BROWARD COMMUTER RAIL (BCR)

PROJECT DEVELOPMENT & ENVIRONMENT (PD&E) STUDY

FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT), DISTRICT 4

BROWARD COUNTY, FLORIDA • FPID: 448942-1

Project Update for:
Middle River Terrace Association
Project Update
February 23, 2022

Agenda and Process

- ❑ Project Background and Overview
- ❑ Locally Preferred Alternative (LPA) considerations and process
- ❑ New River Crossing Alternatives
- ❑ Project Costs and Funding
- ❑ Next Steps

Benefits of Commuter Rail

MOBILITY – More and enhanced Transit options can increase transit use, improve travel times and provide congestion relief on roadways

ENHANCE QUALITY OF LIFE - Enhances quality of life by increasing mobility, transportation choices, and access to jobs and services

ECONOMIC & RESIDENTIAL GROWTH - Economic development increases tax base, affordable/workforce housing incentives, and funding and use of overall transit facilities

COMMUTER RAIL BENEFITS FOR EMPLOYERS - Employer benefits include access to a wider talent pool and enhanced productivity

ENVIRONMENTAL - Environmental benefits include sustainability, reduced vehicle emissions, and cleaner air

Overview of Project

- Broward MPO endorsed Tri-Rail Coastal Link (TRCL) LPA in 2010 and is unfunded in needs plan (MTP)
- Miami-Dade has advanced the NE Corridor Project from Aventura to Downtown Miami with FTA
- Per Memorandum of Understanding (MOU)
  - FDOT will lead the environmental study and technical analysis
  - Broward County is responsible for the access fee, maintenance, operations, the Finance Plan and Consensus Building
- Aventura to Deerfield Beach (27 miles of the FEC corridor)
- Technical recommendations have been made for 6 station locations (general) in Broward
- Coordination with Brightline, FECR, USCG, FTA, MPO, municipalities, Broward and Miami-Dade Counties
- Stakeholder meetings and workshop focused on the New River Crossing

Rail Services in the FEC Corridor

- Study is being conducted in coordination with many parties that have an interest in the FEC railroad corridor
- Shared-use corridor with FEC freight trains and intercity (Brightline) passenger trains
- Florida East Coast Railway, L.L.C. owns the FECR right of way and operates freight service
- Brightline operates inter-city passenger rail trains via a passenger easement in the corridor

Locally Preferred Alternative (LPA)

- LPA must be approved by Broward County Commission and also approved by Broward MPO prior to entering the FTA Project Development and NEPA process
- Approval of an LPA is not a commitment to fund and build the project
- Primary LPA components include:
  - Mode – Commuter Rail Transit
  - Technology – Push-pull locomotive
  - Alignment – Florida East Coast Railroad Corridor, utilizing Brightline passenger rail easement and crossing of the New River
  - Recommended Station Locations
    - Deerfield Beach (south of Hillsboro Blvd.)
    - Pompano Beach (north of Atlantic Blvd.)
    - Oakland Park (north of Oakland Park Blvd.)
    - Ft. Lauderdale (Downtown Brightline Station)
    - Airport Station (joint station with Brightline)
    - Hollywood (north of Hollywood Blvd.)
  - Selection of an alternative to cross the New River
    - Low-Level Bascule Bridge
    - Mid-Level Bascule Bridge
    - High-Level Fixed Bridge
    - Tunnel

Note: Significant opposition to selected/approved LPA could cause delays and/or result in the project not being allowed into FTA's Project Development or requiring a more significant environmental document (EIS).

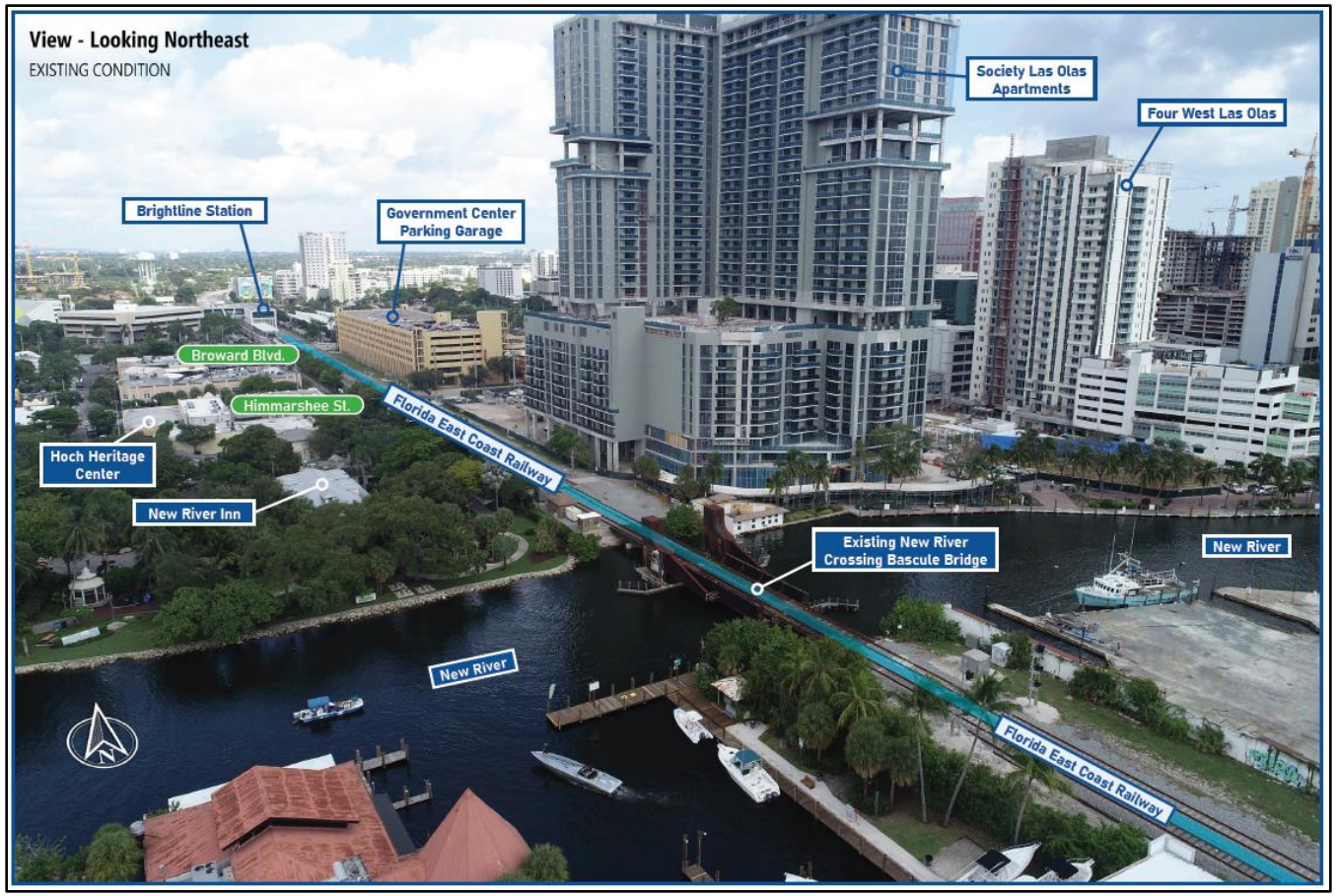
New River Crossing Analysis

❑ Considerations

- Navigation
- Freight and Brightline operations
- Downtown Station (existing Brightline Station) and access to it
- Historic District
- Numerous communities in downtown area (RW, Noise, Visual, other)
- Connectivity of neighborhoods(bike, ped, vehicle)
- Vehicle Traffic Operations

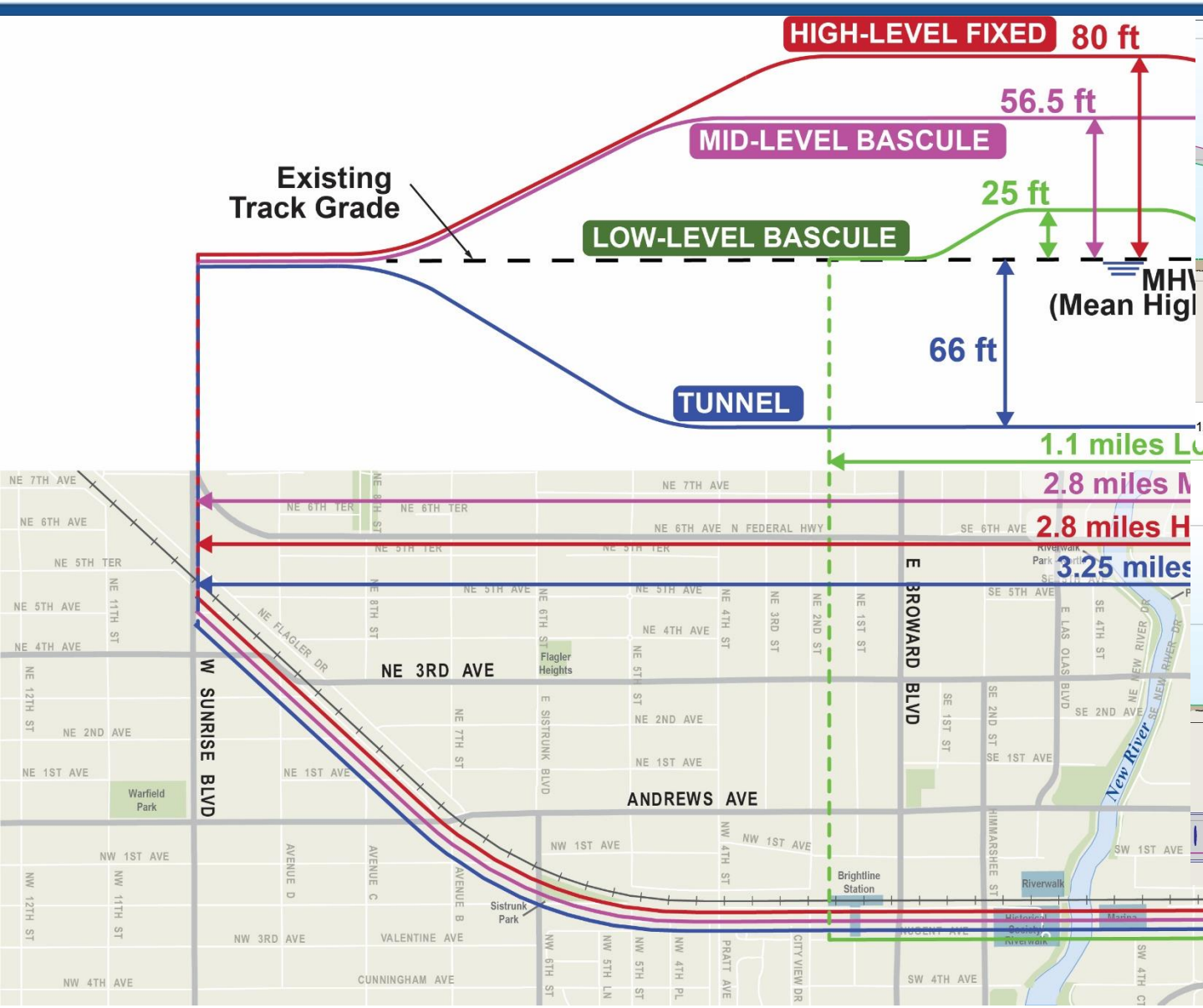
❑ Four Crossing Alternatives

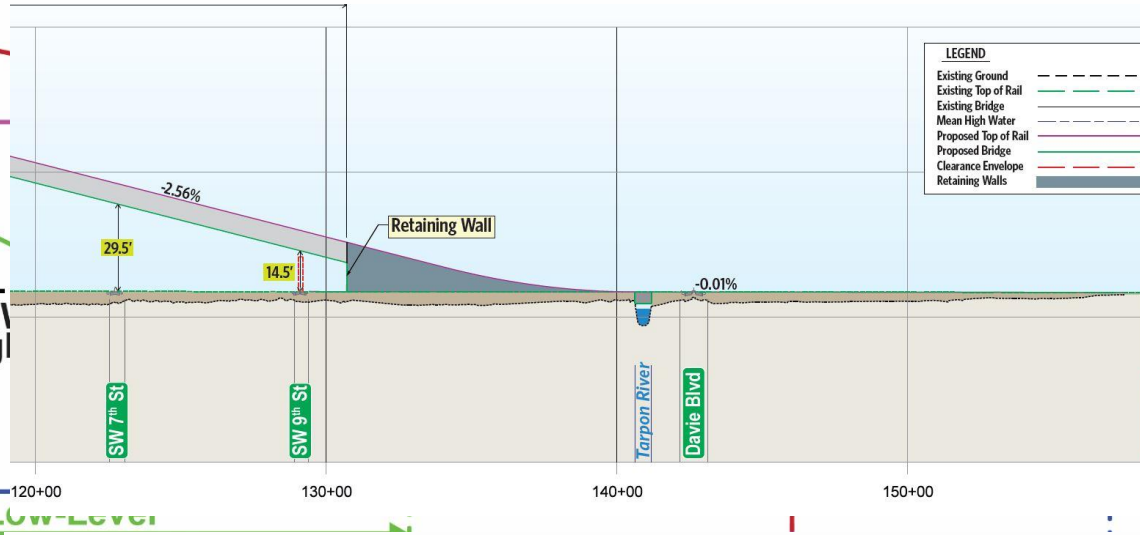
- Low-Level Bascule Bridge: $240* Million
- Mid-Level Bascule Bridge: $444* Million
- High-Level Fixed Bridge: $452* Million
- Tunnel: $1.82* Billion



*Note: Preliminary construction cost estimates shown, do not include RW costs.

Alternatives Overview



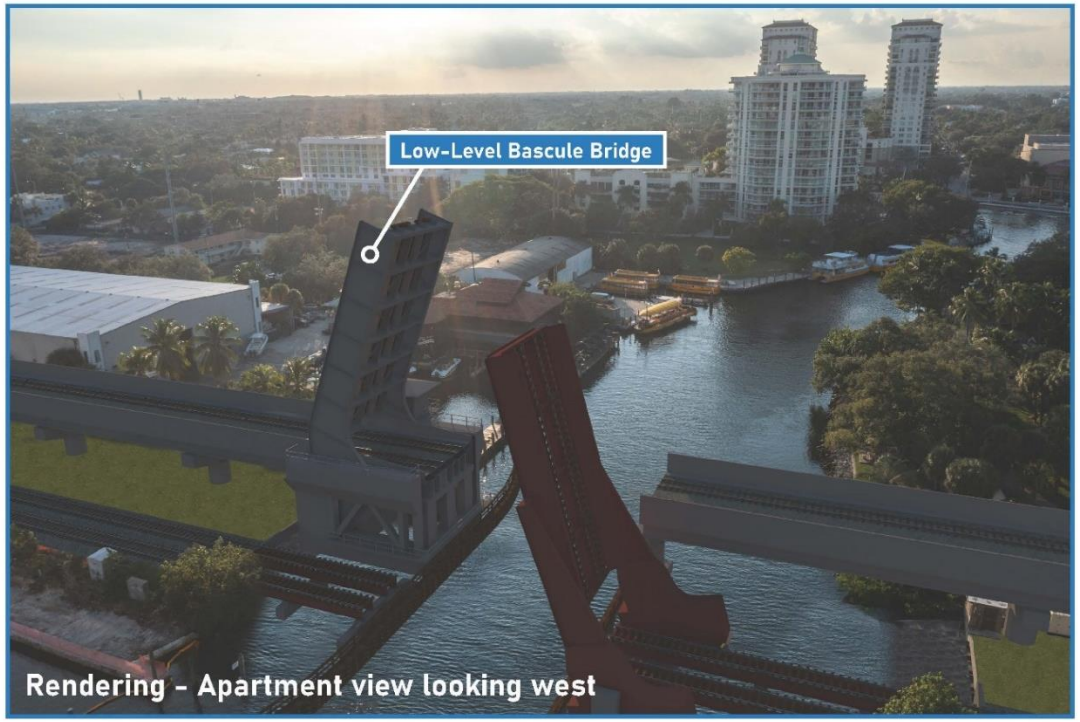


Note: The lengths shown above includes the crossing alternative length plus necessary rail track work associated with each alternative.

Low-Level Alternative: Technical Take-aways

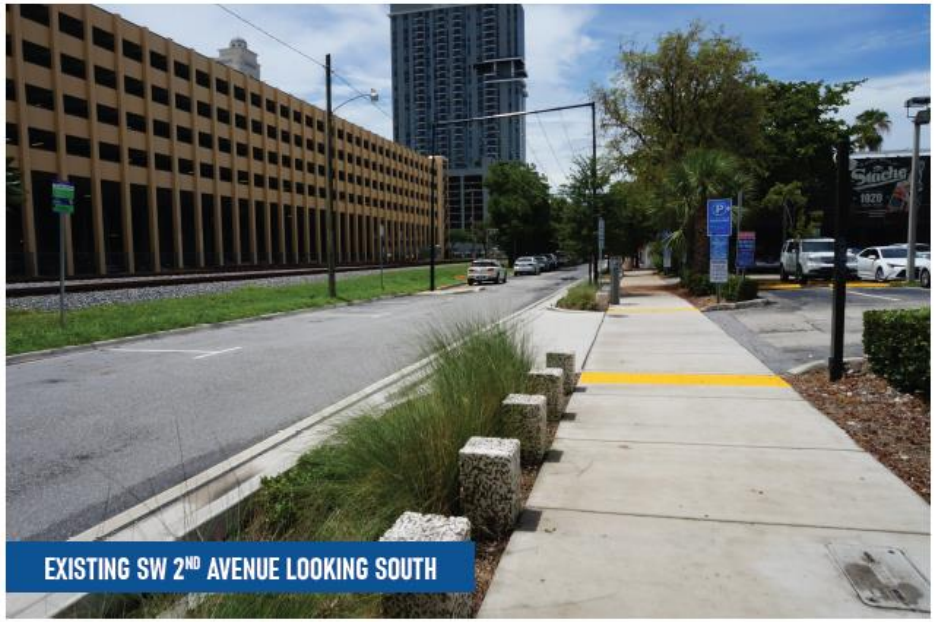
- Freight Trains remain on existing tracks and will continue to use existing bridge that will be shifted east
- $240 M for Construction and no private Right-of-Way required
- No bridge throughout the downtown area
- Closes Grade Crossing at SW 5th Street
- Does not By-Pass the Broward Boulevard (a separate road project could be evaluated to place Broward Blvd under the tracks and potentially re-purpose some of the area above)
- Does accommodate 90% of Navigation and will most likely operate on a schedule that will reduce boat congestion at the crossing and provide for a known bridge operating schedule

Rendering - River view looking east



Rendering - Apartment view looking west

Artistic Rendering – Low-Level Alternative



EXISTING SW 2ND AVENUE LOOKING SOUTH

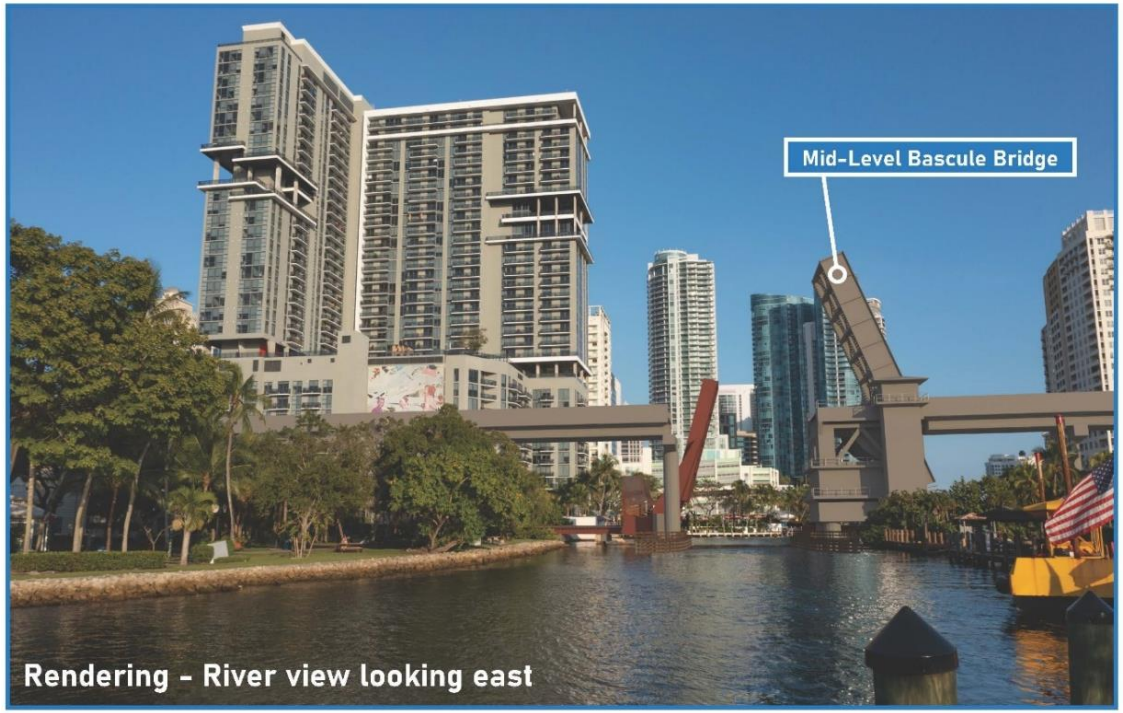
DESIGN FEATURES CAN ACTIVATE SPACES AND PROTECT NEIGHBORHOOD CHARACTER AND CONTEXT:

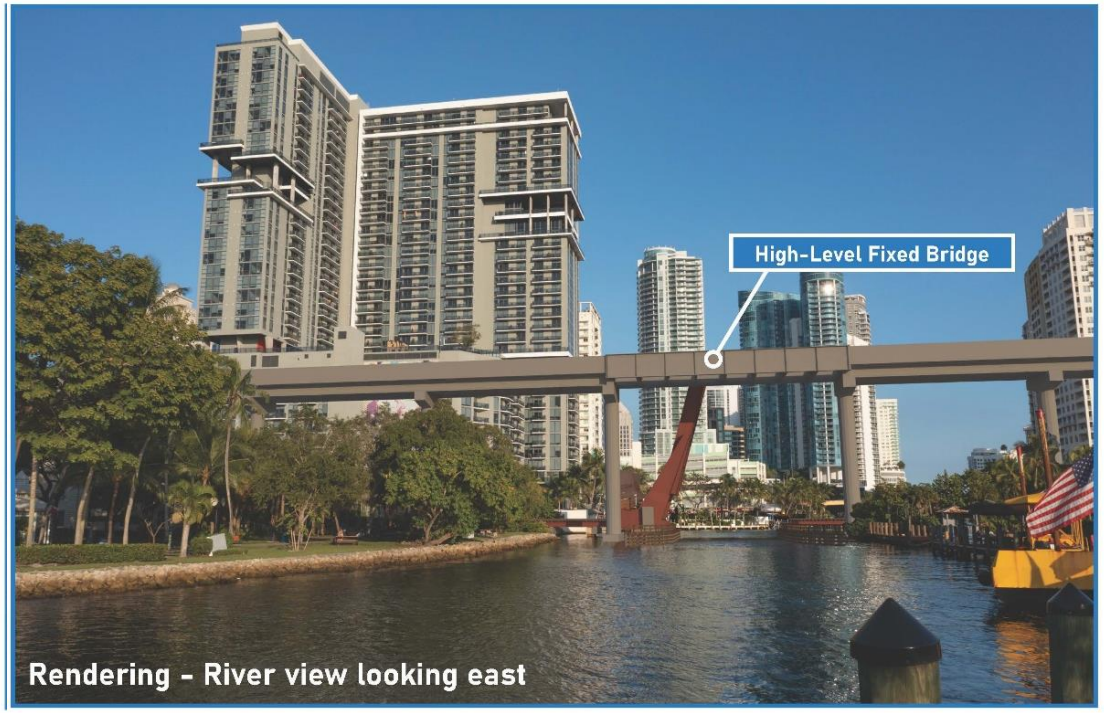
- Pavers can help convert a one-way street into a shared street or temporary plaza
- Landscaping can soften structures by adding nature in contrast to hardscape
- Public art on a retaining wall helps create a sense of place and can correspond with neighborhoods and history as well as other local art
- Lighting can be multi-colored and provide enhanced night-time aesthetics

ARTISTIC RENDERING: SW 2ND AVENUE LOOKING SOUTH TOWARDS HIMMARSHEE

Mid-Level and Fixed Alternative: Technical Take-aways

- Freight Trains remain on existing tracks and will continue to use existing bridge that will be shifted east Mid-Level and High-Level Bridges By-Pass Broward Boulevard
- Mid and High Level require bridge structure throughout the downtown area (charettes and aesthetic design of structures most likely will be required if these alternatives move forward)
- Mid and High Level do not close any grade crossings
- Mid Level will have a large bascule pier and requires additional maintenance and a full-time bridge tender
- Has full support of the Marina community with the Mid-Level accommodating 99% of boats when closed
- $444M for construction of the Mid-Level and $452M for the High-Level and both require $98M in Right of Way





Artistic Rendering – Mid-Level Alternative

EXISTING HIMMARSHEE/SW 2ND AVENUE LOOKING SOUTH

Infrastructure introduced as design feature with additional streetscape to preserve openness and access:

- Aesthetic treatments for column and sound barrier designs
- Aesthetic closed-bottom box
- Pavers add color and texture and visual separation
- Crosswalks delineate safe area for crossing

ARTISTIC RENDERING OF INTERSECTION OF HIMMARSHEE AND SW 2ND AVENUE LOOKING SOUTH

Artistic Rendering – High-Level Alternative

Infrastructure introduced as design feature with additional streetscape to preserve openness and access:

- Aesthetic treatments for column and sound barrier designs
- Aesthetic closed-bottom box
- Pavers add color and texture and visual separation
- Crosswalks delineate safe area for crossing

Artistic Rendering – Mid/High-Level Alternative

EXISTING SW 9TH STREET LOOKING WEST

DESIGN ENHANCES CONNECTIVITY AND IS CONSISTENT WITH NEIGHBORHOOD SCALE:

- Steel bridge and sample artistic columns
- Access to Laudertrail is easy to see, safe and attractive
- Landscaping and crosswalks help to define spaces for trail users

ARTISTIC RENDERING AT SW 9TH STREET SOUTH OF RIVER LOOKING WEST

Typical Street Crossing: Mid/High Level Alternative

SISTRUNK BOULEVARD LOOKING EAST

Design preserves openness and accessibility and neighborhood character of Flagler Arts and Technology (FAT) Village:

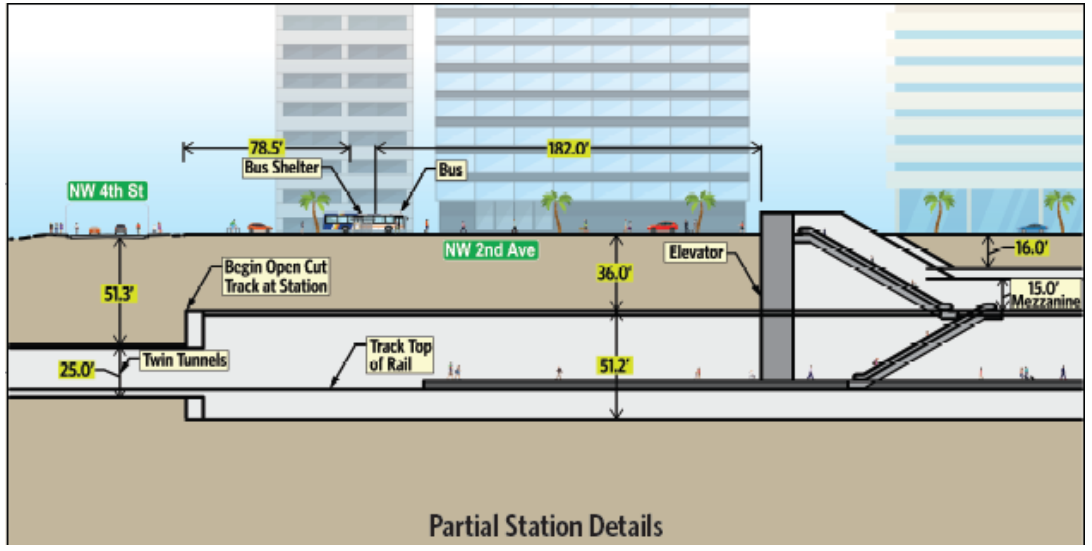
- Artistic columns and decorative railing
- Column design allows for narrower columns to maintain visibility
- Pavers and landscaping soften the edges of the street

ARTISTIC RENDERING SISTRUNK BOULEVARD LOOKING EAST

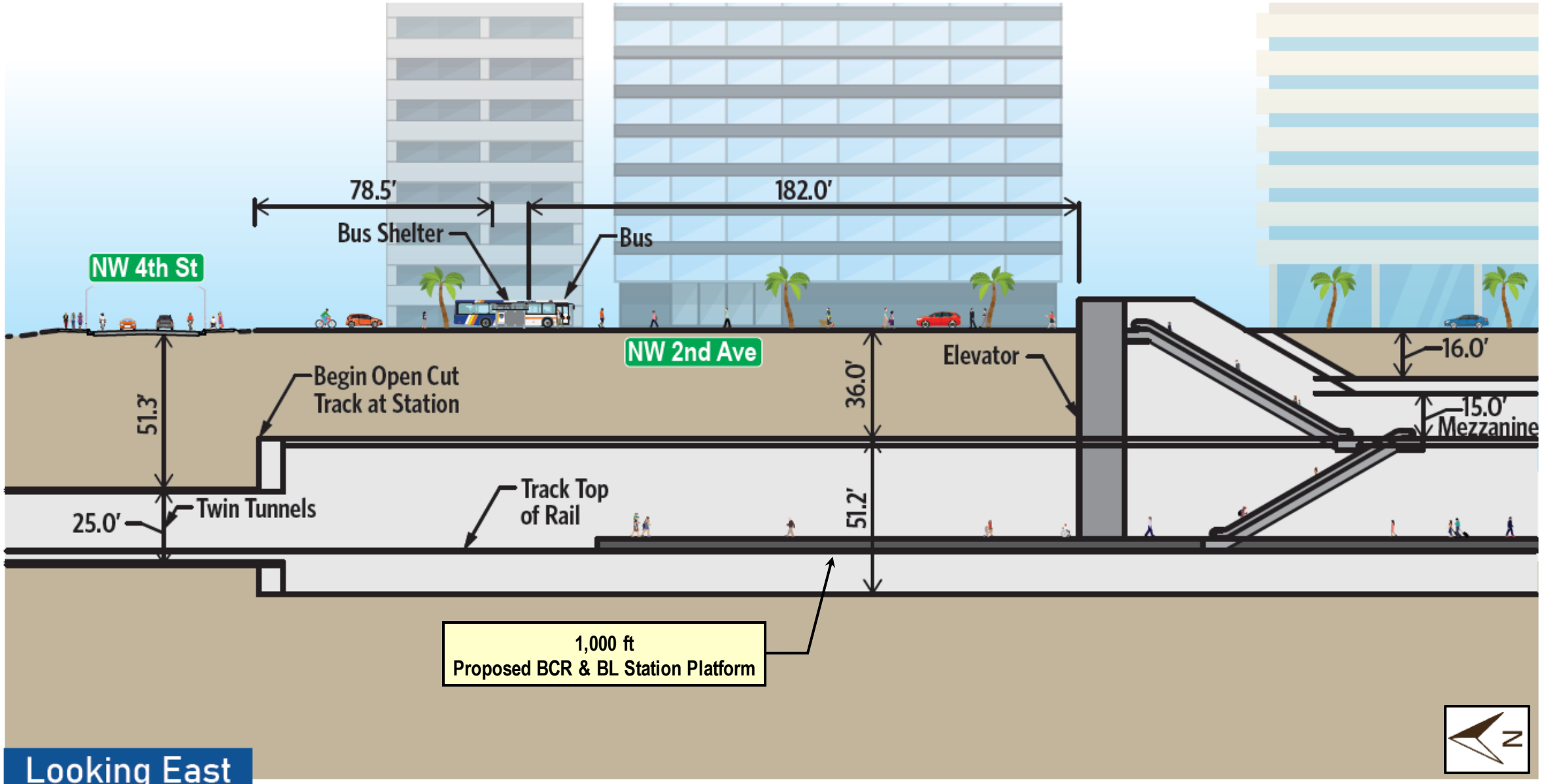
Examples of Bridges through Urban Areas

Tunnel Alternative: Overview

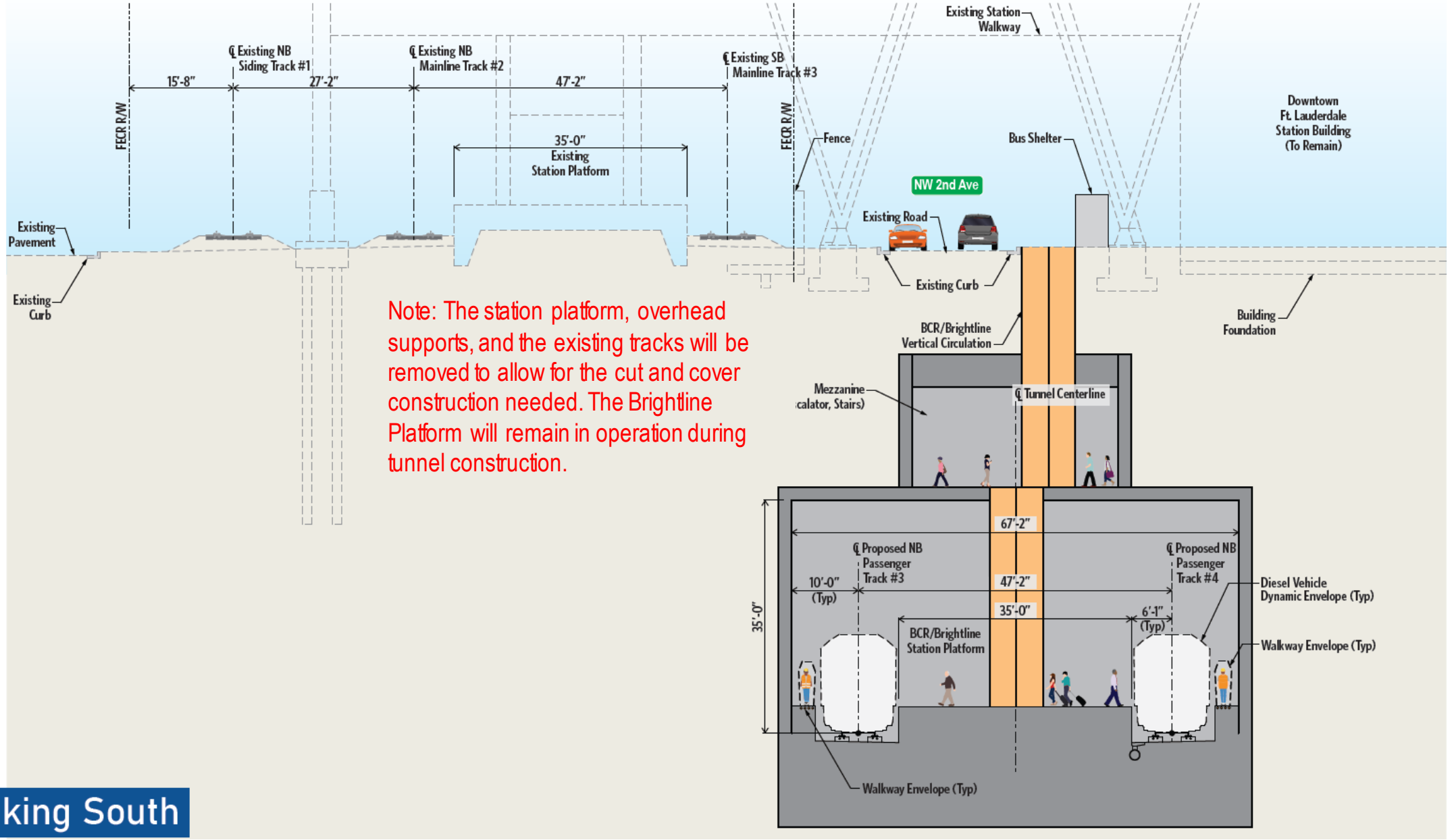
- Supported by many City of Fort Lauderdale stakeholders, including the city commission
- Will provide the best noise protection and least visual concerns in the areas between the portals
- Bypasses both Broward and Davie Boulevards with passenger rail
- $1.8 Billion for construction and $150M in Right of Way,
- Lengthy permitting and construction schedule
- Larger local disruptions for trucking of excavation and dewatering as well as concern for the protection of the existing structures in the area with the tunneling operations
- Higher risks for contamination, permitting, construction and resiliency than the other alternatives



Tunnel Alternative: Underground Station Elevation View



Tunnel Alternative: Underground Station Section View



Note: The station platform, overhead supports, and the existing tracks will be removed to allow for the cut and cover construction needed. The Brightline Platform will remain in operation during tunnel construction.

Looking South

Tunnel Alternative

PORT MIAMI TUNNEL

VENTILATION REQUIRED AT EITHER END OF UNDERGROUND STATION

PORT MIAMI TUNNEL BORING MACHINE

Financial Analysis: Preliminary Cost Estimate

New River Crossing Alternative Cost Table ($2021)				
Alternative	**Low-Level Bascule**	**Mid-Level Bascule**	**High-Level Fixed**	**Tunnel**
New River Crossing	$240 M	$444 M	$452 M	$1.82 B[4]
Right-of-Way (Private)	$0	$98 M	$98 M	$148 M
Operations & Maintenance[1]	- Bridge Tender - Mechanical Systems	- Bridge Tender - Mechanical Systems	- Regular Maintenance	- Underground Station - Ventilation Systems
Corridor Cost Table ($2021)				
Corridor Capital Cost[2]	$495 M			
Right-of-Way (Stations)	Under Analysis will be the same for each alternative			
Total Capital Cost	$735 M	$1.04 B	$1.05 B	$2.46 B
Other Project Cost Table ($2021)				
Operations & Maintenance[1]	$18 - $28 M	$18 - $28 M	$17 - $27 M	$18 - $28 M
Access Fee and Agreements[3]	TBD			

[1] O&M costs are per year and are not calculated in the total cost. There are differences among the NRC alternatives , with the tunnel O&M costs expected to increase in the outer years.
[2] Capital Cost Includes Construction, Stations, Vehicles, Yards, Parking, etc. (Costs shown are in 2021 dollars and will need to be escalated for year of expenditure
[3] Access Fee and Agreements - A negotiated fee to allow commuter trains to use the Brightline passenger easement on the FEC corridor, also may need to cover potential compensation for temporary and permanent operational impacts associated with the New River Crossing and station impacts
[4] Tunnel construction cost does not address potential need for resiliency infrastructure that may be necessary, such as portal covers, additional pumps, salt water intrusion protection

NRC Alternatives Evaluation Matrix

- The LPA will be refined and evaluated against the No-Build Alternative during the NEPA environmental process.
- Subject to change: All categories will require further analysis as the project continues.

Evaluation Category	Low-Level Bascule	Mid-Level Bascule	High-Level Fixed	Tunnel
Navigational Accommodations				
Vehicular Traffic Operations				
Socio-Cultural Resources (Historic)				
Contamination Risk				
Resiliency				
Right-of-Way Impacts				
Noise				
Neighborhood Connectivity - Bicycle/Pedestrian/ Vehicle Local Connections				
Operations and Maintenance Costs (O&M)				
Capital Costs	See Cost Table on Slide 14			

Worst | Better | Best

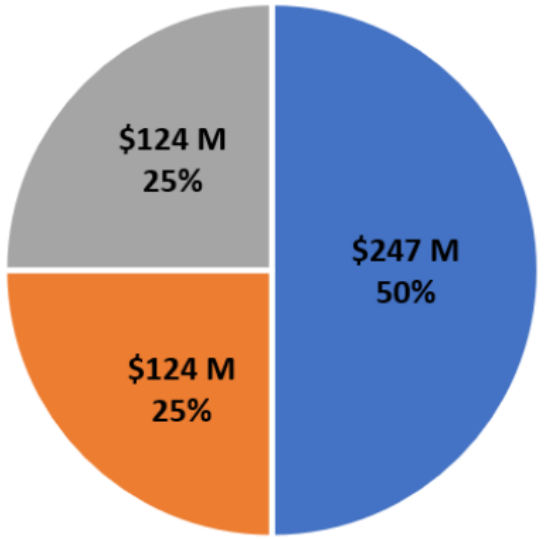
Preliminary Funding Process

- Capital Improvement Grant (CIG) funding is competitive, and the capital cost must meet FTA's cost effectiveness requirements.
- Corridor cost is split funded (per the graphs below) and the NRC Capital Cost, Corridor Access Fee, and Operations and Maintenance are local responsibilities.

Eligible Capital Cost of Corridor

(Does not include NRC Alternative)

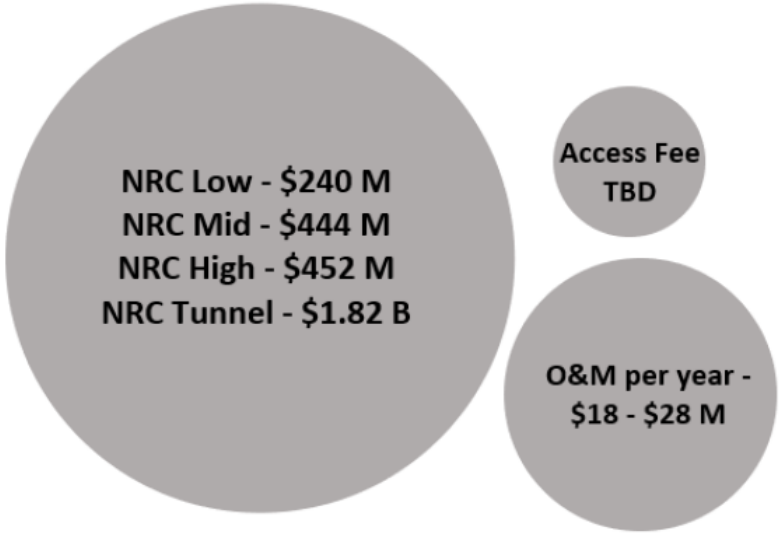
FTA Capital Improvement Grant Funding



Note: Right of Way Costs are eligible, but not included

NRC Construction and Corridor Annual Costs

Non-FTA Capital Improvement Grant Funding



Note: Although NRC Costs are not part of the FTA CIG Funding they could be eligible for federal grants and state funding

PD&E Study Milestone Schedule

PROJECT MILESTONES	2021							2022											2023											
	Q1-Q2			Q3		Q4		Q1			Q2			Q3			Q4			Q1			Q2			Q3			Q4		
	JAN		JUN	AUG	SEP	OCT	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Begin Study	◆																														
Data Collection	▬	▬	▬	▬																											
Public Kick-off Meeting				◆																											
Engineering and Environmental Analyses				▬	▬	▬	▬	▬																							
Financial Plan					▬	▬	▬	▬	▬	▬	▬	▬	▬	▬	▬	▬	▬	▬	▬	▬	▬	▬	▬	▬	▬	▬	▬	▬	▬	▬	▬
Alternatives Public Workshop								◆																							
Select Locally Preferred Alternative (LPA) (County Commission & MPO)									▬	▬	▬																				
Request Entry into PD and COA from FTA											◆																				
Entry into FTA Project Development													◆																		
Draft Engineering and Environmental Reports													▬	▬	▬	▬	▬	▬	▬												
Begin FTA CIG Application Process																◆															
Public Hearing																					◆										
BoCC & MPO Adopts Refined LPA																							◆								
Final NEPA Action																									◆						
CIG Submittal to FTA																											◆				
Public Involvement	▬	▬	▬	▬	▬	▬	▬	▬	▬	▬	▬	▬	▬	▬	▬	▬	▬	▬	▬	▬	▬	▬	▬	▬	▬	▬	▬	▬	▬	▬	▬

NEPA Schedule assumptions:
CatX-12 months
EA-18 to 24 months
EIS 24+ Months

NOTE: Design can begin in 2023, with R/W acquisition and construction could begin in 2025 with initial operations potentially starting in 2028, depending upon adoption of the Refined LPA and associated access agreement, funding and implementation plans and FTA approvals.

▬ *General Project Tasks* ◆ *Public Meetings* ◆ *General Project Milestones* ◆ *Critical Project Milestones*

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Questions???