

# Caltrain Downtown Extension (DTX) Peer Review and Tunnel Options Study Update

## Board Agenda Item 16

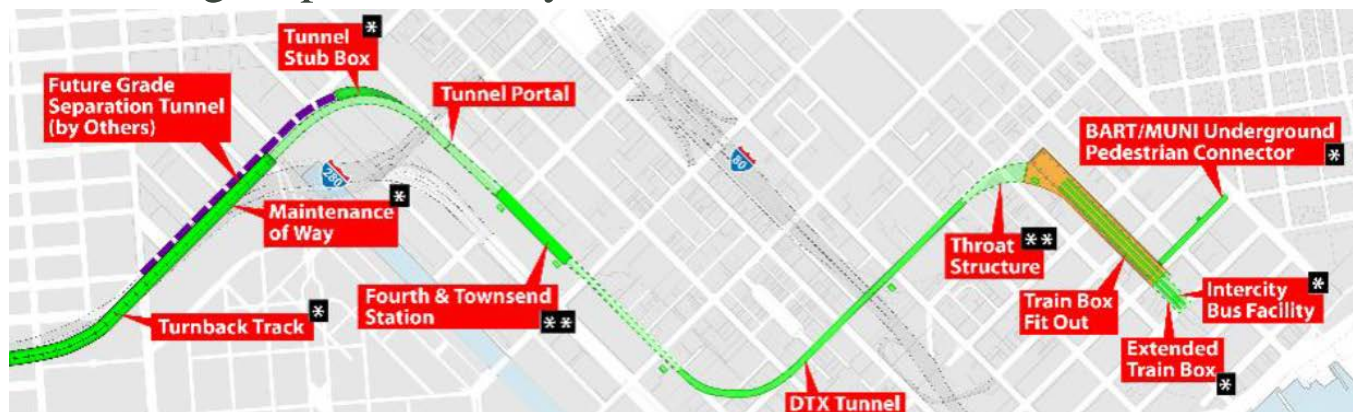


April 10, 2018

# DTX Peer Review Scope



- ▶ Conducted at the request of the Board
- ▶ Three Operational Studies
  - ▶ Transbay Transit Center – San Francisco DTX – Value Engineering Study, prepared by SENER for Birmingham Properties, September 2017
  - ▶ Train Operations Analysis of Two Versus Three Mainline Tracks for the San Francisco Downtown Rail Extension, prepared by Parsons and Carl Wood, October 31, 2017
  - ▶ Railyard Alternatives and I-280 Boulevard Feasibility Study (RAB) Conceptual Planning Analysis developed on behalf of the San Francisco Planning Department by CH2M and SMA+, June 19, 2017



# Peer Review Panel



Selected for their extensive expertise on rail operations

- ▶ **John Flint** – Senior Vice President, Managing Director of Lines of Business for TY Lin International
- ▶ **Les Elliott** – President, The Elliott Group
- ▶ **David Nelson** – Director of Transit for Jacobs
- ▶ **Eugene Skoropowski** – Staff Consultant, TY Lin International, former Senior VP for Rail Operations, All Aboard Florida



# Review Process



- ▶ Three workshops were held
  
- ▶ Stakeholder Participation
  - ▶ TJPA
  - ▶ Caltrain
  - ▶ California High Speed Rail Authority
  - ▶ Birmingham Properties and its consultant SENER
  - ▶ SF Planning and its consultants CH2M and SMA+
  - ▶ Parsons Transportation group and its consultant Carl Wood





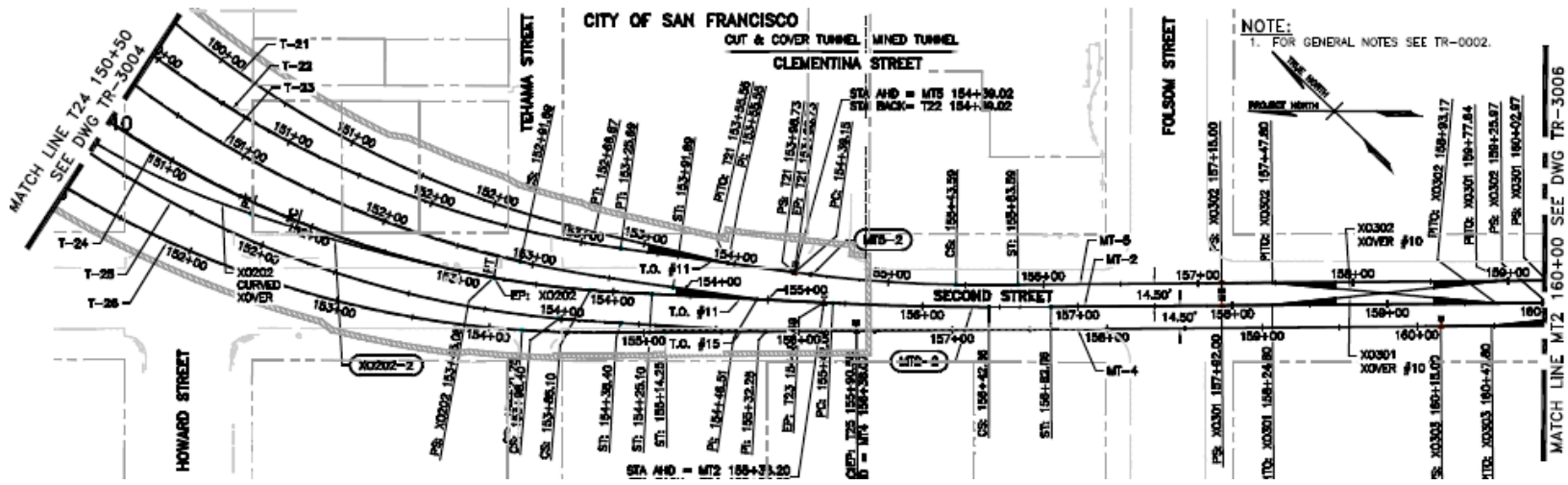
# General Observations

- ▶ All three reports concluded that If all trains operate within two minutes of scheduled times two tracks are sufficient
- ▶ Consistent daily operations within two minutes of schedule is not realistic
- ▶ Caltrain on-time performance is defined as plus or minus 5 minutes, 59 seconds
- ▶ CHSRA on-time performance is defined as plus or minus five minutes
- ▶ Swiss Railways on–time performance is defined as plus or minus three minutes, achieved only 91% of the time
- ▶ Only the study performed by Parsons and Carl Wood for TJPA included perturbation analysis

# Major Findings

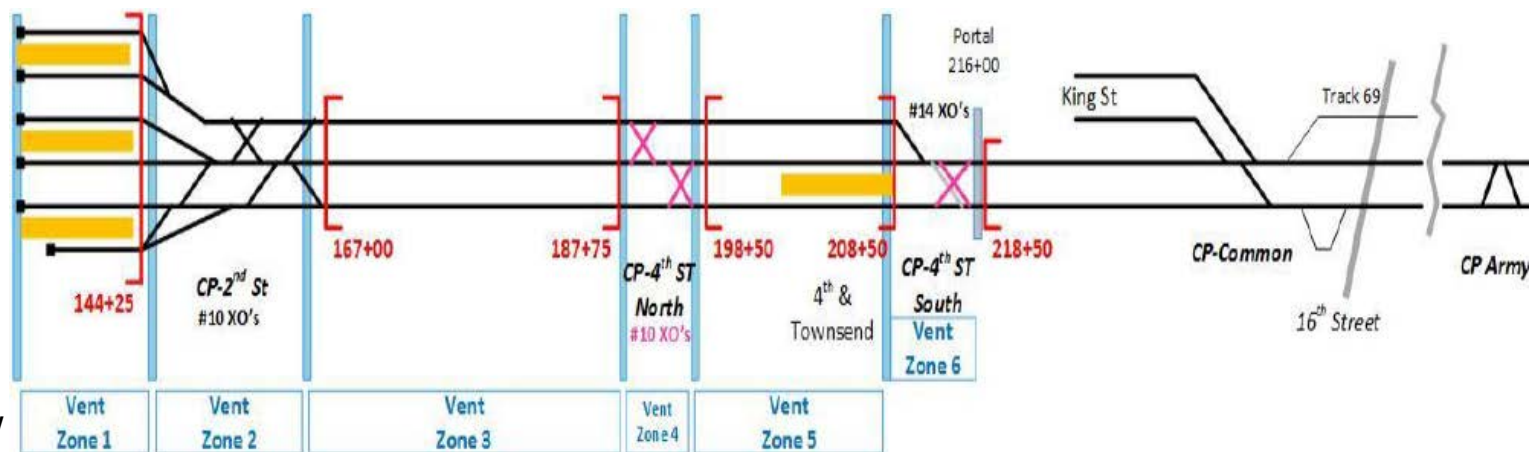


1. Three tracks are required to provide reliable and dependable service at Salesforce Transit Center (STC)
2. CHSRA and Caltrain must be able to berth at all platform faces at the STC
3. The column configuration of the STC limits track geometry within the train box and at the throat of DTX



# Additional Findings and Observations

1. The STC will be operating near capacity at full initial blended service
2. The Underground 4<sup>th</sup>/ Townsend Station will likely have strategic and tactical significance for rail operations
3. The overall utility of 4<sup>th</sup>/ Townsend Station might be improved with platform faces on all three tracks



# Additional Findings and Observations (cont.)



4. There is significant residual operational value for trains at Fourth and King yard
5. All future modeling and simulation studies must use a consistent DTX track configuration
6. A high-performance train control system that safely provides very short times between train movements through the DTX is assumed and essential







# Recommended Immediate Actions/ Next Steps

## 1. Finalize Blended Service Plan:

- ▶ Train schedules
- ▶ Infrastructure south of the study area
- ▶ Plans for vehicle servicing and storage

## 2. Identify and select a set of rolling stock and platform adaptations to allow both services to berth at all platforms

## 3. Evaluate tradeoffs between design criteria and low-speed terminal operations vs. maximizing public benefit while minimizing environmental and community impacts



# Recommended Immediate Actions/ Next Steps (cont.)

4. Revisit the operational program / design for 4<sup>th</sup> and Townsend station
  - ▶ Improve the utility and flexibility of the station
  - ▶ Optimize switch plant
5. Identify an operating plan and footprint for future RR facilities at 4<sup>th</sup> and King Caltrain parcel
  - ▶ identify which portions of the parcel can be released for non-railroad use
6. Build on the open communications facilitated by the SFCTA during the review effort
  - ▶ Meet regularly on the Immediate Action Items
  - ▶ Sustain momentum and cooperation toward the construction and operation of the proposed facilities.

Thank You



SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY