

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



RAB CITIZEN WORKING GROUP MEETING #2, SEPTEMBER 19TH, 2016

HELD AT: MERCY HOUSING COMMUNITY ROOM | 1180 4TH ST, SAN FRANCISCO, CA | 6:30-8:00PM

CITIZEN WORKING GROUP (CWG) MEETING AGENDA

BEFORE MEETING: OVERVIEW OF 4TH/KING CALTRAIN STATION (COMPLETED OFF-SITE)

I. CHAIRPERSON SELECTION

II. STUDY AREA CHALLENGES

III. REVIEW ANALYSIS, OPTIONS, AND ADDITIONAL WORK COMPLETED TO DATE FOR:

- **DOWNTOWN RAIL EXTENSION ALIGNMENT OPTIONS (COMPONENT 1)**
- **TRANSBAY TRANSIT CENTER LOOP OPTIONS (COMPONENT 2)**

IV. NEXT STEPS/NEXT MEETING

I. CHAIRPERSON SELECTION

CHAIRPERSON ROLES

- **FACILITATE THOUGHTFUL DISCUSSIONS AND MEETINGS**
- **UPHOLD THE GOALS OF THE CWG**
 - **UNDERSTAND THE INTENTION/PURPOSE OF THE RAB STUDY**
 - **UNDERSTAND OTHER TOUCHPOINTS THROUGH OTHER REGIONAL TRANSPORTATION PLANNING/ENGINEERING EFFORTS UNDERWAY OR ANTICIPATED**
 - **UNDERSTAND THE TRADEOFFS FOR VARIOUS COMPONENTS AND ALTERNATIVES**
 - **HAVE THE ABILITY TO DISCUSS ALTERNATIVES WITH THE BROADER COMMUNITY**
 - **SERVE AS A SPOKESPERSON FOR THE COMMUNITY**
- **SUPPORT THE CWG IN THINKING THROUGH THE OPPORTUNITIES, CHALLENGES, AND NEEDS**
 - **ENSURE:**
 - **THE CWG, CITY, & THE RAB STUDY ASK THE RIGHT QUESTIONS?**
 - **THE CWG, CITY, & THE RAB STUDY ANTICIPATE FUTURE NEEDS?**
 - **AN EFFECTIVE TRANSPORTATION SYSTEM FOR FUTURE GENERATIONS**
- **ENSURE ALL VOICES ARE HEARD AND NONE DOMINATE**

II. STUDY AREA CHALLENGES

WHAT CHALLENGES EXIST IN THE AREA



III. REVIEW ANALYSIS, OPTIONS, AND OTHER WORK COMPLETED TO DATE:

- I. DOWNTOWN RAIL EXTENSION ALIGNMENT OPTIONS**
- II. TRANSBAY TRANSIT CENTER LOOP OPTIONS**

TAKING ON THE CHALLENGE

- **VARIOUS COMPONENT ELEMENTS HAVE BEEN STUDIED FOR DECADES**
- **KNITTING TOGETHER THE MULTITUDE OF PROJECTS AND OPTIONS**
- **WILL THE STUDY'S OUTCOMES REFLECT SAN FRANCISCO'S SENSE OF PLACE AND COMMUNITY?**

STUDY COMPONENTS

1. DOWNTOWN RAIL EXTENSION (DTX) ALIGNMENT

9/19/2016 CWG MEETING

2. TRANSBAY TRANSIT CENTER LOOP

9/19/2016 CWG MEETING

3. RAILYARD RECONFIGURATION/RELOCATION

OCTOBER CWG MEETING

4. BOULEVARD I-280

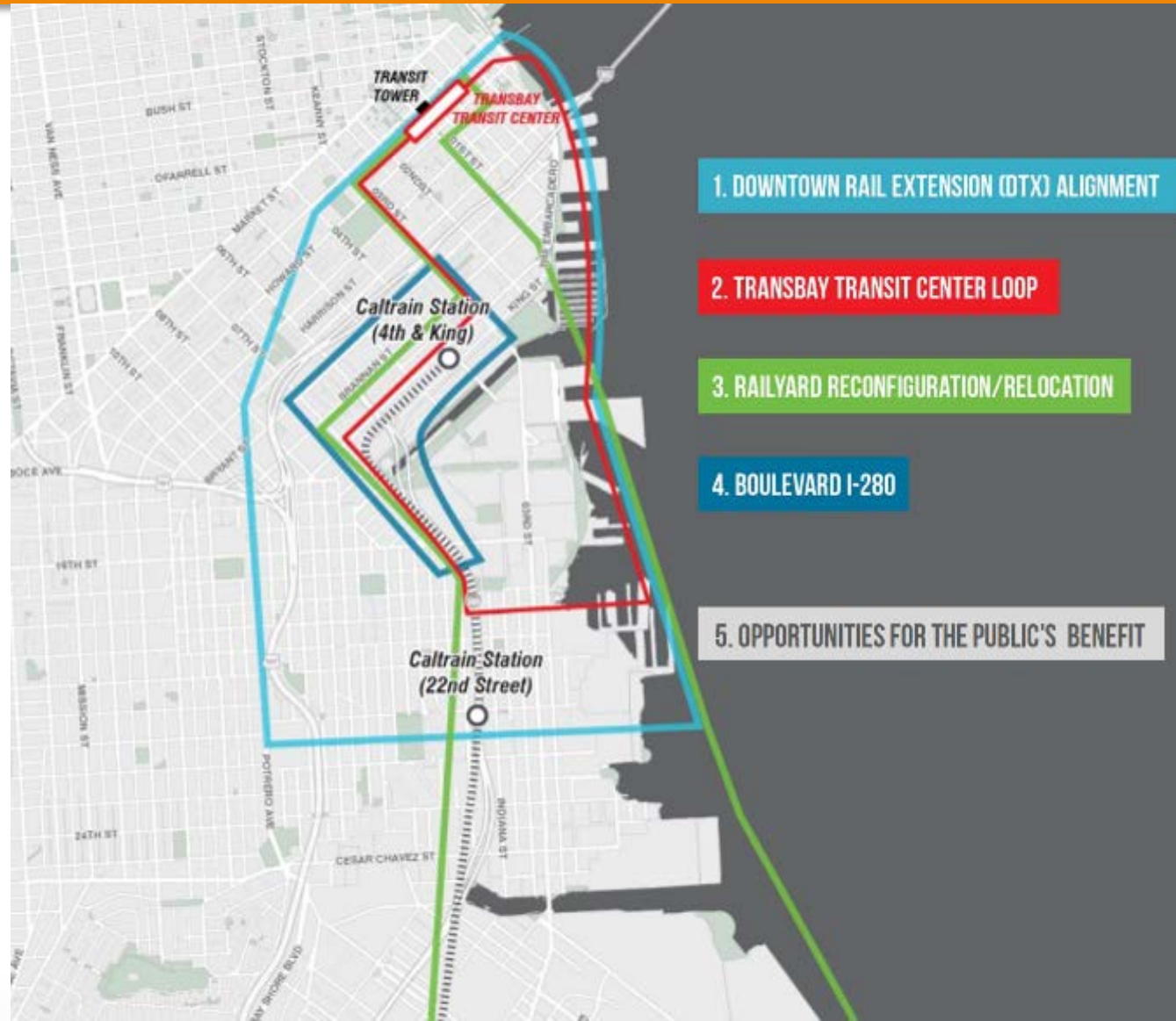
OCTOBER CWG MEETING

5. OPPORTUNITIES FOR THE PUBLIC'S BENEFIT

OCTOBER CWG MEETING

STUDY COMPONENTS

- EACH COMPONENT IS BEING STUDIED INDIVIDUALLY, AS WELL AS COMBINED WITH OTHERS.
- WE ARE STUDYING THE POTENTIAL TO REMOVE THE LAST 1.2 MILES OF I-280 AS AN OPTION FOR COMPONENT 4.
- NONE OF THE OTHER COMPONENT OPTIONS *REQUIRE* I-280'S REMOVAL.



1. DOWNTOWN RAIL EXTENSION (DTX) ALIGNMENT



DTX — 3 TRACKS / TTC — 6 TRACKS

7 YEAR CONSTRUCTION SCHEDULE

CURRENT ESTIMATED CONSTRUCTION COST — \$4 BILLION

POSSIBLE RAIL EXTENSION ALIGNMENTS

OPTIONS FOR ALIGNMENT

A. BASELINE: EXISTING ALIGNMENT FROM 4TH AND TOWNSEND ALONG 2ND ST.

A.2 SUB-OPTION: REDUCED 4TH/KING FOOTPRINT

B. TUNNEL UNDER EXISTING CALTRAIN ALIGNMENT

C. TUNNEL UNDER PENNSYLVANIA AVENUE UTILIZING DTX

D. TUNNEL UNDER THIRD STREET THROUGH MISSION BAY

BASELINE: EXISTING ALIGNMENT PLUS ENVIRONMENTALLY CLEARED DTX OPTION



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 18th St.
3. Allows for grade-separated Mission Bay Dr. and 16th St. with lowered streets in future.
4. Suboption: reduced use of 4th/King Railway for operations/storage/maintenance.

TUNNEL UNDER EXISTING ALIGNMENT OPTION

THIS OPTIONS WAS REMOVED FROM FUTHER CONSIDERATION
DUE TO TECHNICAL ISSUES WITH I-280 SUPPORT COLUMNS

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



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.

**Transbay
Transit
Center (TTC)**

MISSION BAY (3RD ST)

China Basin

Pier 50

**Potential Combined
Caltrain / MUNI Station**

4th & King Railyard

MISSION BAY (3RD ST)

Central
Waterfront



EST

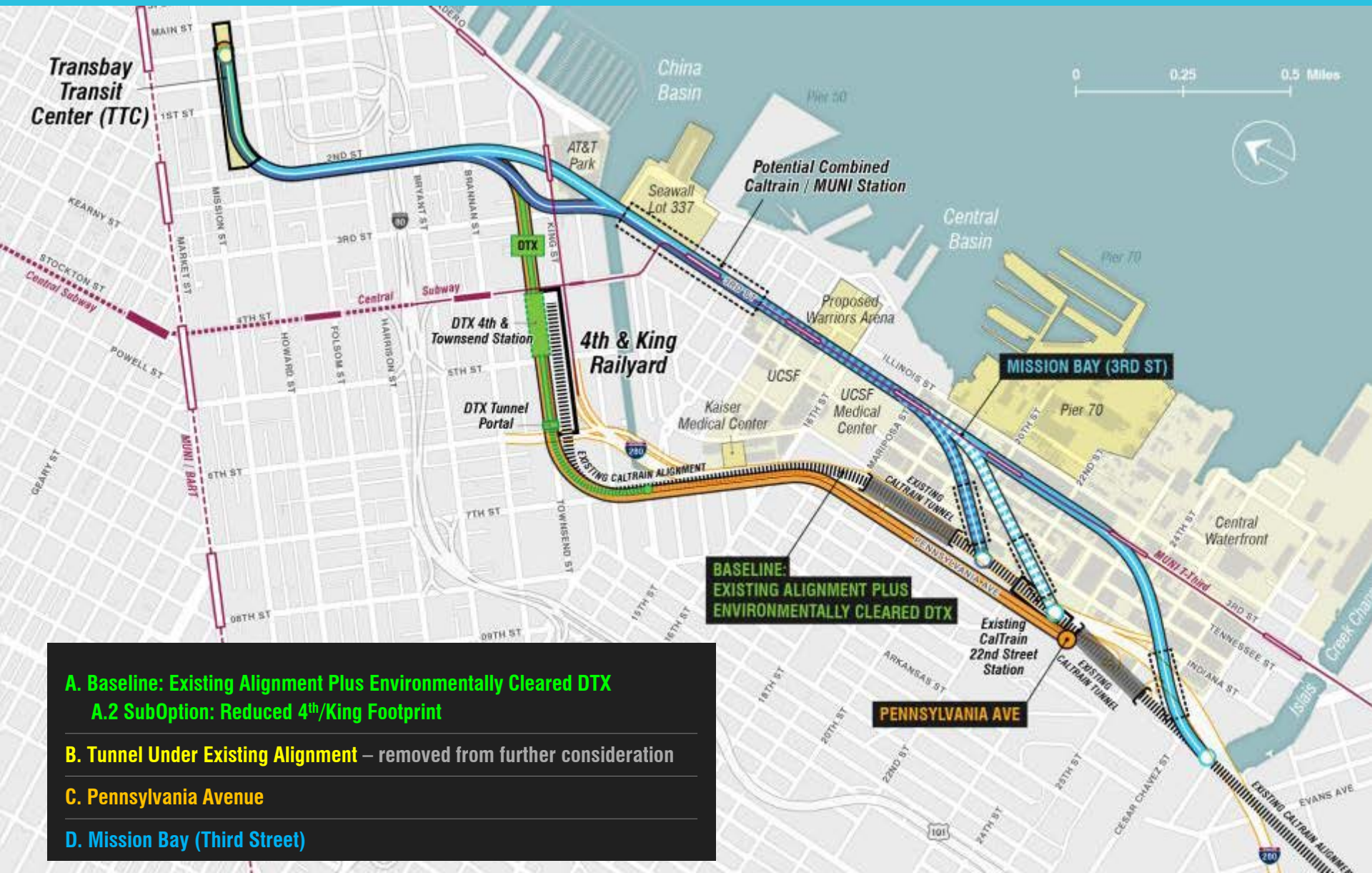


EXISTING



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

1. OPTIONS FOR DOWNTOWN RAIL EXTENSION (DTX) ALIGNMENT - SUMMARY



SUMMARY OF ADDITIONAL WORK COMPLETED ON VIABLE OPTIONS FROM PHASE I

BASELINE DTX (AS DESIGNED) CAN NOT BE BORED

- WIDTH OF ANTICIPATED TRACKS VERSUS DEPTH AT 4TH/TOWNSEND
 - U WALL CONSTRUCTION IN 4TH/TOWNSEND MINIMIZES ABILITY TO BUILD ABOVE
- LENGTH OF POTENTIAL TUNNEL PORTION ISN'T COST EFFECTIVE FOR TBM
- TUNNEL STUB FOR POTENTIAL FUTURE CONNECTION (PENNSYLVANIA AVE OPTION)

ALTERNATIVE ALIGNMENT “TAKE —OFF” POINTS

- FOR EACH OPTION UNDER CONSIDERATION, STUDY TEAM PICKED ONE ALIGNMENT TAKE-OFF POINT TO FURTHER THROUGH PHASE II
- OTHER ALTERNATIVE TAKEOFF POINTS ARE STILL VALID AND COULD BE REVISITED IN LATER PHASES
- NEEDED SOMETHING DEFINITIVE TO FURTHER DESIGN AND PREPARE PRELIMINARY ESTIMATES OF PROBABLE COSTS

ENGINEERING WORK ON TWO ALTERNATIVE ALIGNMENTS

- PENNSYLVANIA AVE & MISSION BAY
- THERE ARE WAYS TO TUNNEL ALONG BOTH ALIGNMENTS WITH A MINIMUM OF 2-TRACKS (PENNSYLVANIA AVE) AND A MAXIMUM OF 4-TRACKS (MISSION BAY)

UTILITY CONSTRAINTS

NEAR 16TH STREET

- AT LEAST THREE UNDERGROUND POWER LINES EQUAL TO OR IN EXCESS OF 110KV WITH FRANCHISE RIGHTS PROVIDE POWER TO DOWNTOWN SF. PREVIOUS ATTEMPTS WITH PG&E TO RELOCATE PORTIONS OF THESE LINES HAVE NOT BEEN SUCCESSFUL.
- A MAJOR EXISTING GRAVITY SEWER IS LOCATED UNDER 7TH ST
- A MAJOR 12-INCH LOW PRESSURE WATER SUPPLY UNDER 16TH ST
- A MAJOR 40-INCH COMMUNICATION DUCT BANK LOCATED UNDER 16TH ST
- A MAJOR COMMUNICATIONS LINE LOCATED UNDER 7TH ST



UTILITY CONSTRAINTS, CONT.

MISSION BAY DRIVE

- UNDERGROUND POWER LINES EQUAL TO OR IN EXCESS OF 110 KV WITH FRANCHISE RIGHTS LOCATED IN 7TH ST
- A MAJOR GRAVITY SEWER IS PROPOSED UNDER 7TH ST
- A LOW PRESSURE WATER SUPPLY IS LOCATED UNDER MISSION BAY DR
- AN AUXILIARY WATER SUPPLY SYSTEM (AWSS) WATER LINE IS LOCATED UNDER MISSION BAY DR
- A MAJOR COMMUNICATIONS LINE UNDER 7TH ST



2. TRANSBAY TRANSIT CENTER LOOP OPTIONS

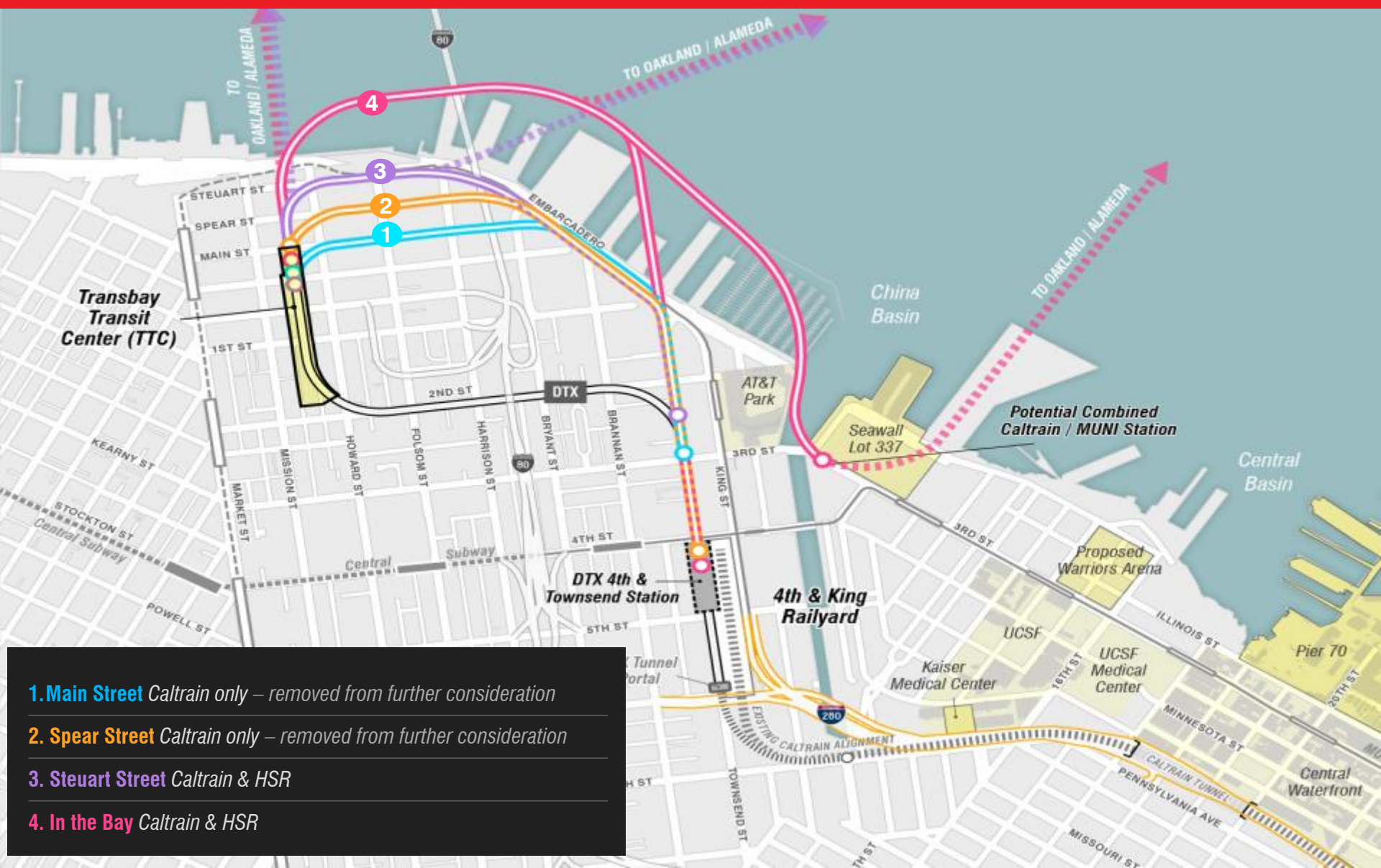
1. MAIN STREET (CALTRAIN ONLY) — NO LONGER BEING CONSIDERED

2. SPEAR STREET (CALTRAIN ONLY) — NO LONGER BEING CONSIDERED

3. STEUART STREET (CALTRAIN & HSR)

4. IN THE BAY (CALTRAIN & HSR)

2. TRANSBAY TRANSIT CENTER LOOP - SUMMARY



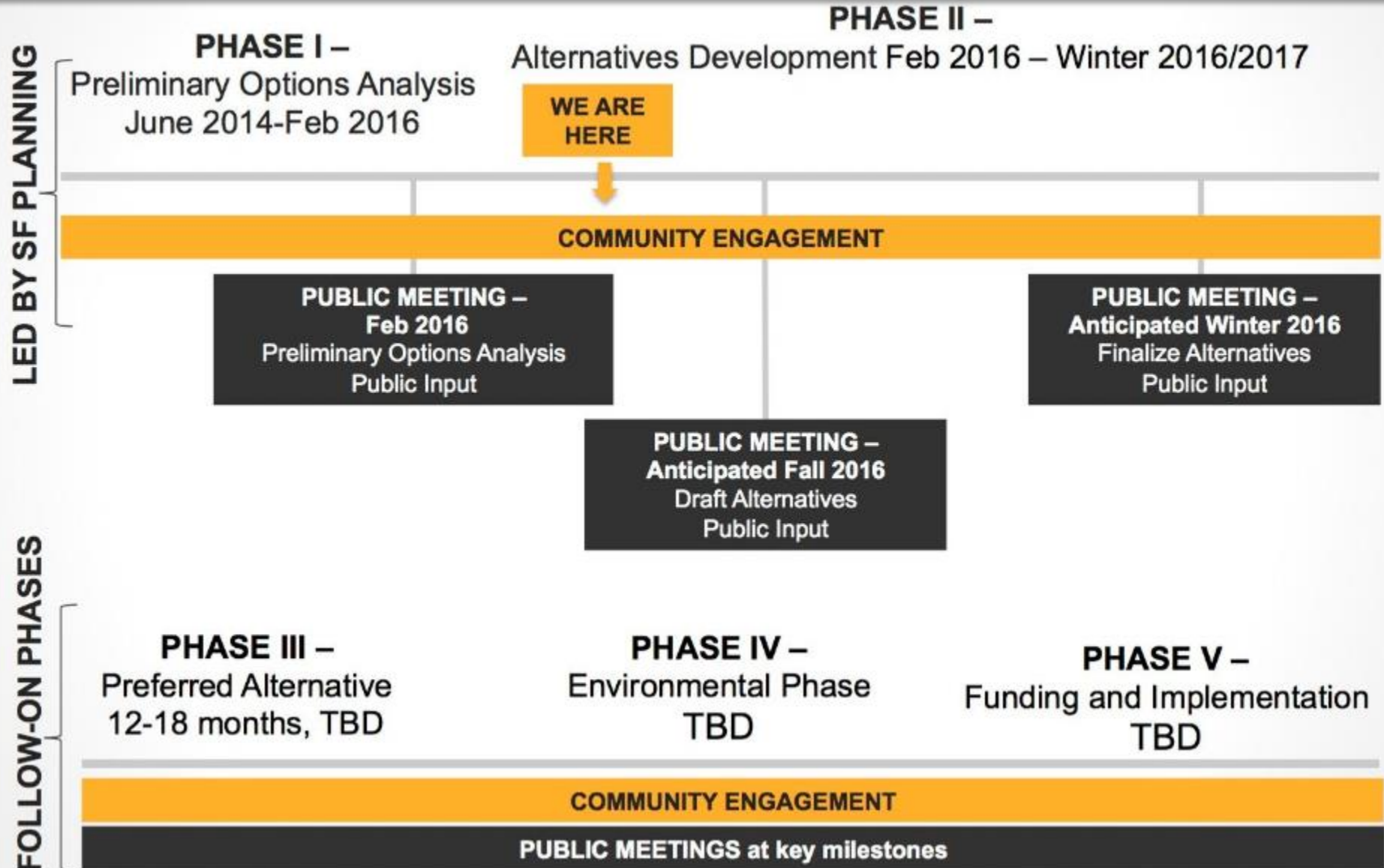
QUESTIONS?



STUDY QUESTIONS

- HOW DO WE GET HIGH SPEED RAIL AND CALTRAIN TO TRANSBAY TRANSIT CENTER?
- HOW DO WE PROVIDE RELIABLE TRAVEL TIMES FOR ALL MODES?
- HOW DO WE PROVIDE BETTER ACCESS TO PUBLIC AMENITIES (E.G., UCSF, MEDICAL CENTER, PARKS, ETC.)?
- ARE WE OK WITH TRENCHING STREETS (16TH AND MISSION BAY DRIVE)?
- IS THERE AN OPPORTUNITY TO IMPROVE ADDITIONAL INFRASTRUCTURE (E.G., 22ND STREET STATION, RE-CONNECTING THE STREET GRID, ETC.)?
- SHOULD WE CONTINUE TO HAVE A RAIL STORAGE YARD WITHIN THE DOWNTOWN CORE?
- WHAT OPPORTUNITIES ARE THERE FOR HOUSING, OPEN SPACE, AND EMPLOYMENT IN FREED AREAS?
- COULD A BOULEVARDED 280 FROM MARIPOSA NORTH BENEFIT THE NEIGHBORHOODS?
- HOW IS TRAFFIC TO/FROM 280 BEST MANAGED?
- WHAT ARE THE TRADEOFFS?

WHAT IS THE PLANNING PROCESS?



NEXT STEPS/NEXT MEETING

- REVIEW ANALYSIS, OPTIONS, AND ADDITIONAL WORK:
 - RAILYARD RECONFIGURATION OR RELOCATION OPTIONS (COMPONENT 3)
 - I-280 BOULEVARD OPTIONS (COMPONENT 4)
 - OPPORTUNITIES OF PUBLIC BENEFIT OPTIONS (COMPONENT 5)

**DATE OF MEETING #3 AND MAKEUP MEETING TO BE DETERMINED BASED ON
CWG MEMBER AVAILABILITY. OPTIONS FOR CWG MEETING #3 INCLUDE**

- OCTOBER 18
- OCTOBER 19
- OCTOBER 20
- OCTOBER 24

PLEASE PROVIDE YOUR AVAILABILITY