

# I-395 Alternative Review

May 14, 2003

MPO I-395 Sub-Committee



Jesus Guerra, P.E.

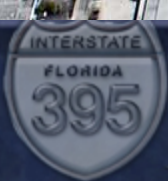
MPO Project Manager

Freddie A. Vargas, P.E.

KHA Project Manager

Paul Cherry, P.E.

KHA Senior Vice-President



Alternative Review



# I-395 Alternative Review

KHA thanks and recognizes:

- ↗ MPO
- ↗ Miami-Dade County
- ↗ City of Miami
- ↗ Miami Urban Watch
- ↗ University of Miami
- ↗ Metric Engineering
- ↗ FDOT



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# Study Objective

- To review three alternatives previously developed to replace I-395
  - Elevated FDOT (E-2)
  - At grade roadway section
  - Depressed (tunnel) roadway section
- Develop up to two new alternatives based on the previous alternatives

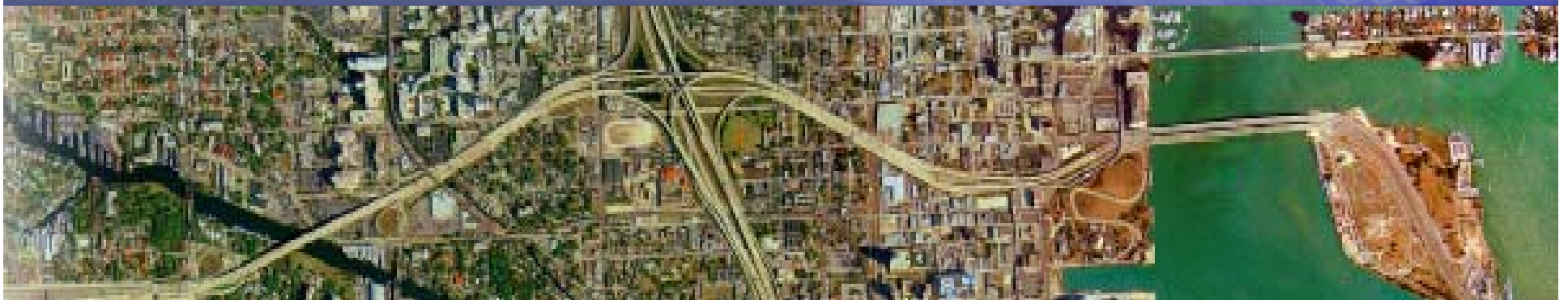


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# I-395 Overview

- Built as a regional transportation link between I-95, SR 836, and the MacArthur Causeway Bridge
- Provides direct access to and from Miami Beach (South)
- Connector for truck traffic to and from the future Port of Miami tunnel





# I-395 Overview

- FDOT Initiated a PD&E study in the early 90's.
  - Study findings:
    - Structural Deficiencies
    - Poor horizontal & vertical geometry
    - Operational deficiencies
    - Safety deficiencies



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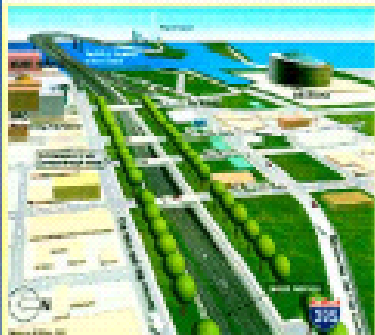
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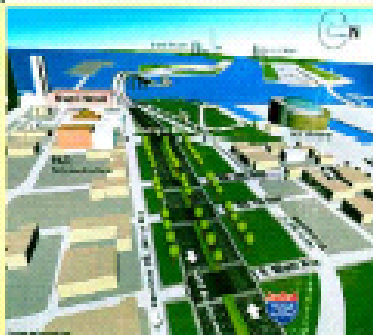
# I-395 Overview

- PD&E Study (17 alternatives)
  - Depressed - open cut
  - At grade
  - Tunnel
  - Midtown Roundabout
  - Elevated with new ramps

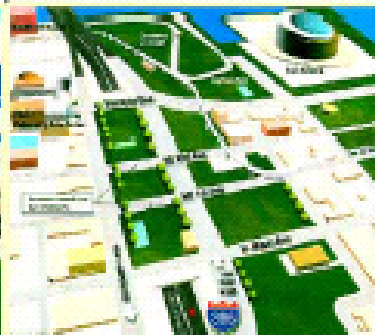
Depressed-Open Cut



At-Grade



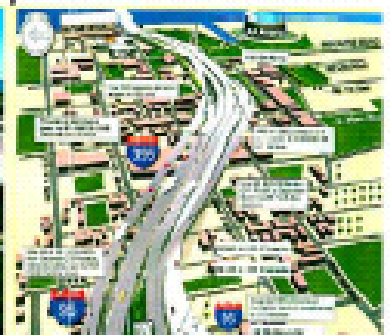
Tunnel



Midtown Roundabout



Elevated



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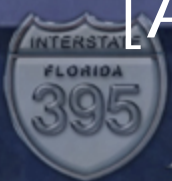


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# Alternatives Reviewed

- FDOT's preferred elevated alternative (E-2)  
[Alternative 1]
- Miami Urban Watch (MUW) "Boulevard Underpass"  
[Alternative 2]
- "Revised University of Miami (MUW) Boulevard Underpass"  
[Alternative 3]



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# Alternatives Reviewed

## ■ (E-2) FDOT's preferred elevated alternative

[Alternative 1]





# Alternatives Reviewed

## [Alternative 1] (E-2 FDOT)

### Pros

- Satisfies FDOT concerns to improve operations
- Cost \$71 M FDOT estimated [\$105 M (Up-dated)]
- Good engineering solution

### Cons

- Remains an obstacle for redevelopment
- Not acceptable solution to the City of Miami
- Does not enhance the PAC
- Does not address blighted condition under I-395



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# Alternatives Reviewed

## [Alternative 2]

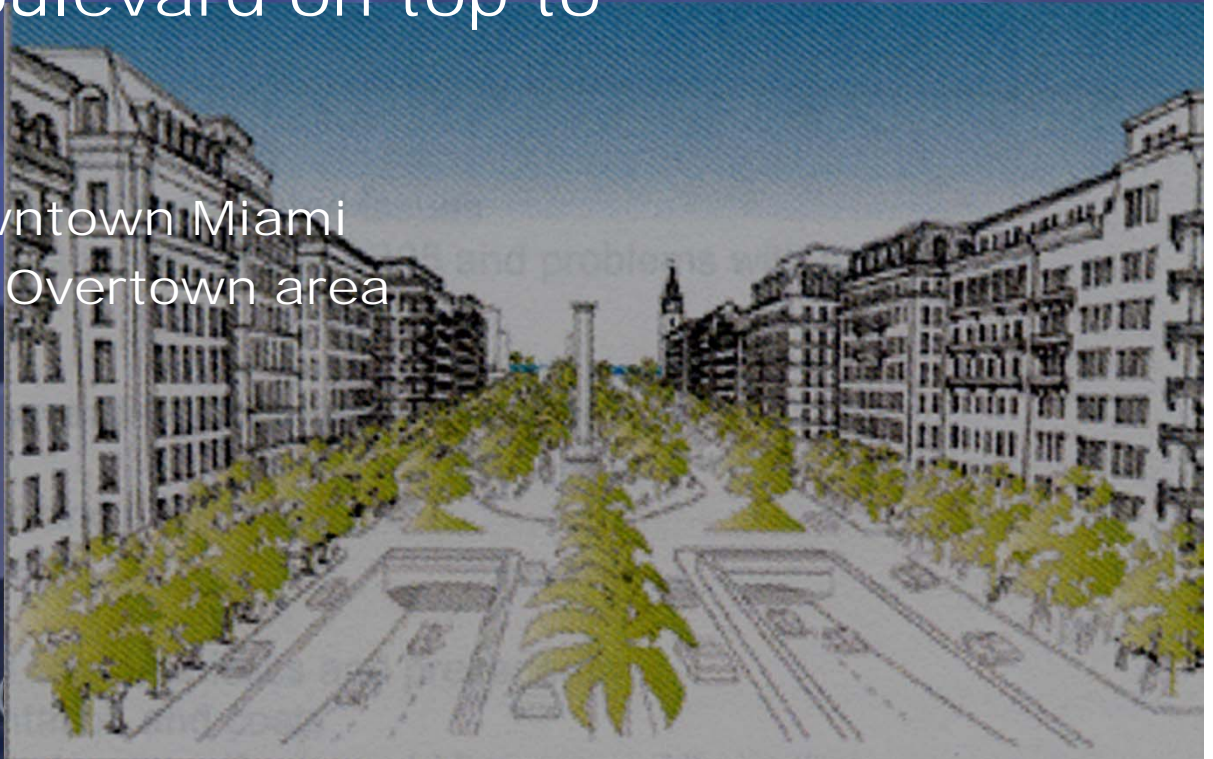
### Miami Urban Watch (MUW)

- Developed an alternative: Relocate I-395 to the north using an open cut with a cap to develop a wide boulevard on top to promote:

- Urban Renewal
- Expansion of Downtown Miami
- Improvements to Overtown area



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# Alternatives Reviewed

- University of Miami Retained to complete an assessment of the MUW Alternative known as “Boulevard/Underpass”
  - Three options were developed:
    - Alternative 2A: Replace FEC with Light Rail over I-395
    - Alternative 2B: An at grade crossing of FEC
    - Alternative 2C: Underground I-395 east of the FEC tracks
  - Similar horizontal alignment for all alternatives
- FDOT/MPO raised concerns:
  - High cost
  - Does not address current deficiencies
  - Right of way impacts
  - FEC at grade railroad crossing issue
  - Safety concerns
  - Not compatible with area enhancement



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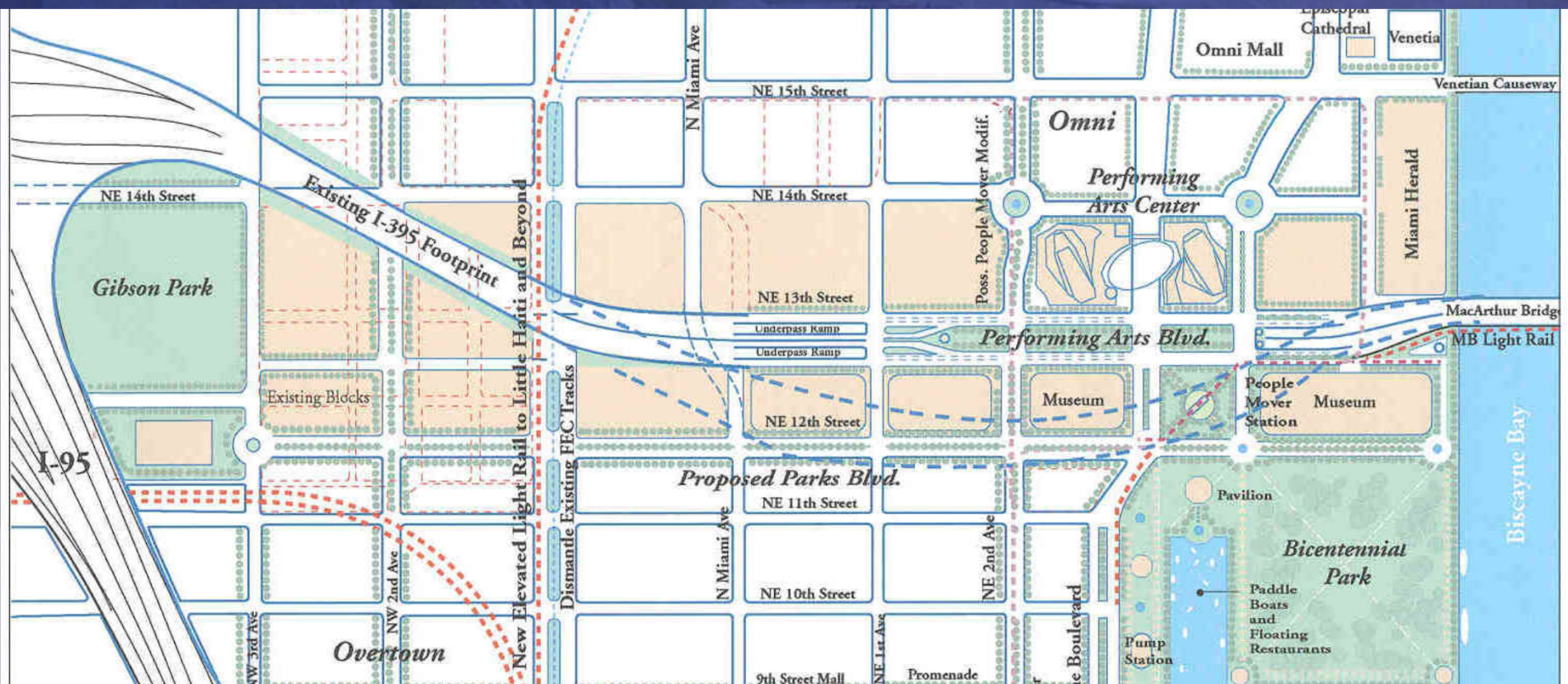


# Alternatives Reviewed

[Alternative 2]

University of Miami (MUW) Boulevard/Underpass

Horizontal alignment



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# Alternatives Reviewed

[Alternative 2]

University of Miami (MUW) Boulevard/Underpass

Alternative 2A: Replace FEC with Light Rail over I-395

- Not a viable alternative at this time due to the need to keep the FEC track at grade
- Cost of depressing FEC
- FEC as potential commuter use
- FEC potential light rail system
- MOT problems

Alternative 2B: At grade crossing

- Creates a new railroad crossing - Fatal Flaw
- I-395 (safety issues)
- MOT problems
- Not acceptable to FDOT



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# Alternatives Reviewed

University of Miami (MUW) Boulevard/Underpass

Alternative 2C: Taking down I-395 east of the FEC tracks

- DOES not address operational deficiencies identified by FDOT
- MOT problems



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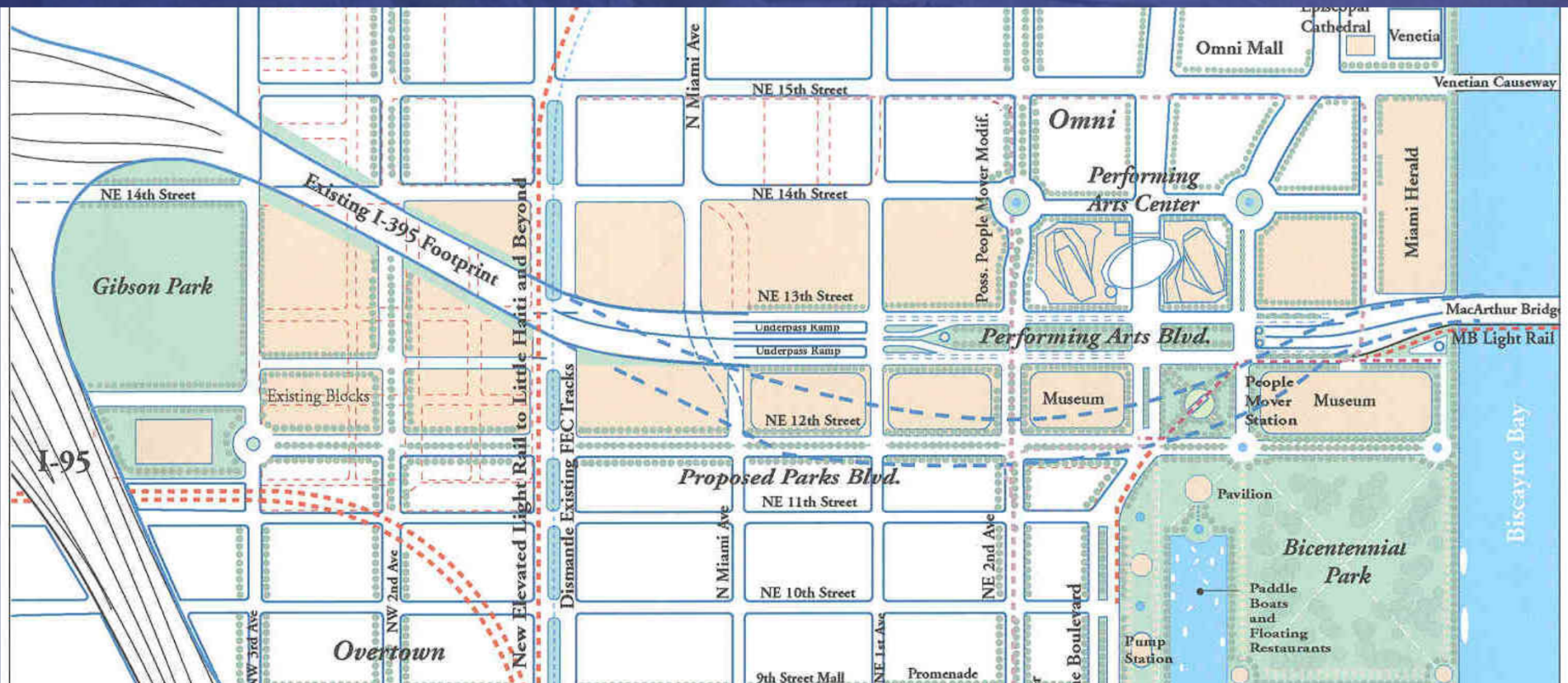
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# Alternatives Reviewed

[Alternative 3]

- FDOT / University of Miami (MUW) Boulevard/Underpass - "Revised Boulevard Underpass"



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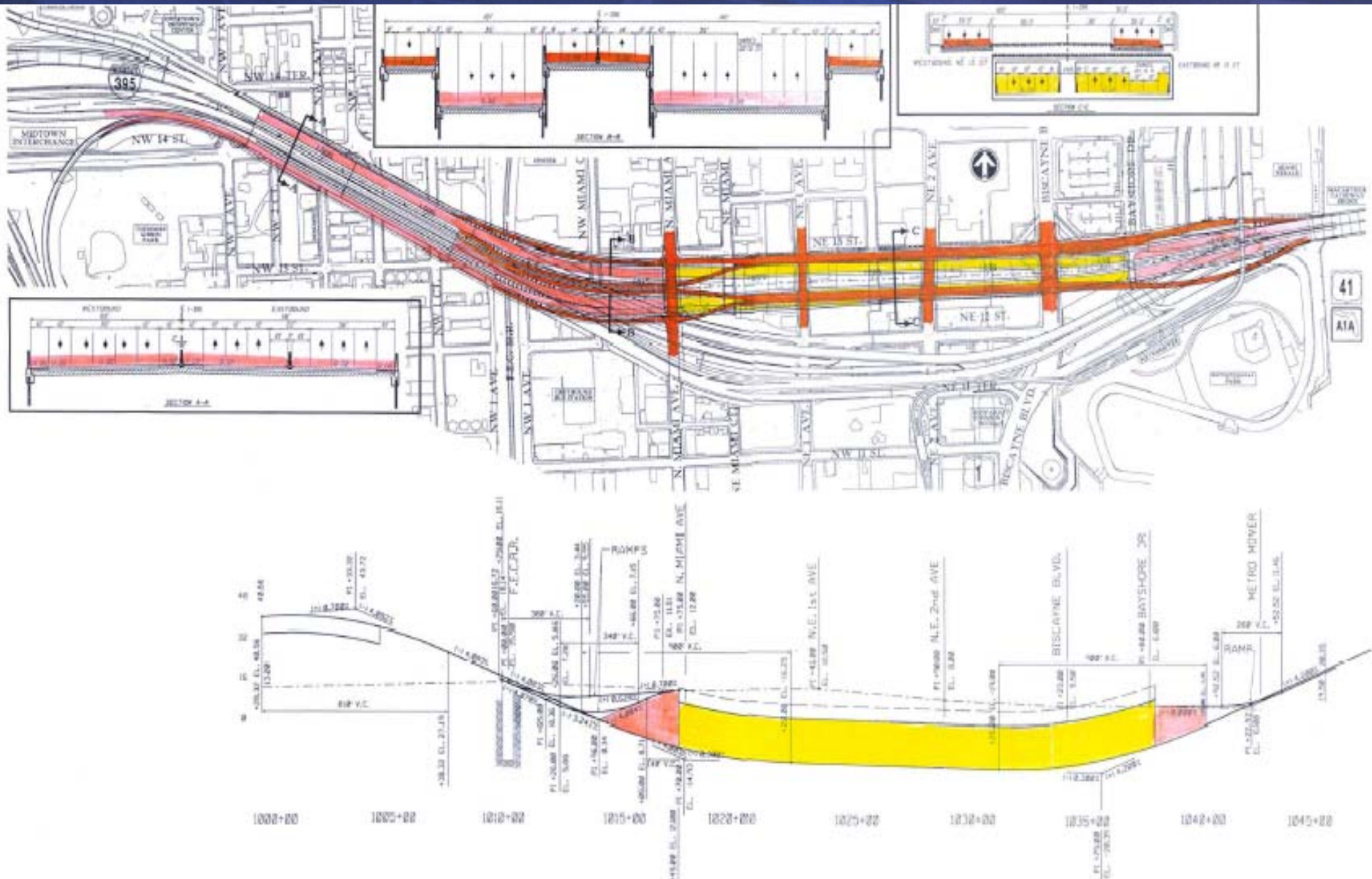


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# FDOT / University of Miami (MUW) Boulevard/Underpass - "Revised Boulevard Underpass"

[Alternative 3]





FDOT / University of Miami (MUW) Boulevard/Underpass -  
"Revised Boulevard Underpass"  
[Alternative 3] [with depressed FEC railroad]

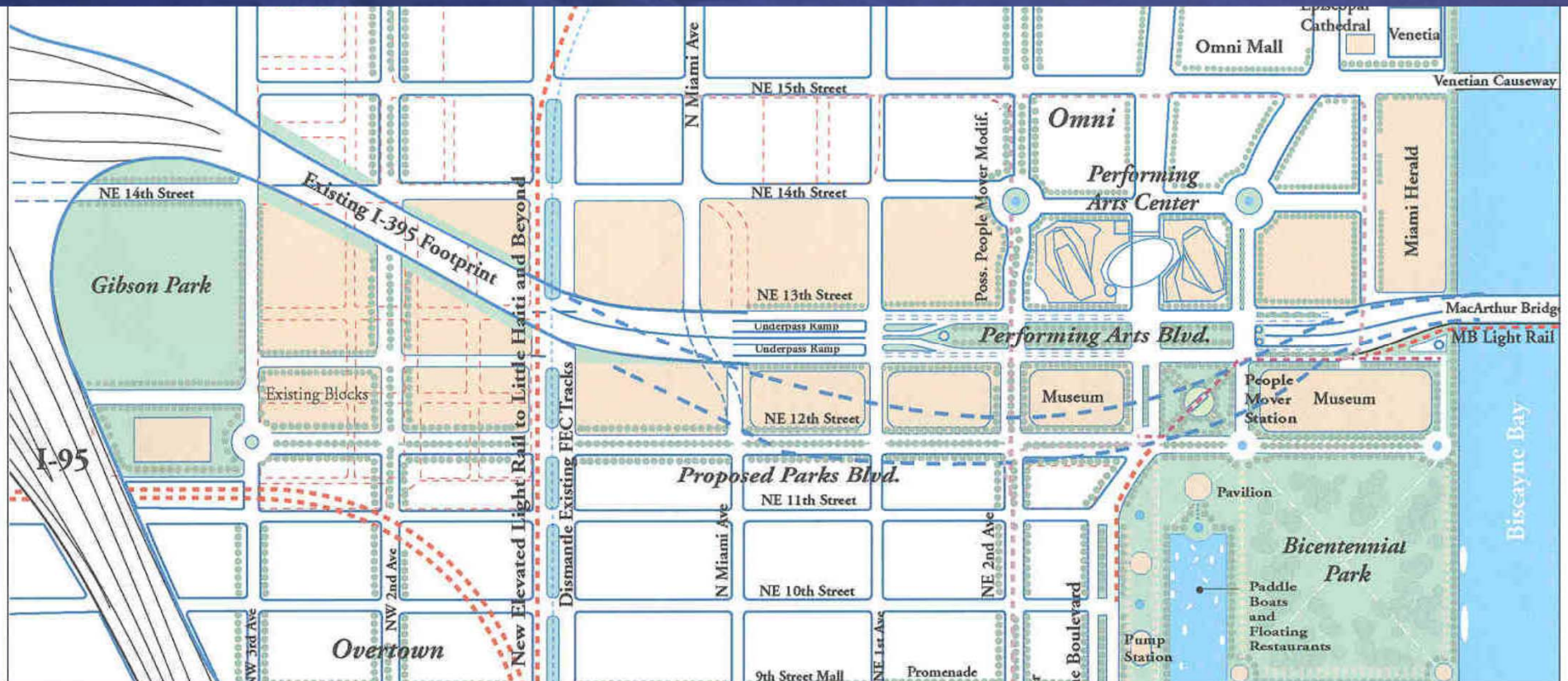
- Revised by FDOT
- FEC railroad beneath relocated I-395
- Same MOT problem as Alternative 2



Alternative Review



# Maintenance of Traffic Alternatives 2 & 3



The problem (MOT)



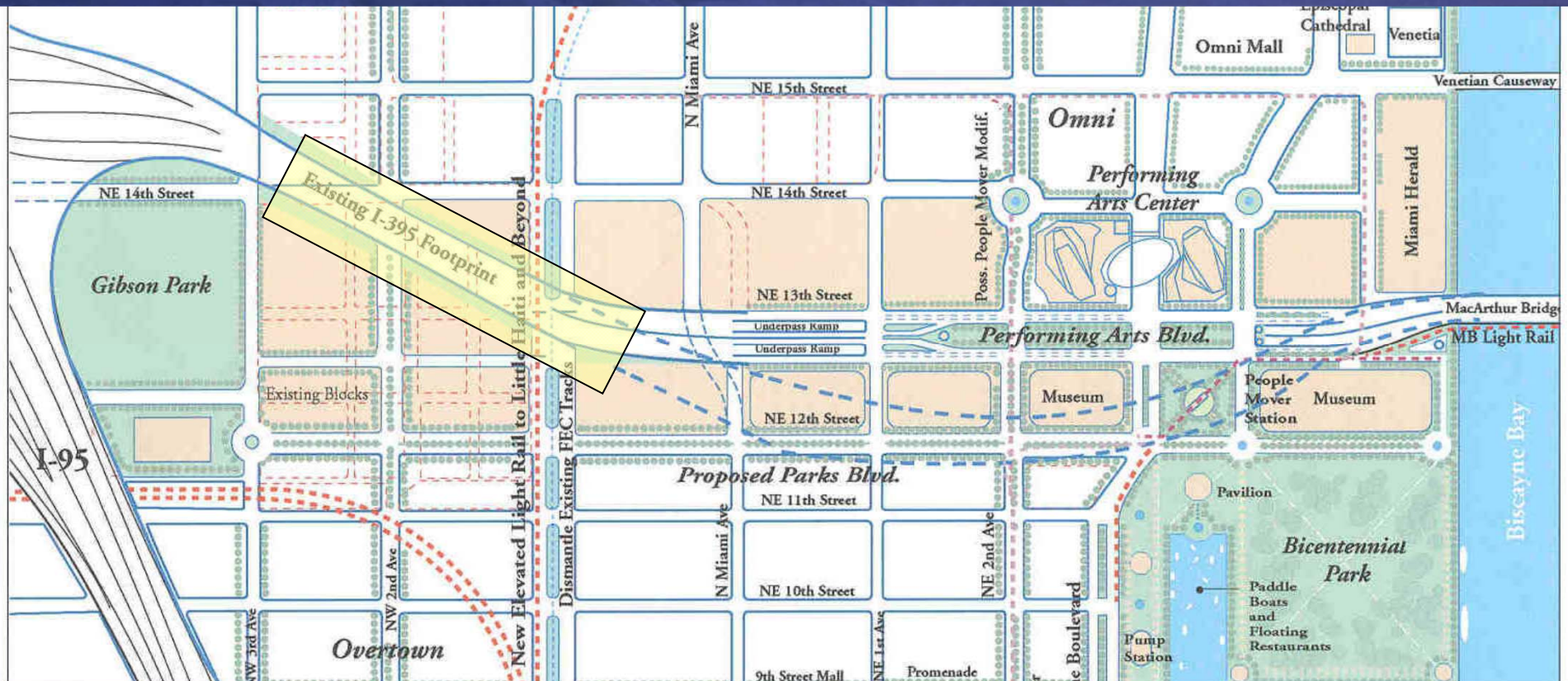
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# Maintenance of Traffic Alternatives 2 & 3



The problem (MOT)



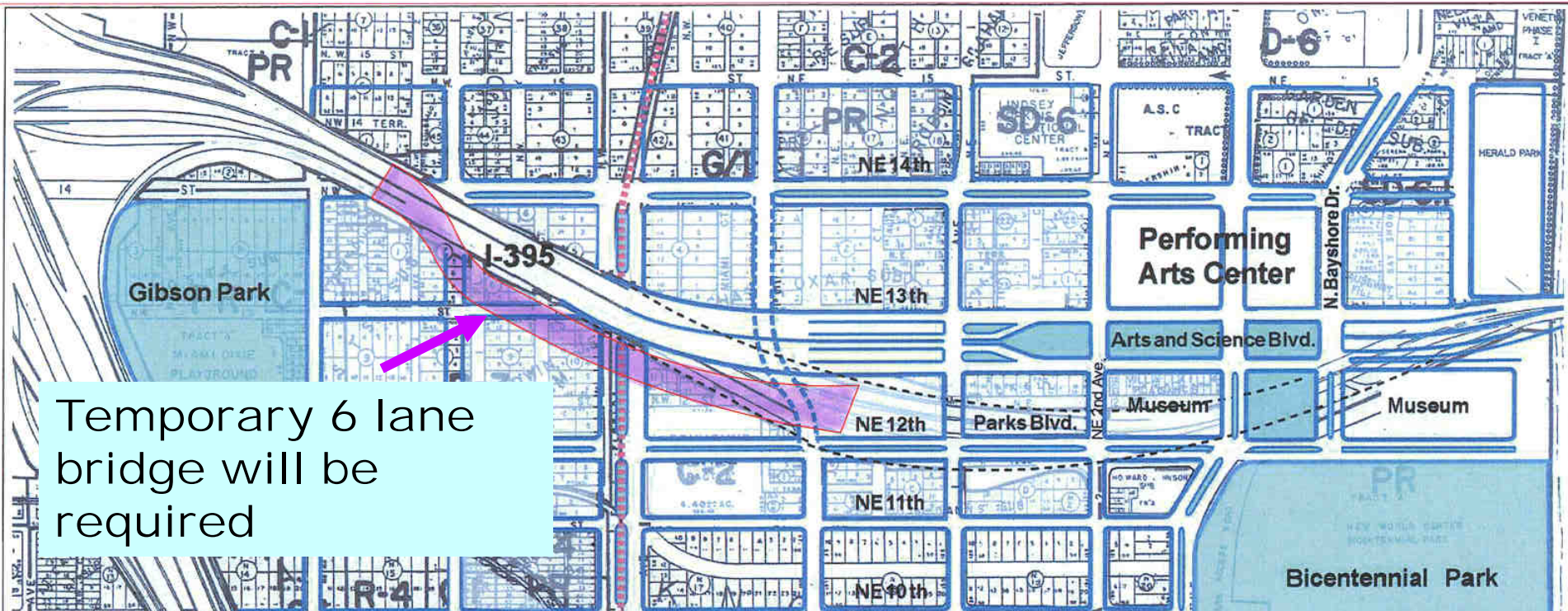
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# Maintenance of Traffic Alternatives 2 & 3



Temporary 6 lane  
bridge will be  
required



## Alternative Review



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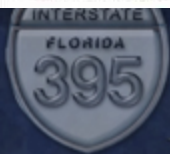
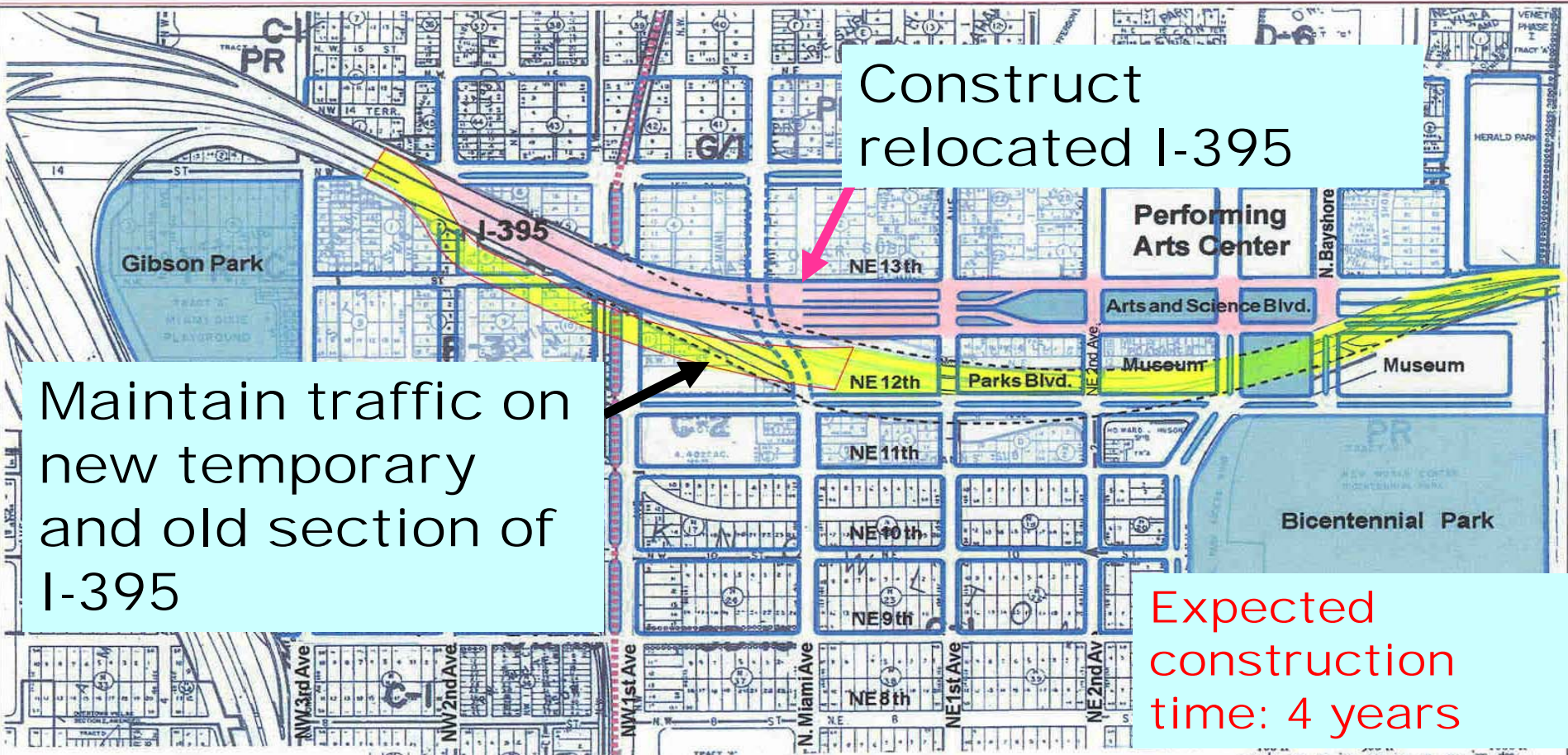


# Maintenance of Traffic Alternatives 2 & 3

Construct  
relocated I-395

Maintain traffic on  
new temporary  
and old section of  
I-395

Expected  
construction  
time: 4 years



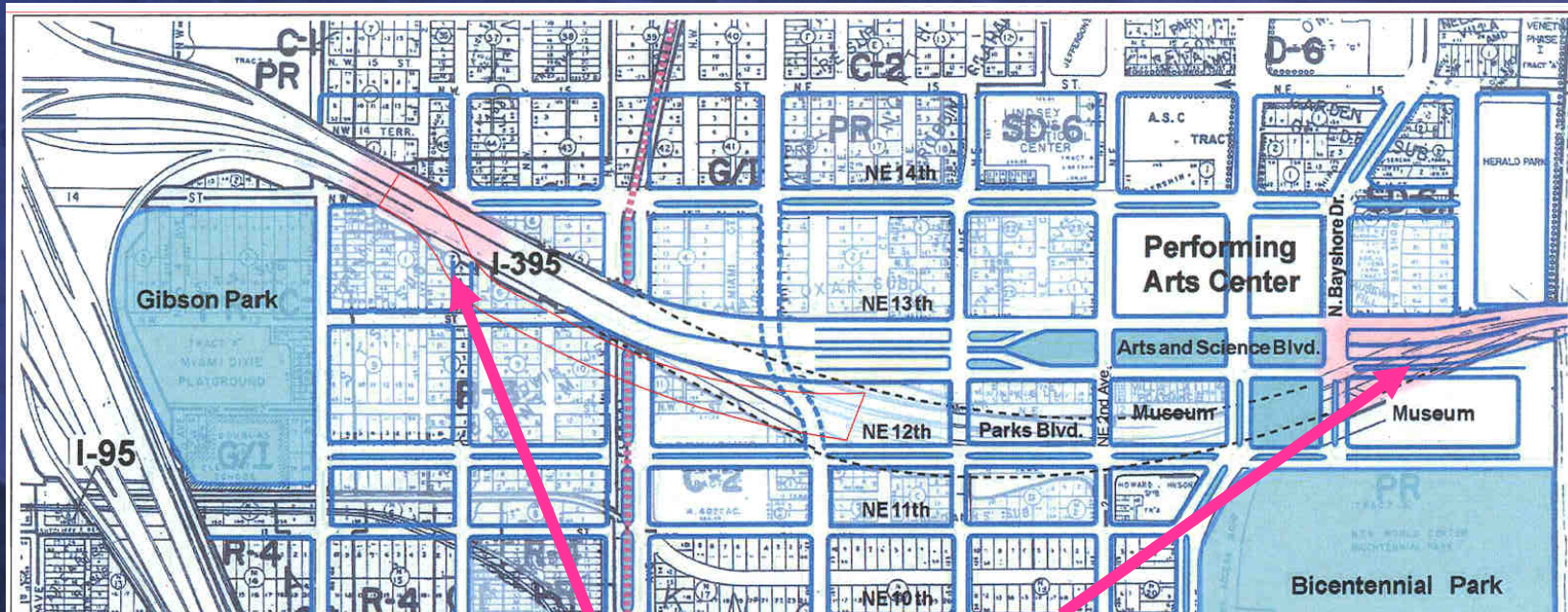
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# Maintenance of Traffic Alternatives 2 & 3



## Phase 3 - Construction

 Make final connections between existing I-395 and relocated I-395

Expected  
construction  
time: 1.5 years



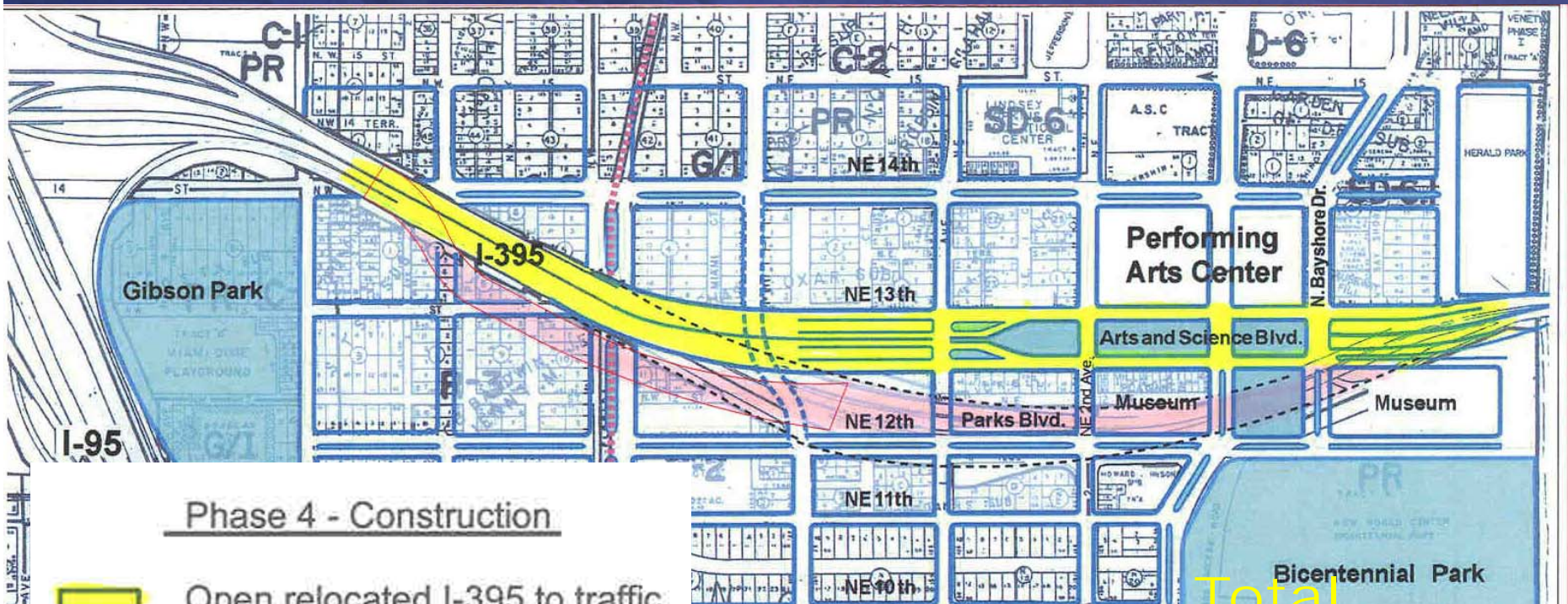
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# Maintenance of Traffic Alternatives 2 & 3



## Phase 4 - Construction

-  Open relocated I-395 to traffic
-  Demolish remainder of I-395 and temporary bridge

Expected  
construction  
time: 1 year

Total  
construction  
time: 9 years



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# Alternatives Reviewed Cost Estimate

## University of Miami (MUW) Boulevard/Underpass

### Costs Analysis

- Alternative 1 - FDOT E-2: **\$105,000,000**

- Alternative 2 - University of Miami

Cost Estimate: \$272,910,800.00 (construction cost)

KHA revised Cost Estimate: **\$383,413,800**  
(construction Cost)

- Alternative 3 - "Revised Boulevard Underpass" **\$933,000,000**



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# In search of a new alternative

New alternative criteria:

- All transportation objectives are met
- No adverse impact to the proposed Port of Miami Tunnel
- Helps promote urban revitalization
- Acceptable cost



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# In search of a new alternative

## Alternative 4 - Open Cut (Option A)

- Developed from Alternative 3- Revised MUW Boulevard/Underpass alternative



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# In search of a new alternative

## Alternative 4 - Open Cut (Option A)



### LEGEND

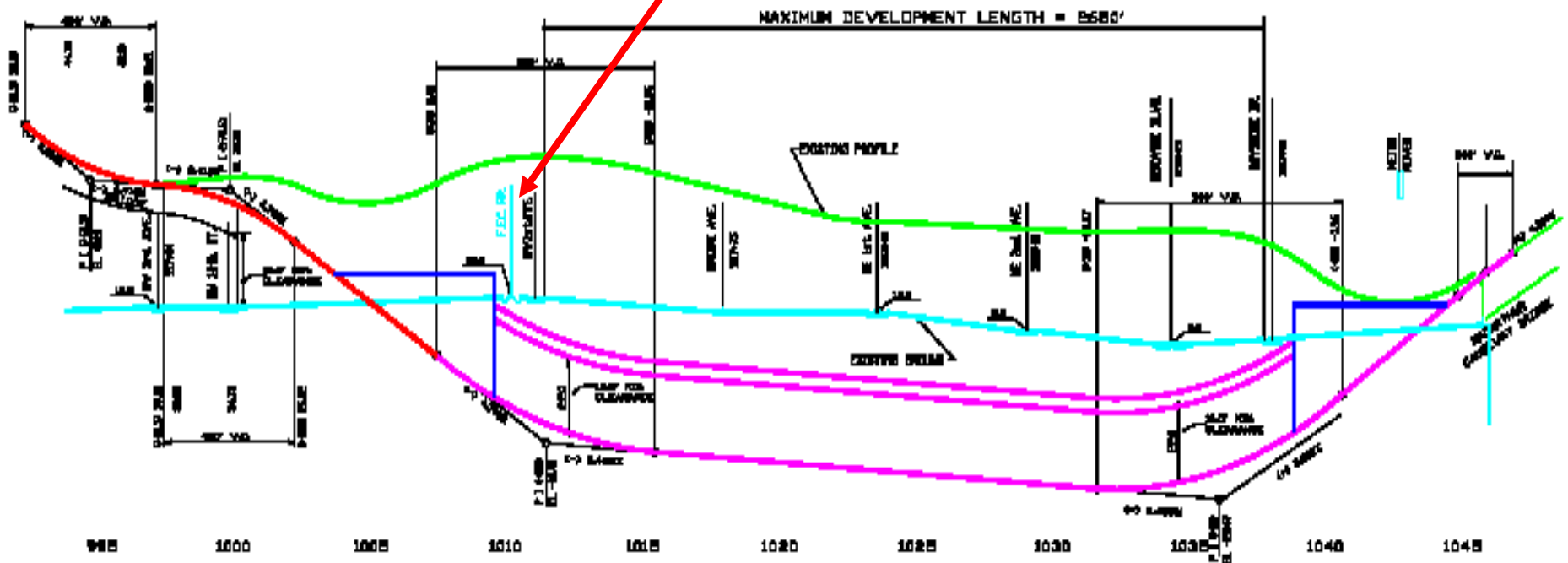
- Relocated I-395
- New Ramp
- New Service Roads
- Bridges Over Relocated I-395
- Existing I-395 to be Removed



# In search of a new alternative

## Alternative 4 - Open Cut (Option A)

- Vertical geometry revised to allow I-395 to pass beneath the FEC Railroad



PROFILE FOR ALTERNATIVE NO. 4 - OPEN CUT OPTION A



# In search of a new alternative

## Alternative 4 - Open Cut (Option A)

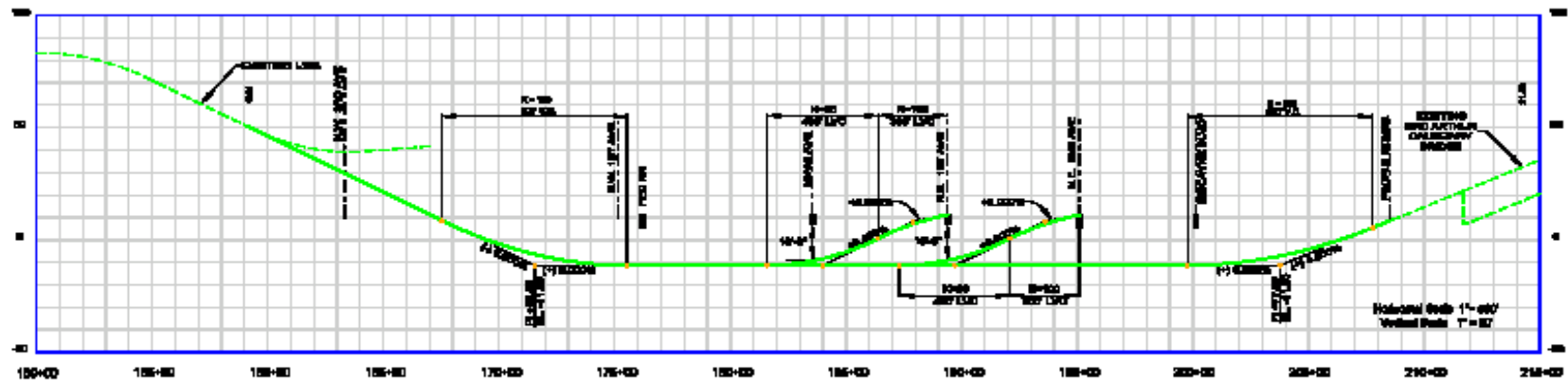
- Similar MOT problems to Alternative 3
- Alternative 4 -Open Cut Option B was developed



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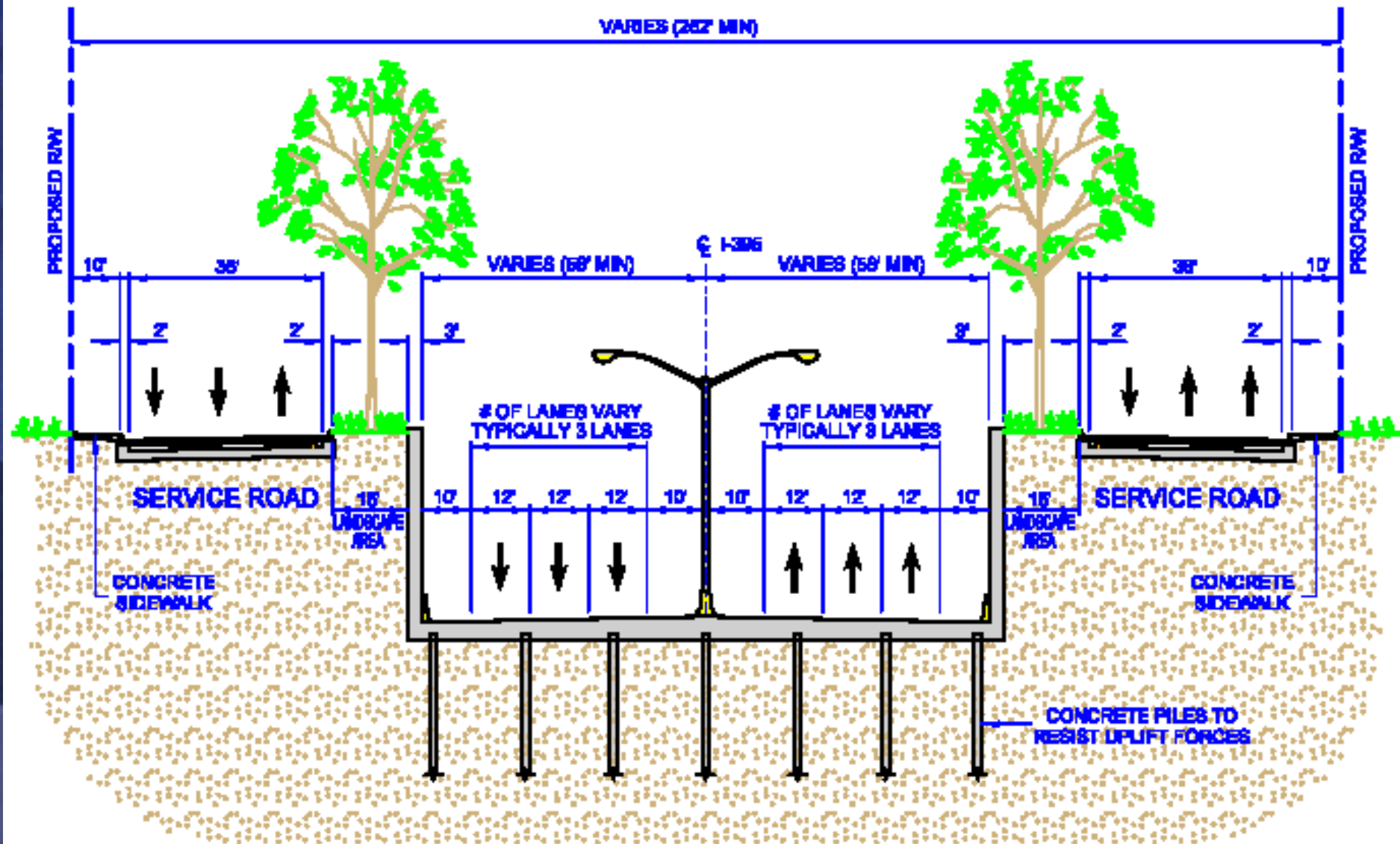
# Open Cut Option B



PROFILE  
ALTERNATIVE 4 - OPEN CUT OPTION B



# Open Cut Option B

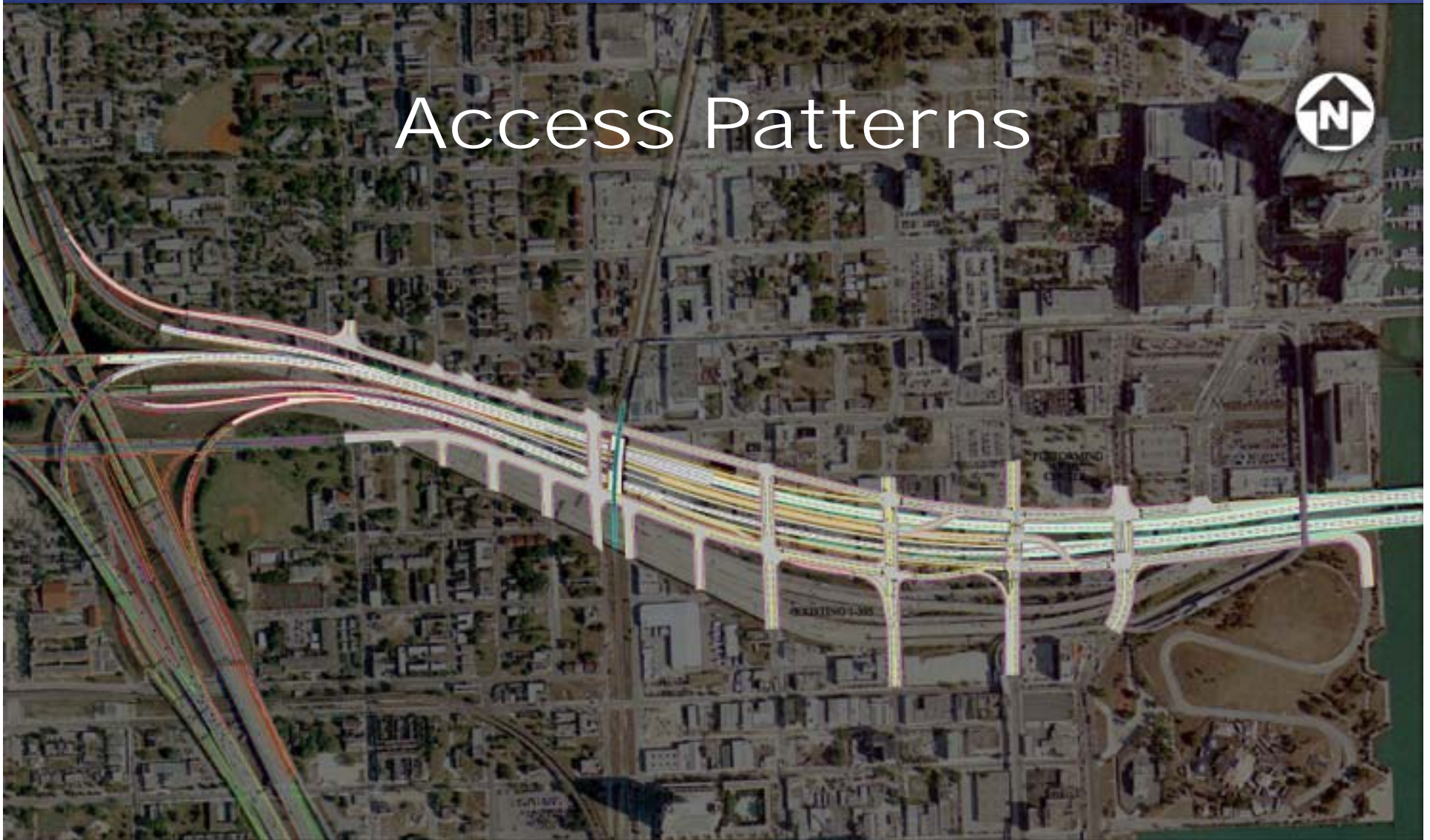


TYPICAL SECTION  
ALTERNATIVE 4 - OPEN CUT OPTION A & B



## Open Cut Option B

# Access Patterns



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## Open Cut Option B

Provides local direct access to northbound I-95



Maintains future access improvement at N 14th Street and enhanced local access



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# Open Cut Option B

Northbound



PAC

NE 1st Ave.

NE 2nd Ave.



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# Open Cut Option B

Southbound



PAC

NE 1st Ave.

NE 2nd Ave.



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# Open Cut Option B

Eastbound



PAC

NE 1st Ave.

NE 2nd Ave.



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# Open Cut Option B

Westbound / to I-95



PAC

NE 1st Ave.

NE 2nd Ave.



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# In search of a new alternative

## Open Cut Option B

- Meets the FDOT's regional transportation requirements
- Meets the urban revitalization objectives of the City of Miami
- Enhanced access to and from the PAC
- Detailed Signing Plan will need to be developed as part of the Alternative
- Estimated Cost: \$525 M
- Provides acceptable Level of Service for year 2025



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In search of a new alternative

Open Cut Option B

# SYNCHRO MODEL



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# Conclusions and Recommendations

- Request that FDOT evaluate Alternative 4 Open Cut Option B for acceptance as the preferred alternative
- Complete the PD&E study
- Conduct a community outreach program to bring the community into the planning process
- Develop comprehensive signing master plan



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# Conclusions and Recommendations

- Implementation cost could be financed through a variety of sources including:
  - FDOT
  - Bonds using (TIF)
  - Special Assessment
  - Other Creative Financing
  - Grants
- Conduct a comprehensive financial analysis



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## Open Cut Rendering



41 acres  
Downtown Park

Enhanced  
landscaping  
and aesthetic  
opportunities



Alte

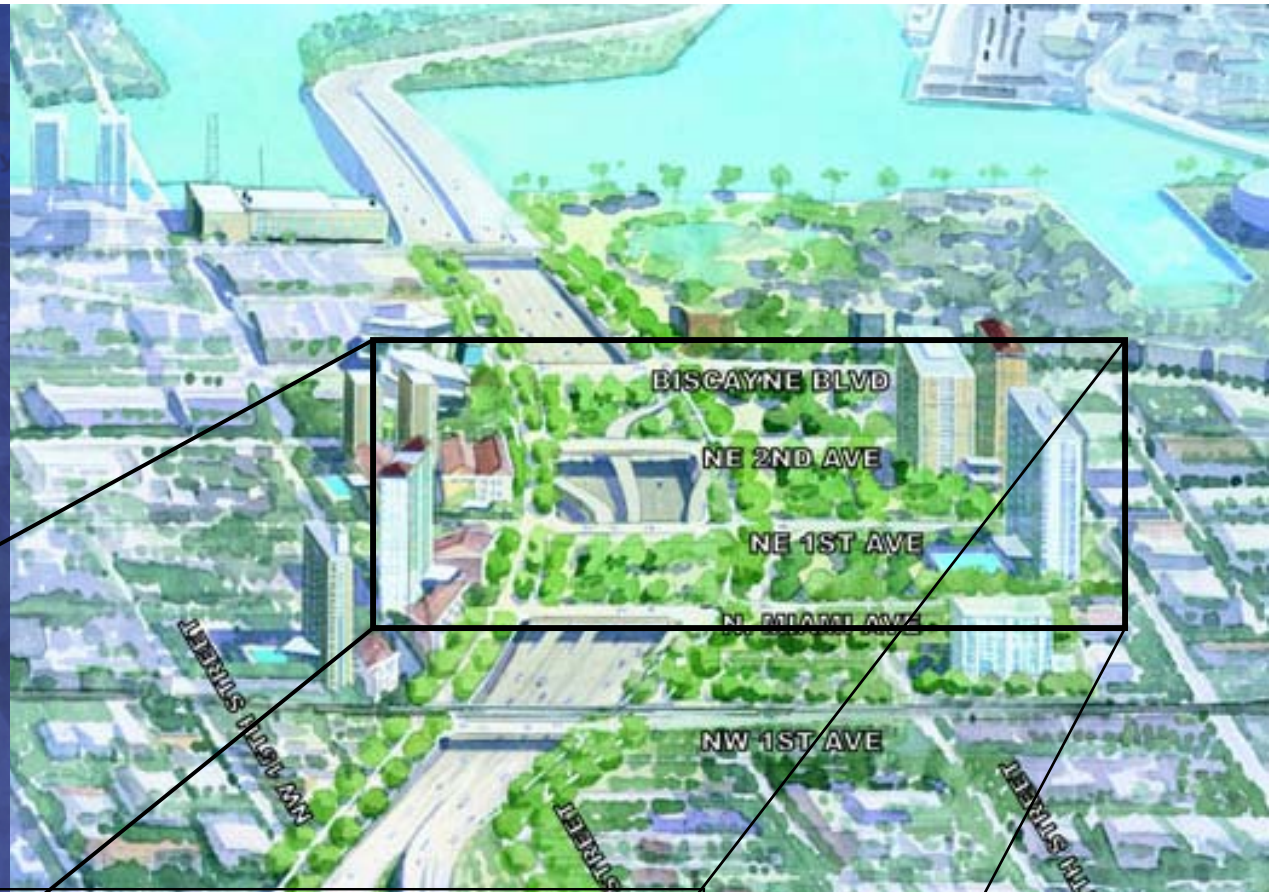


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Open Cut  
Rendering

Park Pads



Open-Cut Section With Park Pads



Thank you



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