

# Pennsylvania Avenue Extension (PAX)

Pre-Environmental Study Update



**San Francisco  
County Transportation  
Authority**

Agenda Item 15

June 8, 2021

# Project Purpose

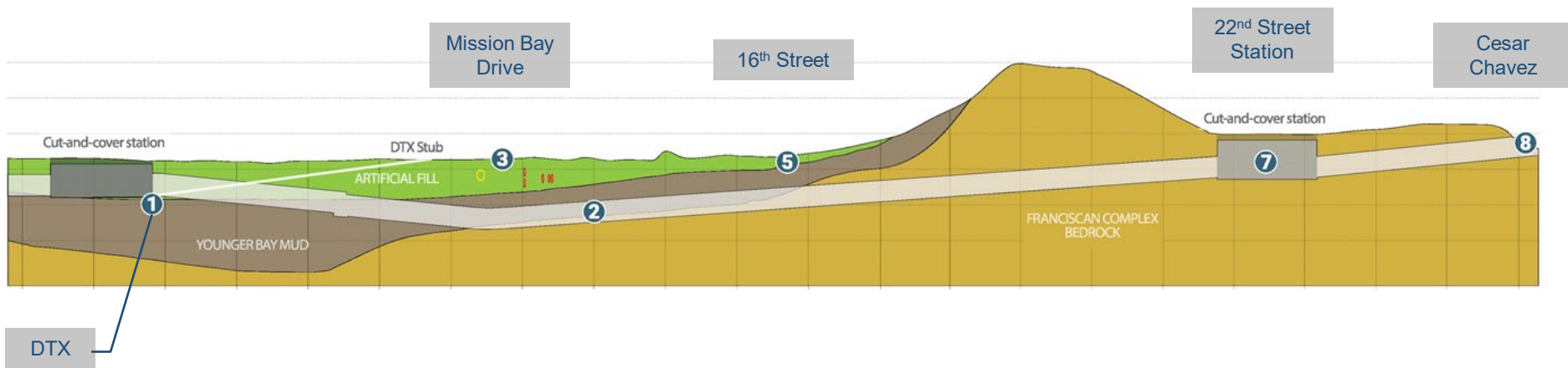


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The PAX project will provide uninterrupted passenger rail service through San Francisco by removing at-grade rail crossings at Mission Bay Drive and 16<sup>th</sup> Street

## Goals:

Improved Surface **Safety**; Rail **Operations**; Street **Connectivity**; and Seismic **Resilience**



# Project Background



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## Railyard Alignments & Benefits (RAB) Study



# Adjacent Projects



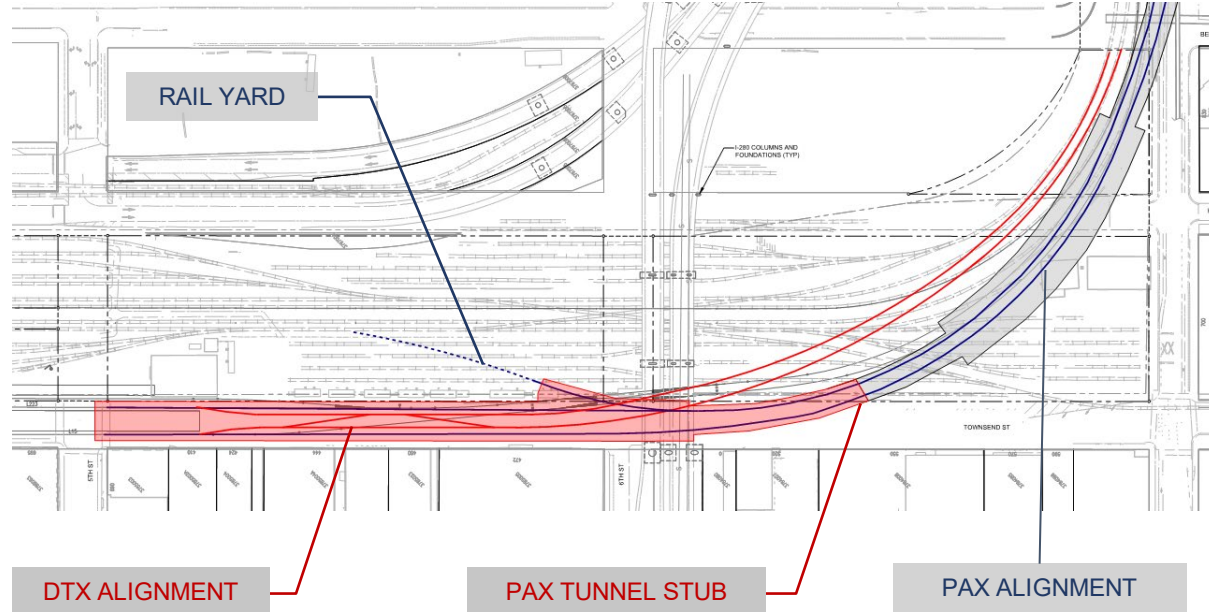
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## Downtown Rail Extension (DTX)

Extension of Caltrain &  
future California High-Speed  
Rail from 4<sup>th</sup> Street to  
Salesforce Transit Center

## 4<sup>th</sup> & King Railyard

Multi-agency process to  
plan for future use of the  
existing Caltrain Railyard at  
4<sup>th</sup> & King streets

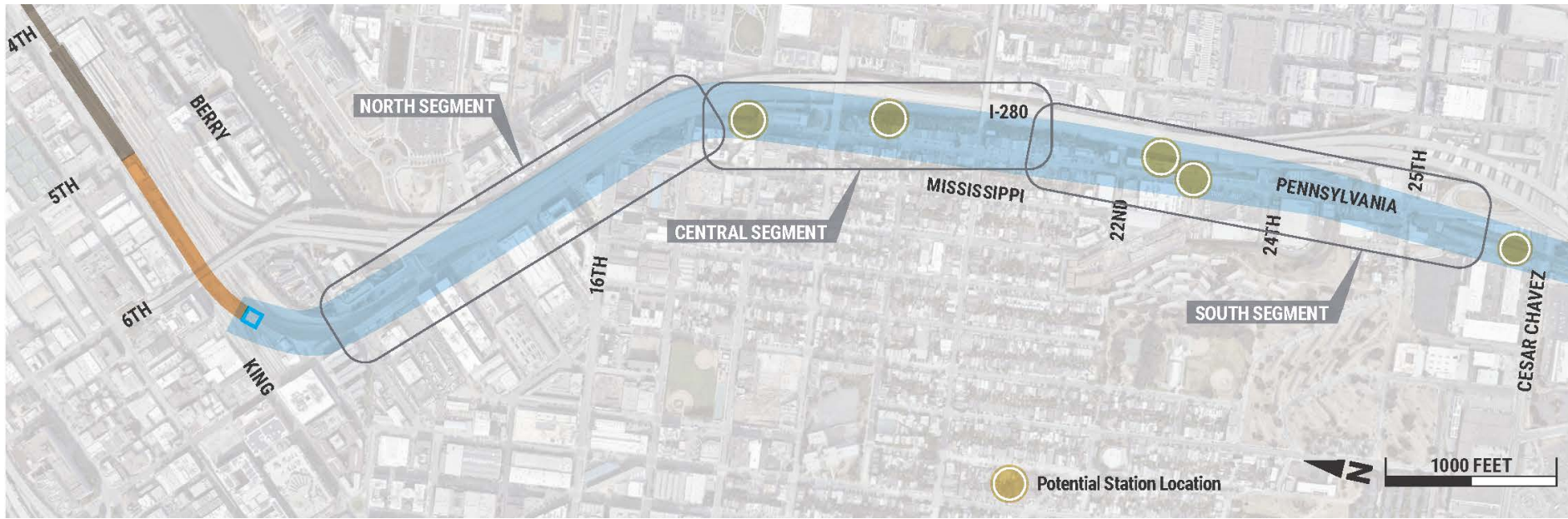


# PAX Project Study Area



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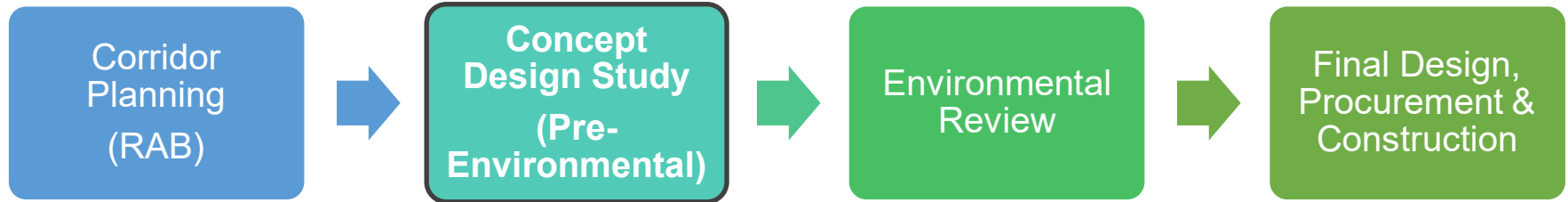
## Inclusive of Potential Station Locations



# PAX Development Process



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# Schedule: Pre-Environmental Study



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Task	Aug '20	Sep '20	Oct '20	Nov '20	Dec '20	Jan '21	Feb '21	Mar '21	Apr '21	May '21	Jun '21	Jul '21	Aug '21	Sep '21
Evaluation Framework														
Alignment Alternatives														
Environmental Constraints														
Constructability Planning														
Cost and Risk														
Final Report														



## A. Long Alignment

- Railyards to Cesar Chavez
- Requires **relocation of existing 22<sup>nd</sup> St Station**

## B. Mid Length Alignment

- Railyards to south of 22<sup>nd</sup> St Station
- Allows for **reconfiguration of existing 22<sup>nd</sup> St Station**

## C. Short Alignment

- Railyards to north of 22<sup>nd</sup> St Station
- Requires **no changes to existing 22<sup>nd</sup> St Station**



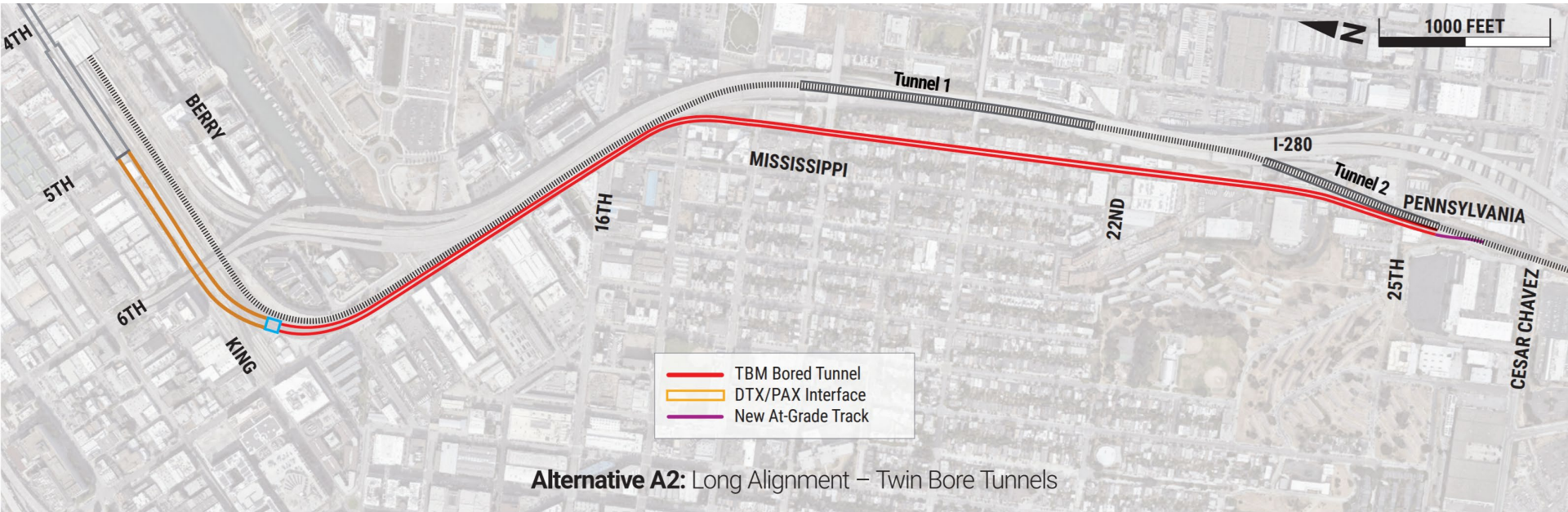
# Alternative A: Long Alignment



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A1 - Single Bore Tunnel

A2 - Twin Bore Tunnel (shown)



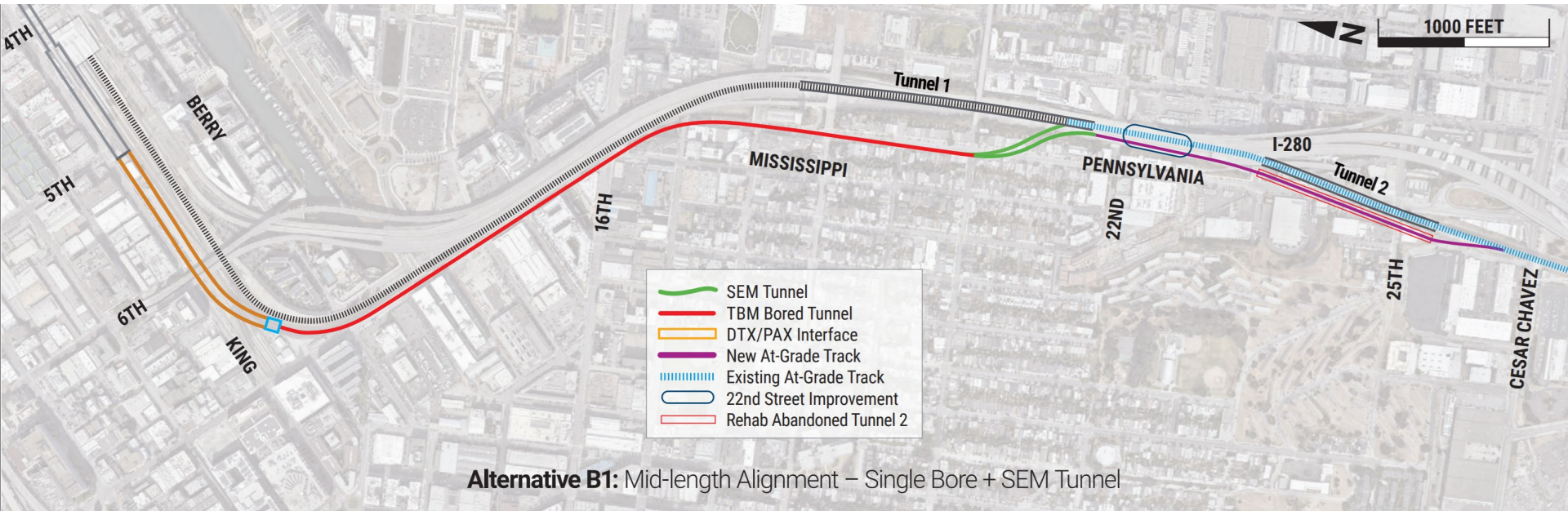
# Alternative B: Mid - length Alignment



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B1 - Single Bore Tunnel with SEM (shown)

B2 - Twin Bore Tunnel with SEM



**Alternative B1:** Mid-length Alignment – Single Bore + SEM Tunnel

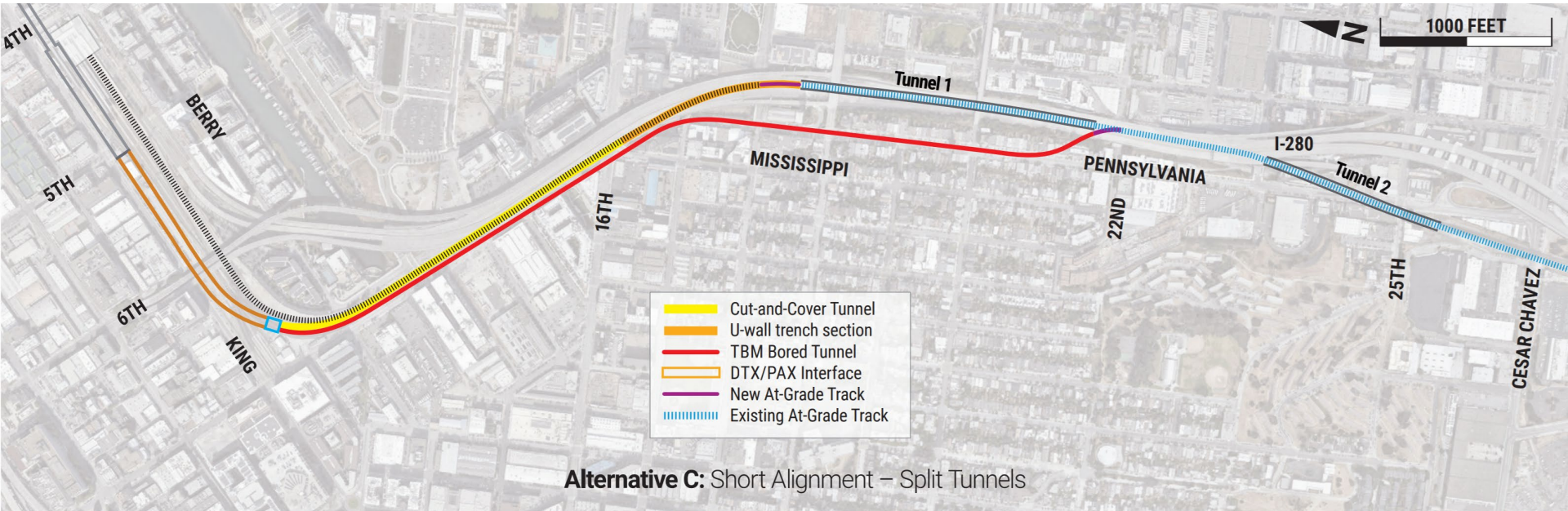


# Alternative C: Short Alignment



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## Split Tunnel with Cut-and-Cover northbound



# Next Steps



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- **Refinement of Concept Designs**
  - Interfaces: DTX/Railyards and Stations Study
  - Operations: Crossovers/Exits/Vent Zones
  - Capital Cost Estimates
  - Development and Construction Timelines
- **Outreach**
  - Preliminary Public Engagement (Summer)
- **Project Report**
  - Draft Review by agency partners (Summer)
  - Final Draft (August/September)

# Thank you.

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