

# City Commission Meeting

March 05, 2024

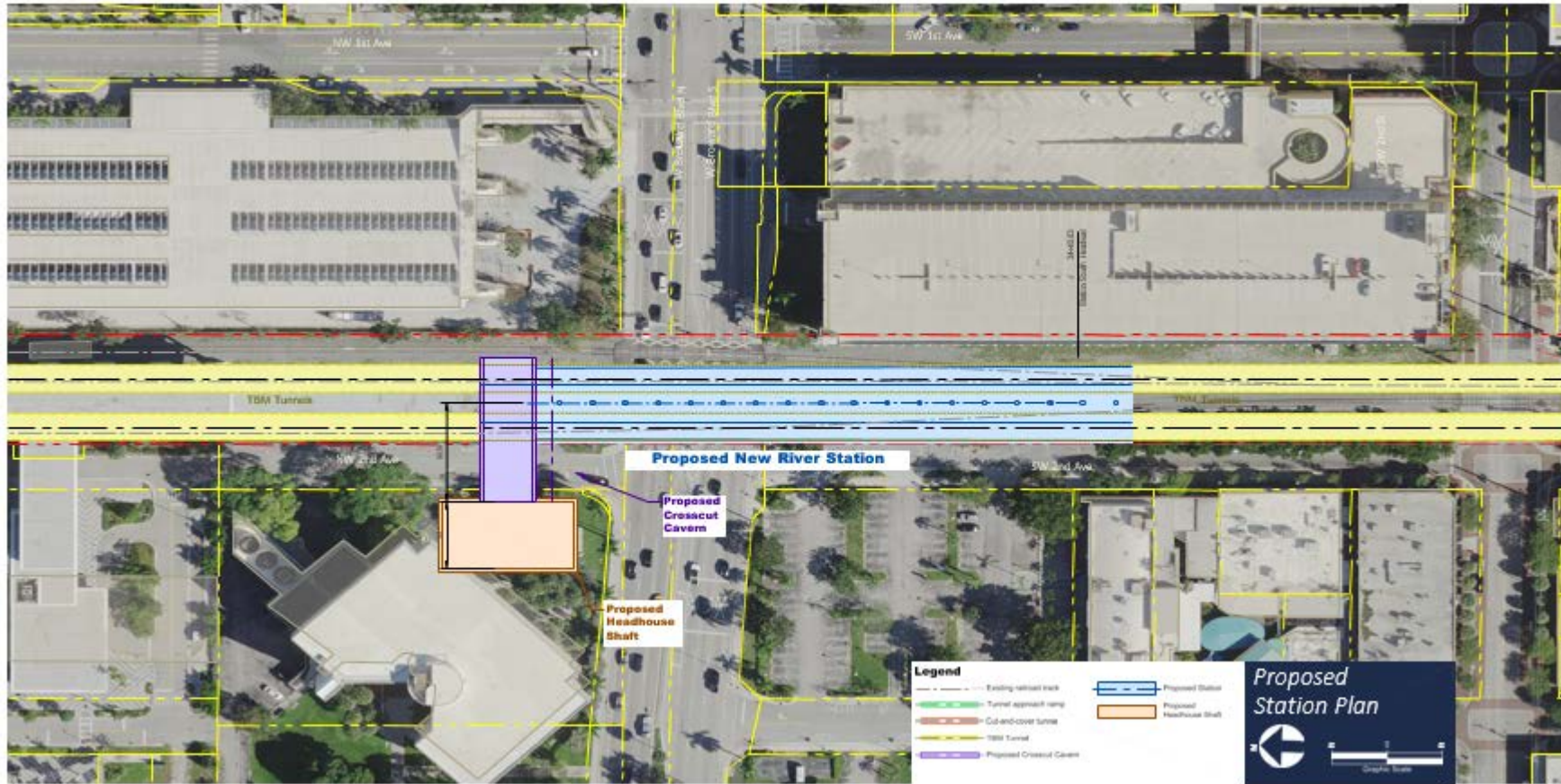
# AGENDA

- ▶ Station Configuration
- ▶ Project Alignment
- ▶ Horizontal Alignment
- ▶ Resiliency Issues
- ▶ Property Impacts
- ▶ Stakeholders Views
- ▶ Project Cost
- ▶ Funding Solutions
- ▶ Next Steps

# Station Configuration

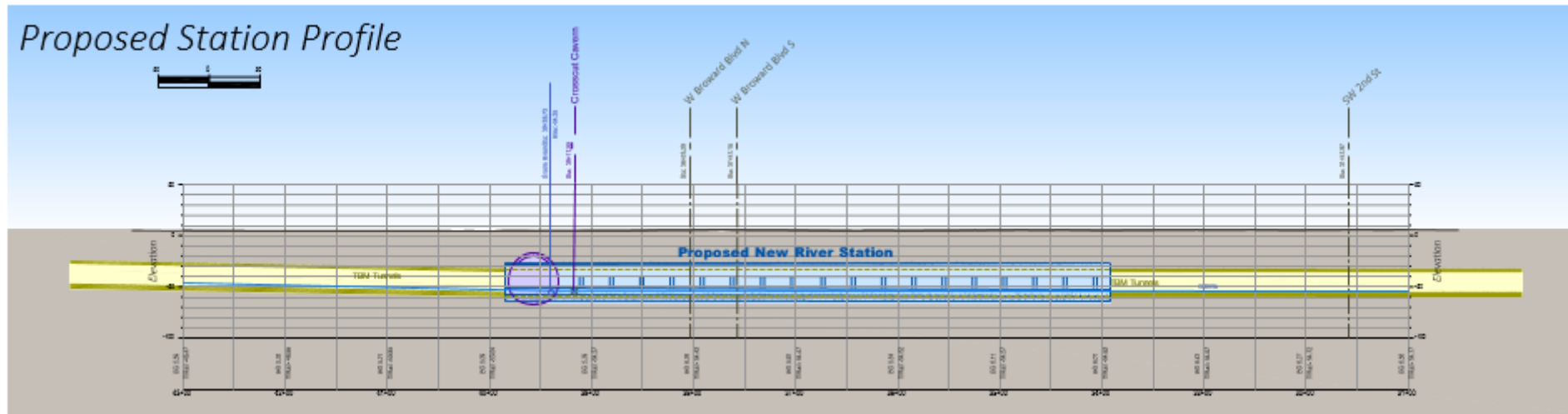


# Station Located Under Broward Blvd

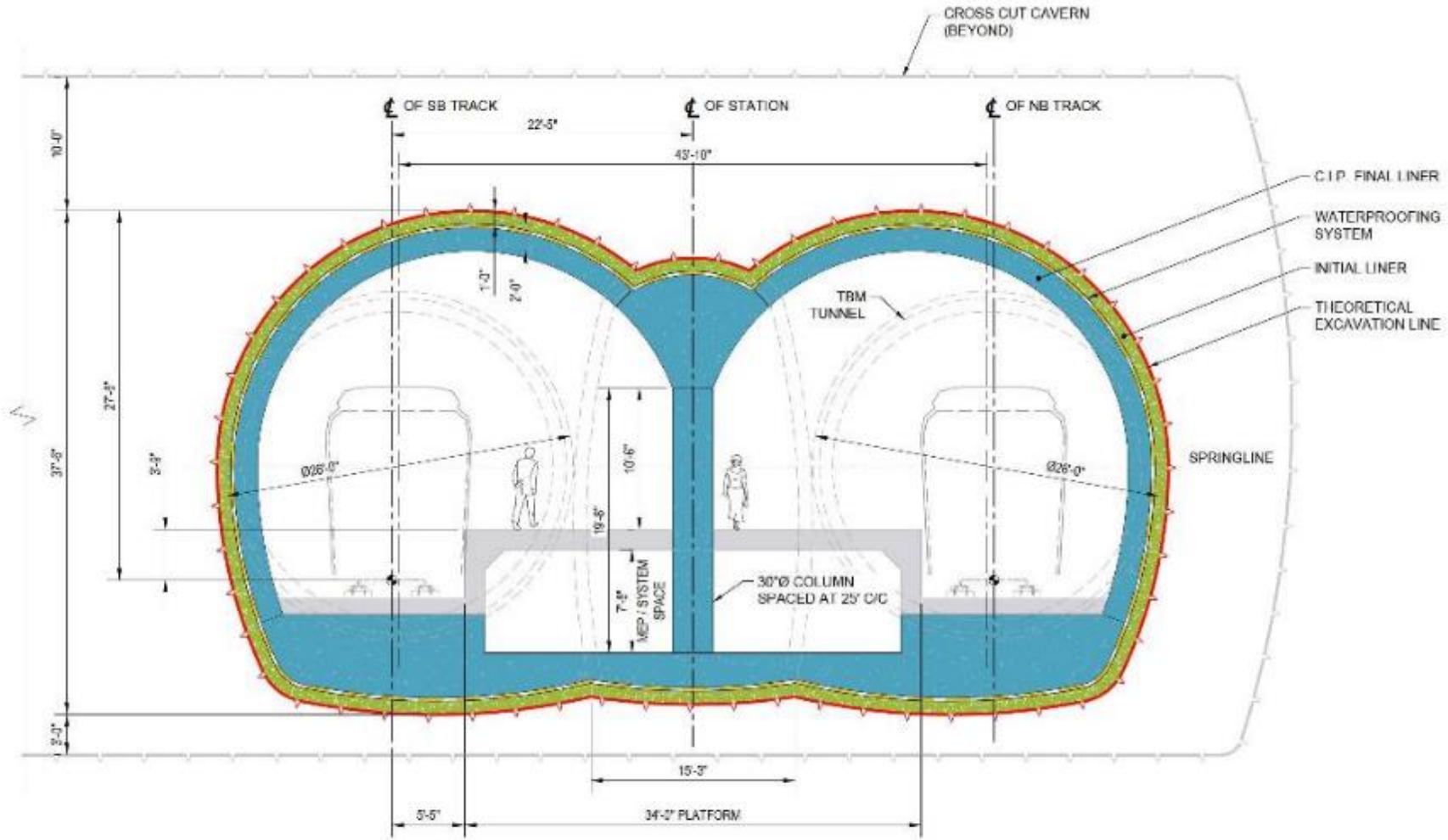


- Station will be constructed using New Austrian Tunneling Method (NATM).
- Main entrance will be from the future Government Center.
- It Provides a multimodal transportation hub with connections to adjoining future developments.
- All work will be done from outside the railroad ROW. No impact on the railroad operation.

# Station Profile



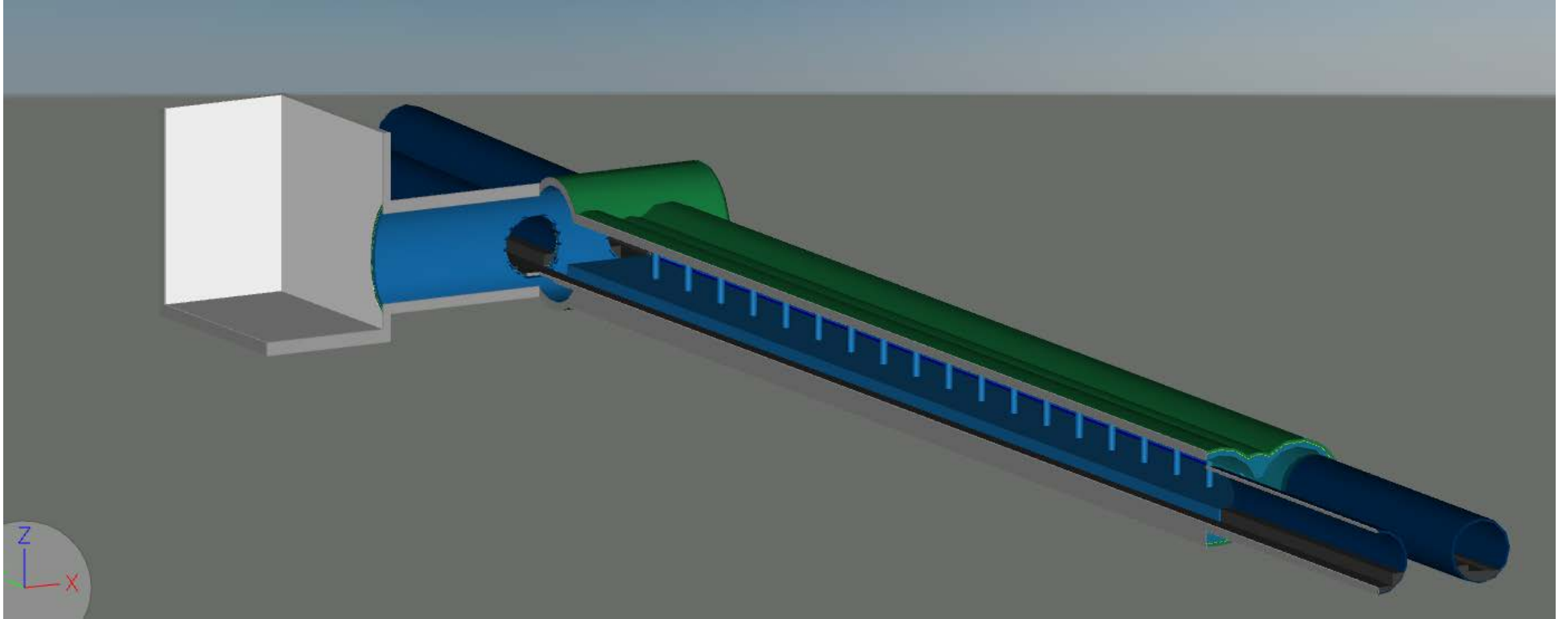
- Station Construction avoids the existing Brightline station pilings
- Top of the station is approximately 35 ft from the surface
- No impact on existing infrastructure and operation of the railroad



FT. LAUDERDALE NEW RIVER CROSSING STATION CONFIGURATION

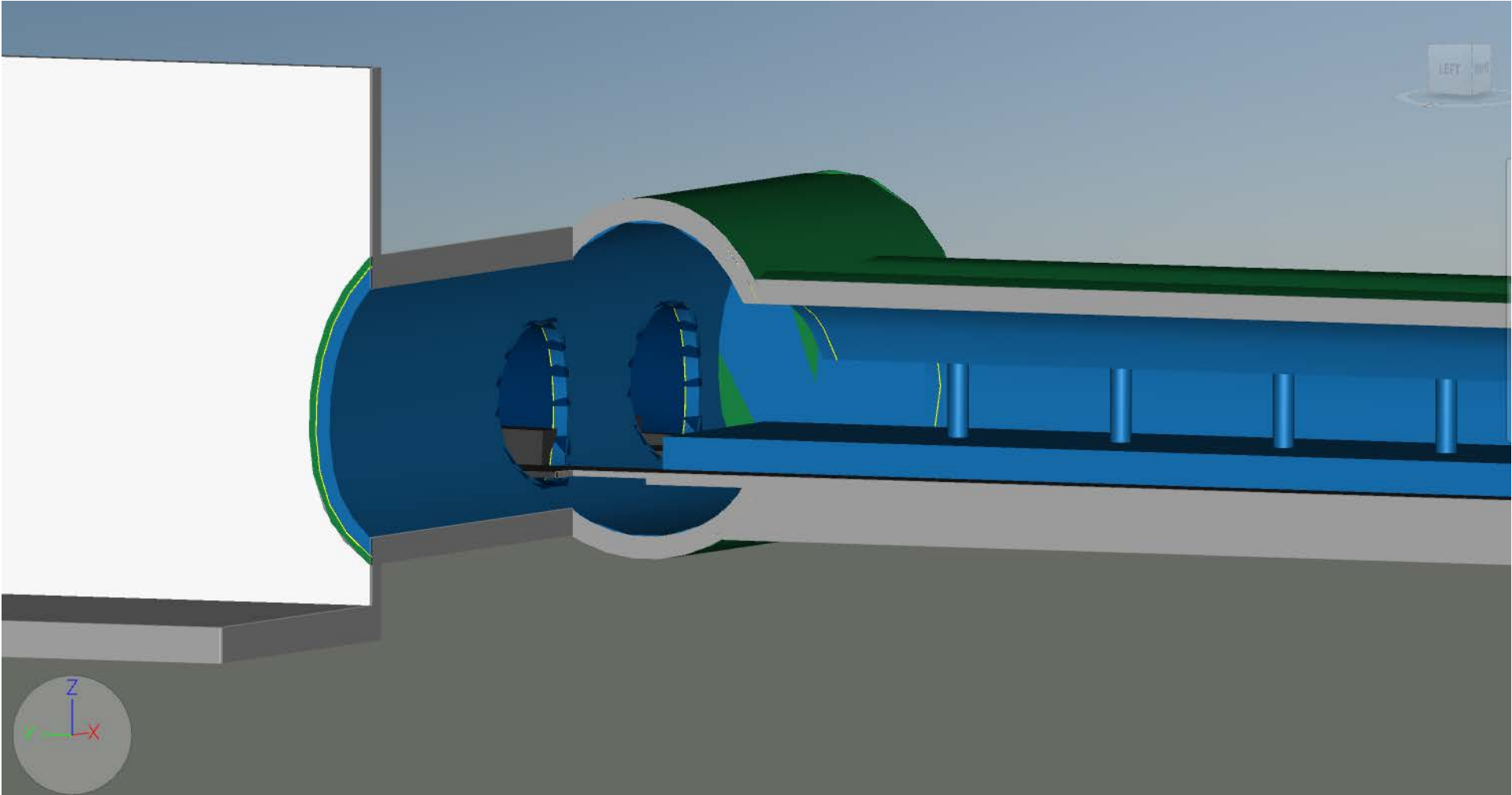


# “Bird eye” View



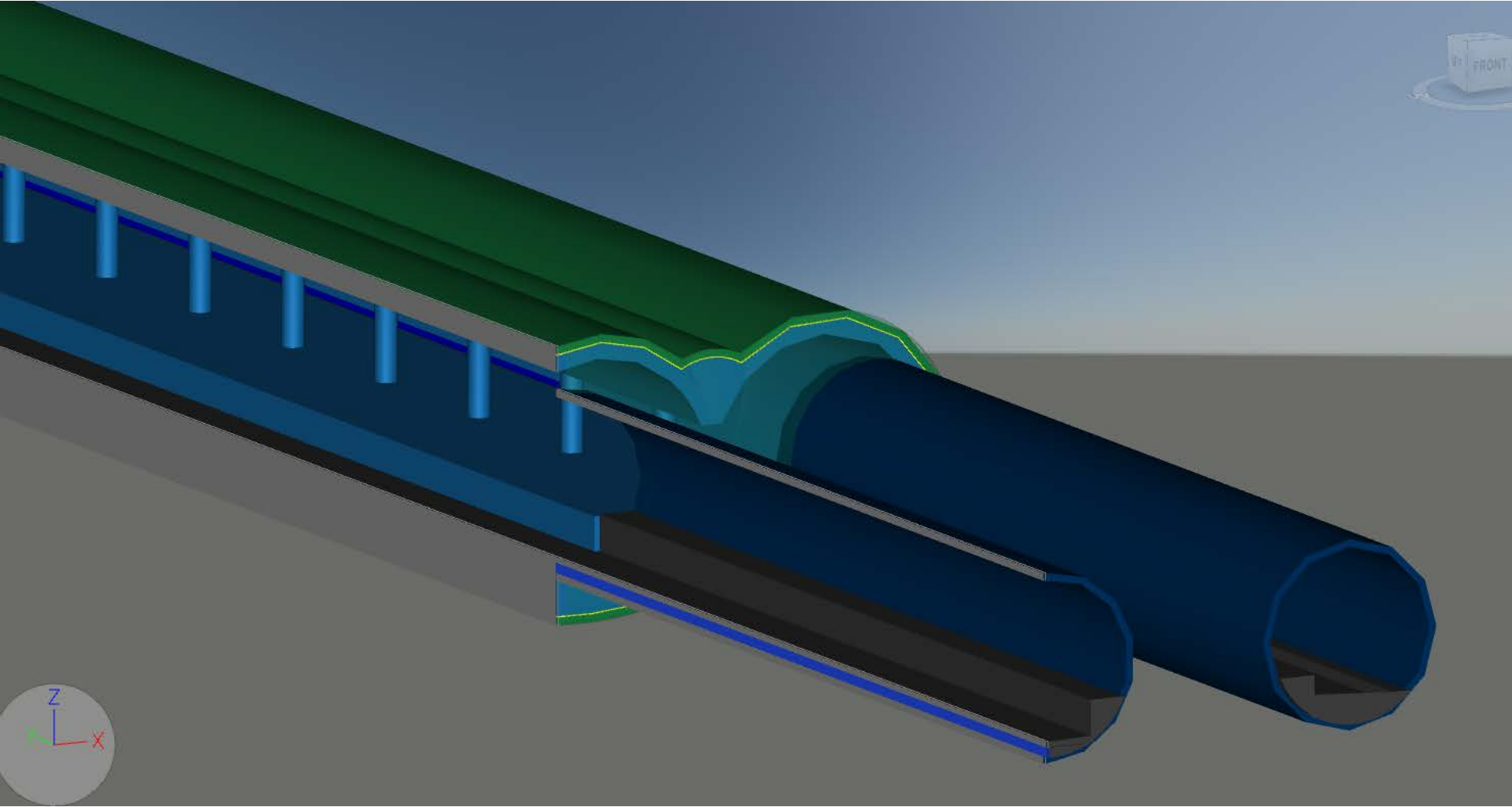


# Crosscut View - North End of the Station





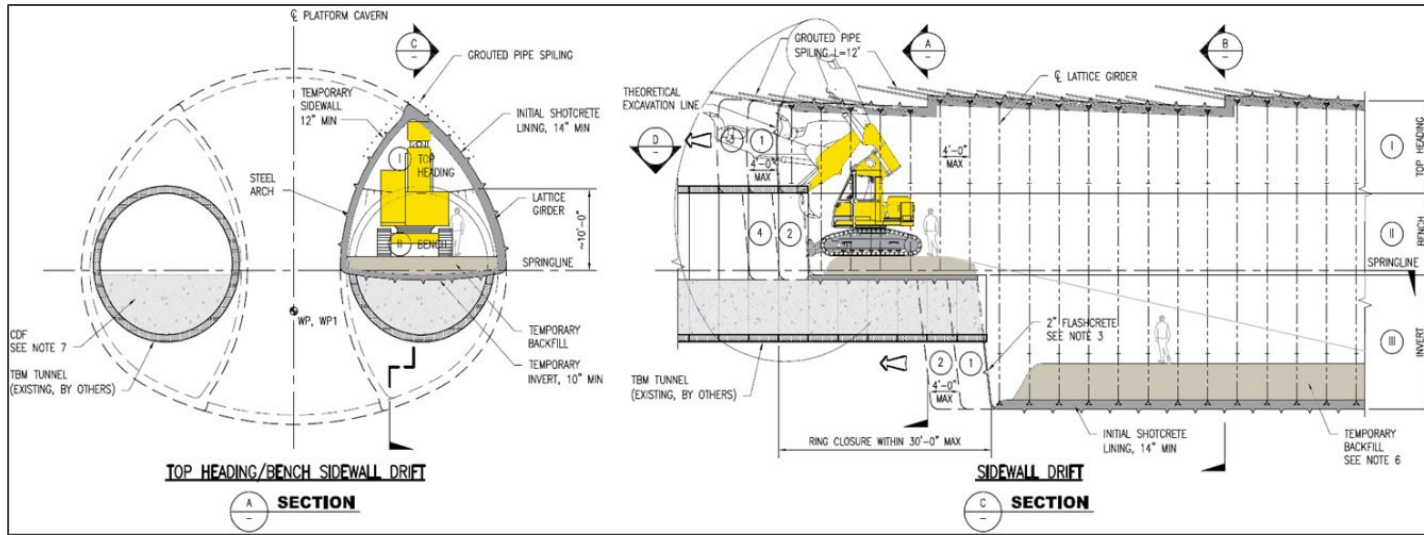
# Southern End of the station



# Station Construction Methodology

- ▶ This section lays out the well-recognized and established Sequential Excavation Method (SEM) also referred to it as New Austrian Tunnelling Method (NATM) as an alternative to Cut & Cover construction
- ▶ Several stations have been built using this method in the US, Canada, Europe and all over the world.
- ▶ Examples: Fort Totten Station, Washington DC; Chinatown Station, San Francisco; Regional Connector, Los Angeles; U5 Berlin Metro; Prague Metro; Northern Blvd Crossing, New York; etc.

# Sequential Excavation Method (SEM) Construction

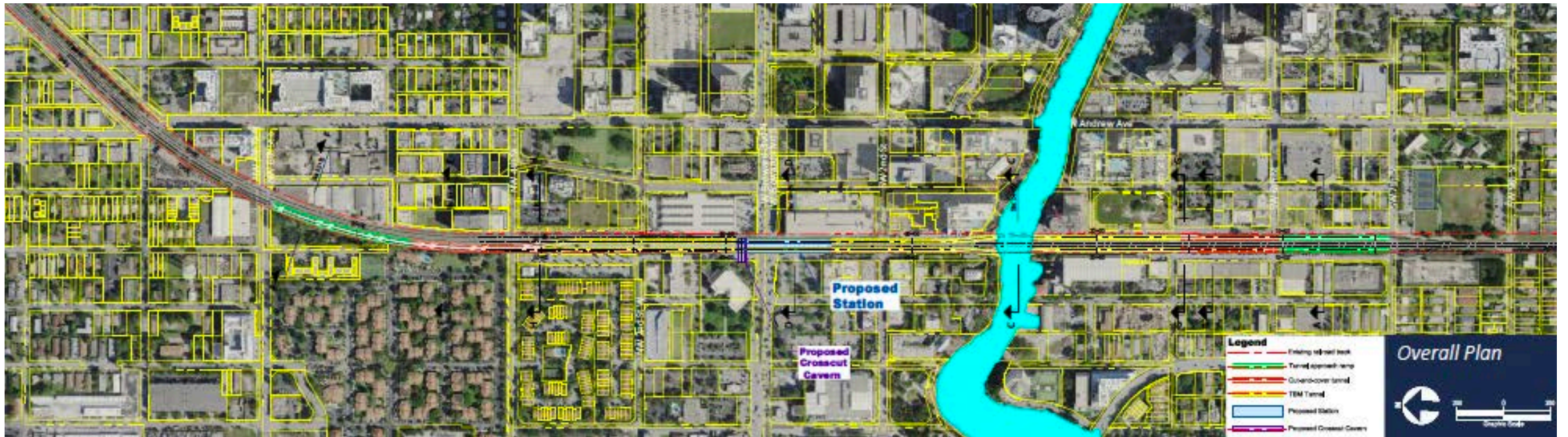


# Project Alignment

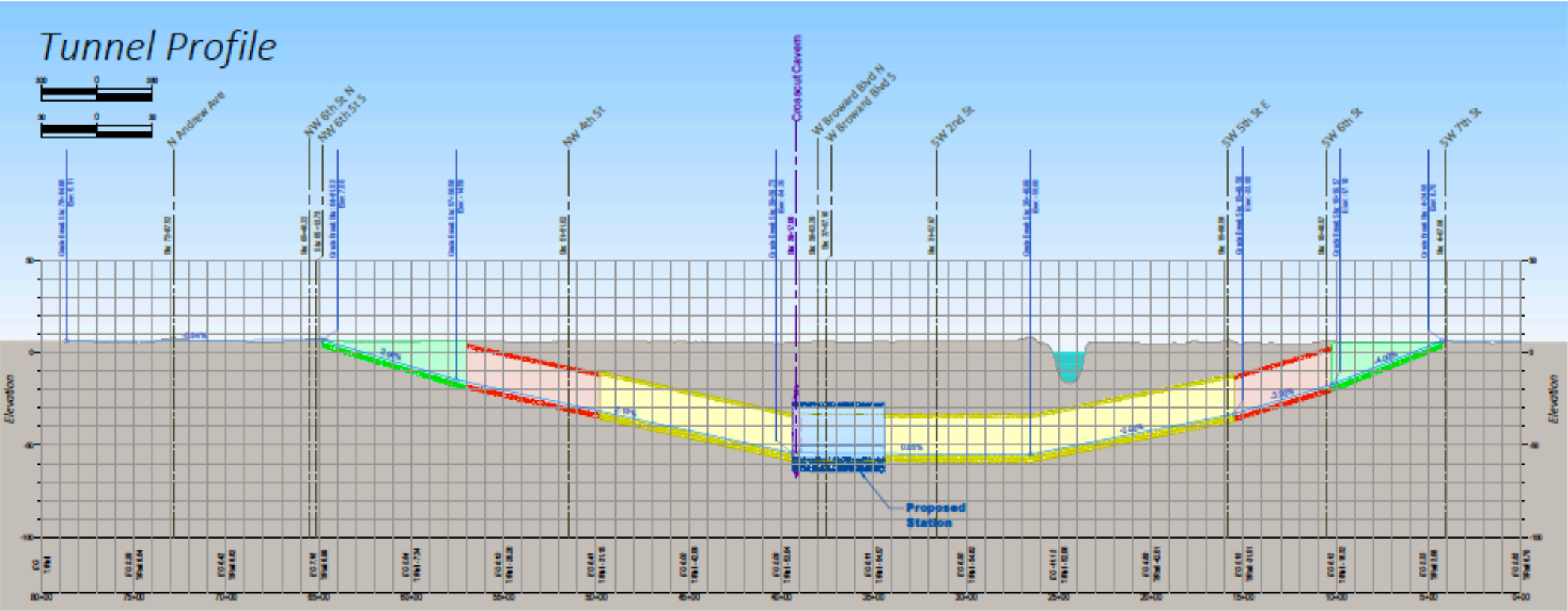




# Overall Project Alignment



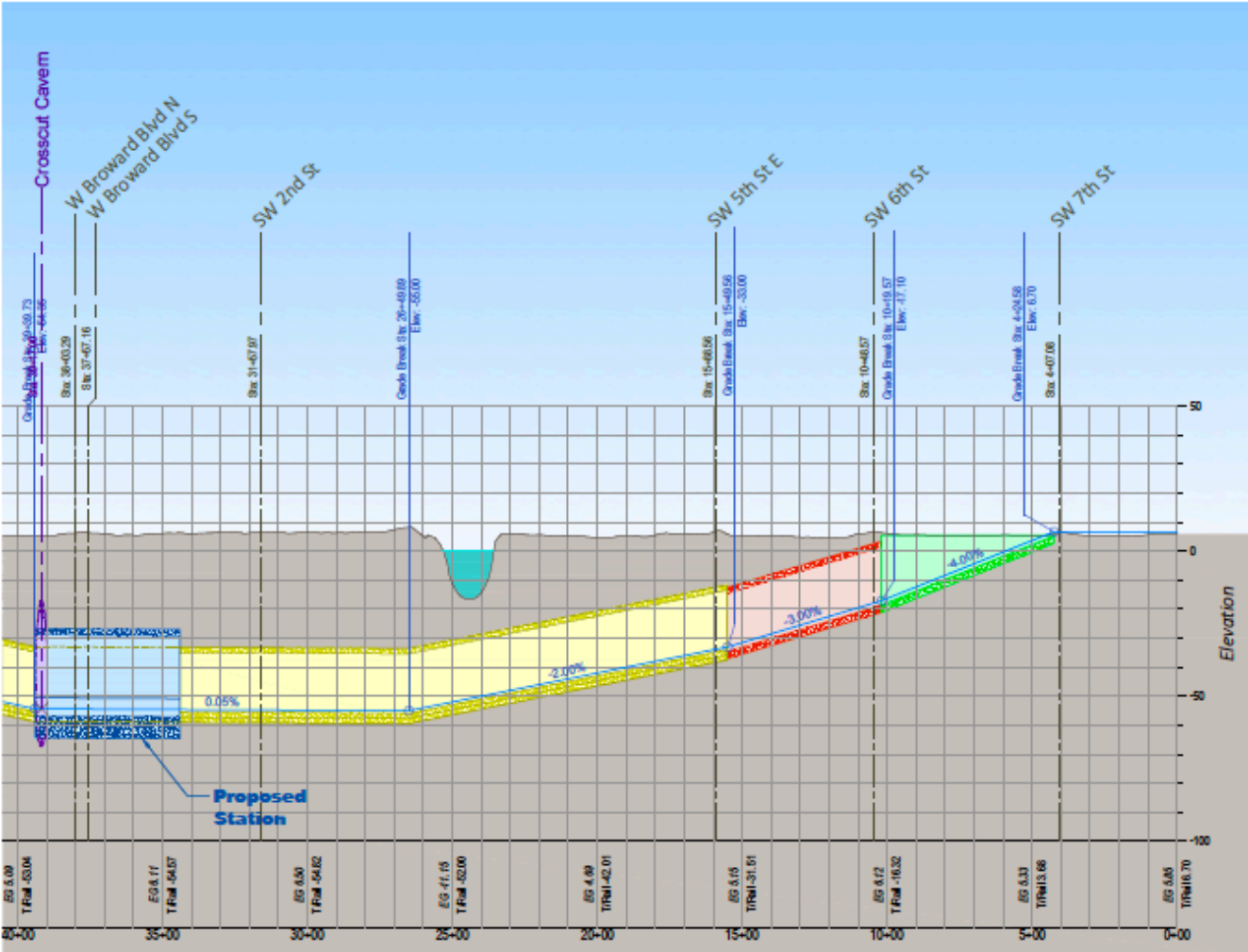
# Profile - Entire Length



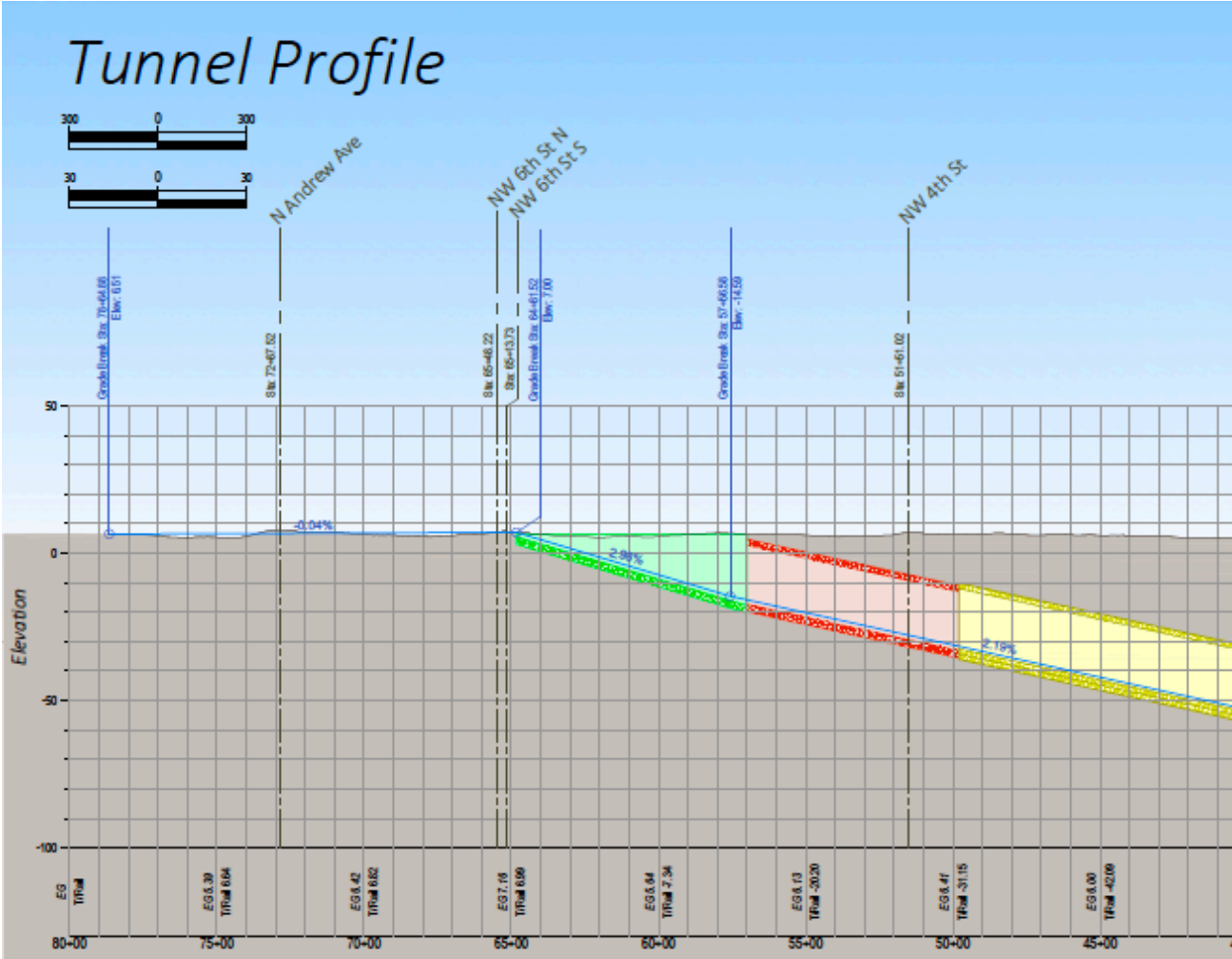
Vertical scale is 10 times Horizontal Scale



# Profile - Southern Segment

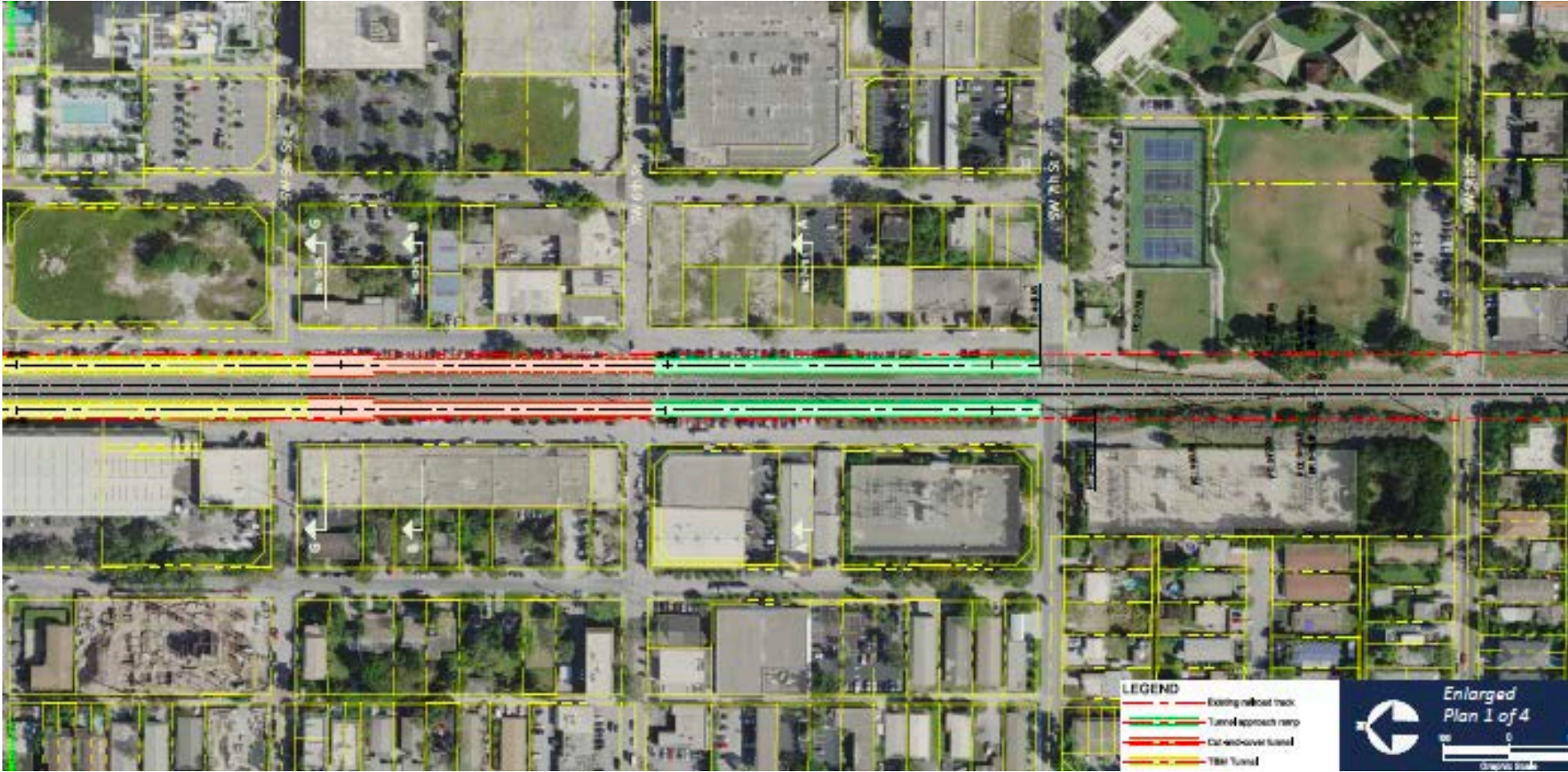


# Profile - Northern Segment

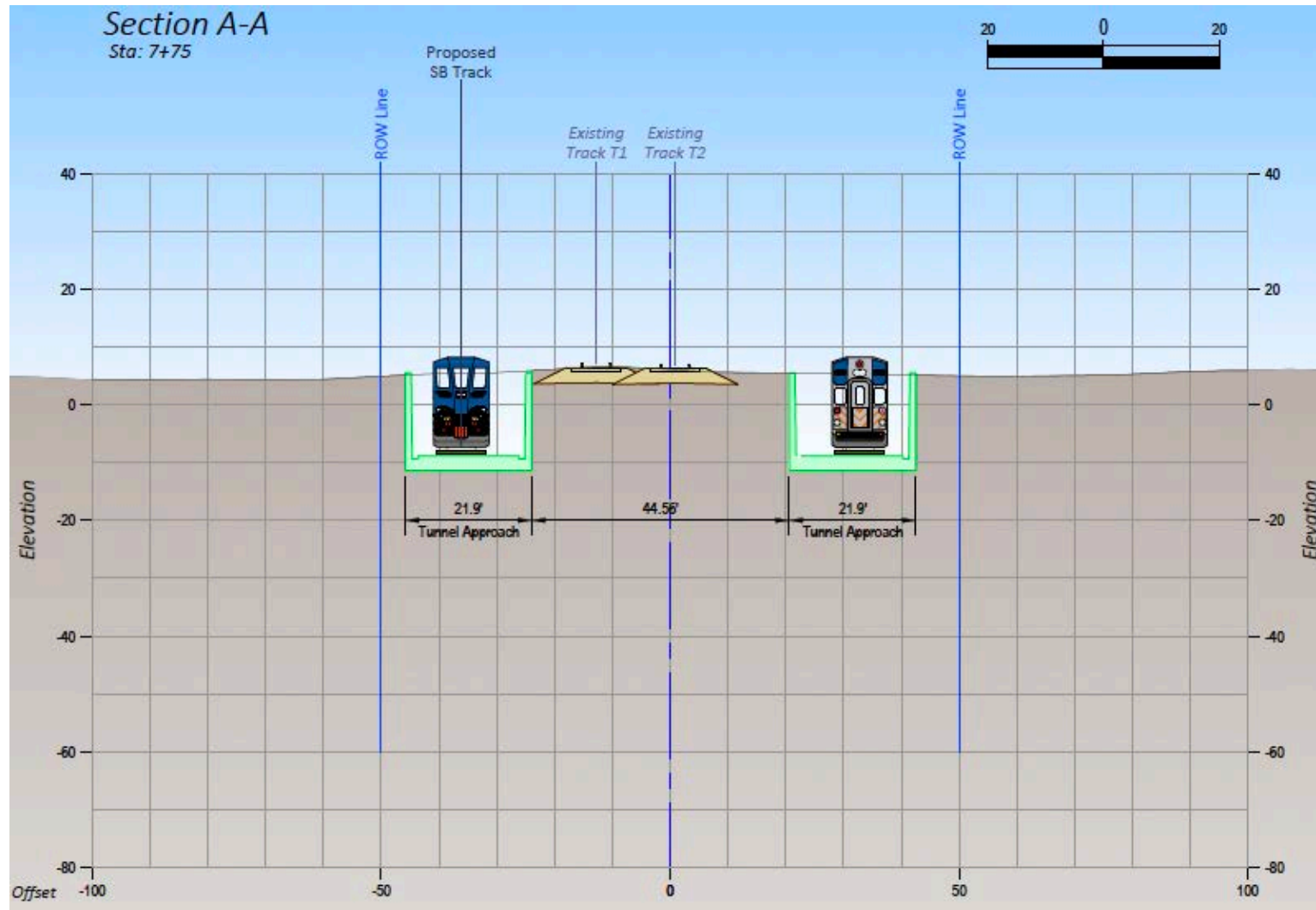




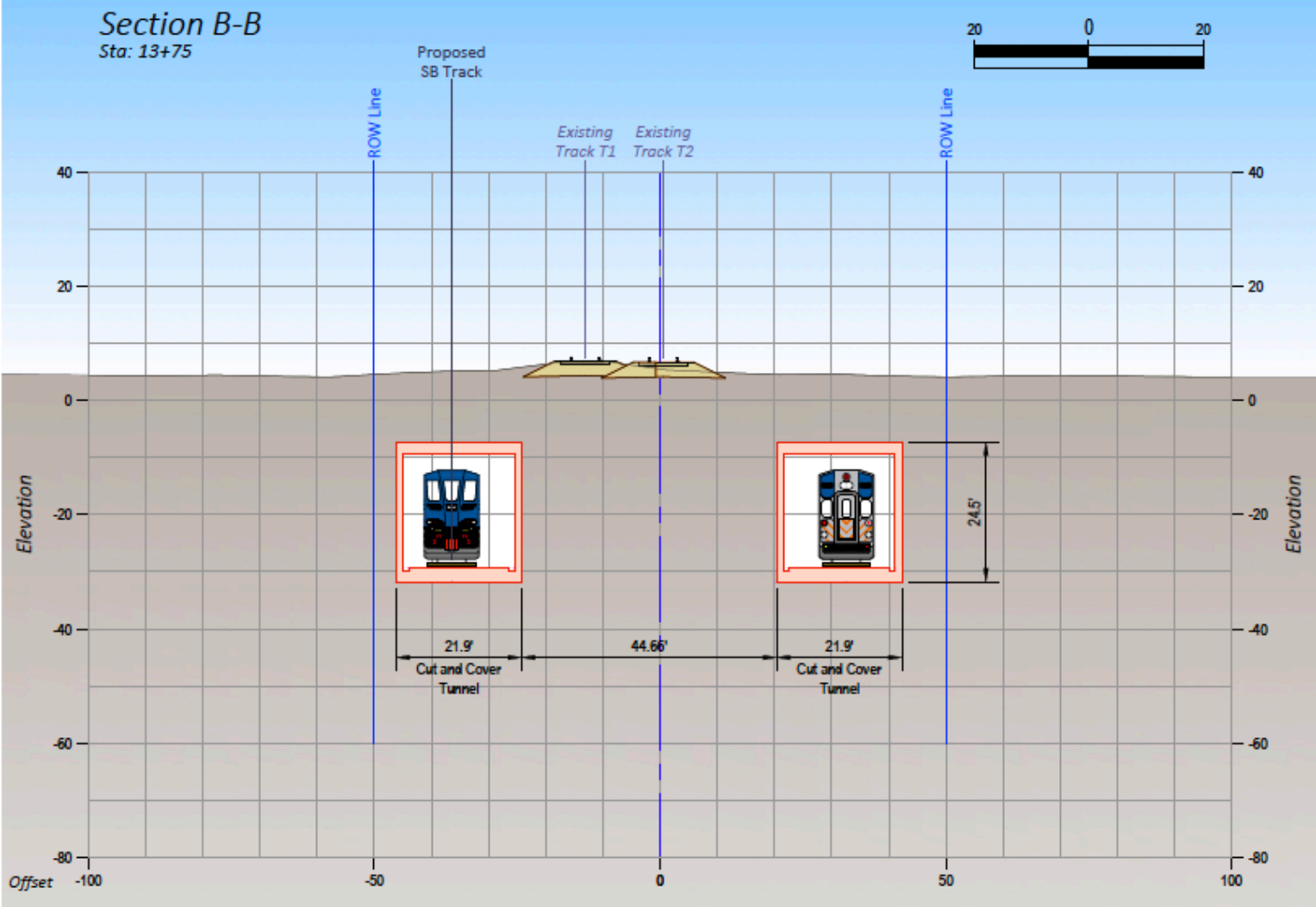
# South Segment - SW 7th Street to SW 5th Street



# Cross Section - Southern Approach Structure SW 7th Street to SW 6th Street

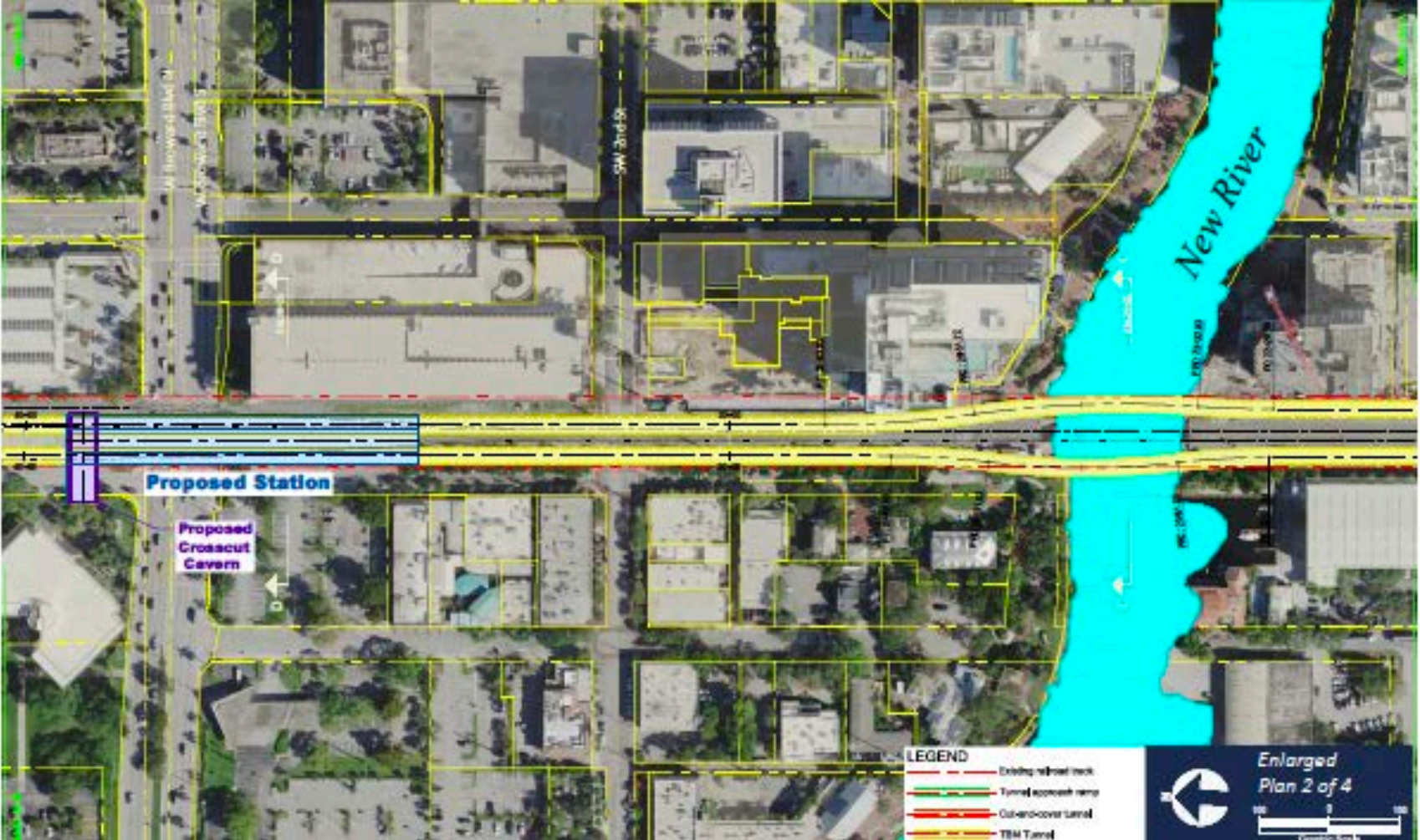


# Cross Section - Cut & Cover Tunnel SW 6th Street to SW 5th Street





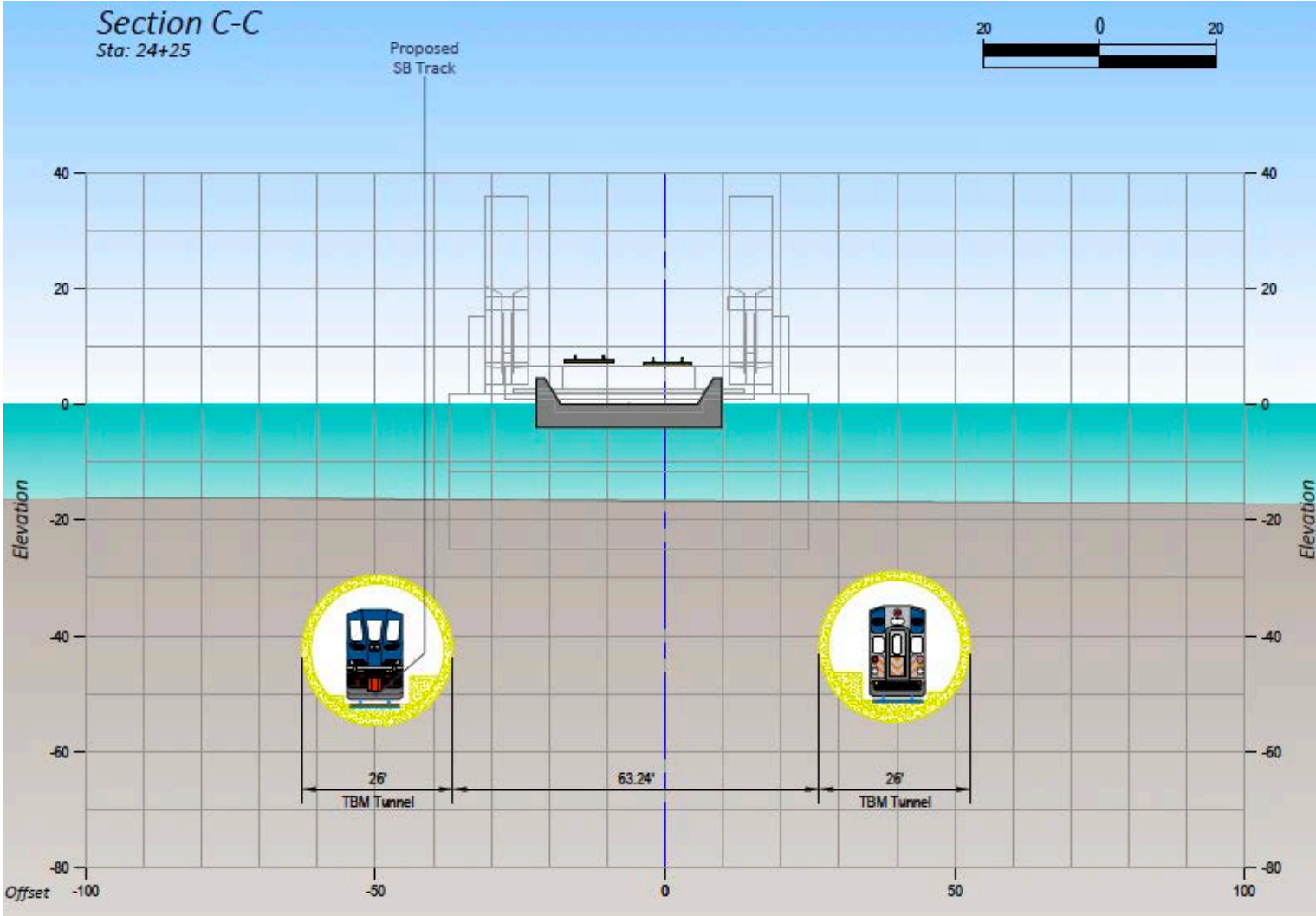
# Crossing the New River and Station Location



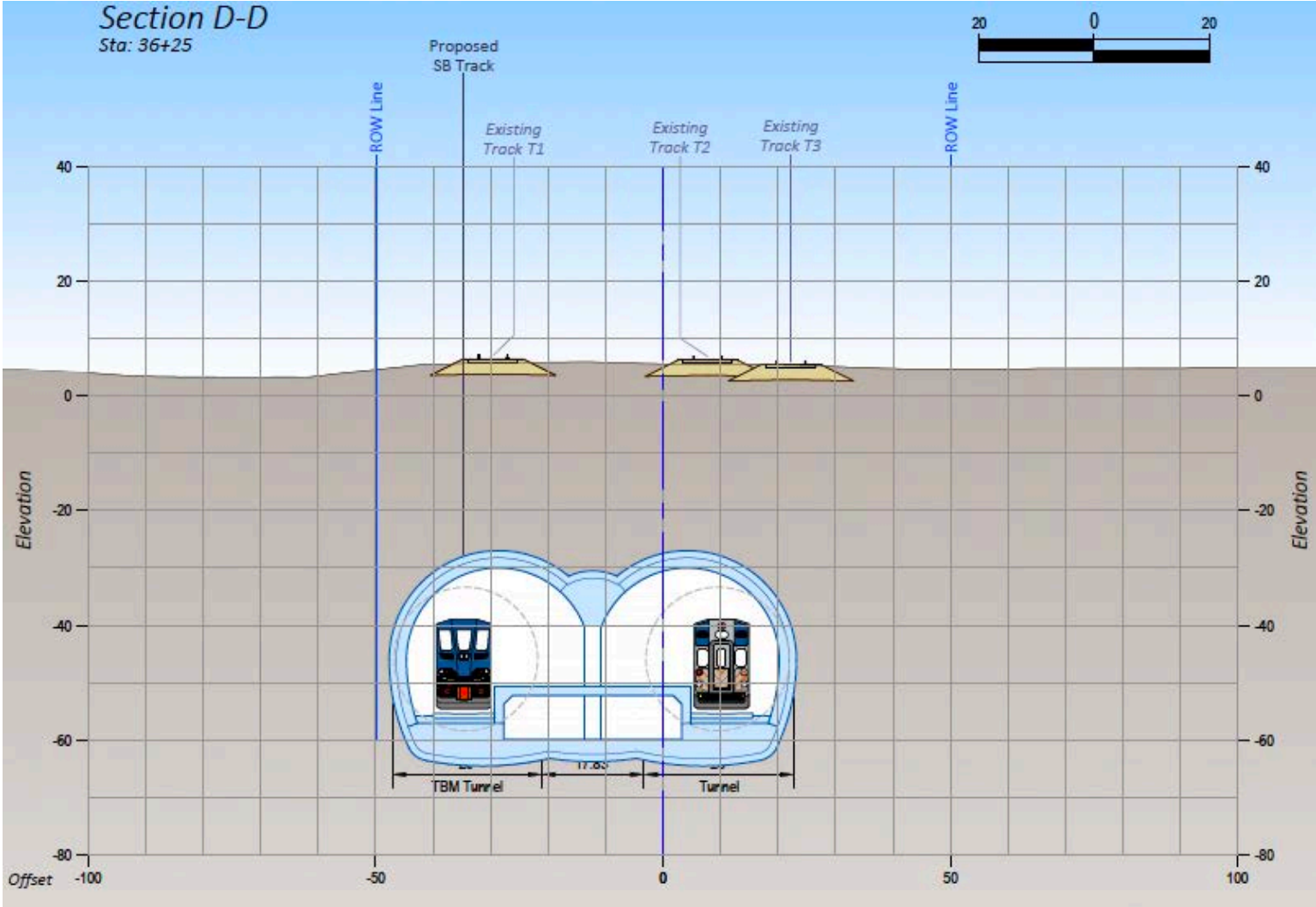
- Avoids the bridge pilings
- Mostly in public and railroad Right of Way



# Cross Section - TBM Tunnel Crossing the New River



# Cross Section at the Station - NATM Construction

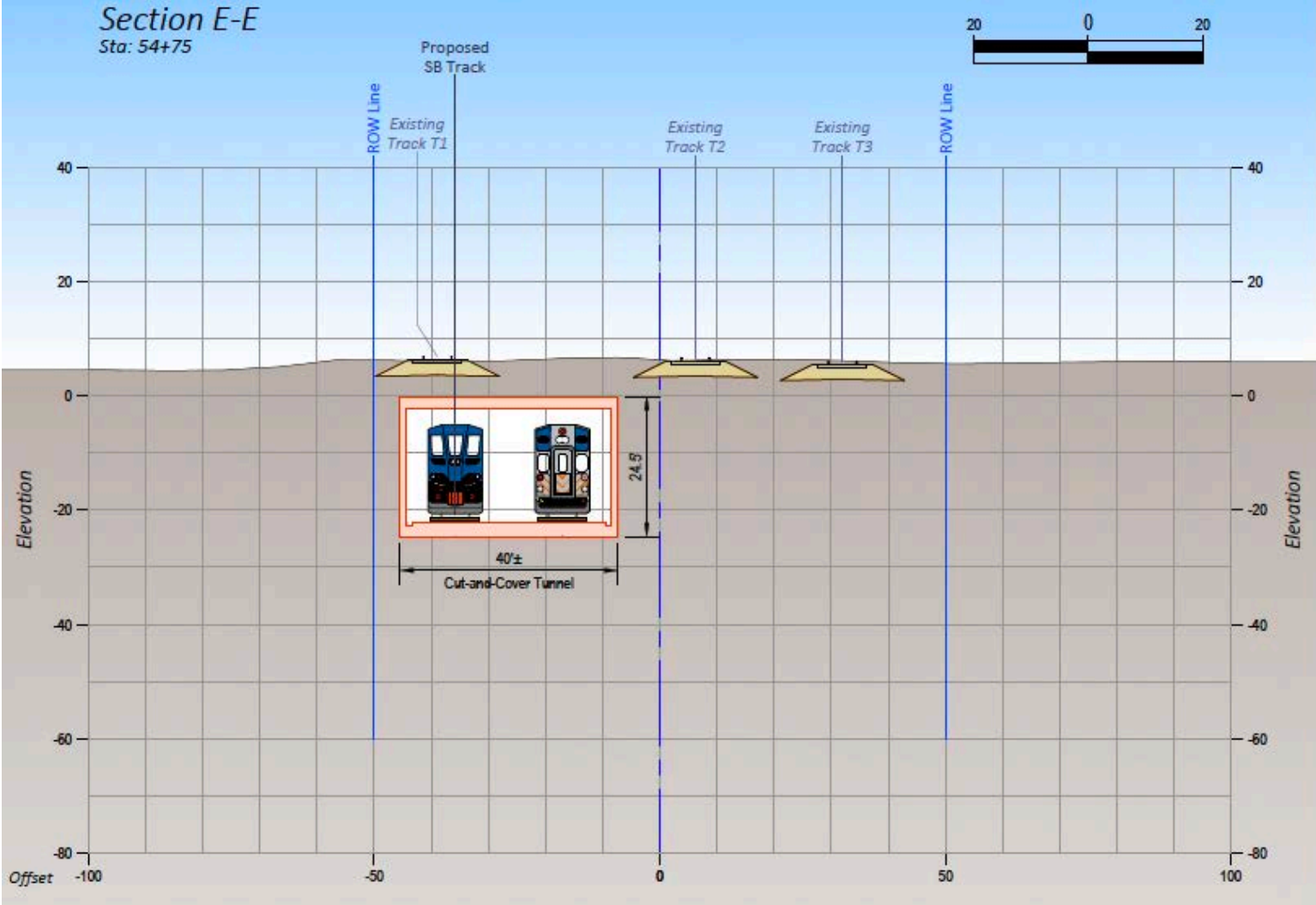


# Northern Segment - Joint Tracks





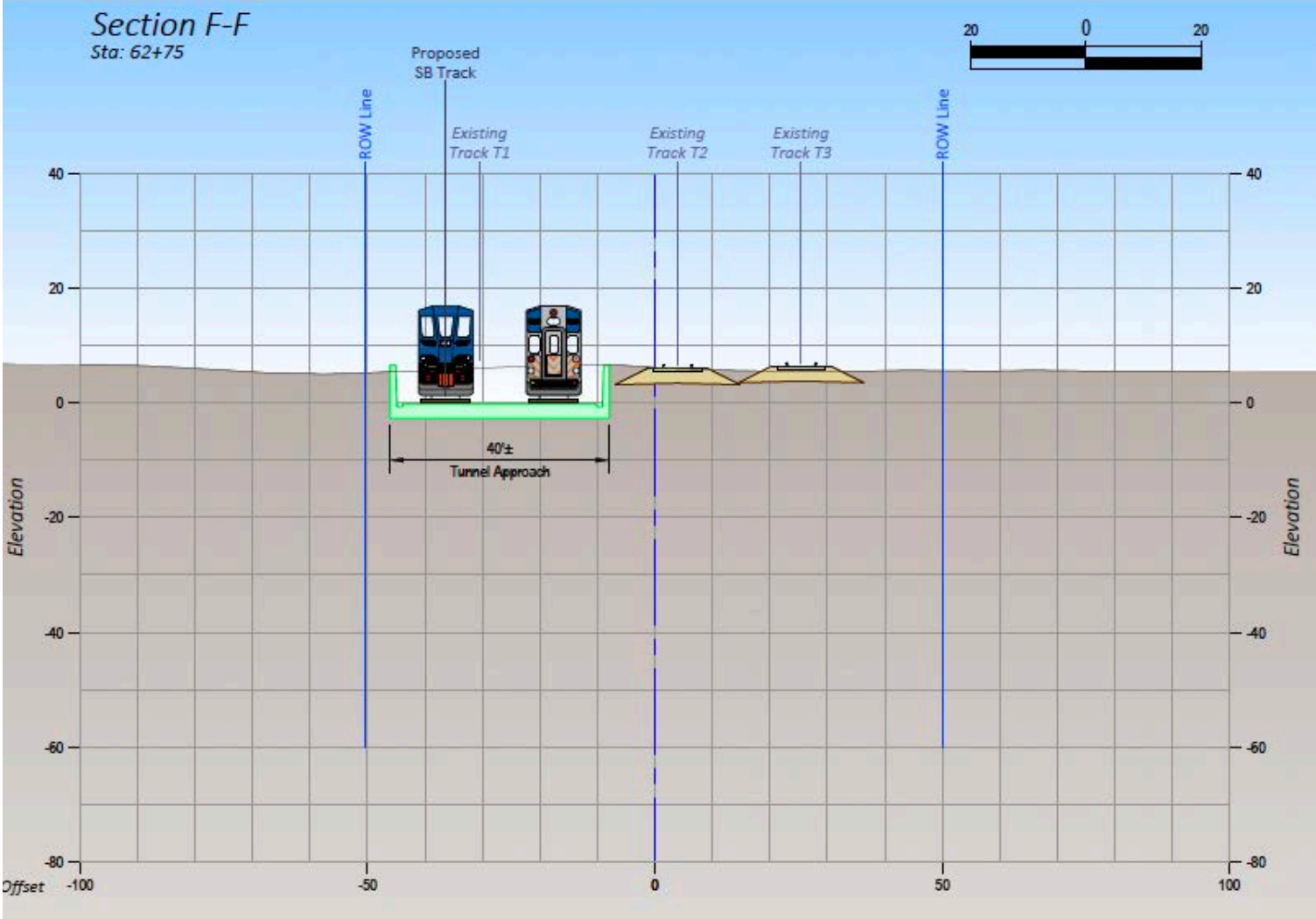
# Cross Section - Northern Cut&Cover - Combined Tracks at NW 4th Street



# Northern Segment - Connection to surface tracks



# Cross Section - Combined Tracks in Northern Open Approach





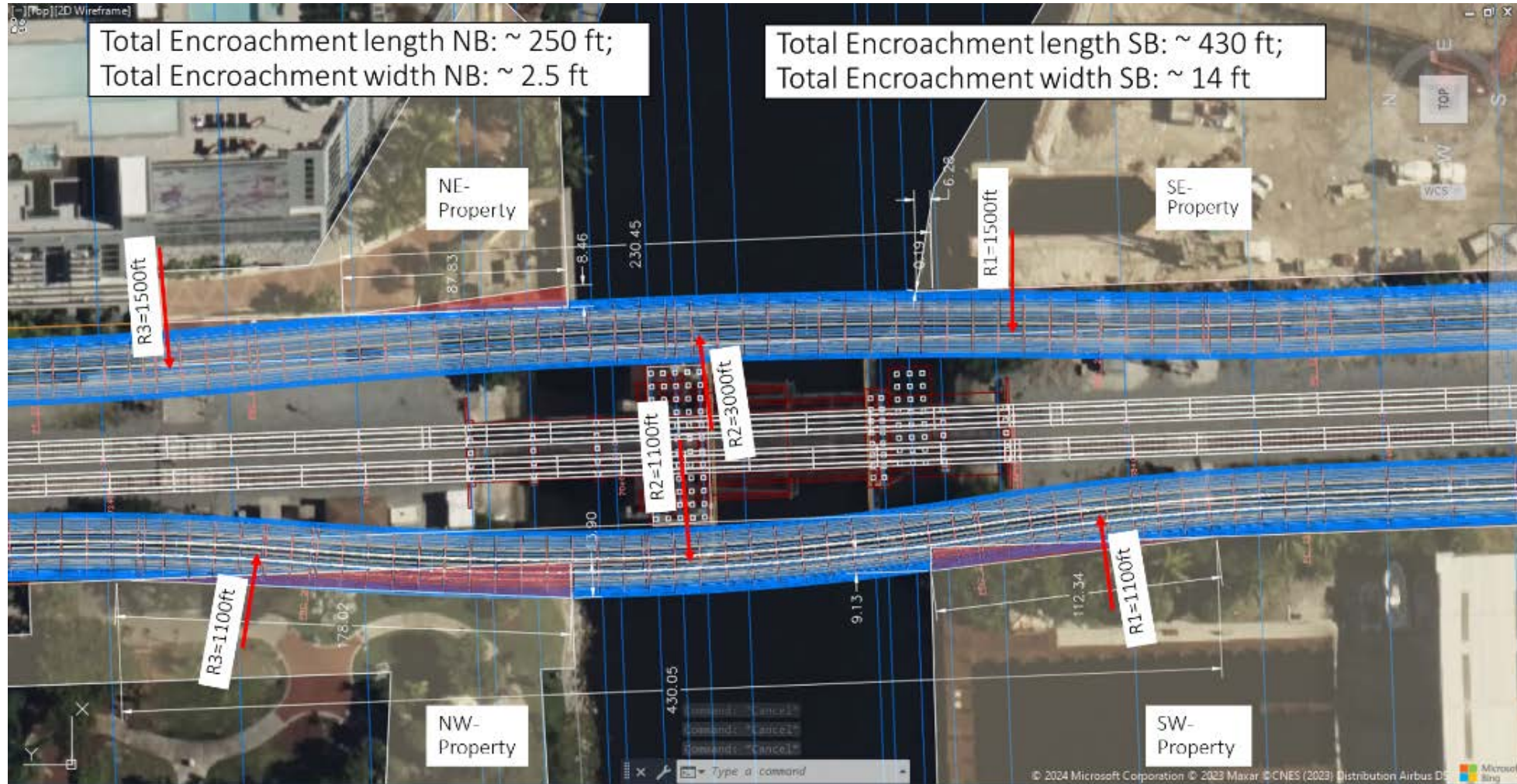
# Horizontal Alignment

# Horizontal Alignment

- ▶ Route Alignment Defined
- ▶ Avoid any of the existing piling under the existing Bascule Bridge
- ▶ Subterranean Right of Way or underground easement required

*In the following sections, Encroachments are defined as underground easements/ subterranean rights with no above the ground impact on the existing or future properties*

# Horizontal Alignment - (DRAFT)

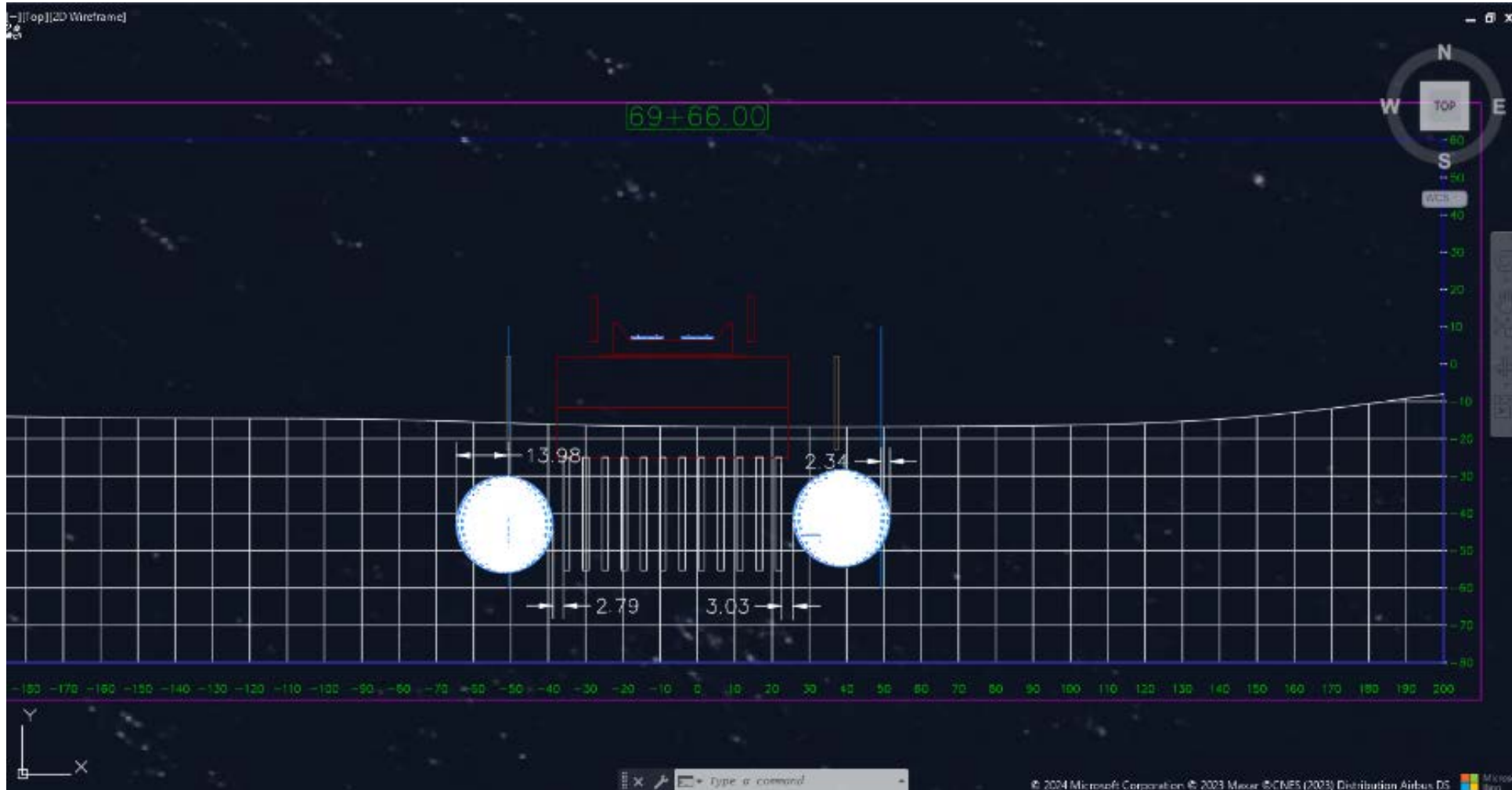


## Notes:

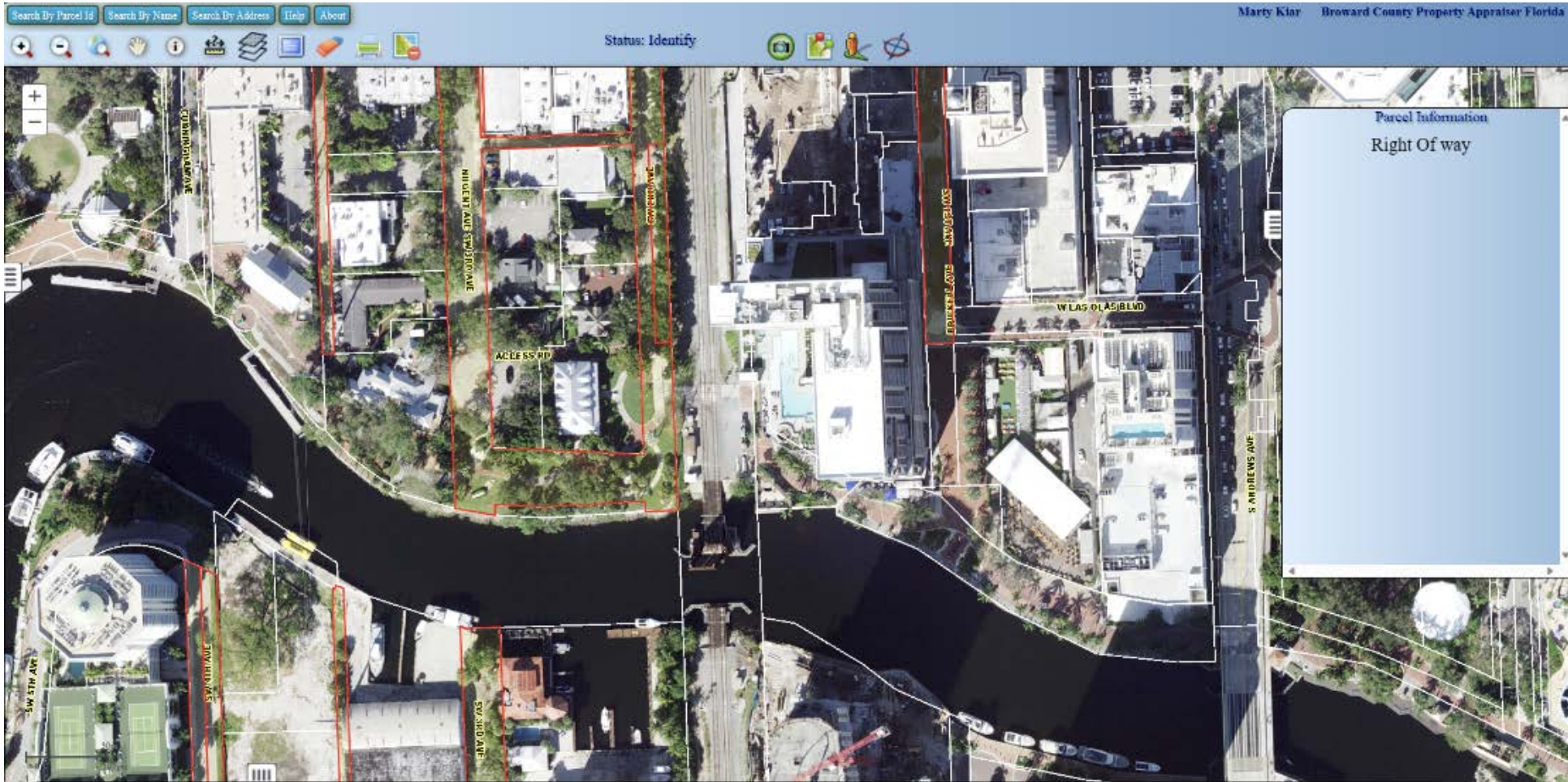
1. All Encroachment dimensions are maximum
2. Encroachments are defined as underground easements



# Horizontal Alignment - (DRAFT)



# Horizontal Alignment - NW ROW - City owned Property - (Draft)





# Horizontal Alignment - NW ROW City owned Property - (Draft)



## Notes:

1. All Encroachment dimensions are maximum
2. Encroachments are defined as underground easements



# Horizontal Alignment - NE ROW City owned Property - (Draft)

The screenshot displays a GIS application interface. At the top, there are search options: 'Search by Parcel ID', 'Search by Name', and 'Search by Address', along with 'Help' and 'About' buttons. The status bar indicates 'Status: Identify'. The main view is an aerial photograph of a residential area with a red outline highlighting a specific parcel. A 'Parcel Information' pop-up window is open on the right side, providing details for parcel 584210520049.

**Parcel Information**

- Parcel ID: 584210520049
- Owner: CITY OF FORT LAUDERDALE
- Site Address: 300 SW 1 AVE FORT LAUDERDALE FL 33301
- Legal: DRICKELL REDEVELOPMENT PLAT 147-27 B THAT PT OF PARCELS 5, 6, 7 & 8 OF MAC ROW DESCR'D AS BEG AT SW COR OF PARCEL D, NLY 50.48, CONT NLY 109.52, E 20.5, S 51.51, SE 94.50, SE
- Mileage Code: 9312
- Use Code: 02
- Land Value: \$ 742,800
- Building Value: \$ 8,610
- Other Value: 0
- Total Value: \$ 751,410
- SOH Capped Value: \$ 341,010
- Homestead Exempt: \$ 0
- Area:
- VWD Exempt Area: \$ 0
- Other Exempt Area: \$ 341,010
- Taxable Value: \$ 0
- Sale Date 1:
- Sale Price 1: 0
- Deed Type 1:
- Acct Plan 2:



# Horizontal Alignment - NE ROW City owned Property - (Draft)



## Notes:

1. All Encroachment dimensions are maximum
2. Encroachments are defined as underground easements



# Horizontal Alignment - SW Privately Owned Property - (Draft)

The screenshot displays a web-based property appraisal tool. At the top, there are search bars for 'Parcel ID', 'Address', and 'Address', along with 'Help' and 'About' links. The status bar indicates 'Status: Layers'. The main view is an aerial photograph of a residential neighborhood with several streets labeled: SW 4TH AVE, SW 11TH CT, SW 12TH CT, SW 13TH CT, SW 14TH CT, SW 15TH CT, SW 16TH CT, SW 17TH CT, SW 18TH CT, SW 19TH CT, SW 20TH CT, SW 21ST AVE, SW 22ND AVE, SW 23RD AVE, SW 24TH AVE, SW 25TH AVE, SW 26TH AVE, SW 27TH AVE, SW 28TH AVE, SW 29TH AVE, SW 30TH AVE, SW 31ST AVE, SW 32ND AVE, SW 33RD AVE, SW 34TH AVE, SW 35TH AVE, SW 36TH AVE, SW 37TH AVE, SW 38TH AVE, SW 39TH AVE, SW 40TH AVE, SW 41ST AVE, SW 42ND AVE, SW 43RD AVE, SW 44TH AVE, SW 45TH AVE, SW 46TH AVE, SW 47TH AVE, SW 48TH AVE, SW 49TH AVE, SW 50TH AVE, SW 51ST AVE, SW 52ND AVE, SW 53RD AVE, SW 54TH AVE, SW 55TH AVE, SW 56TH AVE, SW 57TH AVE, SW 58TH AVE, SW 59TH AVE, SW 60TH AVE, SW 61ST AVE, SW 62ND AVE, SW 63RD AVE, SW 64TH AVE, SW 65TH AVE, SW 66TH AVE, SW 67TH AVE, SW 68TH AVE, SW 69TH AVE, SW 70TH AVE, SW 71ST AVE, SW 72ND AVE, SW 73RD AVE, SW 74TH AVE, SW 75TH AVE, SW 76TH AVE, SW 77TH AVE, SW 78TH AVE, SW 79TH AVE, SW 80TH AVE, SW 81ST AVE, SW 82ND AVE, SW 83RD AVE, SW 84TH AVE, SW 85TH AVE, SW 86TH AVE, SW 87TH AVE, SW 88TH AVE, SW 89TH AVE, SW 90TH AVE, SW 91ST AVE, SW 92ND AVE, SW 93RD AVE, SW 94TH AVE, SW 95TH AVE, SW 96TH AVE, SW 97TH AVE, SW 98TH AVE, SW 99TH AVE, SW 100TH AVE. A specific parcel is highlighted with a red border. On the right side, a 'Parcel Information' sidebar provides the following details:

Parcel Information	
Parcel ID:	504210011830
Owner:	DFW 18 LLC
Sub Address:	400 SW 3 AVE FORT LAUDERDALE FL 33315
	FT LAUDERDALE D 40 D LOT 1 THRU 8, 19 THRU 25, TOGETHER WITH THESE PORTIONS OF VAC R/W'S ABUTTING LOTS 1 & 2 & 19 THRU 25 BLK 39
Milage Code:	0312
Use Code:	20
Land Value:	\$ 3,893,410
Building Value:	\$ 446,980
Other Value:	0
Total Value:	\$ 4,340,390
SOH Capital Value:	\$ 4,340,390
Homestead Exempt Amt:	\$ 0
WVQ Exempt Amt:	\$ 0
Other Exempt Amt:	\$ 0
Taxable Value:	\$ 4,340,390
Sale Date 1:	12/08/2020
Sale Price 1:	\$ 100
Deed Type 1:	SVW
Sale Date 2:	12/22/2011



# Horizontal Alignment - SW Privately Owned Property - (Draft)

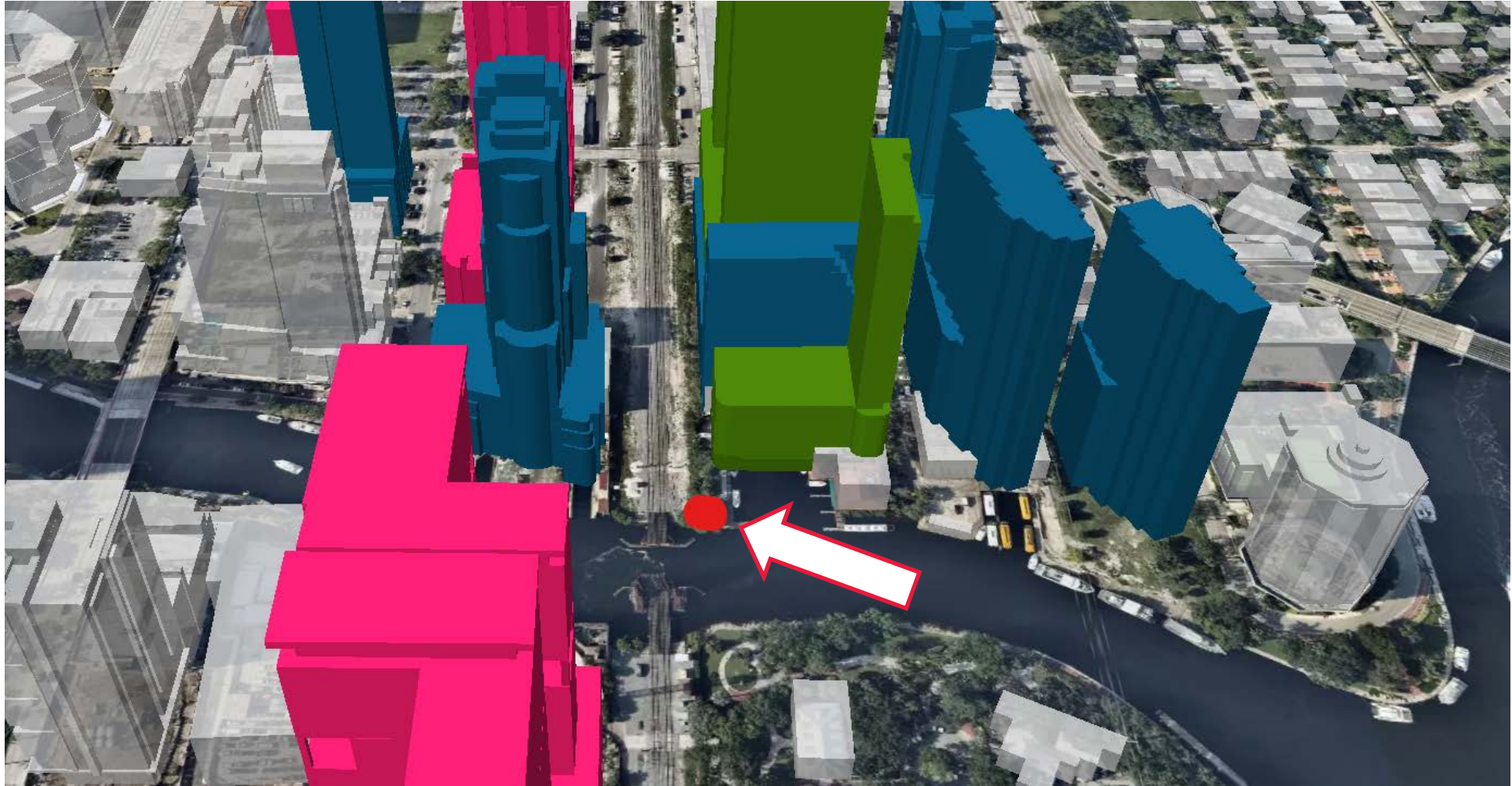


## Notes:

1. All Encroachment dimensions are maximum
2. Encroachments are defined as underground easements



# Horizontal Alignment - SW Underground Easement (Draft)



# Resiliency Issues

# Resiliency Issues

- ▶ A resiliency issue was raised about the potential flooding of the tunnels in case of hurricane or severe storm.
- ▶ Globally Flood Gates are an accepted and well implemented solution which safeguards tunnels from any flood risks.
- ▶ Port of Miami Tunnel has implemented Flood Gates and so does most of the New York tunnels.
- ▶ As per our assessment, each Flood Gate on the entrance of the Portal would cost approximately:
  - Cost of each Flood Gate installed in place: \$450,000
  - Total Cost of all Flood Gates: \$1.8 M
  - Total cost of all Flood Gates with contingency: \$2.34 M

# Property Impacts



# Property Impacts outside ROW: Bridge

- ▶ The City Commission requested to perform an evaluation of property impacts of both bridge & tunnel alternatives
- ▶ Before evaluating impacts on the property for the bridge alternative(s), we requested the County to share with us the Bridge Design
  - No defined Bridge Design is currently available
  - County has informed us that they are in the process of engaging consultants to develop a bridge design
- ▶ Determination of cost of land acquisition, impacts on property temporarily during construction or on permanent basis is not possible without a design

# Property Impacts outside ROW : Tunnel

- ▶ The tunnel alignment will have the following impact:
  - Subterranean Property Access Rights - City & Private Property on the Crossing
  - Majority of the property impacted is owned by the City
  - Potential Staging Area Cost
    - Identified multiple property options
    - Selected property can be leased or acquired
    - If leased, the estimate is around \$1.3 Million for the construction period
    - If acquired, the estimated cost is \$20 Million
    - Since the corridor has seen tremendous growth, the property can be sold upon project completion and can generate additional value

# Stakeholder Views



# Stakeholder Views

- ▶ FECR and Brightline are major stakeholders of corridor
- ▶ Meetings conducted:
  - FECR on Jan 26<sup>th</sup>
  - Brightline multiple meetings, most recently Feb 13<sup>th</sup>
- ▶ FECR agreed to review the tunnel layout once available
- ▶ Brightline confirmed that the 4% gradient between SW 7<sup>th</sup> and SW 6<sup>th</sup> street is allowable

# Project Cost

## Capital Cost

- ▶ The Capital Costs are in draft form as we are still working through refinement of the Station Design and construction requirements
- ▶ The current draft Level Four cost estimate is **\$888M** compared to the initial rough order of magnitude (\$880M - \$1.085B).
- ▶ Costs are based on 2023 dollars comparable to previous reports and will be updated for the year of spend

## O&M Cost

- ▶ The O&M Costs are still being developed.
- ▶ The initial draft assessments indicates the O&M Cost is around **\$2.5M** per annum
- ▶ This estimate of includes costs related to Station O&M as well



FTA Work Elements	FDOT (HDR) \$M	Whitehouse (Jacobs) \$M	BDO Rough Order of Magnitude (ROM) \$M	DRAFT Level Four Cost Estimate
10.00 Guideway and Track Elements (Tunnel)	\$839	\$705	TBD \$300 to \$350	\$247,208,756
20.00 Stations, Stops, terminals	\$88	\$303	TBD \$200 to \$250	\$304,624,744
40.00 Site work	\$86	\$274	TBD \$30 to \$50M	\$13,191,496
50.00 Railroad System	\$190	\$86	TBD \$40 to \$50	\$11,607,750
80.00 Professional Services	\$350	\$452	TBD \$140 to \$175	\$115,906,937
90.00 Contingencies	\$391	\$783	TBD \$170 to 210	\$191,246,446
<b>Total (2023 Dollars)</b>	<b>\$1,944</b>	<b>\$2,603</b>	<b>TBD</b> <b>\$880 to \$1,085</b>	<b>\$887,988,068</b> (Includes \$1,300,000 for ROW)



# Funding Solutions

# Funding Solution

## ASSUMPTIONS & LIMITATIONS TO CURRENT FINANCING PLAN

- ▶ Total Project Cost for neither tunnel nor bridge includes ROW access
- ▶ All options consider static County financial contribution
- ▶ All options consider static FDOT/State financial contribution
- ▶ All Federal Grants related to tunnel are Non-FTA
  - Due to strong community connectivity and Justice components, it is our option that the case for Federal Funding is strong due to its impact and importance on the North-South connectivity
- ▶ In the case of utilization of Federal Financing, creative revenue streams such as Value Capture, inter-local agreements and other revenue sources can be utilized to support the Project financing costs



# Funding Options presented in previous Reports

▶ Whitehouse Report presented three key funding options

Amts in Mn	MID-LEVEL BASCULE BRIDGE		
Capital Cost	\$ 572.00*		
	Option 1 - Non-Federal	Option 2 - Federal FTA**	Option 3 - Federal Non-FTA
% Allocation			
State/FDOT	50%	25%	25%
Local Funding/Broward County	50%	25%	25%
Federal Grants		50%	50%
Capital Cost Distribution Under Options			
State/FDOT	\$ 286.00	\$ 143.00	\$ 143.00
Local Funding/Broward County	\$ 286.00	\$ 143.00	\$ 143.00
Federal Grants		\$ 286.00	\$ 286.00

\*Capital Cost assumed is based on previously proposed mid-level bascule bridge (Currently under redesign by the County)

\*\*Eligibility for FTA Funding is primarily based on ridership



# Proposed Options to fund the Tunnel Cost


Amts in Mn	Tunnel Alternative		
Capital Cost	\$ 888.00		
	Option 1	Option 2	Option 3
% Allocation			
State/FDOT	32%	16%	16%
Local Funding/Broward County	32%	16%	16%
Federal Grants	36%	68%	39%
Federal Financing			28%
Capital Cost Distribution Under Options			
State/FDOT	\$ 286.00	\$ 143.00	\$ 143.00
Local Funding/Broward County	\$ 286.00	\$ 143.00	\$ 143.00
Federal Grants	\$ 316.00	\$ 602.00	\$ 350.00
Federal Financing			\$ 252.00

# Next Steps



# Next Steps

- ▶ Draft Interim Report to be submitted in first week of March 2024
- ▶ Continued Collaboration with the County
- ▶ Interface with FECR and Brightline regarding technical aspects of configuration
- ▶ Buy-in of these stakeholders is essential for completion of the crossing
- ▶ Continue coordination with other Crossing stakeholders
- ▶ Perform impact studies and construction planning
  - Economic, community, quality of life, property impacts, geotech, topography & utility surveys, etc.
- ▶ Refinement of funding plan and preparation for federal funding/grants



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