

# Pennsylvania Avenue Extension (PAX)

## Project Initiation Report



**San Francisco  
County Transportation  
Authority**

Agenda Item 8

July 12, 2022

# Project Context



San Francisco  
County Transportation  
Authority

## 1. Railyard Alignment and Benefits Study (Planning Department - completed 2018)

- Established neighborhood connectivity, safety, rail operations, and traffic goals
- Studied undergrounding the at-grade crossings in the area to address local traffic challenges
- Proposed the Pennsylvania Avenue Extension (PAX) tunnel south from the 4th & King Railyards

## 2. Southeast Rail Station Study (Planning Department - to be completed Summer 2022)

- Considers potential future station locations within San Francisco along the Caltrain corridor



## Purpose

Grade separate the existing at-grade rail crossings at Mission Bay Drive and 16th Street

GOALS	DESCRIPTION
<b>Improve Street Connectivity</b>	Increase connectivity between Mission Bay, Potrero Hill, and Design District/SOMA neighborhoods
<b>Improve Rail Operations</b>	Allow for more efficient Caltrain operations and service planning
<b>Improve Surface Safety</b>	Improve pedestrian, bike, and vehicular safety on surface streets
<b>Improve Quality of Life</b>	Decrease congestion, improve air quality, and reduce noise, among other factors

# PAX Initiation Study - Key Outcomes



San Francisco  
County Transportation  
Authority

1. **Developed & narrowed down feasible alignment alternatives**
  - Three broad families of alternatives identified
2. **Developed preliminary capital cost estimates for alternatives**
  - Capital cost of approximately \$2.0-2.5 billion (excluding 22<sup>nd</sup> Street-related costs)
3. **Advanced assessment of project interfaces**
  - Downtown Extension (DTX) project
  - Railyards site
  - Existing corridor infrastructure



# Summary of PAX Alternatives



San Francisco  
County Transportation  
Authority

## A. Long Alignment (7,800 Feet)

1. Single Bore, 42-foot diameter tunnel
2. Twin Bore, 26-foot diameter tunnels

## B. Mid-Length Alignment (6,300 Feet)

1. Single Bore, 42-foot diameter tunnel
2. Twin Bore, 26-foot diameter tunnels

## C. Short Alignment (5,600 Feet)

Northbound within existing Caltrain corridor

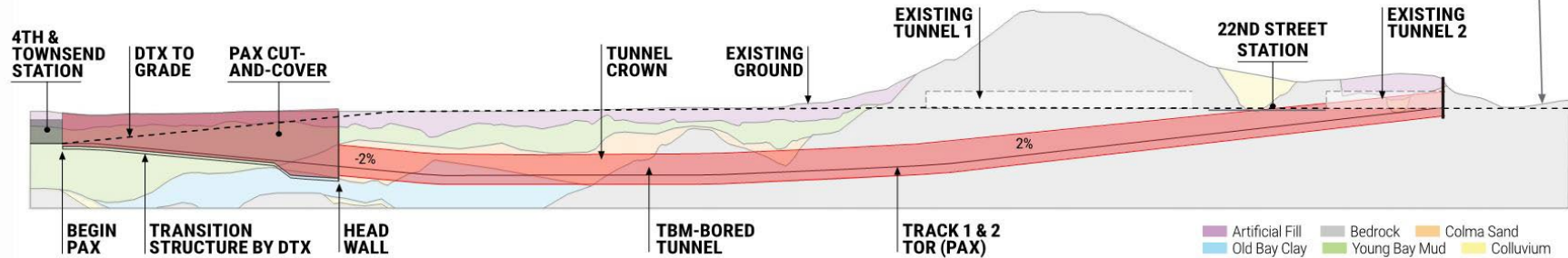
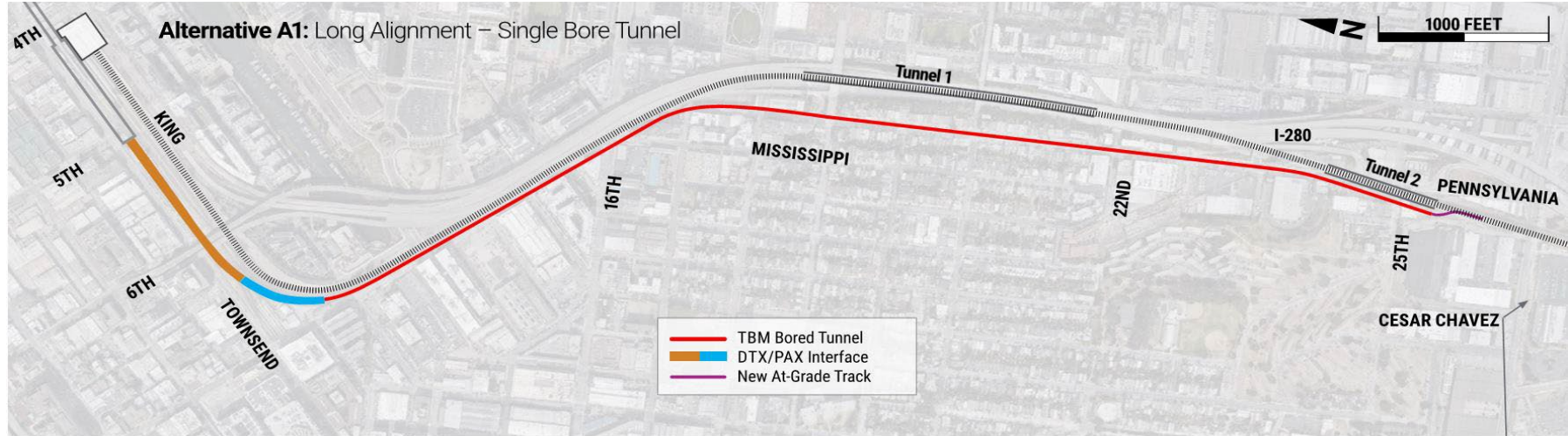
Southbound, 26-foot diameter tunnel west of existing alignment



# Example Plan & Profile



San Francisco  
County Transportation  
Authority



---

# Comparison of Alternatives

---



San Francisco  
County Transportation  
Authority

## Alternative A (long tunnel)

- Advantages: Greatest improvement to rail operations; minimization of construction impacts
- Limitations: Highest cost; requires replacement of 22nd St Station

## Alternative B (mid-length tunnel)

- Advantages: Allows use of 22nd St Station (with modifications); lower cost than Alternative A
- Limitations: Complex interfaces with existing rail and freeway infrastructure

## Alternative C (short tunnel)

- Advantages: Allows use of 22nd St Station (with minimal modifications); lowest cost alternative
- Limitations: Greatest construction impacts, including to existing rail operations

---

# Next Steps: Pre-Environmental Study

---



San Francisco  
County Transportation  
Authority

- Recommend advancing PAX to Pre-Environmental Study phase, to prepare project for environmental review
- Goal of next phase is to identify the 1-2 most viable alternatives and develop technical and organizational approach to environmental review

## Key Activities for Pre-Environmental Study:

1. Integration of station-related design and cost considerations
2. Assessment of opportunities to reduce costs and risks
3. Technical coordination with Railyards and DTX
4. Public outreach and stakeholder engagement
5. Funding strategy development
6. Development of approach for the environmental phase



# Thank you. Questions?

sfcta.org



San Francisco  
County Transportation  
Authority



[sfcta.org/stay-connected](https://sfcta.org/stay-connected)