

# Westside Extension Alternatives Analysis (AA) Study

Planning & Programming Committee

February 20, 2008

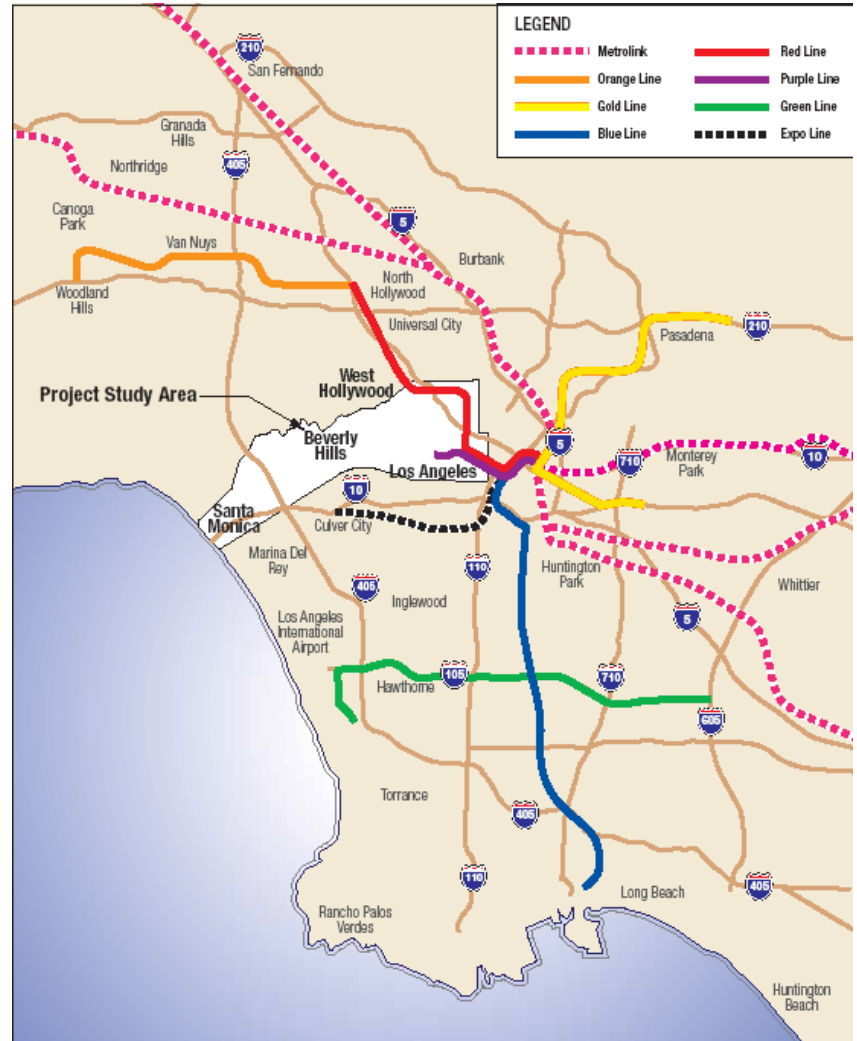


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# Westside Extension AA Study

Receive and File  
Report on Westside  
Extension AA Study

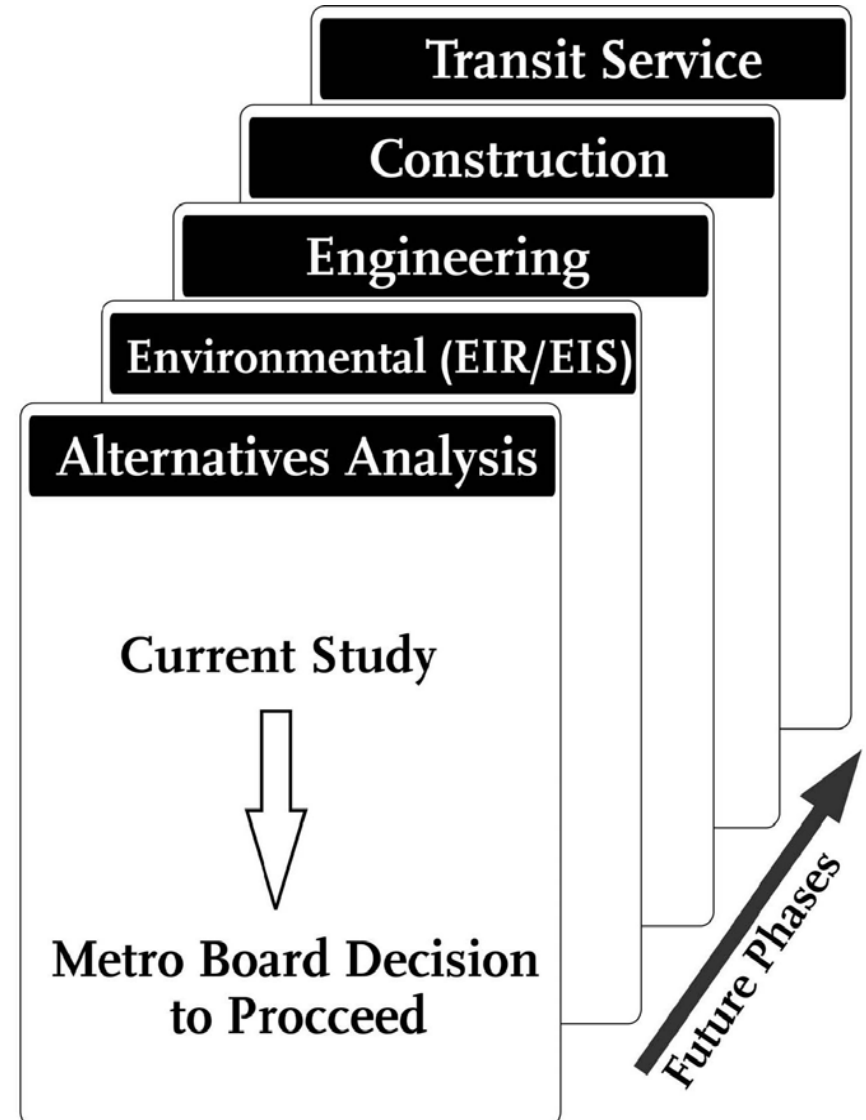
- Early Scoping Process
- Preliminary Definition of Alternatives



# Alternatives Analysis Process

## First step in defining a project

- Evaluation of a wide range of alternatives
- Screening of alternatives
- Includes Early Scoping & Public Comments



# Westside Extension Study Area

## Westside Extension Transit Corridor Study Area



# Alternatives Analysis (AA) Early Scoping

- **AA Scoping Comment Period**
  - Oct. 1 to Nov. 7, 2007
- **Community Meetings**
  - October 9 – 29, 2007
  - 469 Attendees at Westwood, Pan Pacific Park, Mid-Wilshire, Beverly Hills, Santa Monica, West Hollywood



# General Tone of Scoping Comments

## 484 Verbal & Written Comments were Received

- The overwhelming majority of comments received supported the need for a transit improvement in the Westside Extension Corridor.
- The Wilshire subway alignment was the most favored route and mode. Many people also advocated for subways on both the Wilshire and Santa Monica alignments.
- Most thought that the Wilshire alignment should take precedence over the Santa Monica alignment.
- Limited support was voiced for aerial/monorail, light rail or bus rapid transit modes, with opposition to each of these modes expressed as well.

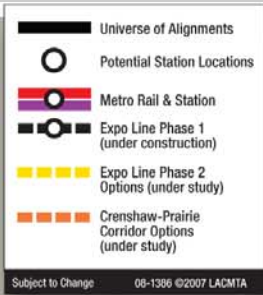
# Identification of All Reasonable Alternatives

17 Alternatives were developed following Scoping for Evaluation:

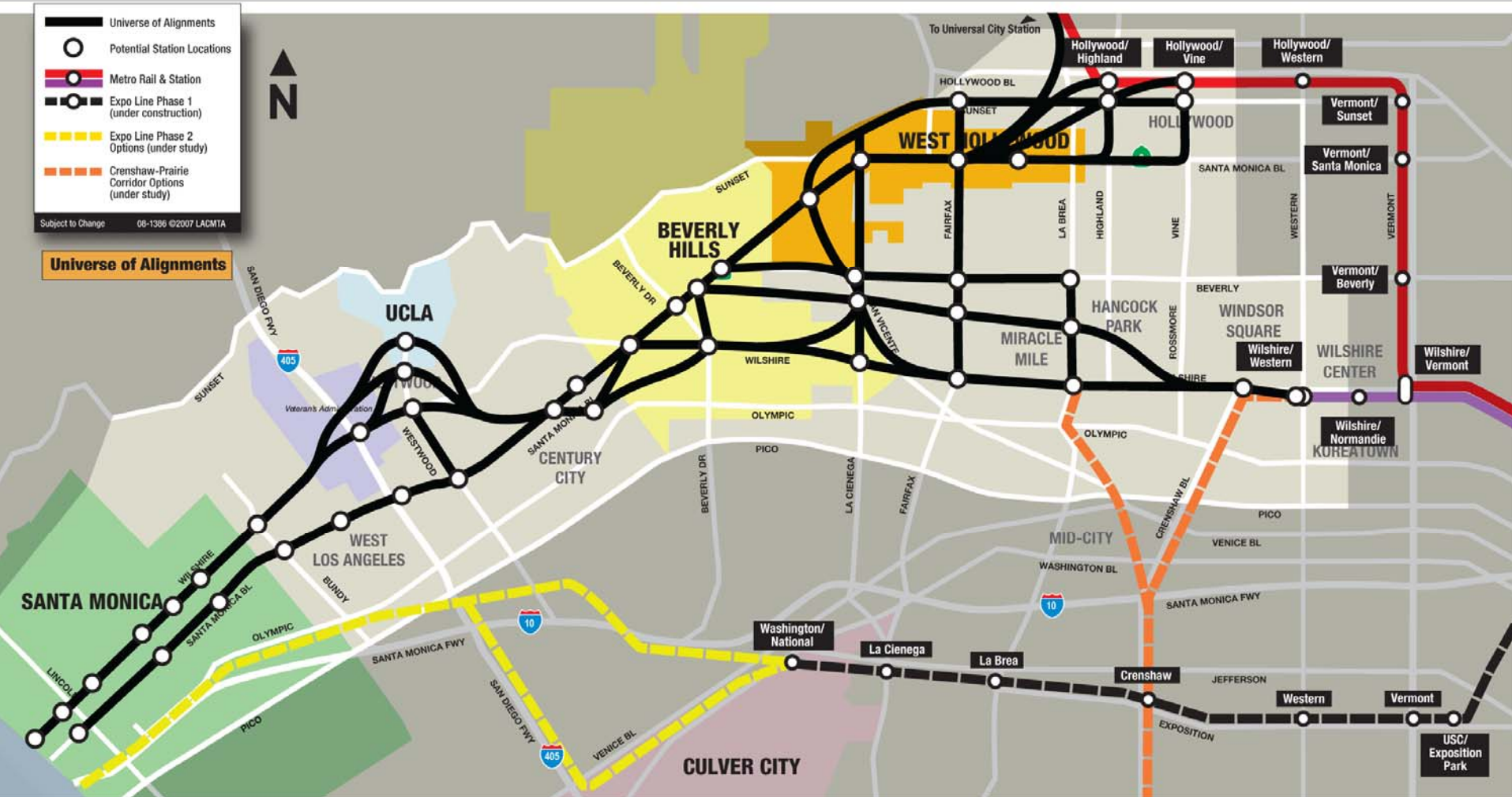
- 3 Wilshire Boulevard Subway Alternatives
- 5 Santa Monica Boulevard Subway Alternatives
- 5 Combined Subway Alternatives
- 3 Aerial Rail Alternatives
- 1 Bus Rapid Transit Alternative



# Universe of All Preliminary Alternatives



## Universe of Alignments



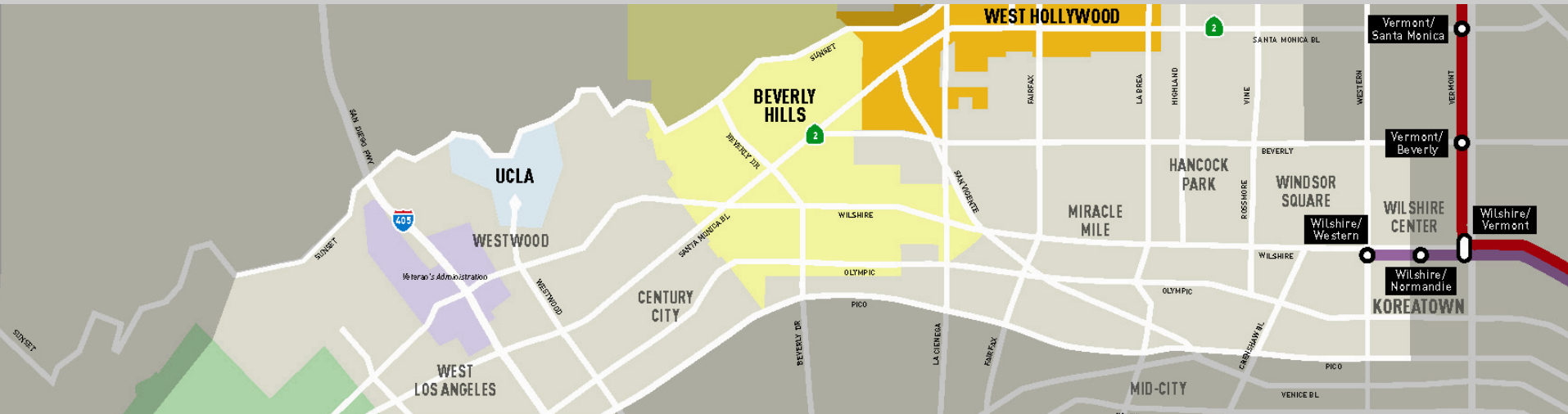


# Second Round of Public Meetings

- Wilshire/Fairfax area Thursday, January 31<sup>st</sup>  
LACMA West
- Westwood area Tuesday, February 5<sup>th</sup>  
Westwood Presbyterian Church
- West Hollywood area Wednesday, February 6<sup>th</sup>  
Plummer Park
- 327 attendees provided 116 comments on the 17 preliminary alternatives.
- Comments focused on alignments and mode preferences and suggestions for changes to the alternatives to be taken into initial screening. These will be considered as part of the analysis and evaluated against the performance criteria.

# Alternatives Analysis Schedule

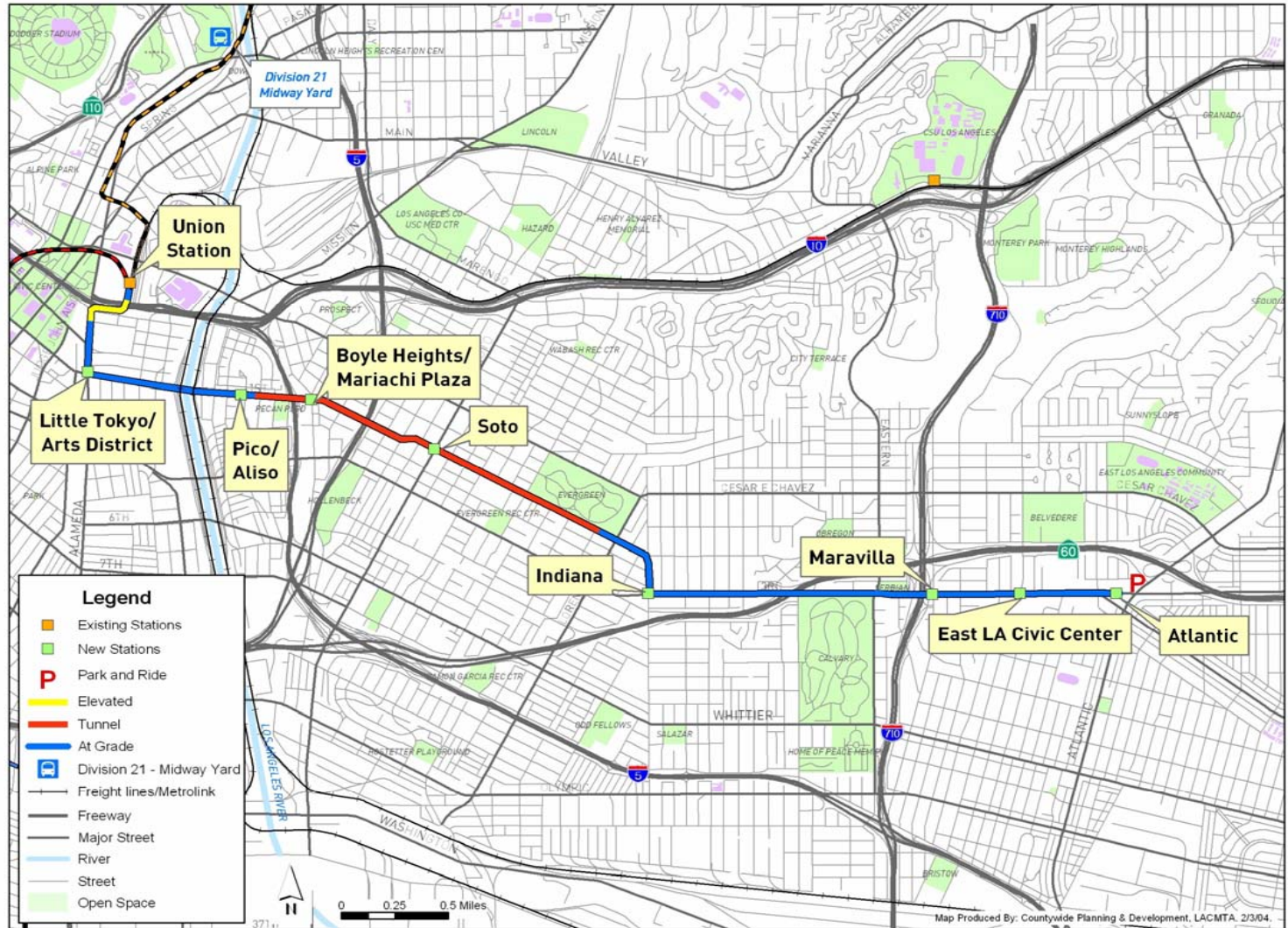
<b>Public Scoping Meetings</b>	<b>October 2007 (completed)</b>
<b>Public Comment Period Closed</b>	<b>November 7, 2007 (completed)</b>
<b>Initial Alternatives Definition</b>	<b>January/February 2008 (completed)</b>
<b>Performance Comparison of Alternatives</b>	<b>April 2008</b>
<b>Completion of AA Study Report</b>	
<b>Recommendation to Board of Locally Preferred Alternative(s) (LPA)</b>	<b>Summer 2008</b>



# Tunnel Feasibility Update



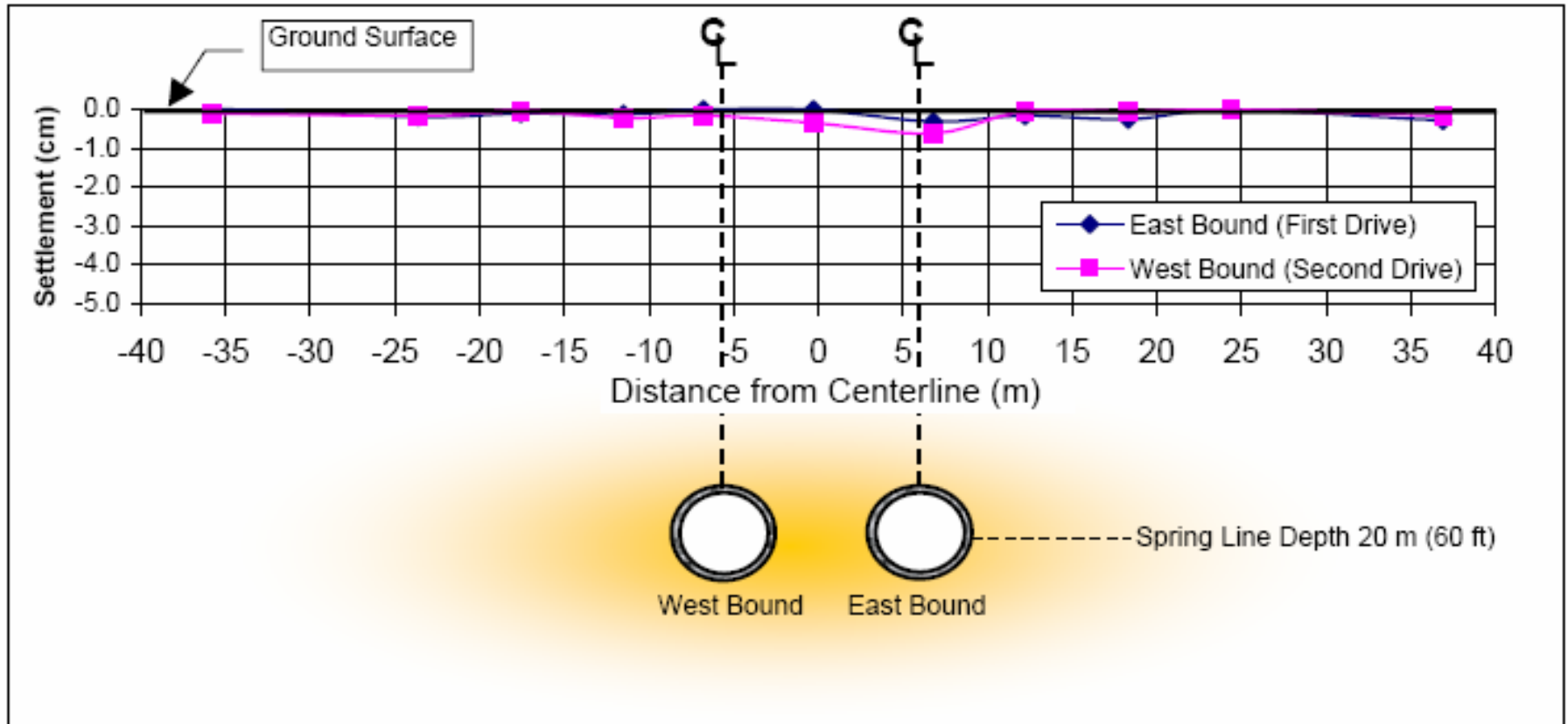
# Eastside Extension Tunneling Experience And Applicability to Westside



# Los Angeles Eastside EPB TBM



# Typical Settlement Los Angeles Metro Gold Line (Cummings Street)



# Eastside Tunnel Completed



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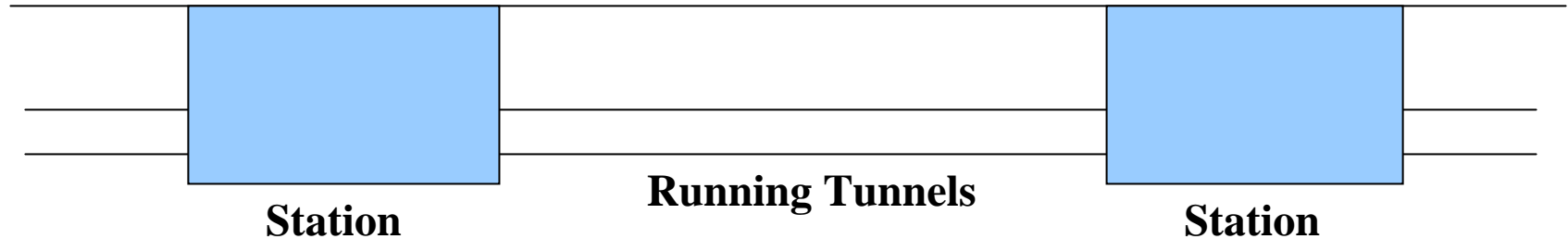
# Focus of Tunnelling Analysis

## Wilshire & Santa Monica Boulevards with Special Focus on Mid-Wilshire Area





# Solution Matrix for Subway in Contaminated Ground

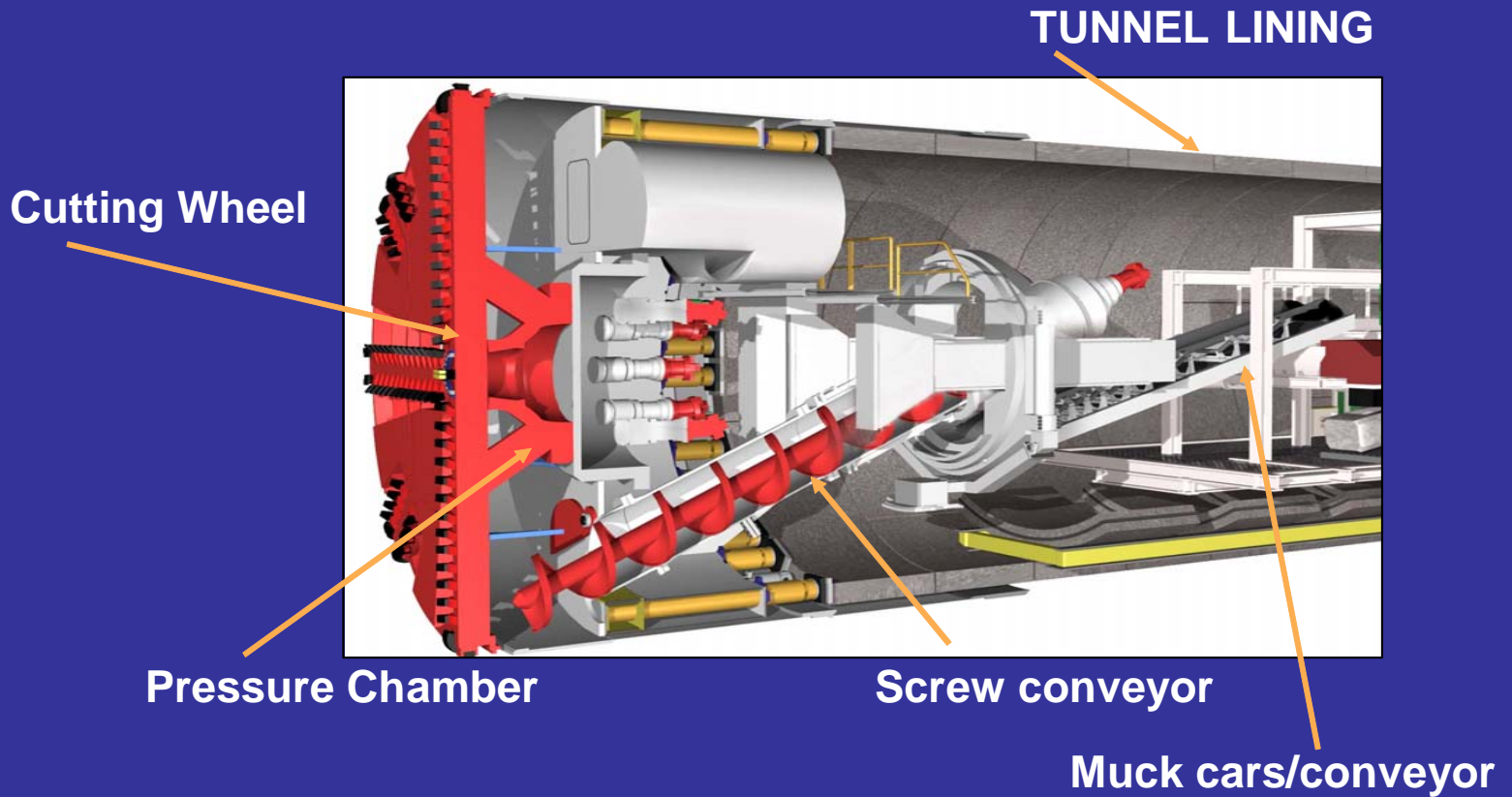


	Running Tunnels	Stations
During Construction	Closed Face Tunneling (Slurry Technology)	Open Air Ventilation
During Operation	Lining Designed to withstand Gases, even during an Earthquake	Double Walls with Ventilation and Monitoring

# Bottom Line

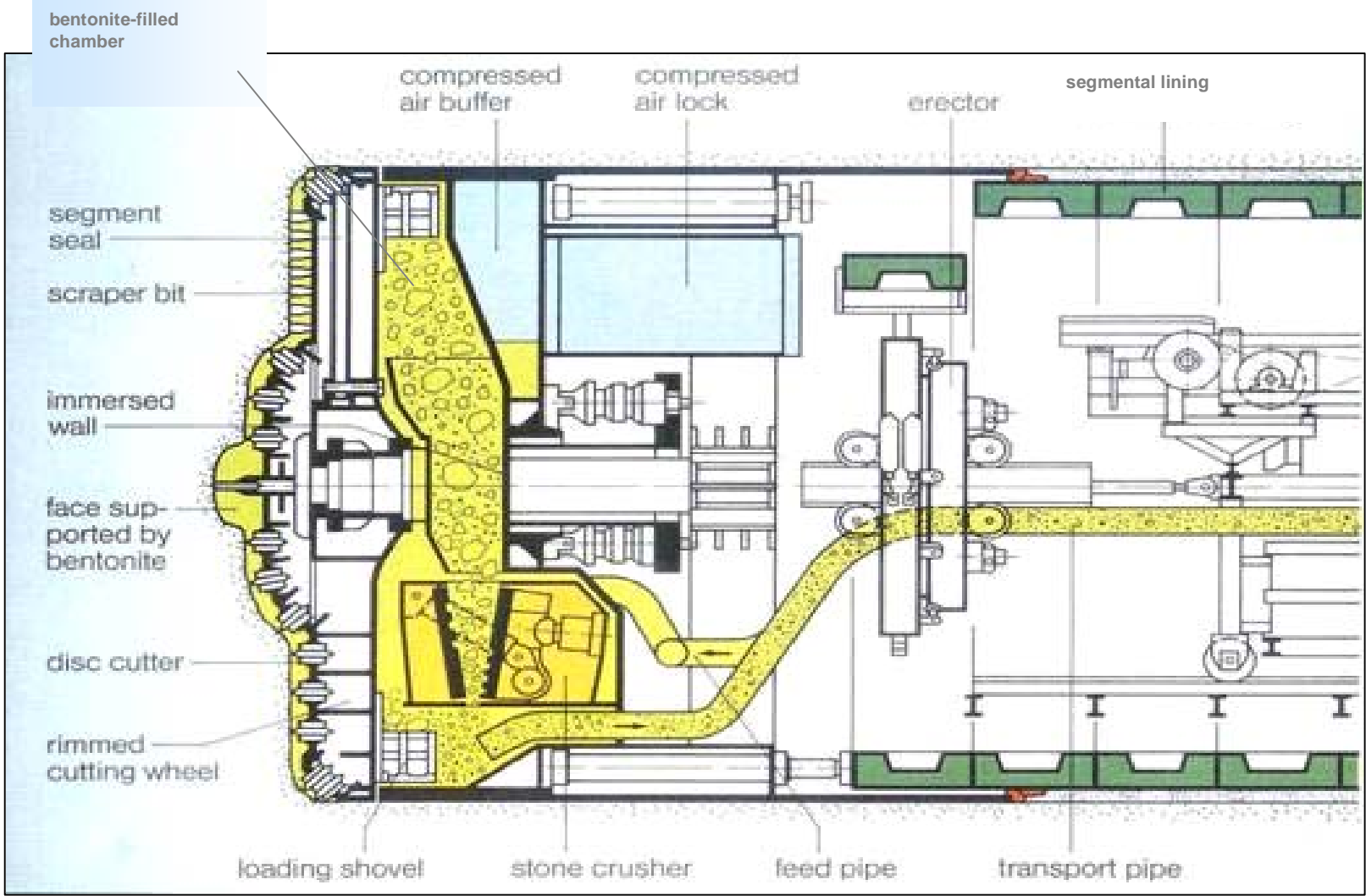
By following proper procedures and using appropriate technologies it is possible to safely construct and operate a subway along the Wilshire Corridor.

# Earth Pressure Balance TBM



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# Bentonite Slurry Tunnel Boring Machine



# Is it Safe to Construct Stations Along Wilshire?

## Wilshire Station Findings

- Deep basements and parking garages have been constructed safely along Wilshire, some in tar sands
- Stations along Wilshire alignment can be sited to minimize intrusion into gas bearing formations
- Technology of retaining walls for cut and cover construction has improved over the last 20 years

# Is it Safe to Tunnel along Westside Alignments?

## Westside Tunnel Findings

- Closed face slurry machines improve safety
- Experience with large diameter sewer tunnels in gassy ground has been positive
- Up-to-date information on gases is available