

## BART Core Capacity and Traction Power Upgrades

#### Overall Project Goals

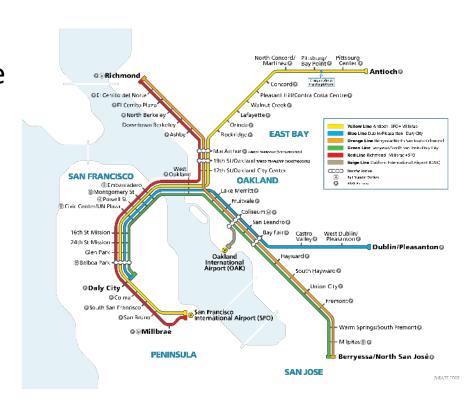
- Up to 30 10-car trains per hour through Transbay Tube
  - Additional rail cars
  - Train Control Modernization Project (CBTC)
  - Additional railcar storage yards (HMC, Millbrae Tailtrack)
  - New and upgraded traction power substations.

#### R-Line Specifics

- Replacement of existing 34.5 kilovolt (kV) cable.
- Replacement of substations.

#### Ashby Station

 New substation and upgraded equipment critical to meeting current and future demands.





#### Systemwide Traction Power Substations and Improvements\*



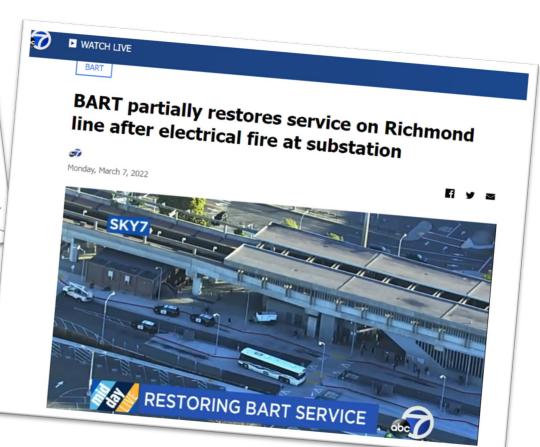
Traction Power
substations (TPSS) at
BART stations
TPSS w/upgrade &
replacement
projects
Future TPSS



# Ashby BART Station Area – why a "TPSS Staging Area?"



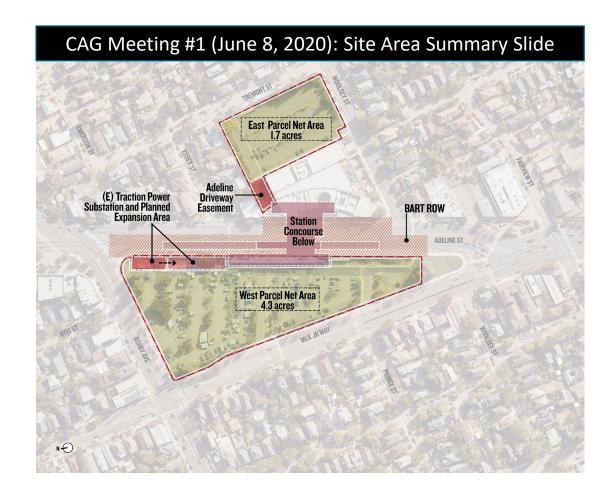
- Offers a place to replace damaged substation with temporary power/trailers and regular maintain and repair for BART services.
- Adeline Street would not be a viable alternative for a temporary substation if needed.





### History of Traction Power discussions

- City-BART staff meetings:
  - August 30, 2018 (Public Works) (RLine Expansion)
  - March 2022 (Planning and Public Works)(VIA Report)
- Berkeley BART TOD Community Advisory Group (CAG)
   Meetings:
  - June 2020 Dec 2021
- Community and Transportation Infrastructure Commission and City Council meetings:
  - October, 2022
  - November , 2022
- Community meeting:
  - April 20, 2023





### Future Traction Power Substation (TPSS)



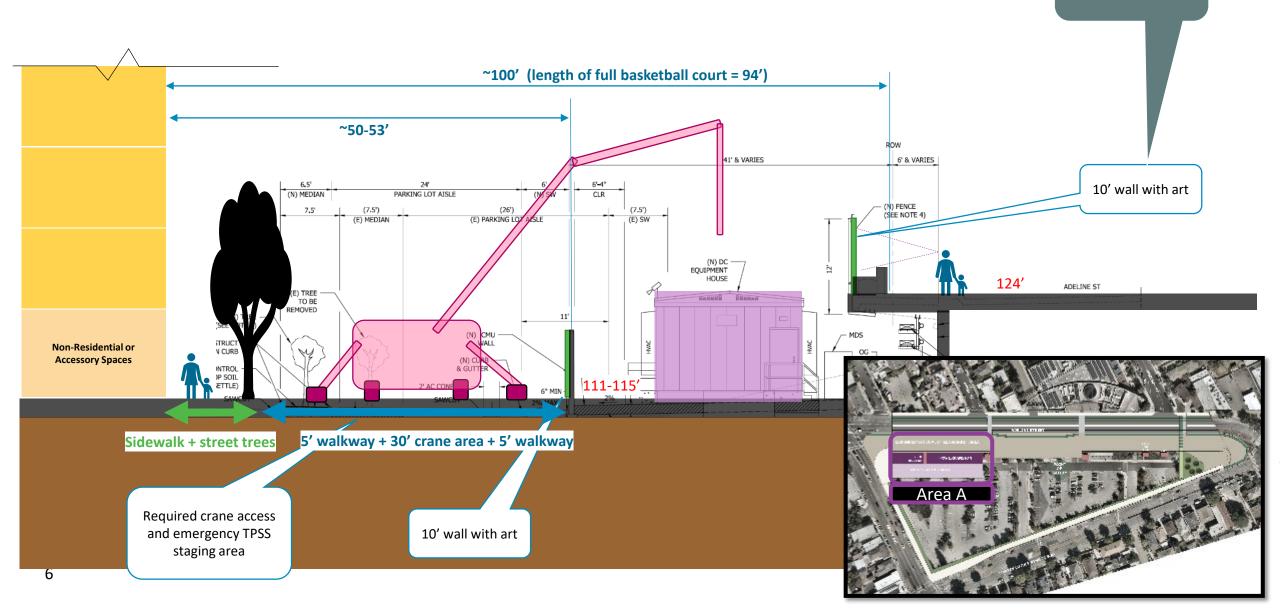
# **BART TPSS Requirements**

- TPSS Expansion
  - Directly south of existing TPSS
- TPSS Staging Area
  - Located west of TPSS
  - Staging Area for maintenance and crane access
  - Space for emergency temporary TPSS
  - First Responders
  - BART Maintenance



# TPSS Expansion/TOD Integration

Could be fence or art wall



# Potential Art Surrounding TPSS



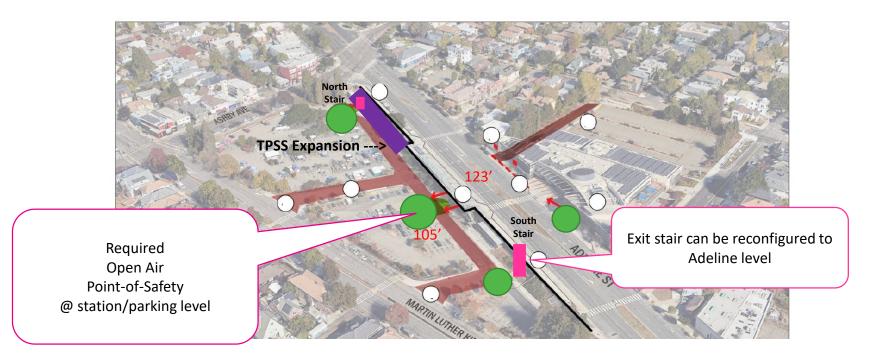








### Station Exiting Constraints

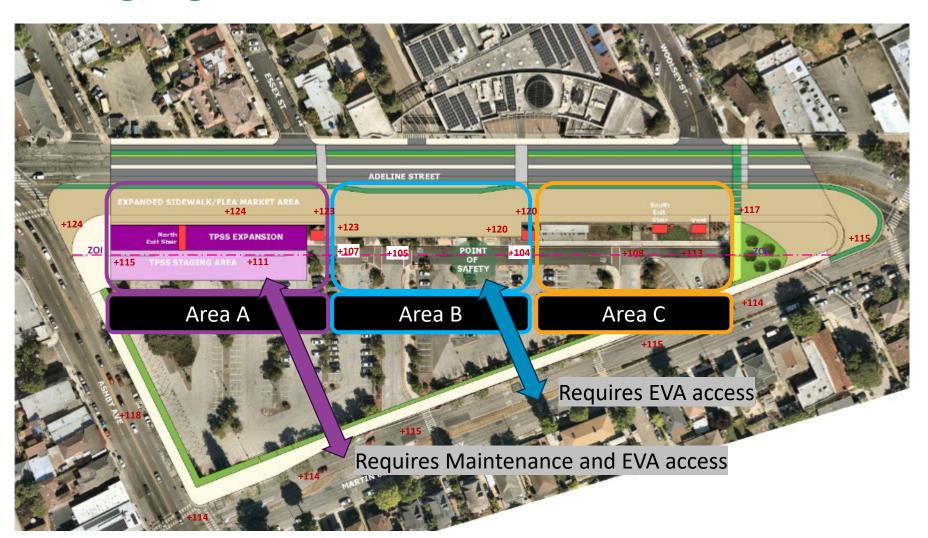


#### Emergency exiting requires:

- Egress capacity to evacuate the platform occupant load from the station platform in 4 minutes or less
- Permit evacuation from the most remote point on the platform to a point of safety in 6 minutes or less.
  - Point of Safety at main station entrance
  - North + South stairs lead to open air refuge at Adeline or station level
    - Ed Roberts stairs lead to open air refuge at Adeline or station level



### Bridging to Adeline



EVA – Emergency Vehicle Access

#### Connection Challenges

#### Area A – TPSS Area

- Cannot connect over TPSS
- Required staging area and crane access for TPSS maintenance adjacent to TPSS
- Required area for Emergency Temporary TPSS
- EVA to TPSS
- Safety areas around TPSS
- North exit stair access

#### Area B – Station Entrance

- Required open air area for Point of Safety
- First responder access to station entrance
- EVA to station entrance
- Grade change from station entrance to Adeline not adequate for EVA access under building/bridge
- Connecting development to Adeline requires building in ZOI

#### Area C – South of Station

- Does not require EVA or below grade parking podium
- Requires rebuilding south exit stair and exhaust vents
- New exist stair to Adeline level and vent shaft disrupts plaza connections to the building
- Connecting development to Adeline requires building in ZOI



#### Area A: New TPSS Area



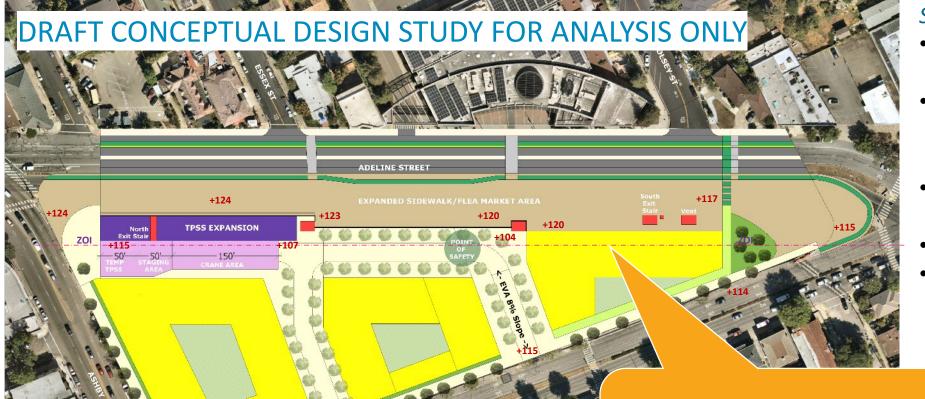
### Area B: Station Entrance



#### Area C: South of Station Entrance



### Study Concept | Plaza Loop



#### **Summary**

- ~200-275 feet frontage on Adeline
- Plaza lines up with station entrance for visibility to/from station to MLK
- New tree-lined plaza at station entrance elevation
- Loop plaza provides EVA
- Loop design could be plaza or street with drop-off area for passengers

**South building fronts Adeline Street Plaza** 

DRAFT CONCEPTUAL DESIGN STUDY FOR ANALYSIS



## **Question and Answer**