

# RAILYARD ALTERNATIVES & I-280 BOULEVARD (RAB) FEASIBILITY STUDY

## PHASE I: PRELIMINARY OPTIONS ANALYSIS

San Francisco Planning Department  
Public Meeting #1, February 23, 2016  
Potrero Hill Recreation Center 6-8pm

**San Francisco**  
**Planning**

An aerial, grayscale photograph of a dense urban area. A major multi-lane highway interchange is visible in the lower-left and center. To the right, a large stadium with a distinctive roof is situated near a body of water. The rest of the image is filled with a grid of buildings, streets, and parking lots.

# ABOUT THE STUDY

# WHAT IS THIS STUDY ABOUT?

CONSOLIDATE MULTIPLE STUDIES

COORDINATE PARTNER EFFORTS

PREPARE FOR UPCOMING PROJECTS

# WHY IS IT IMPORTANT?

REGIONAL GROWTH

NEW INFRASTRUCTURE PLANNED

IMPROVE REGIONAL CONNECTIONS

# BACKGROUND: WHY THIS STUDY NOW



- **Comprehensive** approach.
- **Coordinated** projects.
- Accommodate **growth**.
- **Improve** the urban environment.



Flickr: Central Subway

# BACKGROUND: WHY THIS STUDY NOW - MAJOR PIECES OF NEW INFRASTRUCTURE PLANNED

CALTRAIN ELECTRIFICATION



HIGH-SPEED RAIL (HSR)



DOWNTOWN RAIL EXTENSION (DTX)



Transbay Transit Center (under construction Jan 2016)



Potential Grade-Separation of 16<sup>th</sup> Street

Potential Grade-Separation of Mission Bay Drive



# CHALLENGES THAT FACE SAN FRANCISCO

COORDINATE PARTNER EFFORTS

KNIT TOGETHER CITY FABRIC

IMPROVE LOCAL AND REGIONAL CONNECTIONS

CONSIDERATION OF BENEFITS/IMPACTS

OPPORTUNITIES FOR HOUSING, OPEN SPACE, AND JOBS

# STUDY GOALS

- Better **understand** the effects of projects **holistically**.
- Coordinate efforts to **shape** the **urban environment**.



An aerial, black and white photograph of San Francisco, California. The image captures the dense urban landscape of the city, with numerous skyscrapers and buildings. In the background, the Golden Gate Bridge spans across the water, connecting the city to the Marin Peninsula. The sky is overcast, and the overall tone is monochromatic. A prominent orange banner is overlaid across the center of the image, containing the text "STUDY COMPONENTS" in white, bold, sans-serif capital letters.

# STUDY COMPONENTS

# RAB STUDY COMPONENTS

1. DOWNTOWN RAIL EXTENSION (DTX) ALIGNMENT

2. TRANSBAY TRANSIT CENTER LOOP

3. RAIL YARD RECONFIGURATION/RELOCATION

4. BOULEVARD I-280

5. OPPORTUNITIES FOR THE PUBLIC'S BENEFIT

# STUDY AREA

EACH COMPONENT HAS ITS OWN STUDY AREA

1. DOWNTOWN RAIL EXTENSION (DTX) ALIGNMENT

2. TRANSBAY TRANSIT CENTER LOOP

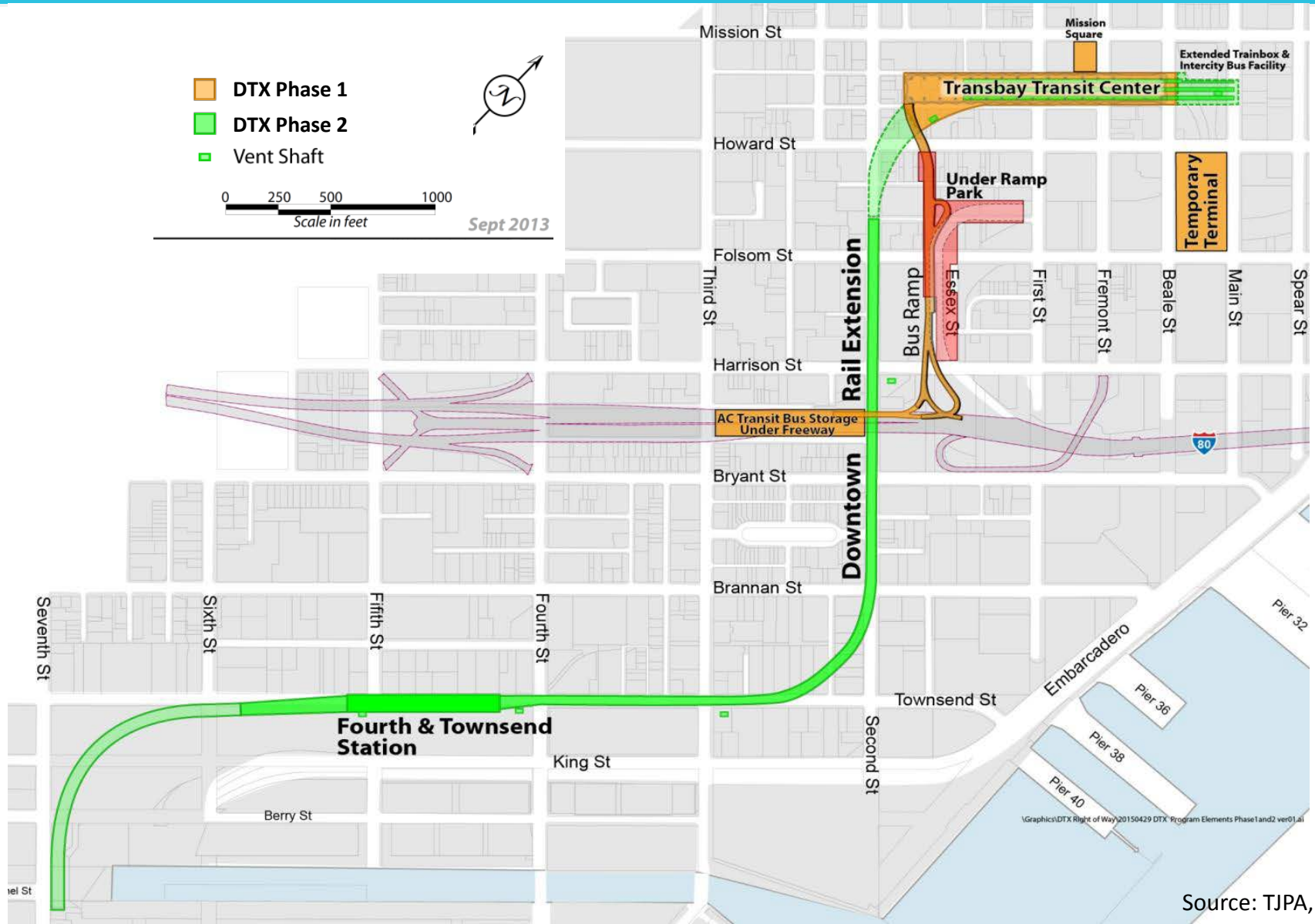
3. RAILYARD RECONFIGURATION/RELOCATION

4. BOULEVARD I-280

5. OPPORTUNITIES FOR THE PUBLIC'S BENEFIT



# DOWNTOWN RAIL EXTENSION (DTX) VALUE ENGINEERING



I:\Graphics\DTX Right of Way\20150429 DTX Program Elements Phase1and2 ver01.ai

# DOWNTOWN RAIL EXTENSION (DTX) VALUE ENGINEERING

## OPTIONS FOR ALIGNMENT

**A. Baseline: Existing Alignment Plus Environmentally Cleared DTX**  
**A.2 SubOption: Reduced 4<sup>th</sup>/King footprint**

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**B. Tunnel Under Existing Alignment**

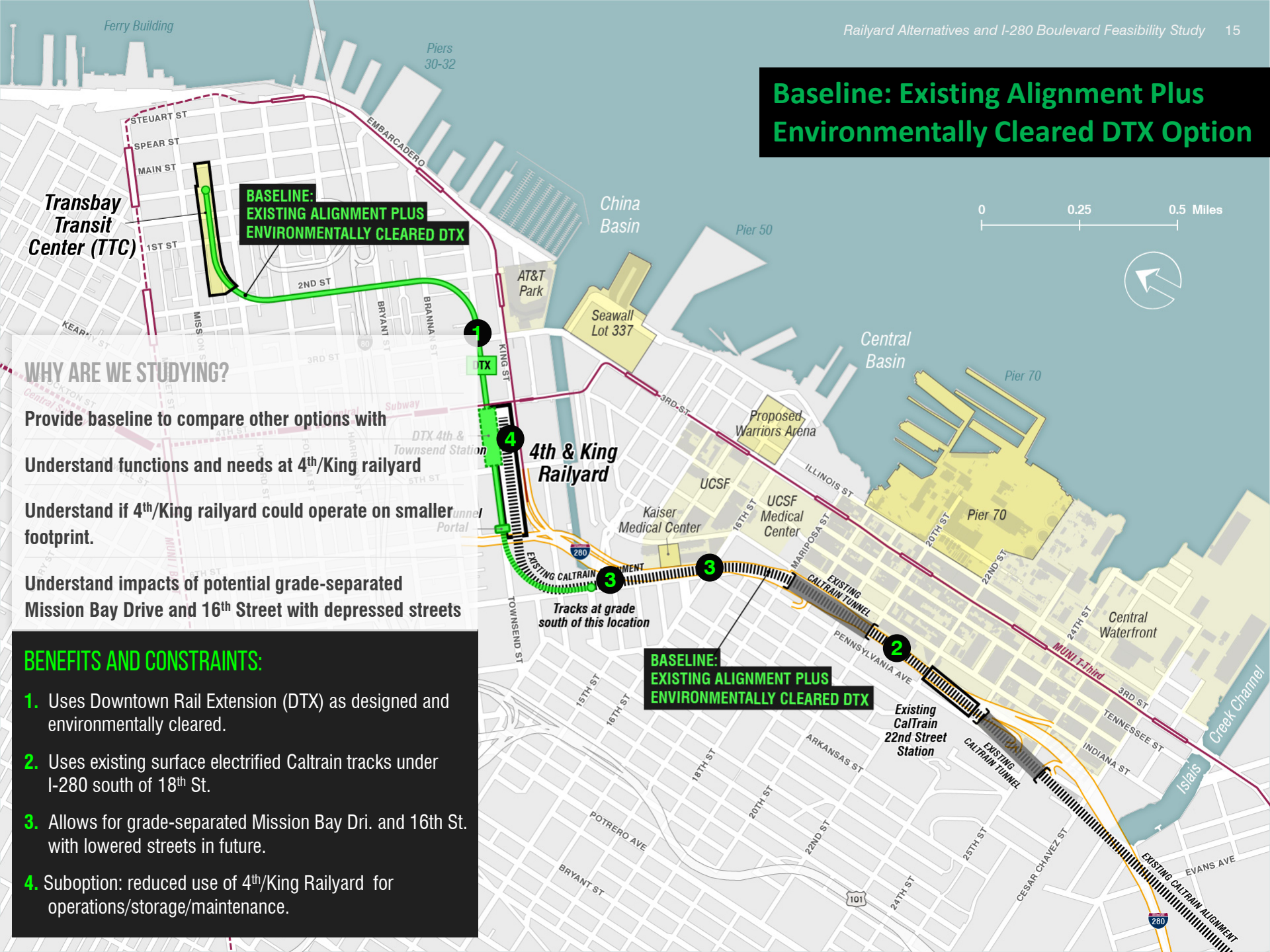
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**C. Pennsylvania Avenue**

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**D. Mission Bay (Third Street)**

# Baseline: Existing Alignment Plus Environmentally Cleared DTX Option



**Transbay Transit Center (TTC)**

**BASELINE: EXISTING ALIGNMENT PLUS ENVIRONMENTALLY CLEARED DTX**

## WHY ARE WE STUDYING?

Provide baseline to compare other options with

Understand functions and needs at 4<sup>th</sup>/King rail yard

Understand if 4<sup>th</sup>/King rail yard could operate on smaller footprint.

Understand impacts of potential grade-separated Mission Bay Drive and 16<sup>th</sup> Street with depressed streets

## BENEFITS AND CONSTRAINTS:

1. Uses Downtown Rail Extension (DTX) as designed and environmentally cleared.
2. Uses existing surface electrified Caltrain tracks under I-280 south of 18<sup>th</sup> St.
3. Allows for grade-separated Mission Bay Drive and 16<sup>th</sup> St. with lowered streets in future.
4. Suboption: reduced use of 4<sup>th</sup>/King Rail yard for operations/storage/maintenance.

**BASELINE: EXISTING ALIGNMENT PLUS ENVIRONMENTALLY CLEARED DTX**

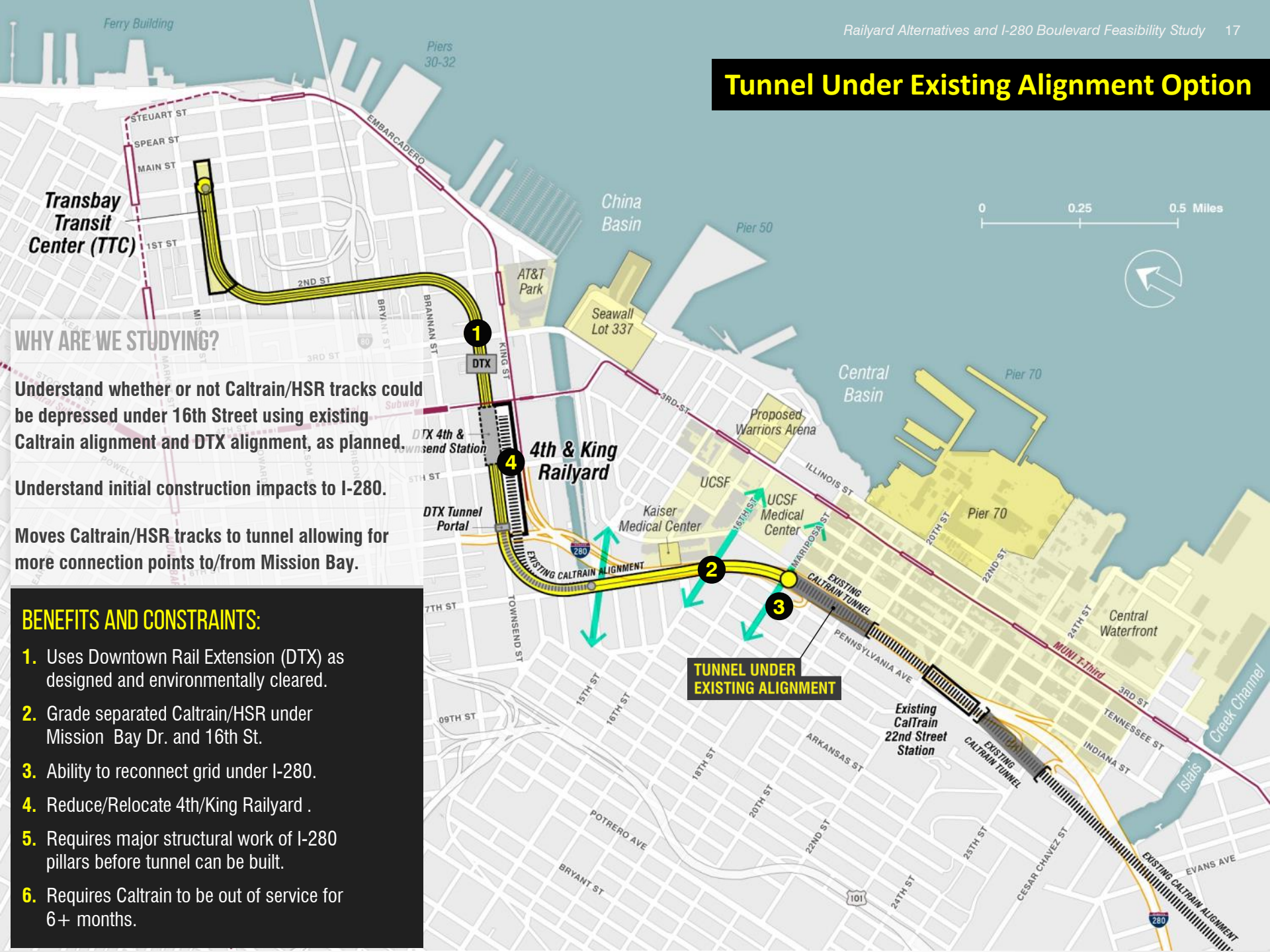
**4<sup>th</sup> & King Rail yard**

Tracks at grade south of this location

Existing CalTrain 22nd Street Station



# Tunnel Under Existing Alignment Option



## WHY ARE WE STUDYING?

Understand whether or not Caltrain/HSR tracks could be depressed under 16th Street using existing Caltrain alignment and DTX alignment, as planned.

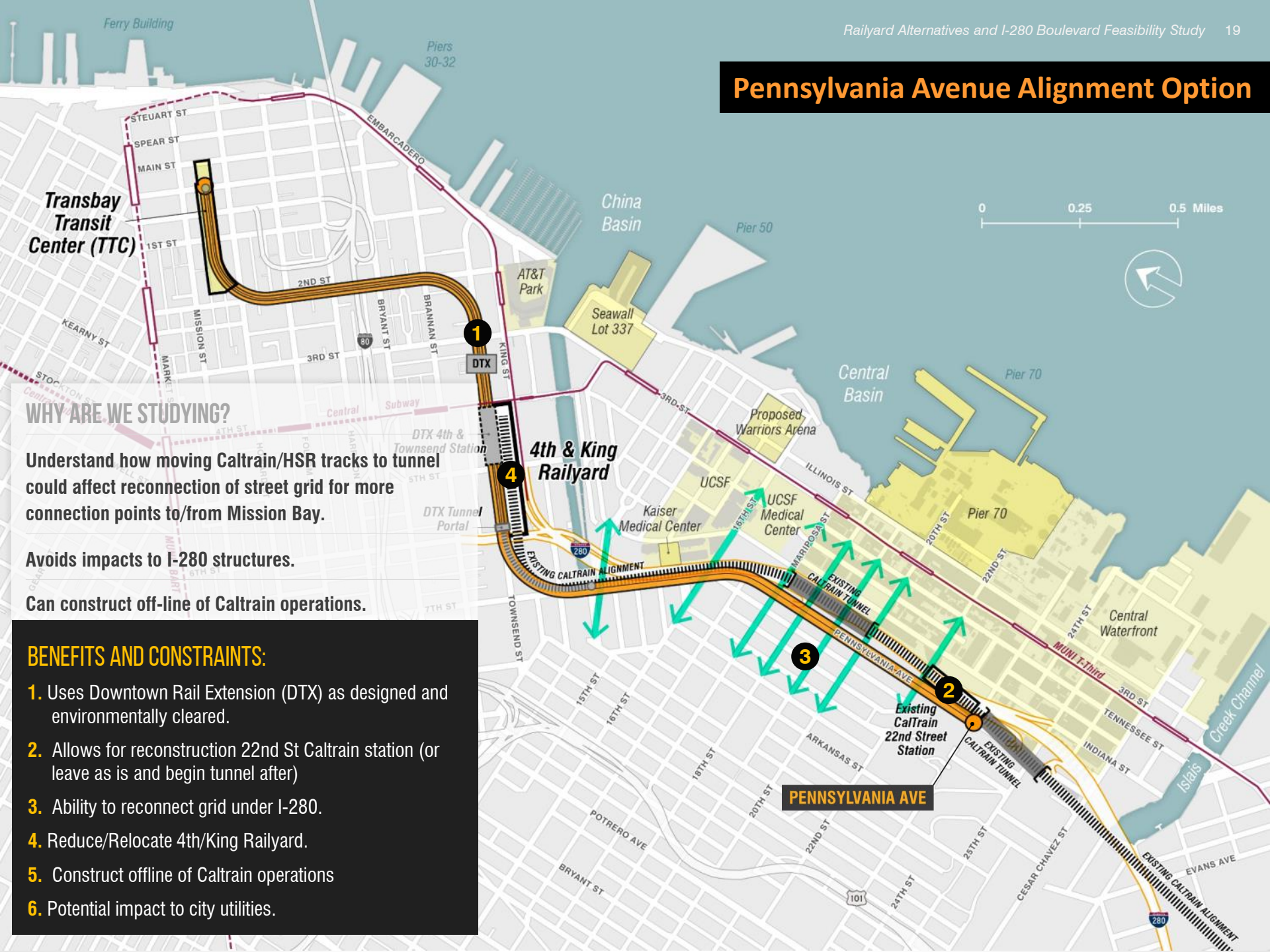
Understand initial construction impacts to I-280.

Moves Caltrain/HSR tracks to tunnel allowing for more connection points to/from Mission Bay.

## BENEFITS AND CONSTRAINTS:

1. Uses Downtown Rail Extension (DTX) as designed and environmentally cleared.
2. Grade separated Caltrain/HSR under Mission Bay Dr. and 16th St.
3. Ability to reconnect grid under I-280.
4. Reduce/Relocate 4th/King Railyard .
5. Requires major structural work of I-280 pillars before tunnel can be built.
6. Requires Caltrain to be out of service for 6+ months.

# Pennsylvania Avenue Alignment Option



## WHY ARE WE STUDYING?

Understand how moving Caltrain/HSR tracks to tunnel could affect reconnection of street grid for more connection points to/from Mission Bay.

Avoids impacts to I-280 structures.

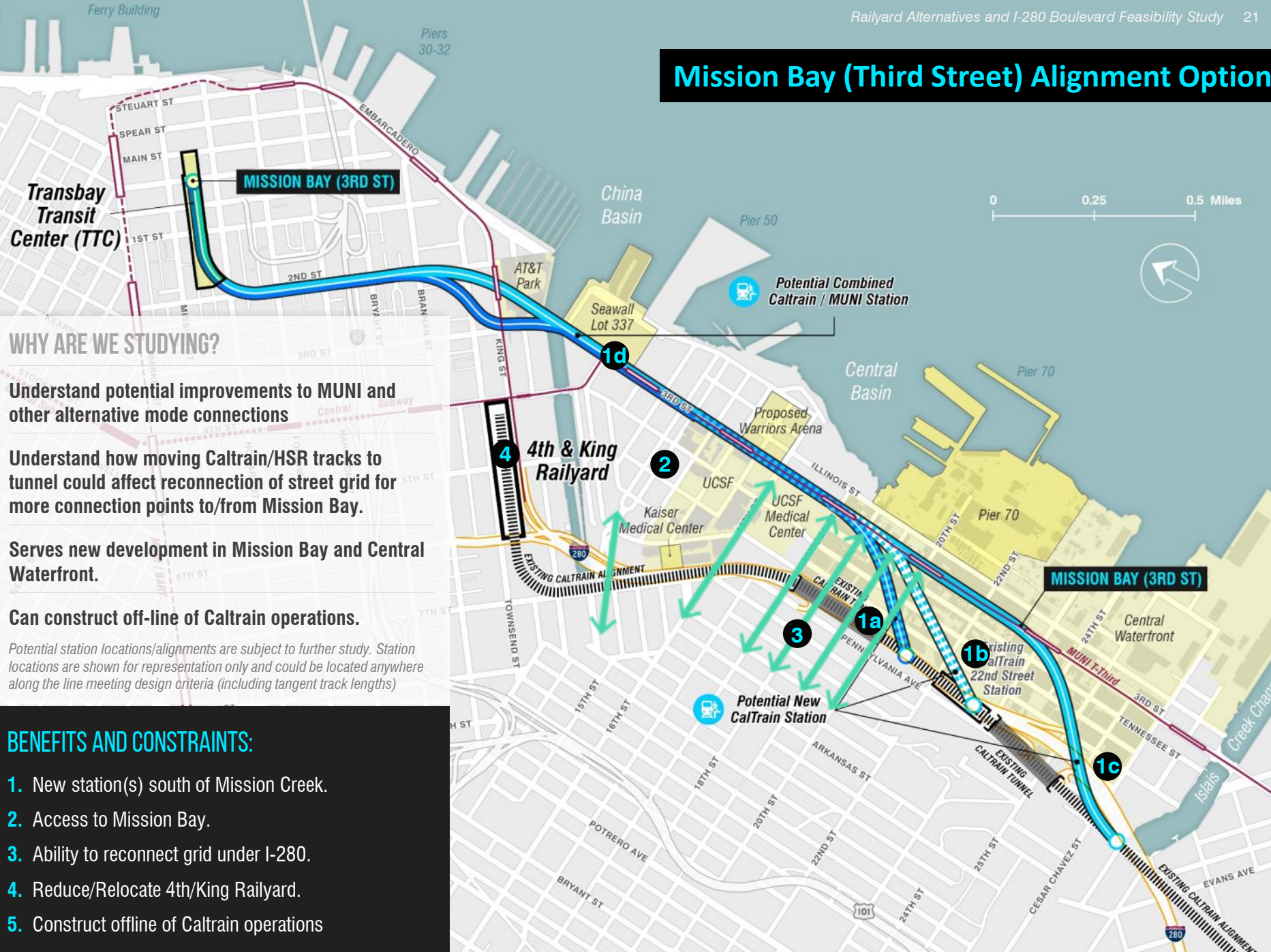
Can construct off-line of Caltrain operations.

## BENEFITS AND CONSTRAINTS:

1. Uses Downtown Rail Extension (DTX) as designed and environmentally cleared.
2. Allows for reconstruction 22nd St Caltrain station (or leave as is and begin tunnel after)
3. Ability to reconnect grid under I-280.
4. Reduce/Relocate 4th/King Rail yard.
5. Construct offline of Caltrain operations
6. Potential impact to city utilities.



# Mission Bay (Third Street) Alignment Option



**WHY ARE WE STUDYING?**

- Understand potential improvements to MUNI and other alternative mode connections
- Understand how moving Caltrain/HSR tracks to tunnel could affect reconnection of street grid for more connection points to/from Mission Bay.
- Serves new development in Mission Bay and Central Waterfront.
- Can construct off-line of Caltrain operations.

*Potential station locations/alignments are subject to further study. Station locations are shown for representation only and could be located anywhere along the line meeting design criteria (including tangent track lengths)*

## BENEFITS AND CONSTRAINTS:

1. New station(s) south of Mission Creek.
2. Access to Mission Bay.
3. Ability to reconnect grid under I-280.
4. Reduce/Relocate 4th/King Railyard.
5. Construct offline of Caltrain operations

# DOWNTOWN RAIL EXTENSION (DTX) VALUE ENGINEERING

SUMMARY: OPTIONS FOR ALIGNMENT MOVING FORWARD TO PHASE II

**A. Baseline: Existing Alignment Plus Environmentally Cleared DTX**

**A.2 SubOption: Reduced 4<sup>th</sup>/King footprint**

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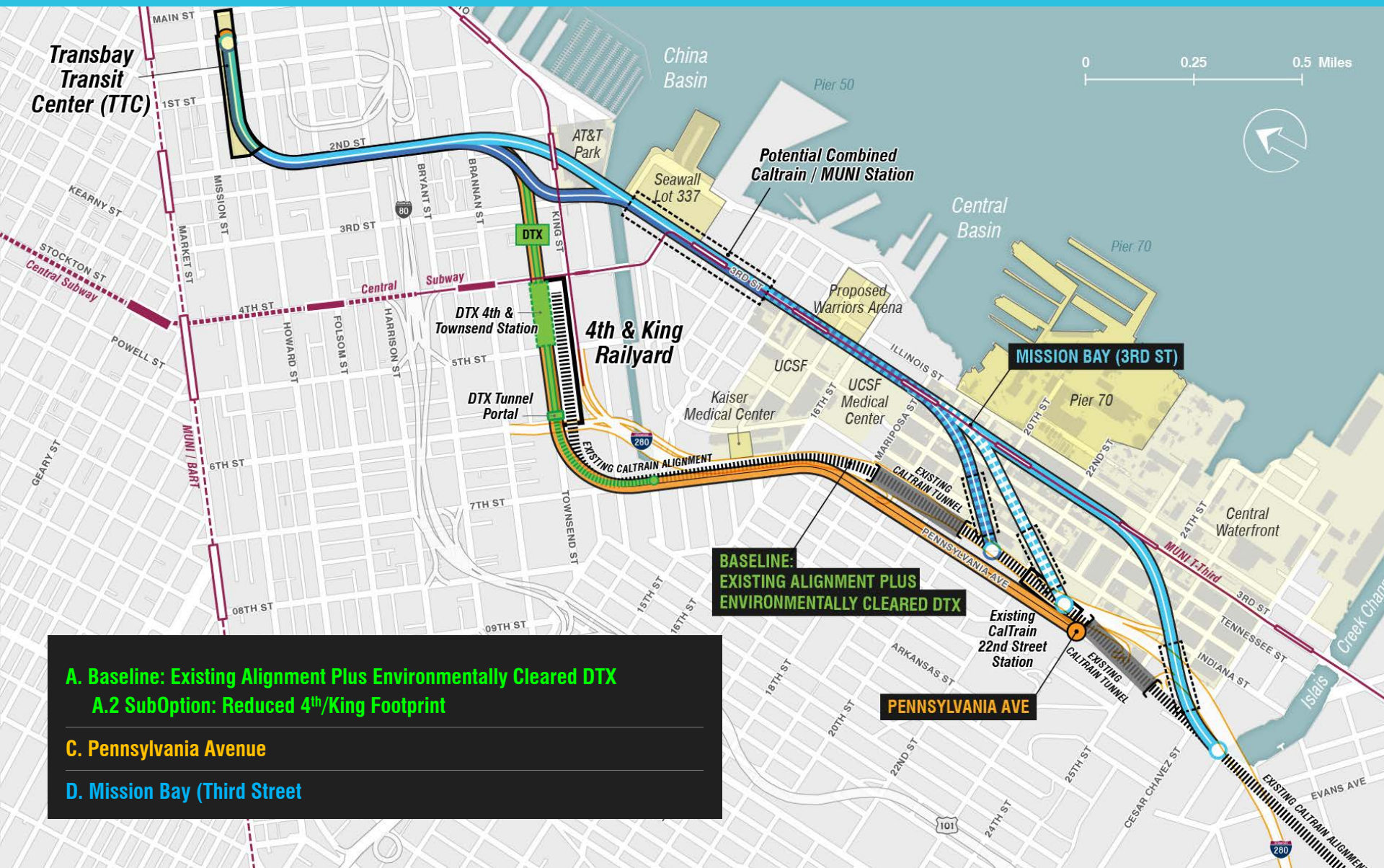
**C. Pennsylvania Avenue**

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**D. Mission Bay (Third Street)**

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# OPTIONS FOR ALIGNMENT MOVING FORWARD TO PHASE II



- A. Baseline: Existing Alignment Plus Environmentally Cleared DTX**
- A.2 SubOption: Reduced 4<sup>th</sup>/King Footprint**
- C. Pennsylvania Avenue**
- D. Mission Bay (Third Street)**

**BASELINE:  
EXISTING ALIGNMENT PLUS  
ENVIRONMENTALLY CLEARED DTX**

**PENNSYLVANIA AVE**

**MISSION BAY (3RD ST)**

**4th & King  
Railyard**

**DTX 4th &  
Townsend Station**

**DTX Tunnel  
Portal**

**Potential Combined  
Caltrain / MUNI Station**

**Transbay  
Transit  
Center (TTC)**

**Central  
Subway**

**MUNI / BART**

**MUNI J-Third**

**Existing Caltrain  
22nd Street  
Station**



0 0.25 0.5 Miles

# TRANSBAY TRANSIT CENTER LOOP

## OPTIONS

1. **Main Street** *Caltrain only*

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2. **Spear Street** *Caltrain only*

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3. **Steuart Street** *Caltrain & HSR*

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4. **In the Bay** *Caltrain & HSR*



- 1. Main Street Caltrain only
- 2. Spear Street Caltrain only
- 3. Stuart Street Caltrain & HSR
- 4. In the Bay Caltrain & HSR

# TRANSBAY TRANSIT CENTER LOOP

## SUMMARY: OPTIONS MOVING FORWARD TO PHASE II

1. **Main Street** *Caltrain only – removed from further consideration*

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2. **Spear Street** *Caltrain only – removed from further consideration*

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3. **Steuart Street** *Caltrain & HSR*

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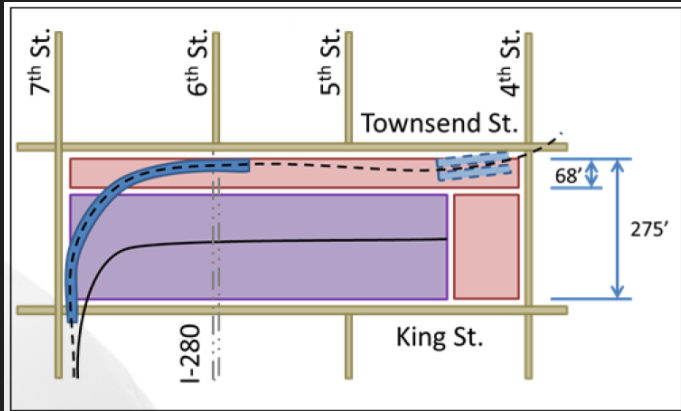
4. **In the Bay** *Caltrain & HSR*



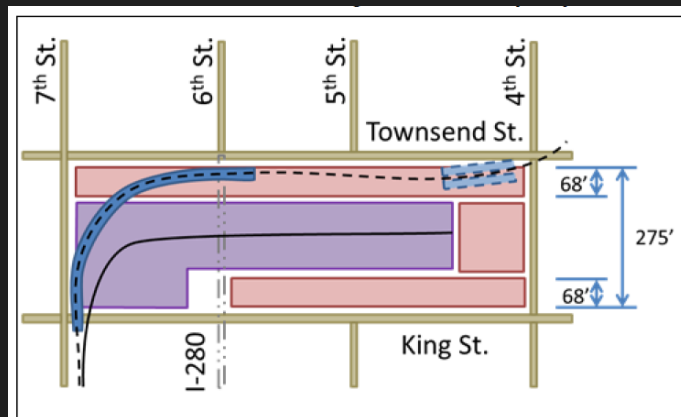
- 1. Main Street Caltrain only – removed from further consideration
- 2. Spear Street Caltrain only – removed from further consideration
- 3. Steuart Street Caltrain & HSR
- 4. In the Bay Caltrain & HSR

# RAILYARD RECONFIGURATION/RELOCATION

If maintenance, storage, and operations remained at 4<sup>th</sup>/King after electrification



If maintenance and storage were relocated, but operations remained at 4<sup>th</sup>/King after electrification



2013 Caltrain completed a preliminary assessment of possible modified footprints at 4<sup>th</sup>/King at the request of San Francisco

Starting point for analysis

Assumes only Caltrain use of 4<sup>th</sup>/King.

Based on anticipated maintenance, storage, and operations AFTER electrification of Caltrain (anticipated December 2020).

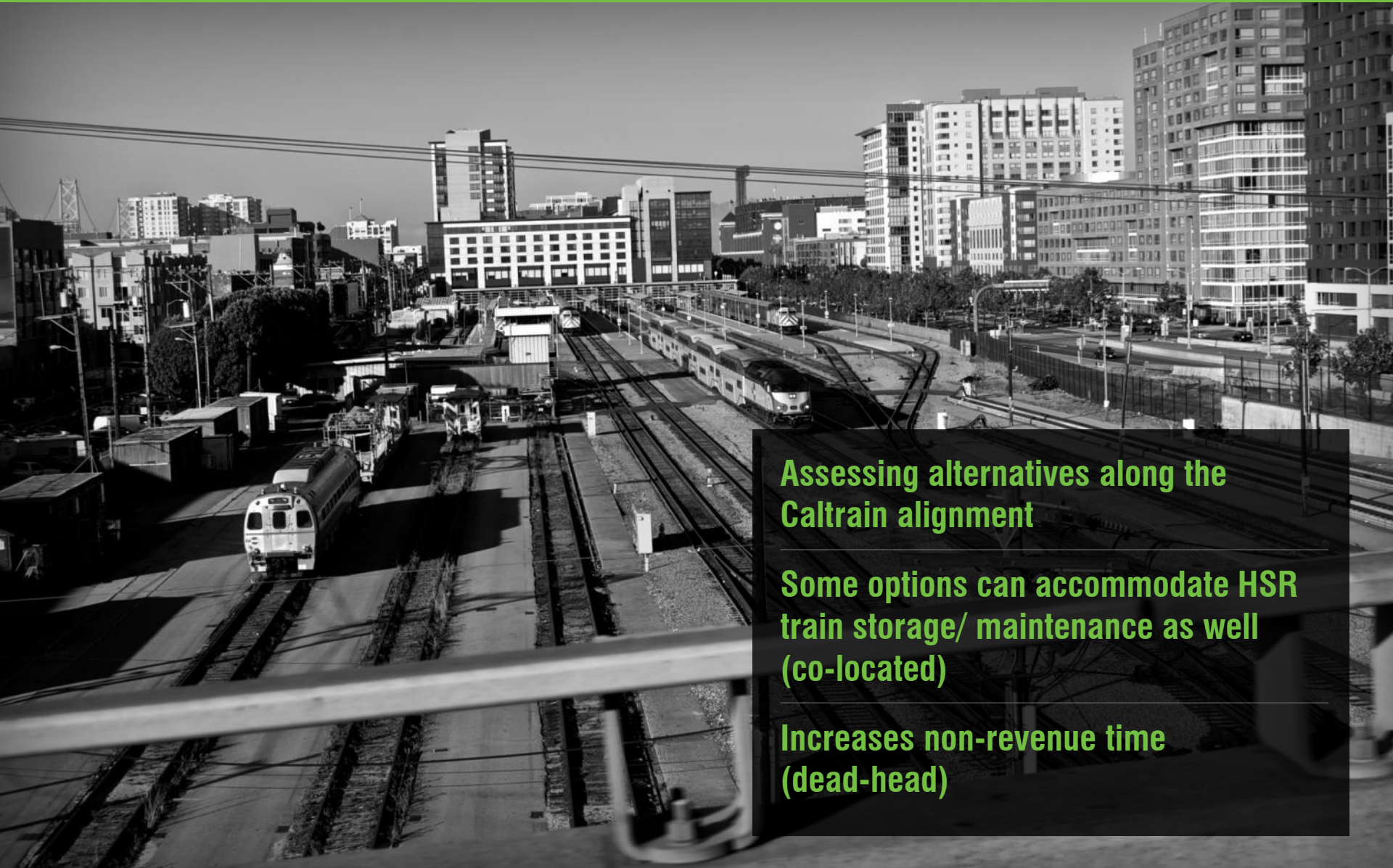
- Blue denotes the DTX alignment (in 2013)
- Purple denotes areas that would be needed for Caltrain use (min)
- Pink denotes areas that could be repurposed for other uses

- DTX alignment (in 2013)
- Minimum area needed for Caltrain use
- Available area for repurpose or other use

Source: Caltrain, 2013



# RAILYARD RECONFIGURATION/RELOCATION

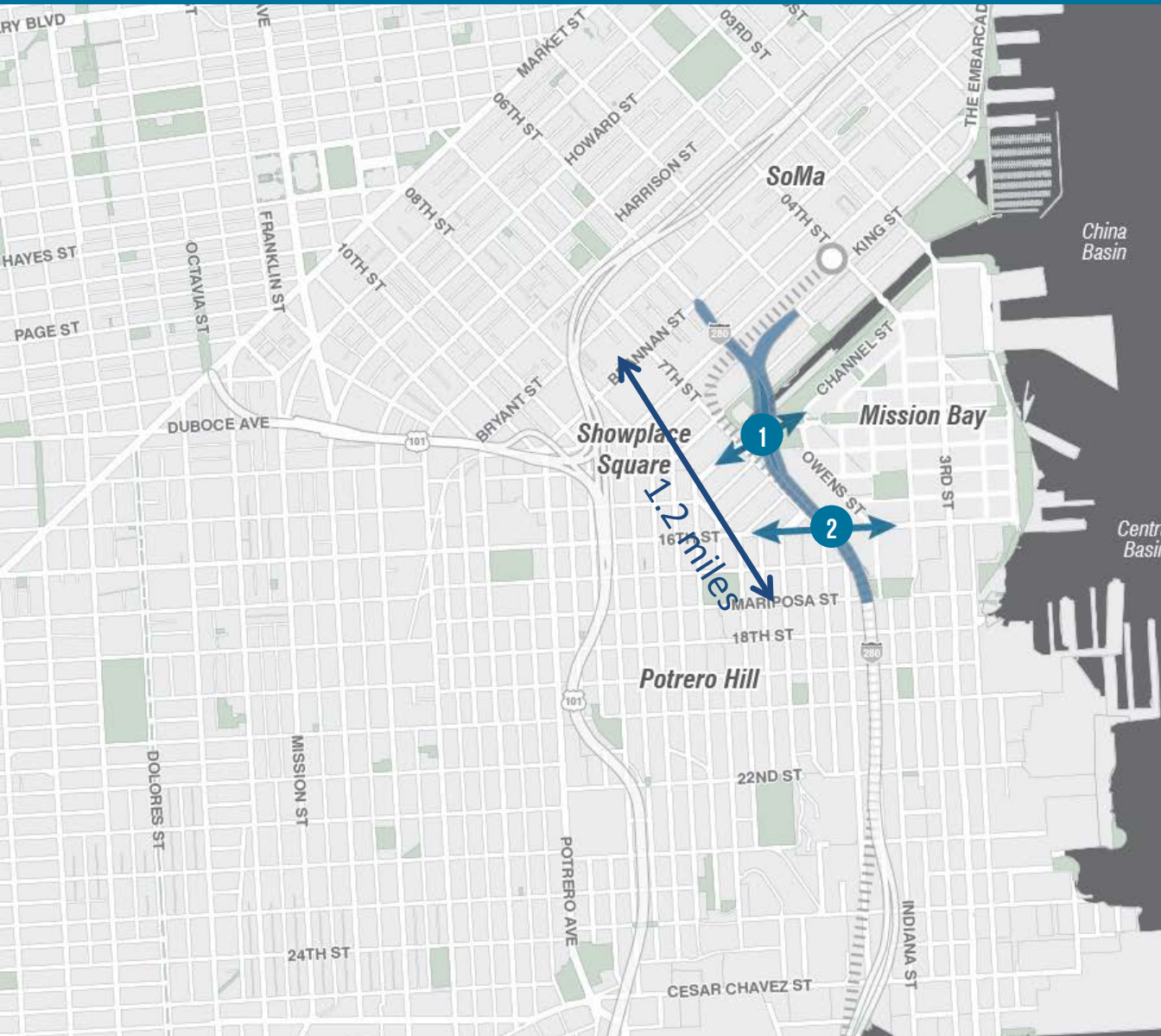


**Assessing alternatives along the Caltrain alignment**

**Some options can accommodate HSR train storage/ maintenance as well (co-located)**

**Increases non-revenue time (dead-head)**

# BOULEVARD I-280: EXISTING CONDITIONS



## ONLY TWO CROSSINGS

1



2

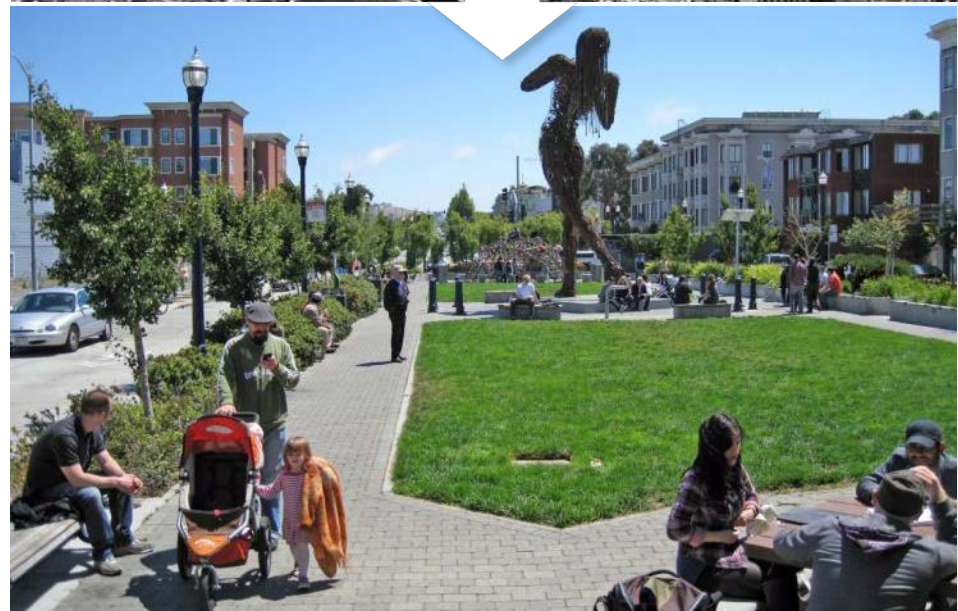


# 4. BOULEVARD I-280: WHY WOULD WE TAKE DOWN A FREEWAY

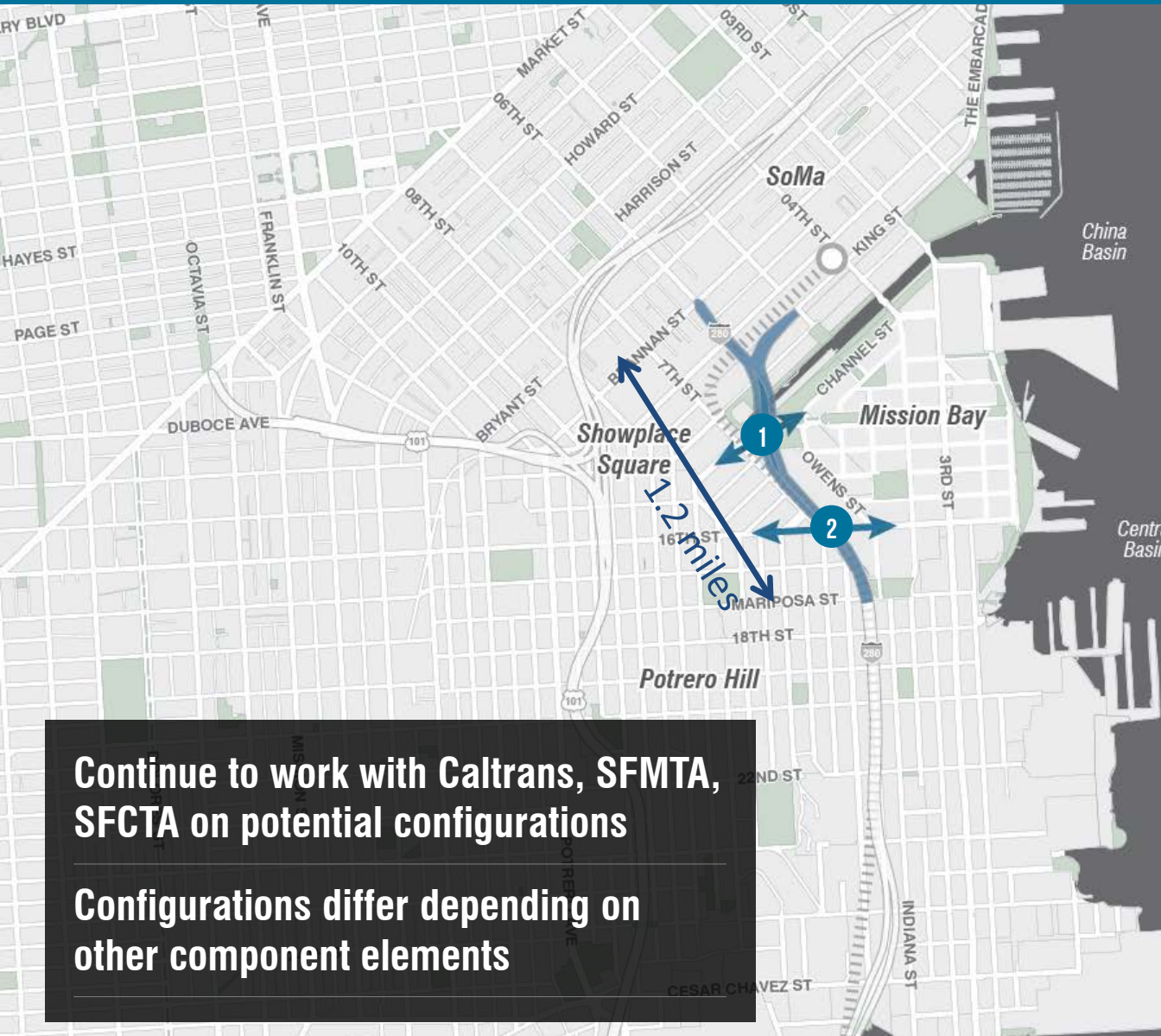
THE EMBARCADERO



OCTAVIA BLVD



# 4. BOULEVARD I-280: SUMMARY



**Continue to work with Caltrans, SFMTA, SFCTA on potential configurations**

**Configurations differ depending on other component elements**

### ONLY TWO CROSSINGS

**1**

**MISSION BAY DR / 7TH STREET**

**2**

**16TH STREET**

# SUMMARY OF OPTIONS TO BE STUDIED IN PHASE II

## 1. DOWNTOWN RAIL EXTENSION (DTX) ALIGNMENT

- Three of the four alignments options moving forward
- Removed the “Tunnel under Existing Alignment” option

## 2. TRANSBAY TRANSIT CENTER LOOP

- Two of the four loop track options moving forward
- Removed the Main Street and Spear Street options

## 3. RAILYARD RECONFIGURATION/RELOCATION

- Continue to work with Caltrain and California High Speed Rail Authority (CHSRA) on possible reconfiguration/ relocation options

## 4. BOULEVARD I-280

- Continue to work with Caltrans, San Francisco Municipal Transportation Agency (SFMTA), San Francisco County Transportation Agency (SFCTA) on traffic operations

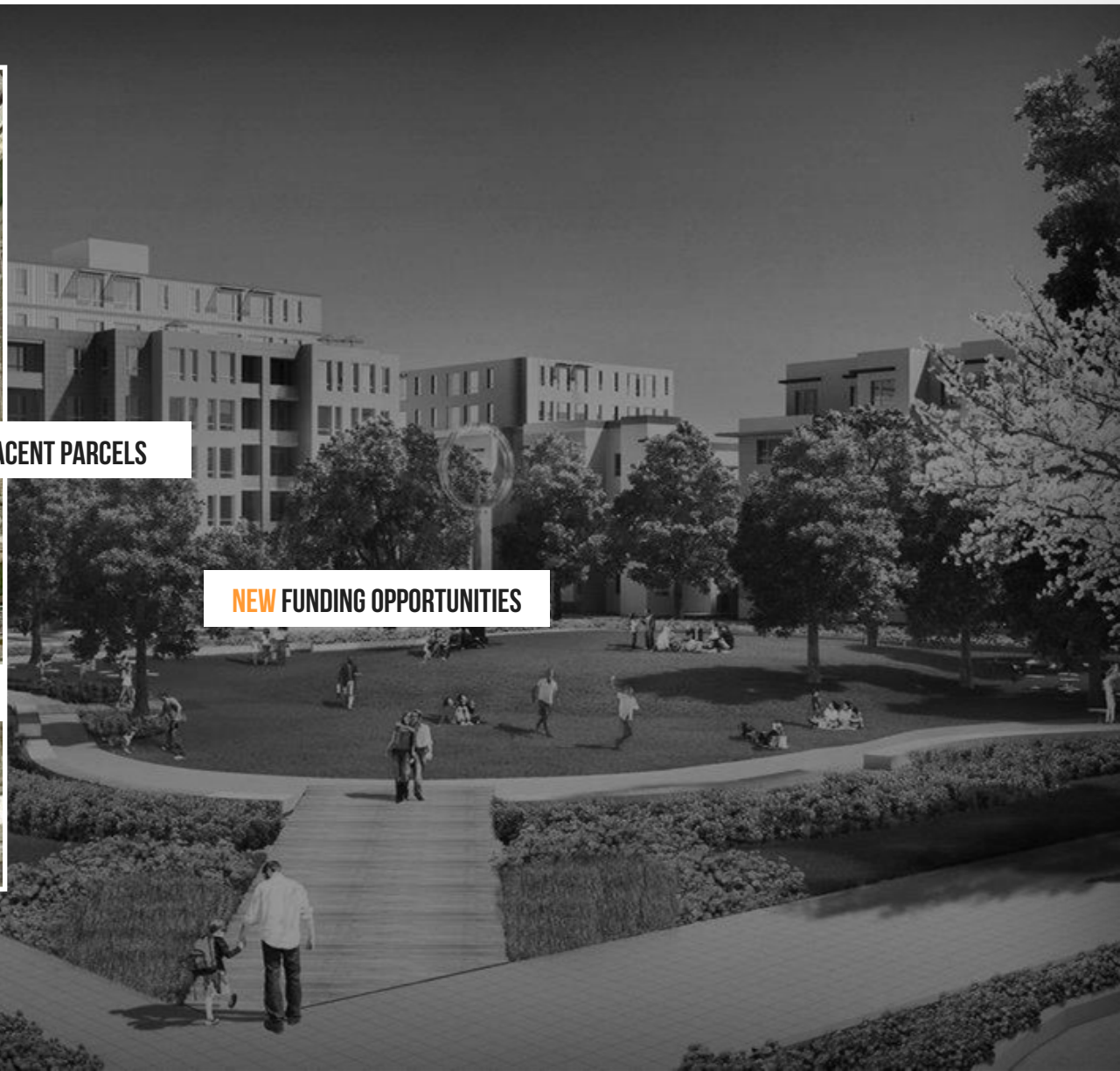
# OPPORTUNITIES FOR THE URBAN ENVIRONMENT



**RAILYARD (20+ ACRES)**

**ACTIVATE ADJACENT PARCELS**

**I-280 CORRIDOR (4+ ACRES)**

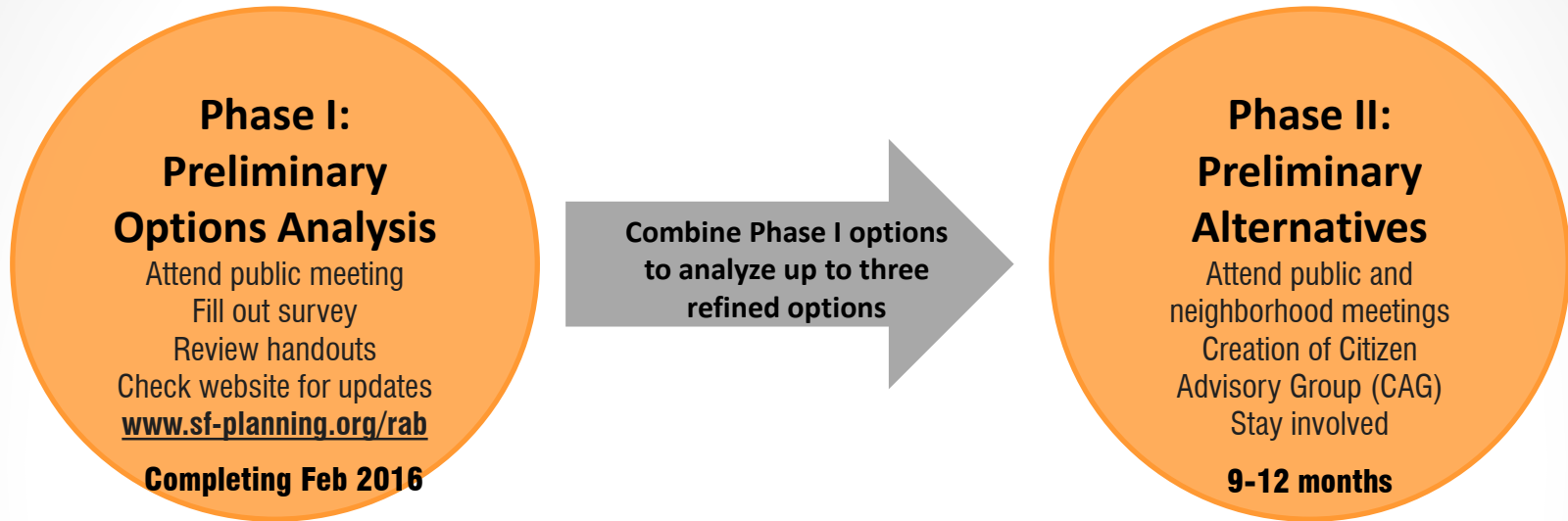


**NEW FUNDING OPPORTUNITIES**



# OUTREACH

# COMMUNITY ENGAGEMENT – HOW CAN YOU PARTICIPATE?



**WE ARE HERE**

**FOLLOW-ON PHASES**





# TIMELINE & NEXT STEPS

**PHASE I –**  
Preliminary Options Analysis  
June 2014-Feb 2016

**PHASE II –**  
Alternatives Development  
9-12 months



**STAKEHOLDER BRIEFINGS UPON REQUEST**

**PUBLIC MEETING – Feb 2016**  
Preliminary Options Analysis  
Public Input

**PUBLIC MEETING – Anticipated Fall 2016**  
Draft Alternatives  
Public Input

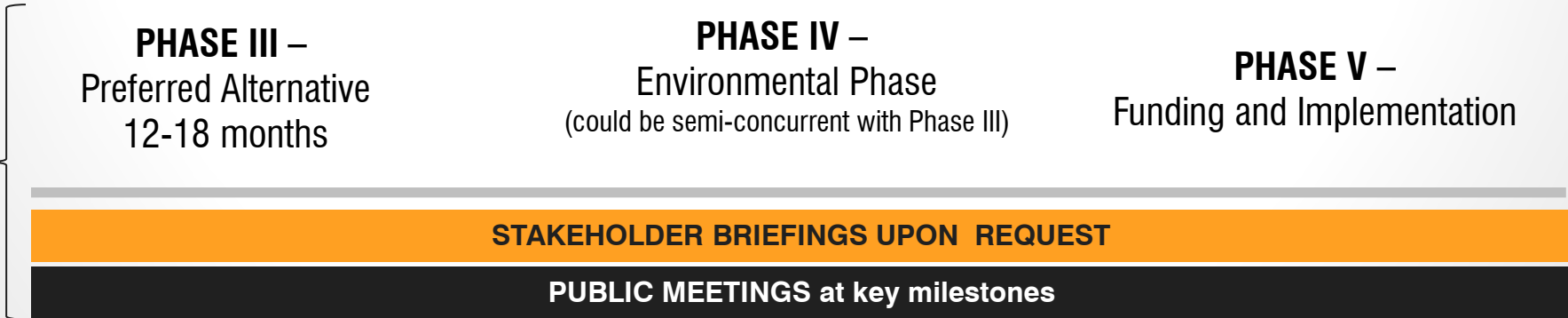
**PUBLIC MEETING – Anticipated Winter 2016**  
Finalize Alternatives  
Public Input

**PHASE III –**  
Preferred Alternative  
12-18 months

**PHASE IV –**  
Environmental Phase  
(could be semi-concurrent with Phase III)

**PHASE V –**  
Funding and Implementation

**FOLLOW-ON PHASES**



**STAKEHOLDER BRIEFINGS UPON REQUEST**

**PUBLIC MEETINGS at key milestones**

# THANK YOU

[www.sf-planning.org/rab](http://www.sf-planning.org/rab)

*Study Manager*

Susan Gygi, PE



San Francisco  
**Planning**