



## Memorandum

**Memorandum No: 23-158**

**Date:** December 18, 2023

**To:** Honorable Mayor, Vice Mayor, and Commissioners

**From:** Greg Chavarria, City Manager   
Greg Chavarria (Dec 18, 2023 08:41 EST)

**Re: New River Crossing Update Part III – Supplemental Materials**

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The attached materials are being provided to you in reference to BUS-1 (23-1201) for the December 19, 2023, City Commission Conference Meeting. At the time of publishing, these supplemental materials were still being developed by the City's consultant and were not ready for distribution. The supplemental materials will be added as Exhibit 2 to the Commission Agenda Memorandum. The City's consultant, BDO, will attend the December 19, 2023, City Commission Conference Meeting.

If you have any questions, please contact Ben Rogers, Director of Transportation and Mobility, at [brogers@fortlauderdale.gov](mailto:brogers@fortlauderdale.gov).

Attachment: Exhibit Two – BDO Presentation

c: Anthony G. Fajardo, Assistant City Manager  
Susan Grant, Assistant City Manager  
Thomas Ansbro, City Attorney  
David R. Soloman, City Clerk  
Patrick Reilly, City Auditor  
Department Directors  
CMO Managers

# City Commission Meeting

December 19, 2023

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# Introduction to Team

- ▶ BDO combined bring together a holistic team of professionals with relevant experience in transportation, transit, above ground and underground projects
- ▶ Our team has worked on similar projects including but not limited to the California High Speed Rail, Honolulu Authority for Rapid Transportation, Light Rail Maastricht (Belgium), Light Rail Liège (Belgium), Streetcar Track Brabo I & II (Belgium), Livan P3 pre metro project (Belgium), Canada Line Transit Project - BC (Canada), Metrolinx (Canada), The Réseau express métropolitain Québec (Canada) and the Hurontario Light Rail Transit Ontario (Canada)
- ▶ Our professionals have not only advised the most successful public agencies such as LA Metro, Ohio Department of Transportation, Northwest Indiana Regional Development Authority, Indiana Department of Transportation and Regional Transportation Authority (Chicago, Illinois), NYNJ Port Authority, but have also managed public agencies (Washington DC Office of Public Private Partnerships).
- ▶ We offer a one-window service related to strategy, structuring, design, development, program management, technical analysis, funding, financing, commercial, procurement and implementation needs.

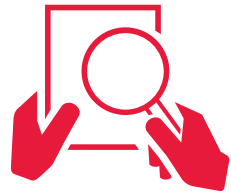
- ▶ Port of Miami Tunnel, FL
- ▶ Hudson Tunnel Project, The Gateway Program, NY/NJ
- ▶ East Side Access, NY
- ▶ I-64 Bridge Tunnel, VA
- ▶ No.7 Subway Line, NY
- ▶ Crossrail, London
- ▶ East Link Extension, WA
- ▶ East Side Access, NY
- ▶ Livan Infrastructure project, Belgium
- ▶ R4 Roadway in Ghent, Belgium
- ▶ Ohio River Bridges East End Crossing Project, OH
- ▶ Eglinton Crosstown West Extension, Canada
- ▶ Toronto-York Spadina Subway Extension – Sheppard West Station and Southern Tunnels, Canada
- ▶ Canada Line Transit Project, Canada
- ▶ George Massey Tunnel Replacement Project, Canada
- ▶ Hurontario Light Rail Transit Project, Canada
- ▶ Interstate 69 (Section 5), IN
- ▶ NWI Rail Projects and Transit Oriented Development
- ▶ Devil's Slide Tunnel, CA
- ▶ Dulles Corridor Metrorail Project,
- ▶ BART Santa Clara VTA Silicon Valley Phase II Extension Project, CA



# Scope of Work



Project Definition



Funding Opportunities



Action Plan



# Project Definition

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# Project Definition

Is It Possible:

- ▶ Marine Traffic to have a free flow
- ▶ Cost-effective underground solution
- ▶ Shorter tunnel
- ▶ No impact on any real estate
- ▶ Not blockade any street
- ▶ No impact on FECR and Brightline operations
- ▶ Lower O&M costs
- ▶ Solution that works for everyone?

The Answer is .....



A nighttime photograph of a city skyline featuring several illuminated skyscrapers. In the foreground, there is a road interchange with a concrete barrier and some greenery. The scene is lit with city lights, creating a vibrant urban atmosphere.

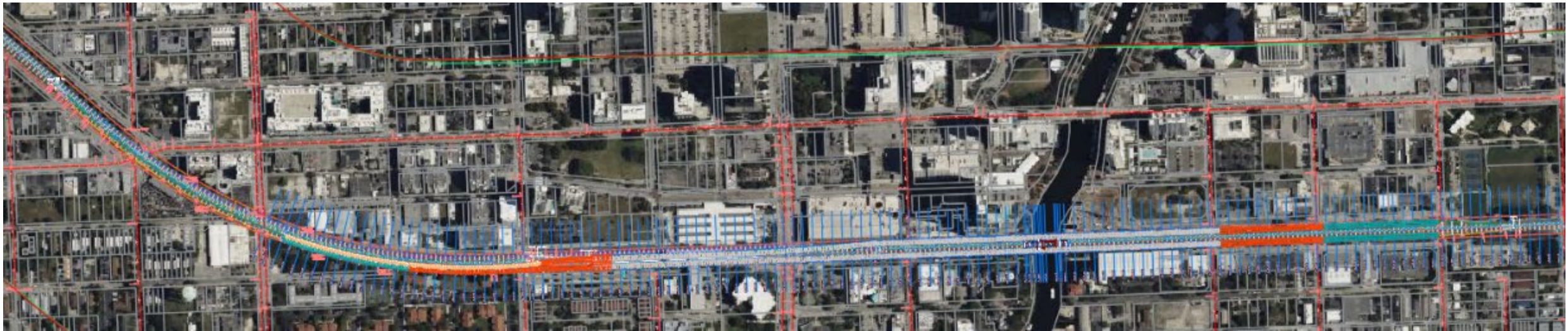
# Solution that Meets the Criteria

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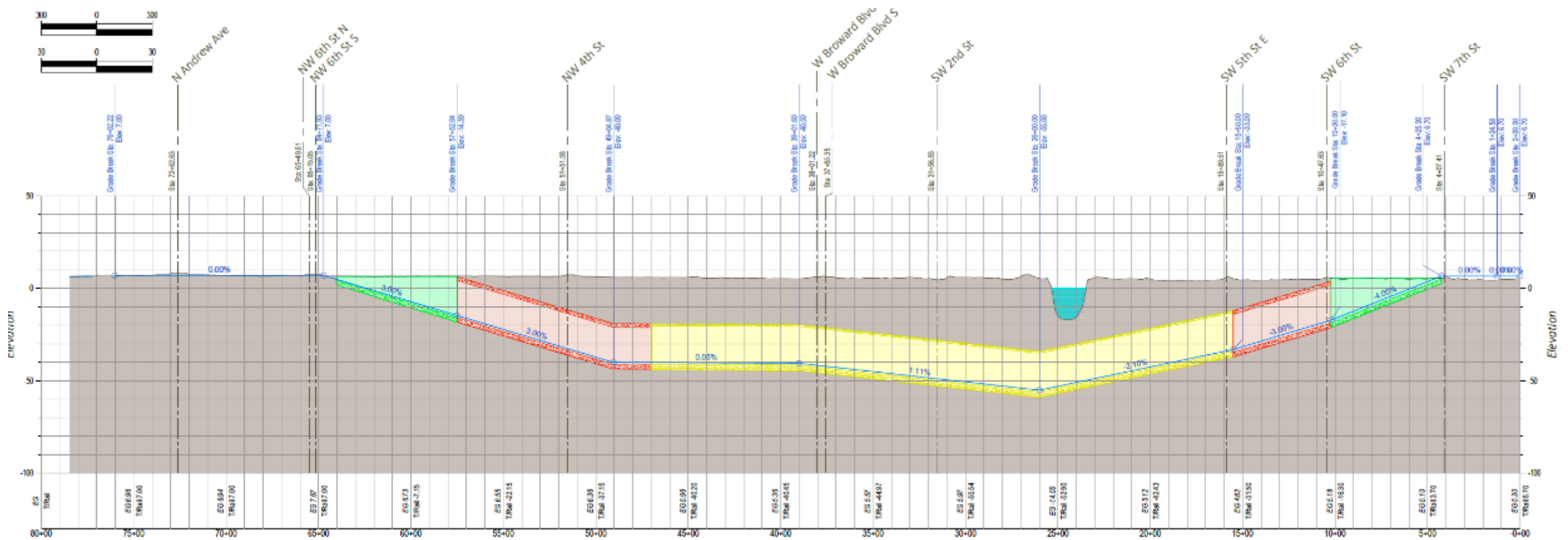
# Alternative 1.4 - Twin Bore TBM Tunnel

Alignment - NW 6<sup>th</sup> Street to SW 7<sup>th</sup> Street





# Profile - Alternate 1.4

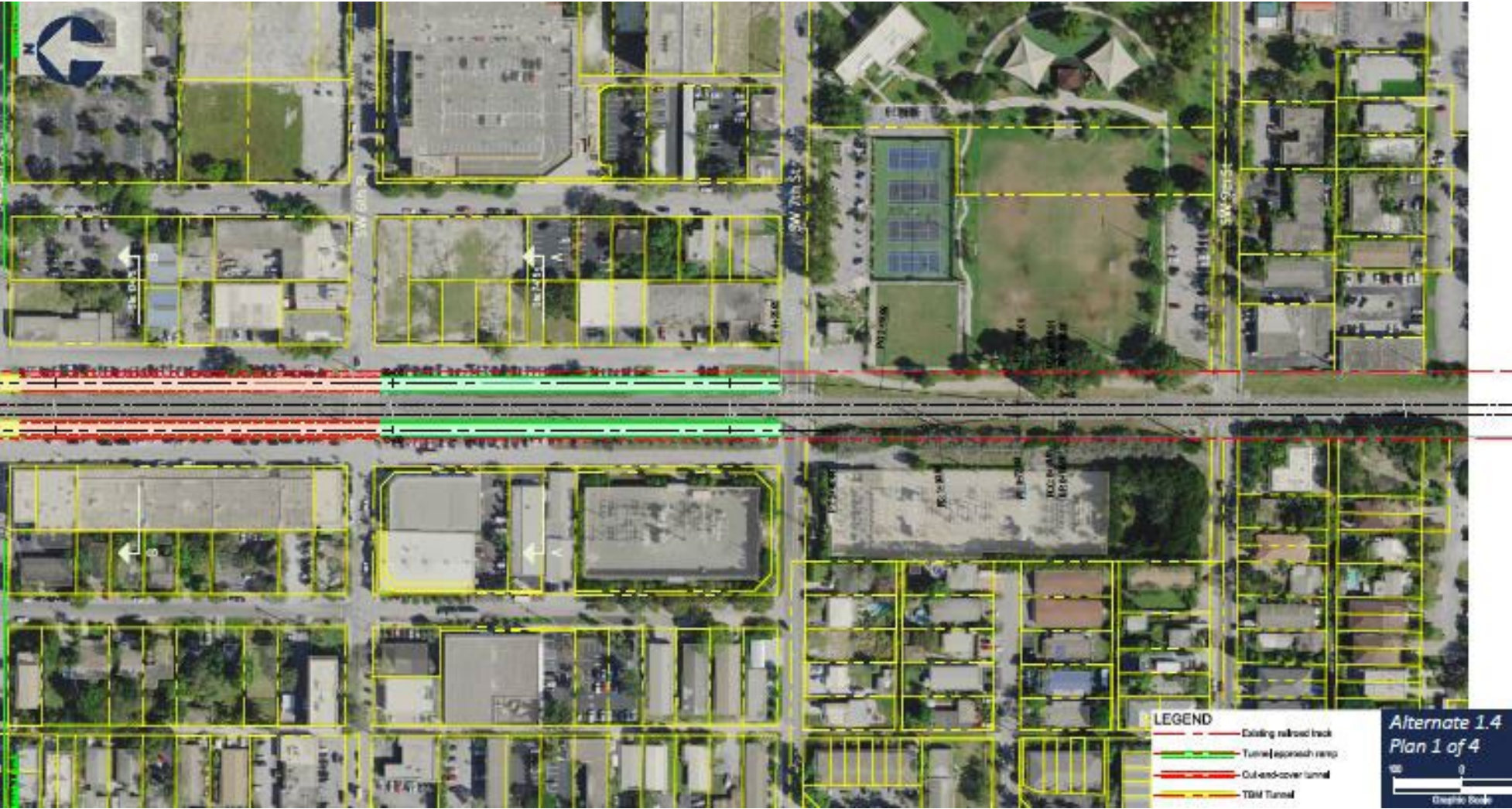


Elevation -55 ft below North River

**DISTORTED SCALE: Vertical 10 times Horizontal Scale**



# South Crossovers - SW 7th Street



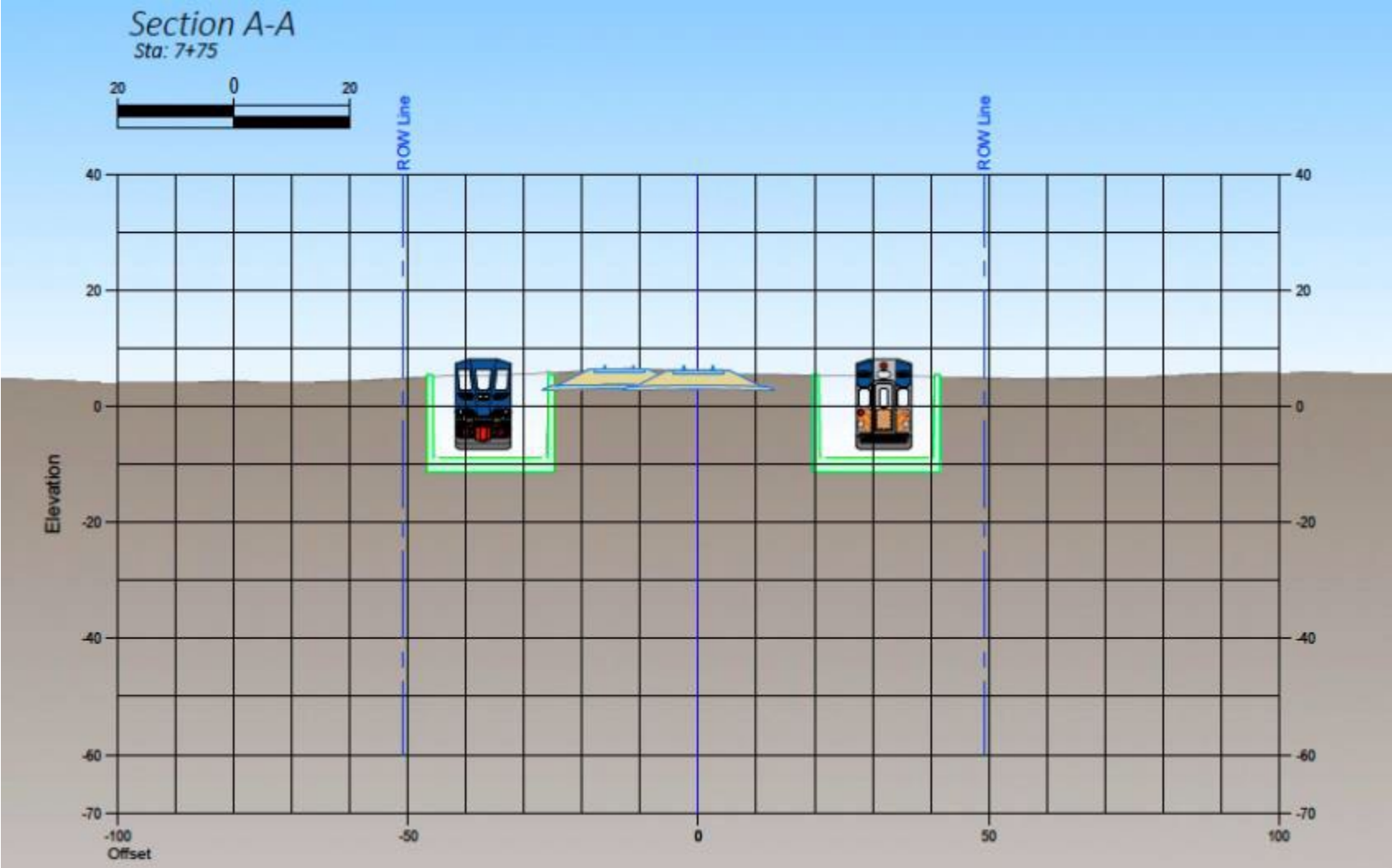
- Cut and cover
- Approach structure
- Crossovers between SW 7th Street and SW 9th Street
- Secondary staging area

LEGEND  
Existing railroad track  
Tunnel approach ramp  
Cut-and-cover tunnel  
TBM Tunnel

Alternate 1.4  
Plan 1 of 4  
Graphic Scale

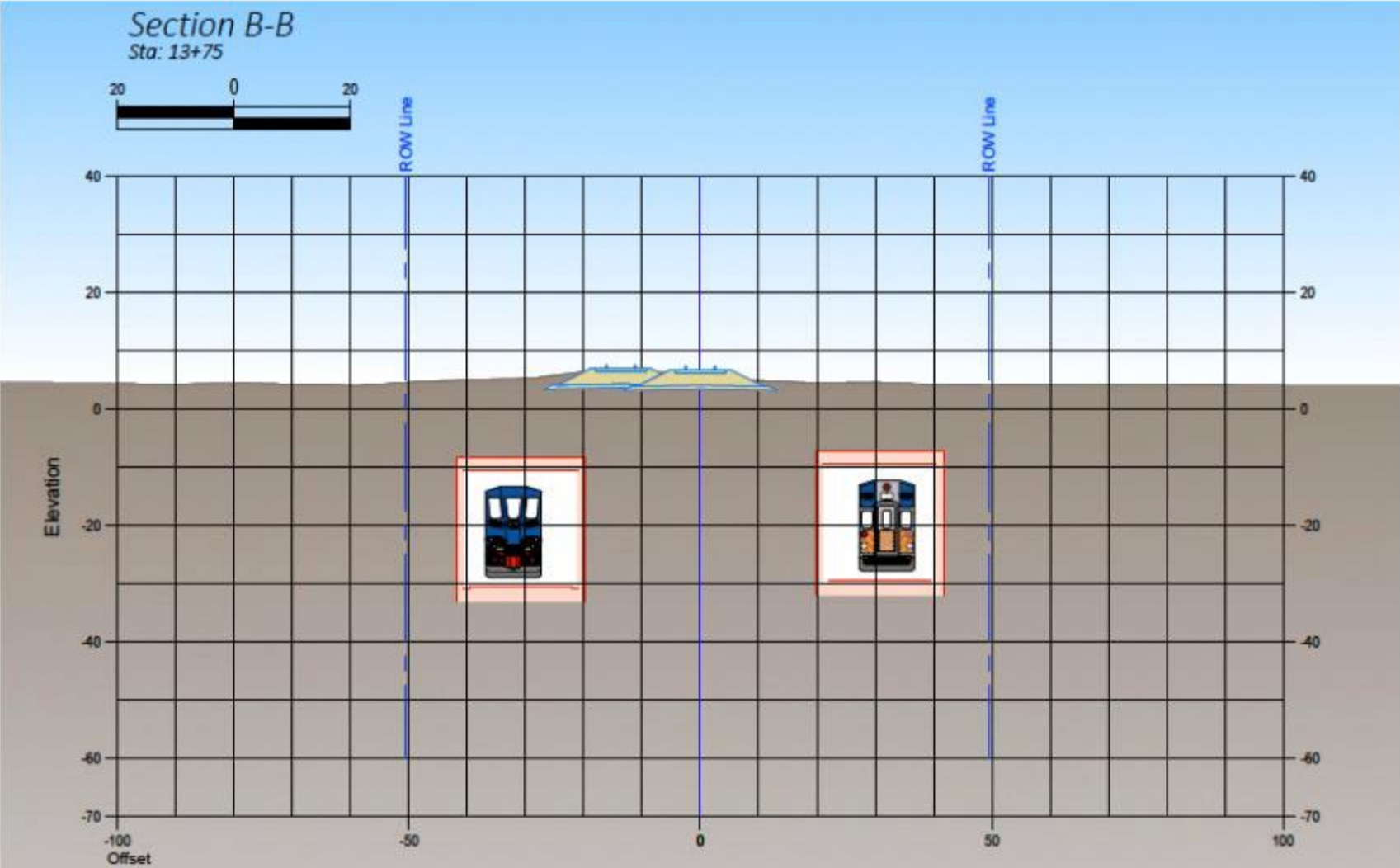


# Cross Sections - South Approaches (North of SW 7<sup>th</sup> St.)



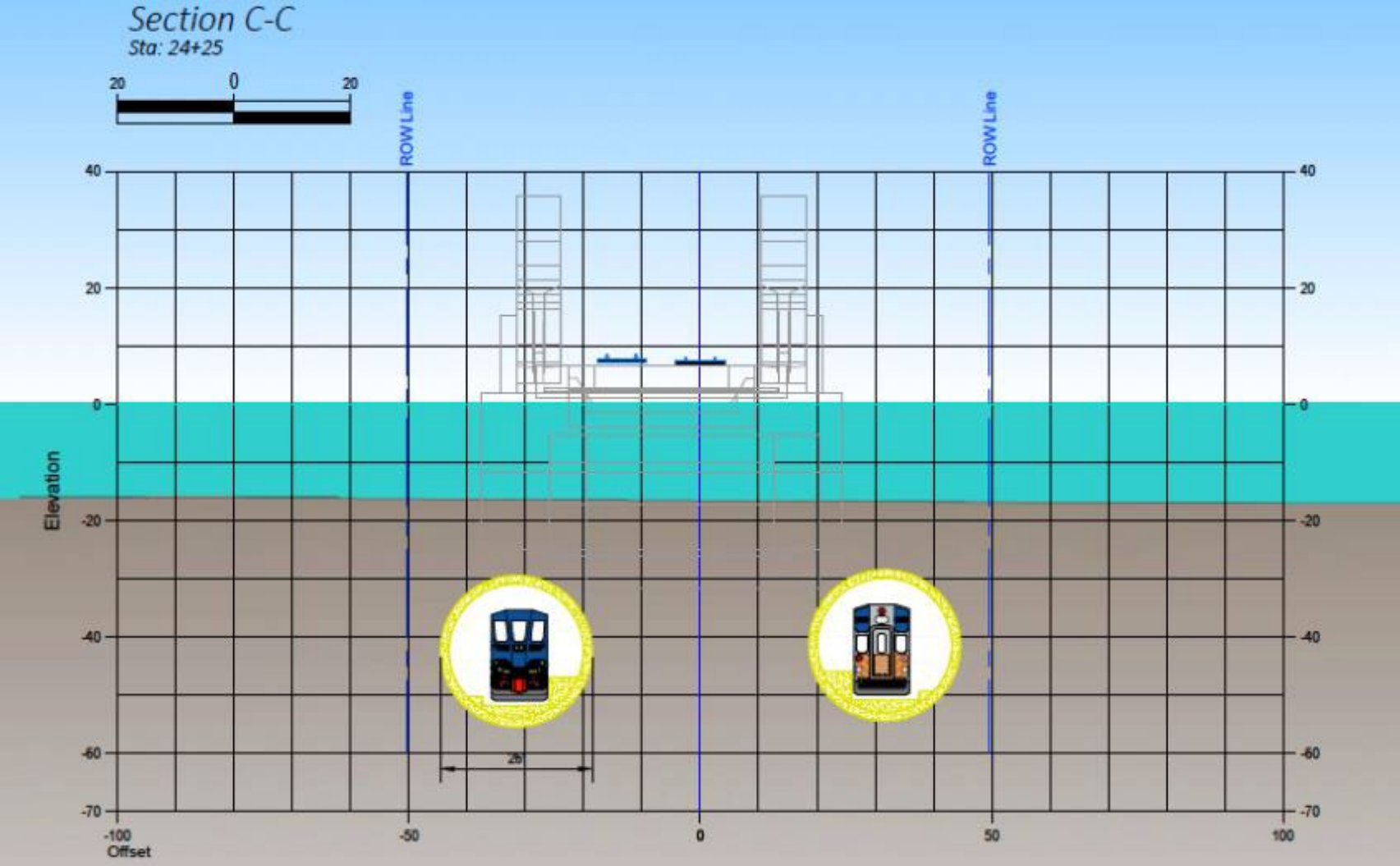


# Cross Sections - Cut and Cover South (SW 6<sup>th</sup> Street)





# Cross Section - Crossing the New River





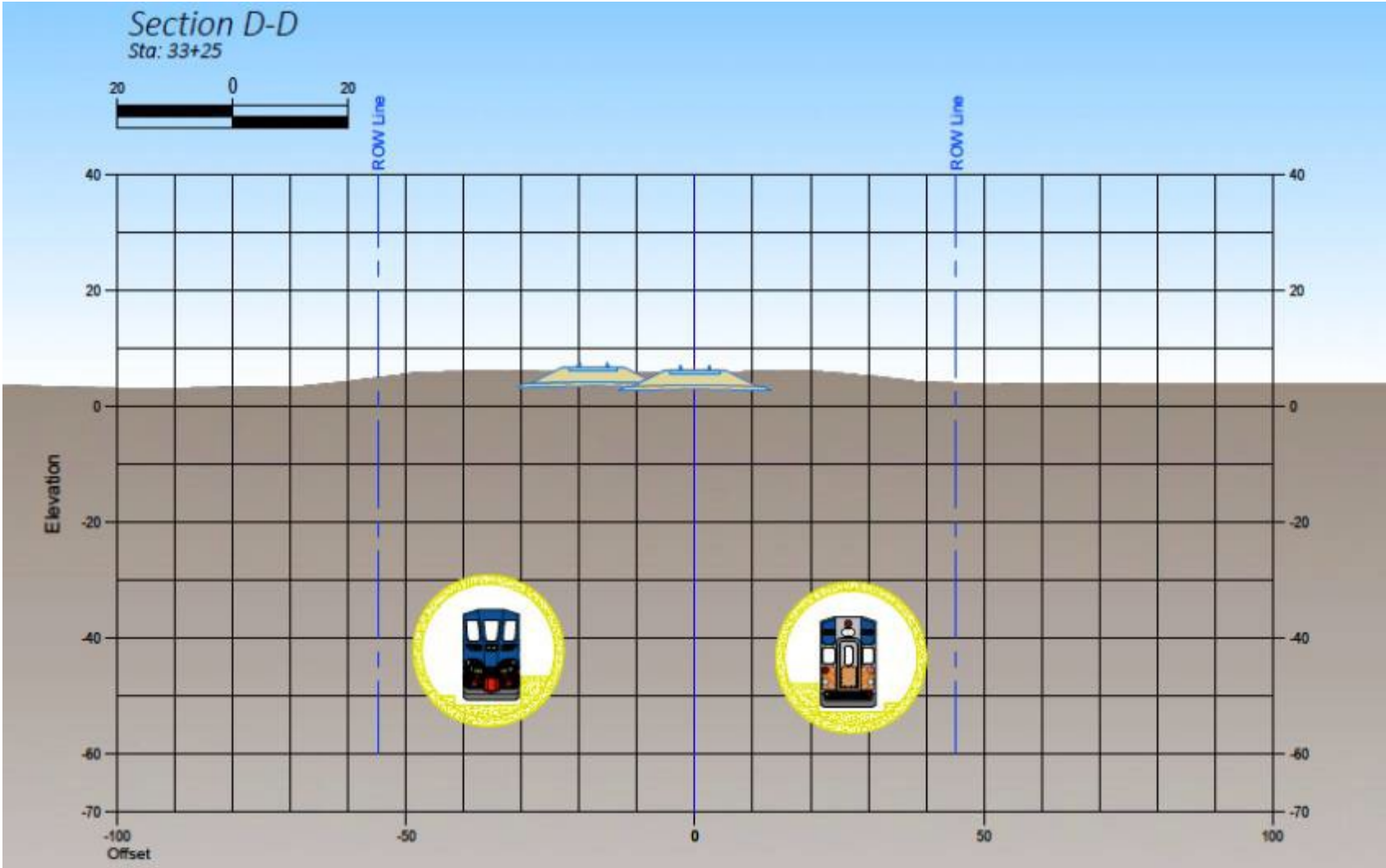
# North Portal - NW 4<sup>th</sup> Street



- Combined cut and cover tunnel in the North Segment
- Launch TBM South of NW 4<sup>th</sup> Street
- Tunnel under NW 4<sup>th</sup> Street



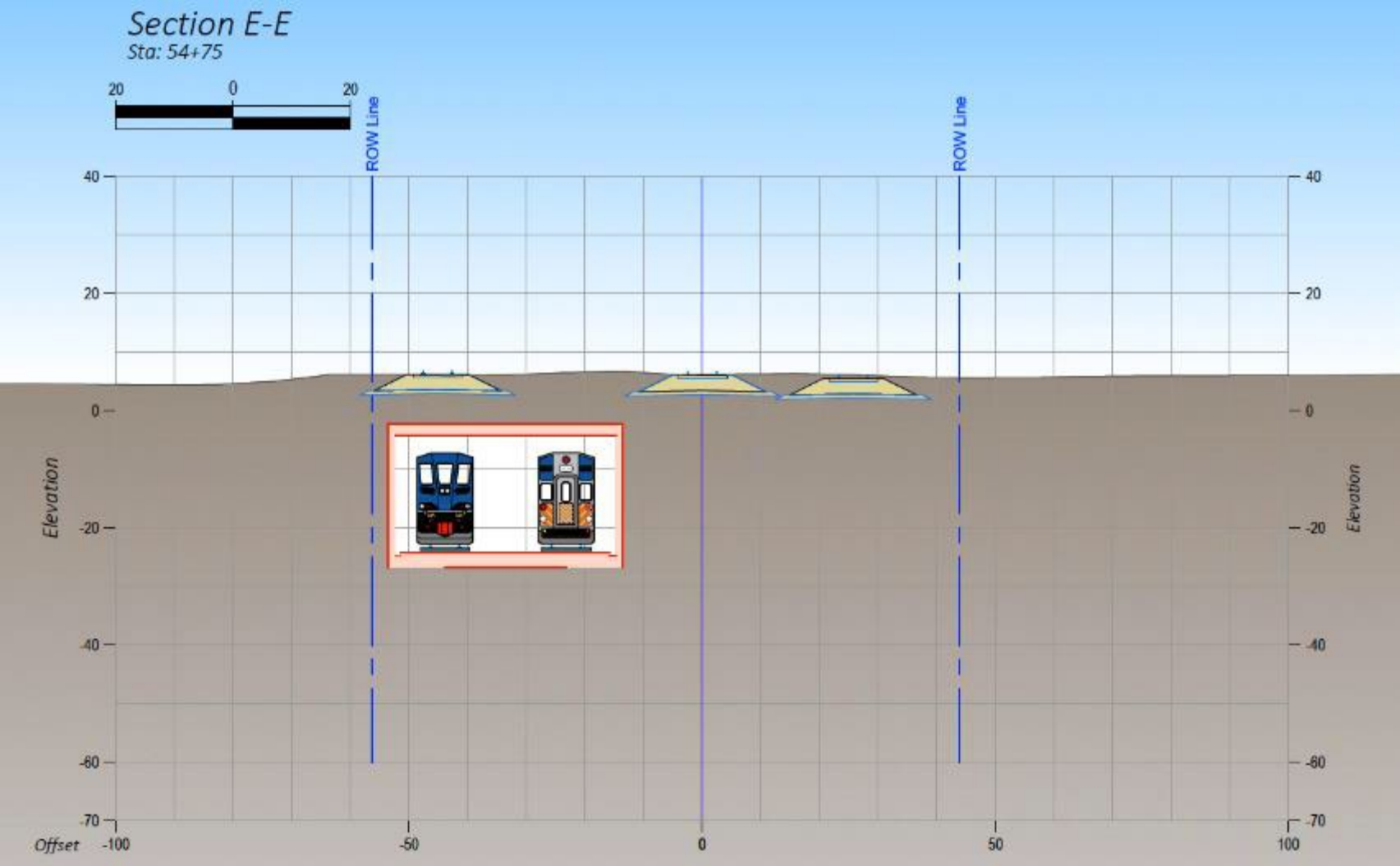
# Cross Section - TBM - Northern Segment



- Station to be constructed using Sequential Excavation Method (SEM)
- No disruption to existing station
- Potential connections to existing station superstructure and future Government Center



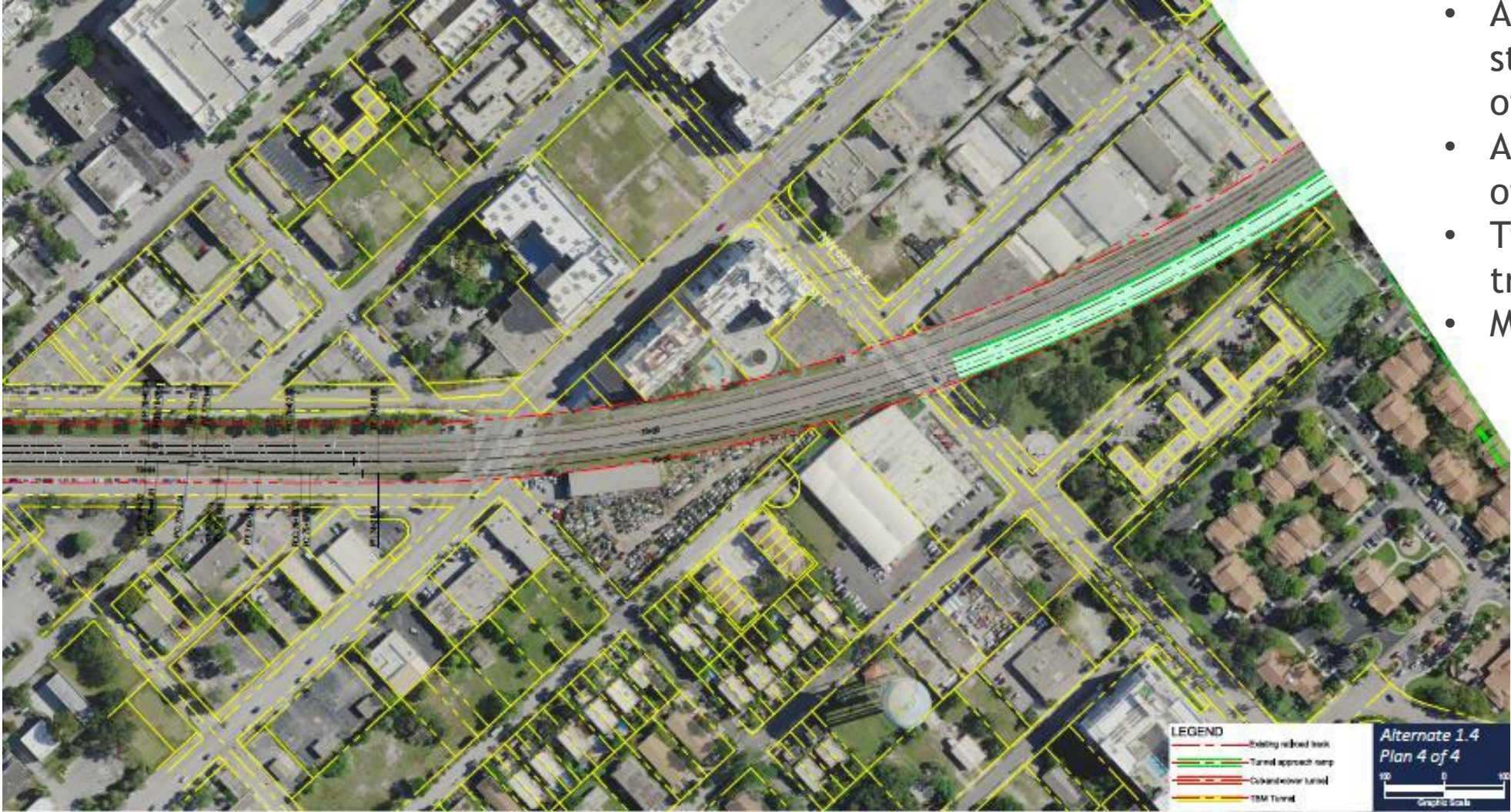
# Cut and Cover - Combined tracks - North Segment



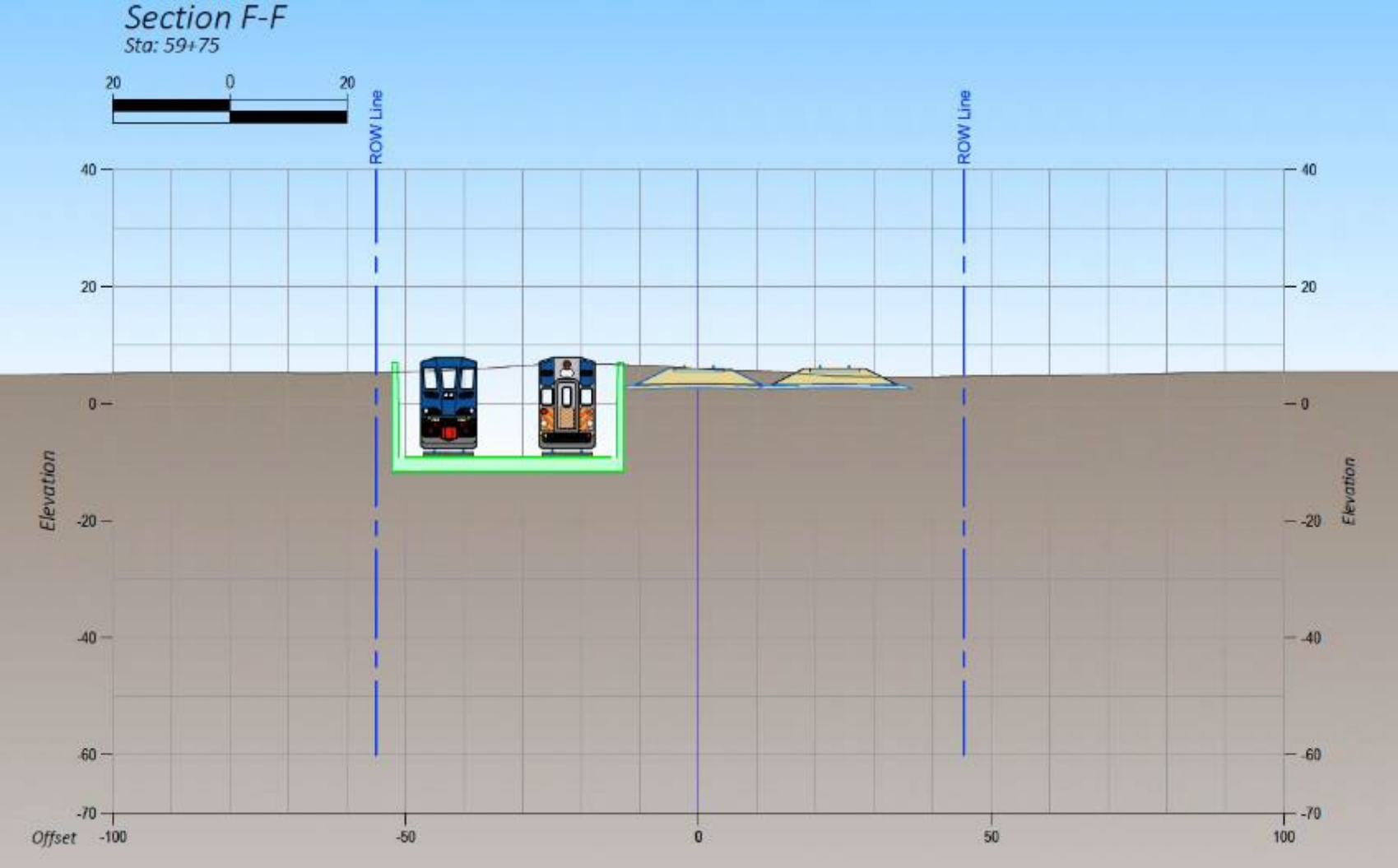


# Surface trackwork - North Segment - NW 6th Street

- Approach structure south of NW 6th Street
- At surface south of NW 6th Street
- Tie to existing tracks at surface
- Main staging area



# Combined Approach Structure - North Segment (south of NW 6th St.)



# Alignment Summary

SB TRACK					
STRUCTURE	Chainage		Length		
	from	to	feet	miles	
U-Shape South	4+26.00	10+21.00	595.000	0.113	<b>0.863</b>
C&C South	10+21.00	15+51.00	530.000	0.100	
TBM Tunnel	15+51.00	49+81.00	<b>3430.000</b>	0.650	
C&C North	considered in NB Track				
U-Shape North					
			<b>4555.000</b>	<b>0.863</b>	

NB TRACK					
STRUCTURE	Chainage		Length		
	from	to	feet	miles	
U-Shape South	4+26.40	10+21.40	595.000	0.113	<b>1.146</b>
C&C South	10+21.40	15+51.40	530.000	0.100	
TBM Tunnel	15+51.40	51+00.00	<b>3548.600</b>	0.672	
C&C North <b>Double tracks</b>	51+00.00	57+00.00	600.000	0.114	
U-Shape North <b>Double tracks</b>	57+00.00	64+75.30	775.300	0.147	
			<b>6048.900</b>	<b>1.146</b>	

**Total Length: 1.146 miles**

**Another alternative:**

- Single Bore Tunnel  
Potentially less expensive






View from North



View from South







## About BDO USA

At BDO, our purpose is helping people thrive, every day. Together, we are focused on delivering exceptional and sustainable outcomes – for our people, our clients and our communities. Across the U.S., and in over 160 countries through our global organization, BDO professionals provide assurance, tax and advisory services for a diverse range of clients.

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Material discussed is meant to provide general information and should not be acted on without professional advice tailored to your needs.

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