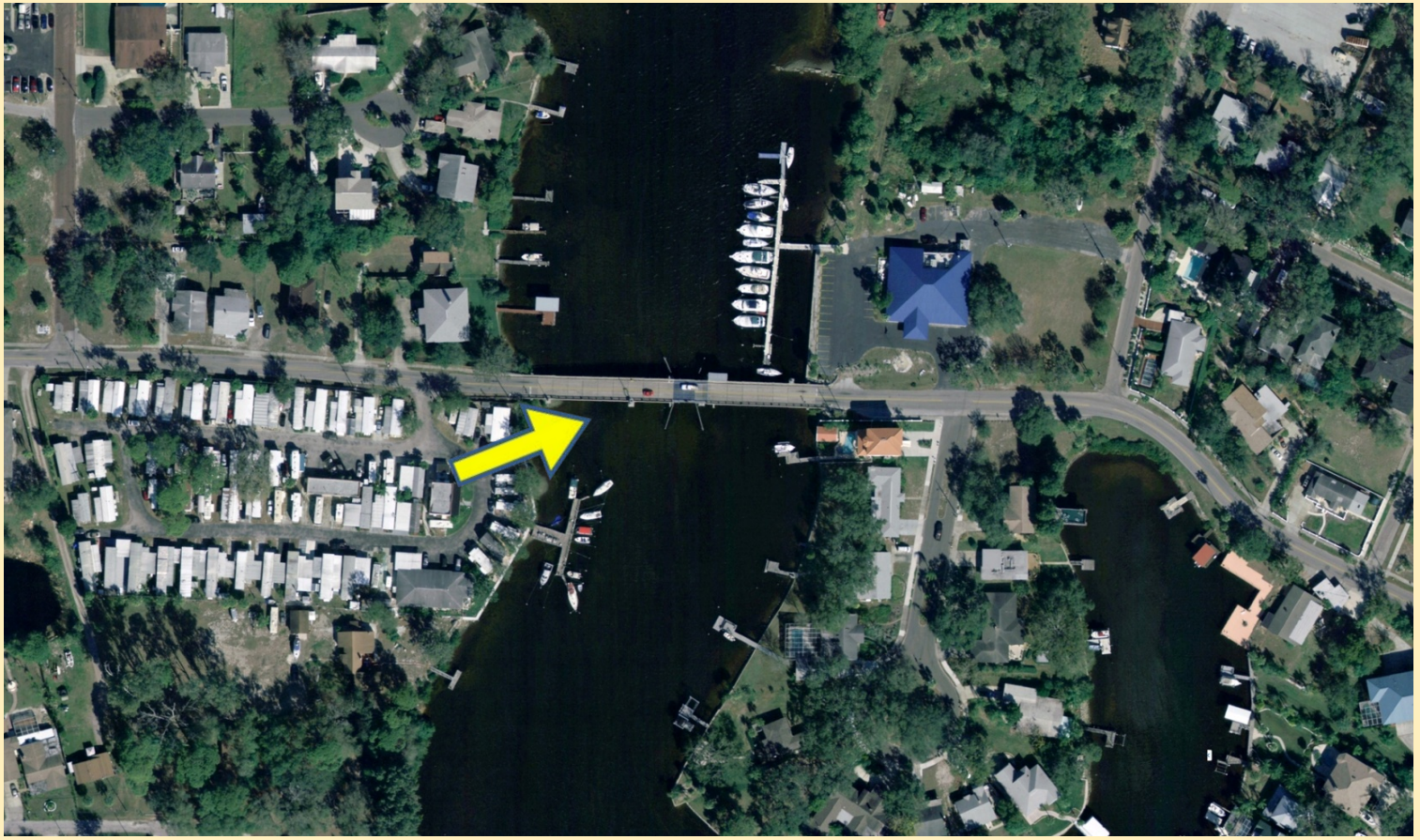
View from Mobile Home Park Entrance Driveway

Proposed Movable Bridge

ECDriver & Associates, Inc.

View from Mobile Home Park Waterfront

Photo Location and View Direction



View from Mobile Home Park Waterfront

Existing Bridge

View from Mobile Home Park Waterfront

Proposed Movable Bridge

New Movable Bridge - Aesthetics

If Conceptual Design for the Movable Bridge is

- Selected as "Preferred Alternative" after the Public Hearing

and

- Approved by FHWA

Aesthetics will be determined in Design Phase

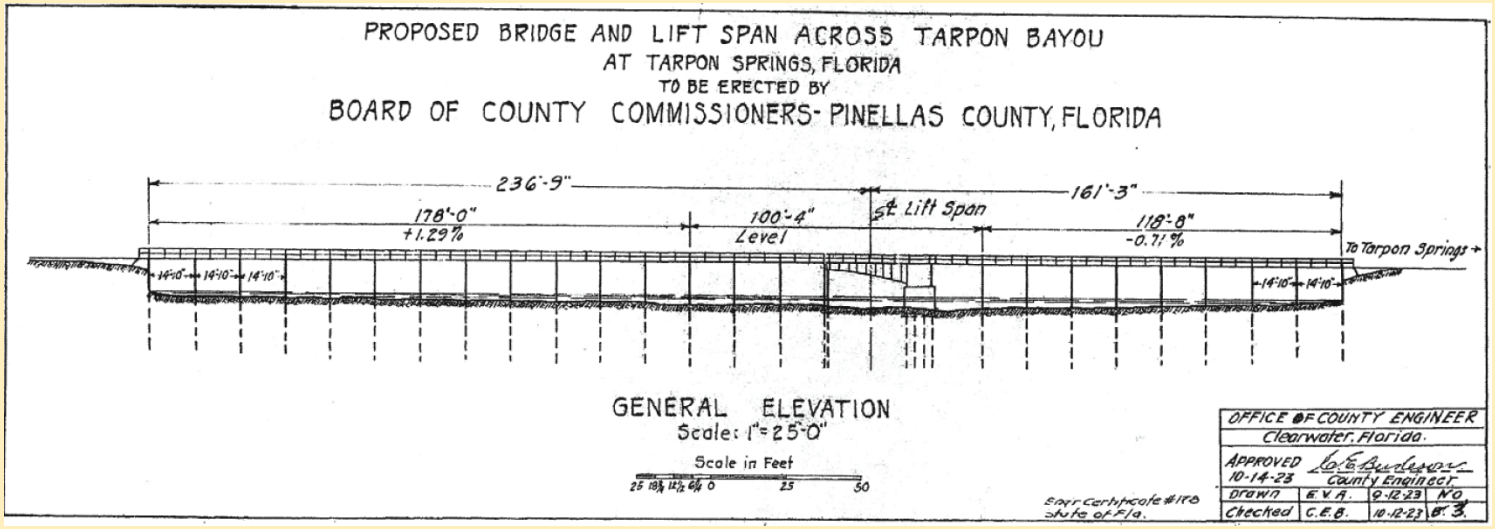
Future Opportunities for Public Input

Minimization/Mitigation Options

Required Mitigation

Historic American Engineering Record (HAER) Documentation

- Large format photographs
- Written history/narrative
- Historic bridge plans copied on archival paper



Minimization/Mitigation Options

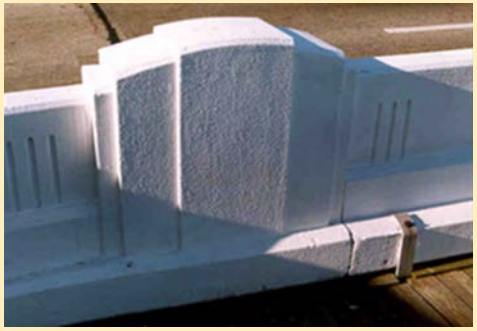
Possible Mitigation

- Choose Bridge Rail to Preserve Viewshed from Bridge
- Educational Kiosk/Monument in Public Space
  - On or Near Bridge
  - In City Park or Museum
- Incorporate Monument into Second Control House
- Incorporate Portion of Original Bridge into New Bridge

Minimization/Mitigation Options

Example – Treasure Island

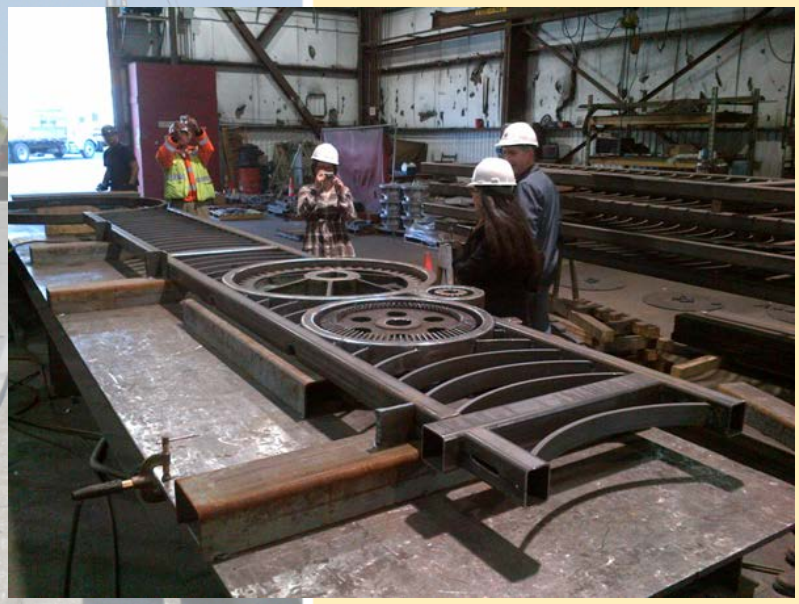
Monument Bridge in City Park – Treasure Island

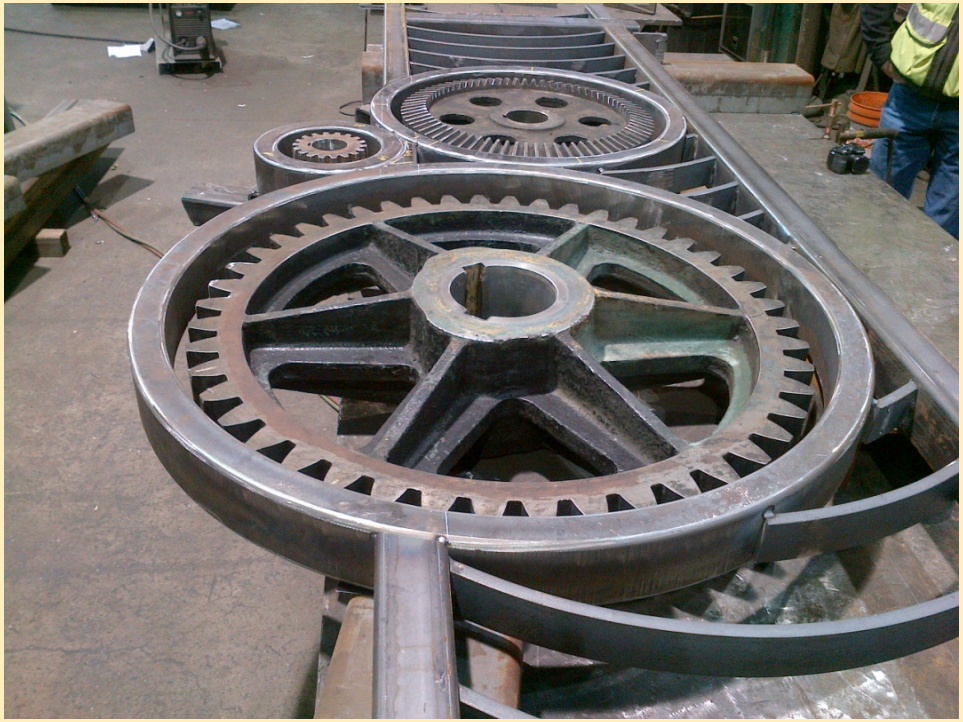


Minimization/Mitigation Options

Example - South Park Bridge, Seattle, WA

Incorporating Part of Existing Bridge into New Bridge





Minimization/Mitigation Options

Incorporating Part of Existing Bridge into New Bridge

Example:

South Park Bridge

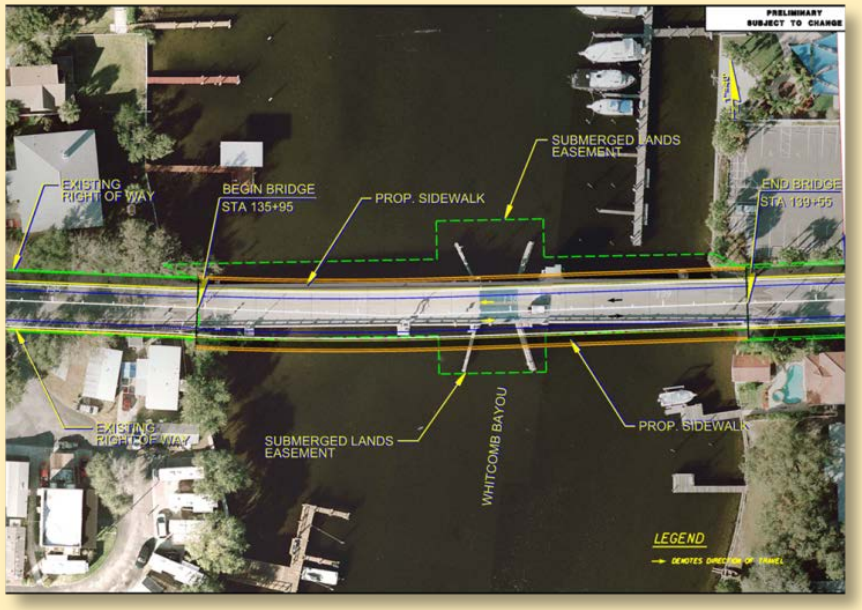
Next Steps in PD&E Process

Present Recommended Alternative at Public Hearing in February 2014

- Presentation will include discussion of all alternatives considered
- Public comments recorded by court reporter
- Comments included in Project Record

Next Steps in PD&E Process

- CRC Meeting
  - Continue coordination of Section 106 Issues
  - Solicit input on possible mitigation if Movable Bridge is selected as “Preferred Alternative”



Next Steps in PD&E Process

- Consider Public Hearing Input
- Finalize Engineering/Environmental Documents
- Continue SHPO Coordination
  - Complete Section 106 documents
  - Develop MOA
    - SHPO, FHWA, FDOT,
    - USCG, County

Submit Final Documents to FHWA for Approval

Thank You!

Questions and Discussion

From:	Cyndi Tarapani
To:	Venables, Ann
Cc:	Tony Horrnik; Phillips, Jim; Linda Anderson; Paul Bellhorn
Subject:	RE: Beckett Bridge PD&E Study - Offer to Meet with You at the Bridge to Discuss Your Concerns
Date:	Friday, December 20, 2013 9:48:02 AM

Dear Ann,

The Tarpon Springs Area Historical Society Board of Directors would like to hear a presentation from the County and Consultant group to hear about the proposed new bridge. We suggest either January 15 or January 16 at 6 pm. We would be happy to host you at the Historic Train Depot, 160 E. Tarpon Avenue, downtown Tarpon Springs. The Depot has a large meeting room that can accommodate our group. We also have a podium, microphone and projector that you can use but you will need to bring your own computer if you plan a powerpoint presentation.

Please let me know if either of these dates work for your group. Thank you for offering to meet with the Historical Society on this important issue.

Cyndi Tarapani, President
Tarpon Springs Area Historical Society
O: 727-849-7588 C: 727-642-2030

From: Cyndi Tarapani [mailto:ctarapani@fldesign.com]
Sent: Thursday, November 21, 2013 12:49 PM
To: 'Venables, Ann'
Cc: 'Tony Horrnik (thorrnik@co.pinellas.fl.us)'; 'Phillips, Jim'; 'Linda Anderson (Linda.Anderson@dot.gov)'; 'Paul Bellhorn (pbellhor@co.pinellas.fl.us)'
Subject: RE: Beckett Bridge PD&E Study - Offer to Meet with You at the Bridge to Discuss Your Concerns

I have received your e-mail and your offer to discuss my concerns. I think the more appropriate method is for you to make a presentation to the Tarpon Springs Historical Society that I represent. I will review this with the Board of the Historical Society and respond with a meeting date. Thanks.

Cyndi Tarapani, VP, Planning
Florida Design Consultants
O: 727-849-7588 C: 727-642-2030

From: Venables, Ann [mailto:ann.venables@urs.com]
Sent: Thursday, November 21, 2013 10:01 AM
To: ctarapani@fldesign.com
Cc: Tony Horrnik (thorrnik@co.pinellas.fl.us); Phillips, Jim; Linda Anderson (Linda.Anderson@dot.gov); Paul Bellhorn (pbellhor@co.pinellas.fl.us)
Subject: FW: Beckett Bridge PD&E Study - Offer to Meet with You at the Bridge to Discuss Your Concerns
Importance: High

Dear Ms. Tarapini,

As stated in the email below, we are offering to meet with you to address your concerns about the Beckett Bridge PD&E study.

We would appreciate confirmation that you received our invitation.

Sincerely,

Ann Venables,

URS Corporation

From: Venables, Ann
Sent: Tuesday, November 12, 2013 2:50 PM
To: ctarapani@fldesign.com
Cc: Phillips, Jim; Tony Horrnik (thorrnik@co.pinellas.fl.us)
Subject: Beckett Bridge PD&E Study - Offer to Meet with You at the Bridge to Discuss Your Concerns

Ms. Tarapini,

If you believe it would be beneficial, Jim Phillips and I are available to meet with you to review the engineering issues that affect the feasibility of rehabilitation of the existing Beckett Bridge and personally address your questions and concerns. We suggest meeting at the bridge so that Jim Phillips, Chief Engineer for this project, can better demonstrate the engineering issues.

Please let us know when you might be available and we can schedule a time to meet you.

Sincerely,

Ann Venables, AICP
Project Manager/Senior NEPA Planner
URS Corporation
7650 W. Courtney Campbell Causeway

Suite 700
Tampa, Florida 33607

Direct: 813.675.6725
Mobile: 727.410.3289
Main: 813.282.1711
ann.venables@urs.com