#### Drozd, Doug@HSR

From:

James Robinson <rdemail56@gmail.com>

Sent:

Saturday, August 18, 2018 7:09 PM

To:

HSR boardmembers@HSR

Subject:

Funding ideas for California High-Speed Rail

Follow Up Flag:

Follow up

Flag Status:

Flagged

Dear, California High-Speed Rail board of directors.

My name is James Robinson I am railroad enthusiast. I have some ideas on cost savings for the future for California High-Speed Rail. Many times I've seen on world news that there's several countries that have gotten brand new High-Speed paid for by the government of China in such countries such as Africa and excetera. My other suggestion was going to be if somehow Amtrak can be part of this new High-Speed Rail for California. Amtrak runs high-speed rail on the East Coast. Somehow I think that Amtrak and California High-Speed Rail would be call save as beneficial because Amtrak is the only other Railroad in this country that he is familiar with High-Speed Rail passenger service that's currently running in Revenue Service. And they understand that there is a lot of logistics involved with other railroad companies in sharing or crossing over Amtrak's high-speed train service route. California High-Speed Rail is going to be a game-changer for transportation and it's better late than never to start this service for current and future generations of the general public.

Thank You, James Robinson.

## Drozd, Doug@HSR

From:

bill <billh7766@gmail.com>

Sent:

Saturday, September 01, 2018 11:21 AM

To:

HSR boardmembers@HSR

Subject:

Kill this project

Follow Up Flag:

Follow up

Flag Status:

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This project makes no sense. Kill this project and use any remaining funds to fix our roads or revert back to taxpayers, Bill Haugh

Registered voter



Ivor E. Samson

ivor.samson@dentons.com D +1 415 882 2491 Dentons US LLP One Market Plaza Spear Tower, 24th Floor San Francisco, CA 94105 United States

大战 Salans FMC SNR Denton McKenna Long dentons com

August 28, 2018

#### By E-mail & Federal Express

Ephraim Egan
Deputy Attorney
CA Dept of Transportation
1120 N Street, MS 57
Sacramento, CA 95814

Email: ephraim.egan@dot.ca.gov

Re: The State of California v. Fresno Rescue Mission, et al.

Fresno County Superior Court Case No. 18CECG00259

#### Dear Ephraim:

I am writing in response to your August 20, 2018 letter to Don Eskes and me. As you know, because the High Speed Rail Authority ("HSRA") was anxious to obtain possession of a portion of the G Street property, the Fresno Rescue Mission ("FRM") voluntarily relinquished that property to HSRA and moved into temporary facilities on April 5th and 6th. It did so notwithstanding Condition A of the Possession and Use Agreement ("PUA"), which provided that FRM did not need to vacate the property until twenty-one (21) days from the Notice of Temporary Relocation Completion. This early move was made in the spirit of cooperation to avoid delay to the High Speed Rail project, notwithstanding the fact that HSRA had failed "to execute a mutually agreeable Permanent Relocation Agreement prior to, and as a condition of and in consideration for, FRM delivering written notice....that the temporary relocation is complete" as required by the Temporary Relocation Agreement. See Temporary Relocation Agreement Sec. IV. D (emphasis added).

Following a demand from HSRA's contractor for additional documentation prior to commencing work at the G Street site, we had several discussions and email exchanges culminating in a meeting in Oakland on July 3rd, at which you agreed to prepare an "Occupation Agreement" in recognition of FRM vacating the property without the condition precedent of an executed Permanent Relocation Agreement. A follow-up meeting was scheduled on July 11th, which you cancelled on the afternoon of July 10th because the "drafting was more complicated than expected." The meeting was rescheduled for Thursday, August 9th, which I cancelled on Friday, August 3rd when you informed me that your draft would not be available for FRM's review until Tuesday, August 7th (providing insufficient time for review in order to ensure a productive meeting).

We have now, yet again, shown our good faith willingness to cooperate and help ensure the project moves forward by providing the "Notice of Completion" documentation requested by the contractor. Yet, almost two months after our meeting to discuss its terms, we have still not seen a draft of the promised draft Occupation Agreement, which you have been working on for seven weeks and which was, supposedly, nearing completion three weeks ago. I know that you have been very busy but we need to get it done to avoid further problems down the road.



To that end, I respectfully request that you send us a draft within the next week so that we can get the Occupancy Agreement in place which is necessary to bridge the gap until we can execute a mutually agreeable Permanent Relocation Agreement as required by both the Temporary Relocation Agreement and Possession and Use Agreement.

Very truly yours,

Ivor E. Samson

#### IES/mpm

cc: Don Eskes, Fresno Rescue Mission

Dan Richard, California High-Speed Rail Authority, Board, Chairman Brian Kelly, California High-Speed Rail Authority, Executive Director Joe Hedges, California High-Speed Rail Authority, Chief Operating Officer Kristina Assouri, California High-Speed Rail Authority, Chief ROW/Third Party Steven Castellano, ARWS, ROW Consultant Karen Eddleman, ARWS, Relocation Consultant

#### Drozd, Doug@HSR

From:

Roland Lebrun <ccss@msn.com>

Sent:

Wednesday, September 05, 2018 9:39 AM

To:

Caltrain Board

Cc:

VTA Board Secretary; Steve Stamos, Clerk of the Board; Caltrain CAC Secretary; HSR

boardmembers@HSR

Subject:

September 6 special Board meeting

**Attachments:** 

Cerone facility.pdf

Follow Up Flag:

Follow up

Flag Status:

Flagged

Dear Chair Bruins,

Please direct staff to provide information about the parcels to be sold, including APNs.

This will assist members of the public and other interested parties in assessing whether this sale would result in undesirable impacts such as potential future reduction in line capacity and advise the Board accordingly.

Thank you in advance for your consideration of this request.

Roland Lebrun

I am enclosing an example of the kind of information provided by the VTA when disposing of similar assets.

# ATTACHMENT A CERONE DEVELOPMENT AREA



#### Drozd, Doug@HSR

From:

Roland Lebrun <ccss@msn.com>

Sent:

Wednesday, September 05, 2018 9:24 AM

To:

SFCTA CAC

Cc:

Steve Stamos, Clerk of the Board; Caltrain Board; Caltrain CAC Secretary; Nila Gonzales;

info@bayareametro.gov; HSR boardmembers@HSR; Caltrain BAC; TJPA CAC

Subject:

SFCTA CAC item 7. Support for Pennsylvania Avenue alignment

**Attachments:** 

SFCTA CAC item #7 support for Pennsylvania Avenue alignment.pdf; Item #2 Citizens

Advisory Committee Report.pdf; Item 7 - DTX Penn alignment.pdf

Follow Up Flag:

Follow up

Flag Status:

Flagged

Dear Chair Larson and members of the SFCTA CAC,

Please find my attached response to Ms. Susan Gygi's August 14th letter.

I look forward to hearing the CAC's comments.

Sincerely,

Roland Lebrun

CC

**SFCTA Board** 

Caltrain Board

**TJPA Board** 

**CHSRA Board** 

MTC Commissioners

Caltrain CAC

Caltrain BAC

TJPA CAC

SFCTA CAC September 5 Special Meeting

Dear Chair Larson and members of the SFCTA CAC

Further to my July 8<sup>th</sup> letter to the SFCTA Board and Ms. Gygi's August 14<sup>th</sup> 2018 response (both attached), I appreciate the opportunity to respond to some of the points raised by Ms. Gygi.

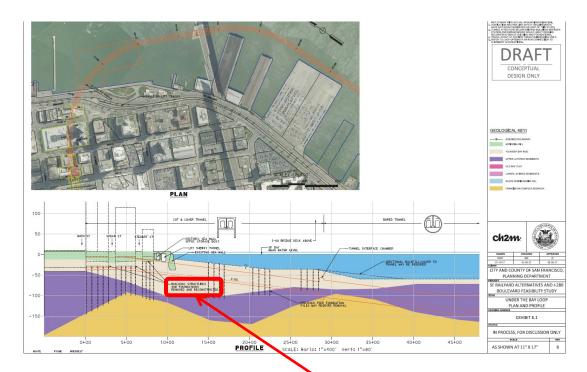
First, I apologize for any confusion the presentation may have caused. As stated in the last paragraph on page 2 of my July 8 letter ( $\it The solution outlined in the attached "Rethinking DTX" (2012) presentation), this presentation was prepared in 2012, approximately two years before the so-called "RAB study" Most of the presentation stands today with the exception of the following items:$ 

- 1) \$1.3B cost estimates. These estimates were based on two contracts awarded during the 2008 Great Recession:
- **Crossrail**: 13 miles of twin-bore tunnels and civils for two ¼ mile-long stations <u>under existing buildings</u> awarded in 2009 for **under \$2B**. http://www.crossrail.co.uk/news/articles/crossrail-awards-major-tunnelling-contracts-worth-125bn
- **Central Subway**: "The Tunnels contract was awarded in June 2011, to the Joint Venture of Barnard/Impregilo/Healy. The **\$233.9 million contract** consisted of 1.5 miles of twin-bore tunnels" <a href="https://www.sfcta.org/sites/default/files/content/CapitalProjects/images/Central Subway/CentralSubway factsheet 042017.pdf">https://www.sfcta.org/sites/default/files/content/CapitalProjects/images/Central Subway/CentralSubway factsheet 042017.pdf</a>

The 2012 estimate for the tunnels and the 7<sup>th</sup> & King station was revised to \$2B on page 9 of the July 8 2018 letter and is followed by a table showing an **average of \$350M/mile** for recently awarded tunnel contracts.

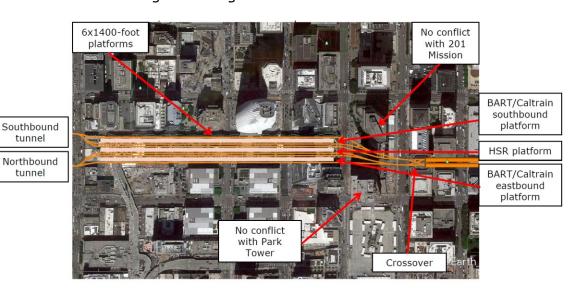
#### 2) Adverse impact to other buildings

As can be seen in the video and the 2012 presentation, the twin bores did not impact any buildings because the 7<sup>th</sup> street alignment was the only alignment that made it possible to connect the Transit Center to the east bay without requiring massive building condemnations including the entire Rincon Center



With regards to comments about the 2012 alignment impacting the foundations of the Park Tower building, it should be noted that Ms. Gygi informed Mayor Ed Lee's office in December 2014 that it was OK to sell Transbay Block 5 because she had a "Spear Street solution" <a href="http://default.sfplanning.org/Citywide/railyard\_blvd/RAB\_TechReport\_052118">http://default.sfplanning.org/Citywide/railyard\_blvd/RAB\_TechReport\_052118</a> <a href="https://default.spplanning.org/Citywide/railyard\_blvd/RAB\_TechReport\_052118">http://default.spplanning.org/Citywide/railyard\_blvd/RAB\_TechReport\_0521188</a> <a href="https://default.spplanning.org/Citywide/railyard\_blvd/RAB\_TechReport\_052118">https://default.spplanning.org/Citywide/railyard\_blvd/RAB\_TechReport\_0521188</a> <a href="https://default.spplanning.org/Citywide/railyard\_blvd/RAB\_TechReport\_0521188">https://default.spplanning

Here is a revised Transbay tunnel alignment which requires the condemnation of a single building on Main Street.



#### 3) Travel times

Ms. Gygi is questioning a travel time saving of 3 minutes between San Jose and San Francisco. This saving was achieved through a series of refinements over 6 months in 2013 designed to sustain a minimum speed of 80 MPH until approaching the Moscone Center.

As an example, a close examination of the video and slide 10 of the 2012 presentation will reveal **that the alignment is not under Pennsylvania Avenue per se** because this would result in a sharp bend at the junction of Pennsylvania and 7<sup>th</sup> (this sharp bend is most likely the reason behind the 2017 SMA study showing a speed of 40 MPH as far south as 22<sup>nd</sup> Street).



I will be addressing Ms. Gygi's other concerns when the item comes to the full SFCTA and the Board of Supervisors for their consideration.

Sincerely,

Roland Lebrun

Dear Chair Peskin and members of the SFCTA Board of Directors,

The intent of this letter is to elaborate on my response to the following comments made at the June 27 CAC meeting:

"Mr. Zurinaga said that the 7th Street alignment had been looked at multiple times and been rejected because of the complexity to build around and under city buildings. He said the alignment of the project had been carefully looked at for the last 14 years by industry experts."

The only slide referring to the 7<sup>th</sup> Street alignment is found on page 40 of the May 2018 DTX Peer Review Panel report (<u>the 7<sup>th</sup> Street alignment was not reviewed by the Panel</u>)

# DTX Project Background: Other Alignments (2010)



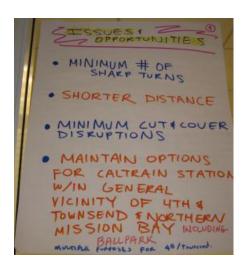
- Seventh St. reviewed in 2010
- Determined that conflicts with Central Subway and buildings along Minna/Natoma required alignment to be up to 130 ft deep.
- New required Throat Structure would require demolition of buildings between the Transit Center and Third St. including SF MOMA.



7

This slide appears to refer to the "San Francisco Technical Working Group DTX Engineering Charette and Alternative Alignment Analysis" held at the SFCTA offices on October 11-12, 2011 which identified the following issues and opportunities:

- Minimum # of sharp turns
- Shorter distance
- Minimum cut & cover disruption

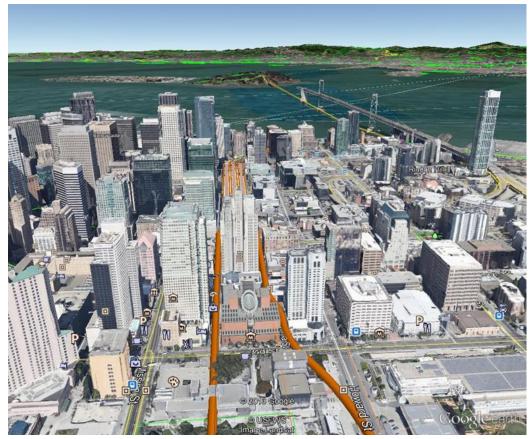




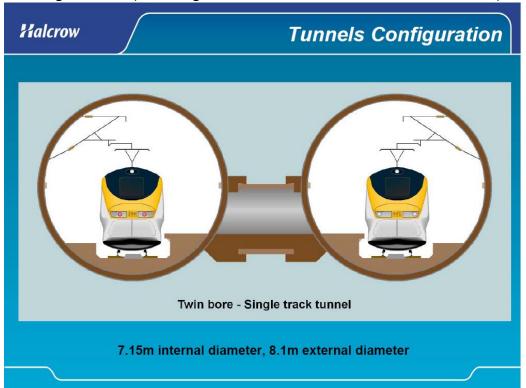
The Orange alignment above is the "7<sup>th</sup> Street alignment" with a fatal flaw (a single 44-foot diameter two-track tunnel).

"Alternative 1B mimics Alternative 1A, but the alignment is routed under Natoma Street. Similar to Minna Street, the ROW available on Natoma Street is approximately 30 feet. Given that about 60 feet ROW will be needed to accommodate the 44 feet tunnel bore, the buildings abutting on either side of Natoma Street will be impacted."

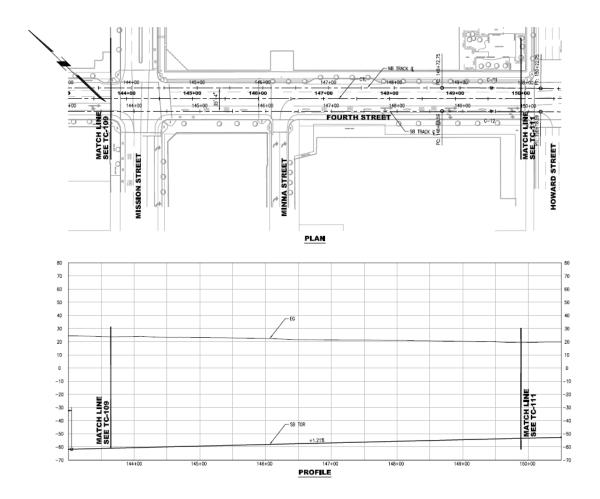
The solution outlined in the attached "Rethinking DTX" (2012) presentation is to <u>locate</u> the northbound and southbound tracks in separate 27-foot tunnel bores (one each under Minna and Natoma Street) similar to the high-speed tunnels linking London to the Channel Tunnel.



As seen above, there is no need to demolish any buildings between Second & Third, including SFMOMA (the orange tunnels under Minna & Natoma are to scale).



The smaller tunnel diameters provide an opportunity to cross the Central Subway.



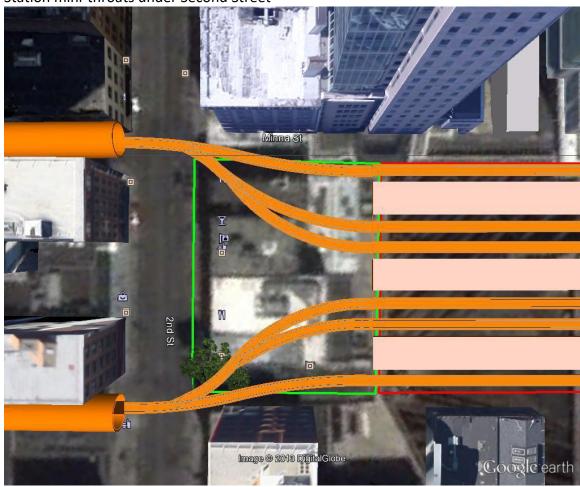
## Additional issues resolved by the 7th Street alignment

## - Elimination of six-track station throat under 2<sup>nd</sup> Street

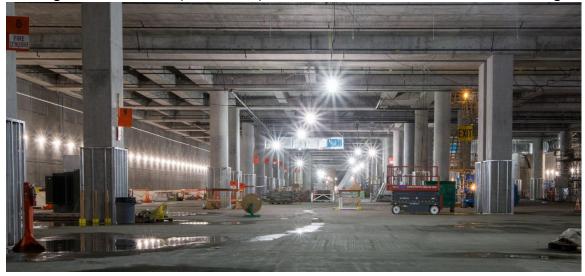
"The structural column configuration in the built Salesforce Transit Center limits the flexibility for changing the track geometry within the train box and at the throat leading into the terminal, but options that entail adjustments to track design criteria at the throat to minimize right-of -way impacts should be explored with CHSRA, TJPA, Caltrain and SENER."

This problem is resolved through the replacement of the 90 degree curved throat under Second Street with two mini-throats each serving 3 sets of platform faces. These mini-throats are modeled after the approach to St Pancras <u>domestic</u> platforms 11, 12 and 13 (please refer to "Elimination of the requirement for a third track" on page 7 below).

Station mini-throats under Second Street

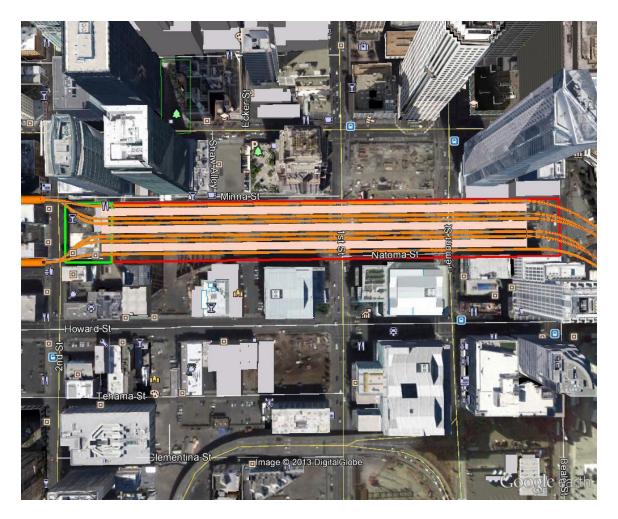


Entering the STC train box (no conflicts). Minna is on the left and Natoma is on the right



## - Platform lengths

One of the conditions of the \$400M 2008 ARRA grant was 400-meter (1,312 feet) straight platforms. The 7<sup>th</sup> Street alignment makes it possible to have six (not five) full-length platforms without impacts on the 201 Mission foundations by sliding the southern tip of the platforms to the location previously occupied by the six-track angled station throat located between Second & First.



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

Doubling the length of the six STC platforms makes it possible to store two 650-foot trains per platform resulting in the same capacity as the existing twelve 650-foot platforms at the  $4^{th}$  & King railyard.

## CHSRA Design Guidance

## Platform Length

Desirable: 1,410 ft Minimum: 1,370 ft Exceptional: 1,315

Transit Center Platforms: 1,335 ft

## Minimum Horizontal Radius

Preferred: 1,000 ft Absolute: 650 ft

Throat Structure Minimum Radius: 650 ft

## Other Design Variances Received

- Platform Taper
- Platform Gap
- Platform Approach Tangent
- Bumper Post
- Platform Setback to Obstruction
- Platform Width
- Track Centers
- Vertical Clearance& OCS

65

#### - Elimination of the requirement for a third track

"Only one of the studies, completed by Parsons and Carl Wood for TJPA, performed a detailed service perturbation analysis. It shows that if there is a delay or track blockage in the tracks leading to the "throat" of the terminal, then three tracks are required to support reliable train service and to facilitate recovery from operational delays."

This problem is resolved by a combination of

- Two 3-track mini throats
- Two mined crossovers (at Howard & Seven and under Yerba Buena Gardens)
- Four tracks between 16<sup>th</sup> and Townsend (new 7<sup>th</sup> & King station)

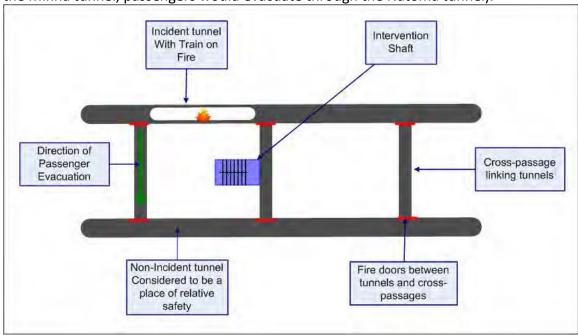
Please refer to the attached "Northbound refined DTX alignment" letter dated November 17<sup>th</sup> 2013 which explained how London was able to support 12 trains/hour with 3 (not six) platforms faces and <u>two tracks</u> (not three) during the 2012 Olympics.



**TWO Tracks** 

## - Elimination of multiple vent/evacuation structures

The elimination of the third track enables the implementation of a twin-bore ventilation/evacuation system similar to BART's Transbay tube (in the event of a fire in the Minna tunnel, passengers would evacuate through the Natoma tunnel).



## -\$4B (2/3) cost reduction

This slide lists recent tunnel project with an average cost of \$350M/mile.

| Tunnel                     | Year<br>completed | Diameter<br>(ft)  | Bores  | Alignment<br>length<br>(miles) | Total length<br>of tunnels<br>(miles) | Reported<br>cost (\$<br>million) | Cost per mile of tunnel (million \$/mile) |
|----------------------------|-------------------|-------------------|--------|--------------------------------|---------------------------------------|----------------------------------|---|
| Port of Miami Tunnel       | proposed          | 36                | twin   | 0.7                            | 1.5                                   | 1,000                            | \$677                                     |
| Lefortovo                  | 2005              | 47                | single | 1.4                            | 1.4                                   | 600                              | \$439                                     |
| Airport Link Brisbane      | 2012              | 41                | twin   | 3.3                            | 6.5                                   | 2,206                            | \$338                                     |
| Groene Hart Tunnel         | 2006              | 48                | single | 1.4                            | 1.4                                   | 450                              | \$332                                     |
| 4th Tube of the Elbe       | 2002              | 47                | single | 2.6                            | 2.6                                   | 775                              | \$303                                     |
| I-710 (A3)                 | proposed          | 50 <sup>1</sup>   | triple | 4.1                            | 12.4                                  | 3,585                            | \$290                                     |
| I-710 (C3)                 | proposed          | 42 <sup>1</sup>   | triple | 4.0                            | 12.0                                  | 3,195                            | \$266                                     |
| A86W                       | 2010              | 37.9 <sup>1</sup> | single | 10.9                           | 10.9                                  | 2,641                            | \$242                                     |
| Wesertunnel                | 2001              | 38                | twin   | 1.0                            | 2.0                                   | 358                              | \$180                                     |
| Beacon Hill Tunnel         | 2009              | 21                | twin   | 0.8                            | 1.6                                   | 280                              | \$172                                     |
| M-30                       | 2008              | 50                | twin   | 2.2                            | 4.3                                   | 570                              | \$131                                     |
| Dublin Port Tunnel         | 2006              | 38                | twin   | 2.8                            | 5.6                                   | 530                              | \$94                                      |
| Pannerdenschkanaal         | 2003              | 32                | twin   | 1.0                            | 2.0                                   | 173                              | \$86                                      |
| SMART                      | 2007              | 43                | single | 6.0                            | 6.0                                   | 515                              | \$85                                      |
| Wuhan                      | 2008              | 37                | twin   | 1.7                            | 3.4                                   | 288                              | \$85                                      |
| Nanjing                    | 2013              | 49                | twin   | 1.9                            | 3.7                                   | 245                              | \$66                                      |
| Westerschelde              | 2002              | 37                | twin   | 4.1                            | 8.2                                   | 490                              | \$60                                      |
| Shanghai River<br>Crossing | 2008              | 51                | twin   | 4.6                            | 9.3                                   | 245                              | \$27                                      |

<sup>&</sup>lt;sup>1</sup> This scheme contains multiple tunnel diameters. This number presented is the average tunnel diameter.

#### This is in sharp contrast with the \$2B/mile costs presented to the CAC on June 27

#### PRELIMINARY ESTIMATES OF PROBABLE COSTS AND SCHEDULES **EXPECTED ALIGNMENT** COST 1 **COMPLETION DATE 2 FUTURE WITH SURFACE RAIL:** \$5.1 Billion 2026 DTX + TRENCHED STREETS PENNSYLVANIA AVENIIF-Conceptual Level Comparative Cost Estimates \$6.0 Billion 2027 DTX + EXTENDED TUNNEL \$9.3 Billion 2031 MODIFIED DTX + 3<sup>RD</sup> STREET TUNNEL 1. Includes construction costs, value capture, and impact costs 2. Completion date estimate if all money were available on January 1, 2017

Respectfully presented for your consideration.

Sincerely,

Roland Lebrun



## SAN FRANCISCO PLANNING DEPARTMENT

MEMO

DATE: August 14, 2018

TO: SFCTA CAC members

FROM: Susan Gygi, PE

RE: Rail Alignment and Benefits (RAB) Study – responses to SFCTA CAC outstanding issues

1650 Mission St. Suite 400 San Francisco, CA 94103-2479

Reception:

415.558.6378

Fax: **415.558.6409** 

Planning Information: 415.558.6377

#### Introduction

The RAB Study Project Management Team (Susan Gygi and Jeremy Shaw) provided an informational presentation related to the Rail Alignment and Benefits (RAB) Study at the June 27, 2018 meeting of the SFCTA CAC. In that meeting there was also an agenda item to adopt a motion of support for the Pennsylvania Avenue Alignment as the Preliminary Preferred Alternative for grade separations at 16<sup>th</sup> Street and Mission Bay Drive on the approach to the Downtown Rail Extension (DTX).

It was the desire of the CAC to continue the motion of support adoption for two reasons:

- 1. Two CAC members expressed concerns about not knowing the specific location of a potential southern railyard, and asked for clarification on the continued use of the 4<sup>th</sup>/King railyard.
- 2. During public comment, Mr. Roland LeBrun requested that a 7<sup>th</sup> Street alignment be fully reviewed prior to approval of any singular alignment moving forward

This memorandum responds to those two items.

## Response to Continued use of surface 4th/King Railyard

The continued use of the surface 4<sup>th</sup>/King railyard was not fully studied under the RAB. The RAB studied only scenarios which included full relocation of the 4<sup>th</sup>/King railyard to a southern location (biggest impact). The study also determined that it may be possible to distribute train storage among various locations (more on this below). At this time, no decision can be made about modifying or relocating the yard and/or its functions until a full analysis of the needs of Caltrain and CHSRA are completed. This work is being done through the Caltrain Business Plan and the Blended Service Operations Plan. Both efforts are underway and anticipated to be completed in mid-2019. In the future, any proposed yard relocation would be required to have its own environmental process where all alternatives will be analyzed, and public input sought.

As noted above, the RAB study found that it may be possible to distribute train storage among various locations. For example, expanding the 4<sup>th</sup>/Townsend underground station further south (under the 4<sup>th</sup>/King surface railyard), is one option that would allow for additional dead-end tracks for staging or storage, allowing for a transit-oriented development to be built above. In addition, there is the possibility to allow for overnight storage at the Salesforce Transit Center (SFTC) on all six tracks including double-berthing the trains on five of them. Some combination of the above could also be deployed with or without a southern railyard. Until the Caltrain Business Plan and the Blended Service Operations Plan efforts are completed, and we have a better understanding of the needs to operate future service, we must have potential alternative railyard sites. Of note, the Pennsylvania Avenue alignment and a potential yard relocation can be seen as independent projects. Even after the Pennsylvania Avenue alignment is built, Caltrain could continue using the current surface railyard (or a smaller footprint) for some to-be-determined amount of time. Since most trains would be going to the SFTC, train volumes on the surface would be significantly lower than present.

#### Response to Request for Locations under Consideration for a Southern Railyard

The RAB study team identified two likely railyard locations (one inside the City limits, and one outside of the City limits) that could meet Caltrain's storage and operational needs in the near term.

Two CAC members requested the physical location of a potential southern railyard before they would consider supporting the preliminary preferred Pennsylvania Avenue alignment.

Based on the City Attorney's Office legal opinion and common practice, City agencies should not disclose potential locations for properties that may have to be acquired until sufficient work is completed to determine what parcels may be needed. Currently, both of the potential locations appear to work for operations. However, without further study, a determination cannot be made as to what, if anything, is necessary.

The RAB study was based on the most conservative planning assumptions for each of the three alignment alternatives. Specific to the Pennsylvania Avenue alignment, that included assuming a total replacement of the 4<sup>th</sup>/King railyard to a southern location. However, the ultimate solution may be much less (as stated above). Caltrain and California High Speed Rail Authority (CHSRA) do not currently know what their railyard needs are along the entire Caltrain alignment. Caltrain is currently undertaking the Caltrain Business Plan and CHSRA/Caltrain are undertaking a Blended Service Plan, aka the Peninsula Corridor Service Vision. These two documents, expected in 2019, will provide a better understanding of each agency's railyard needs along the Caltrain alignment.

## Response to Mr. LeBrun's proposed 7<sup>th</sup> Street alignment

The RAB study preliminarily reviewed over 30 conceptual alignments for getting heavy rail (Caltrain and High Speed Rail) to the Salesforce Transit Center (SFTC). Four alignments were deemed to have merit and were studied further as part of the RAB Study. Mr. LeBrun's proposal is similar to the 7<sup>th</sup> St alignment that the RAB Study considered, deemed infeasible, and therefore, did not study further. This response to the request to look at Mr. LeBrun's alignment proposal was developed in cooperation by the RAB Study Team, the TJPA DTX Team, and SFCTA.

To reach the SFTC, Mr. LeBrun proposes two parallel one-track tunnels starting at the north west edge of the current railyard, traveling north under 7<sup>th</sup> Street, turning east under Minna/Natoma Streets, and ultimately entering the underground train box through the already-constructed western wall near Second Street. The Planning Department, TJPA, SFCTA, consultants, and other agencies evaluated a similar alignment as part of the 3-year RAB study, drawing upon original analysis from the TJPA DTX work. Agency staff and consultants determined that the 7<sup>th</sup> Street alignment did not warrant further study as it would: i) adversely impact other existing buildings, ii) constrain operations and create safety risks, iii) doesn't meet design requirements, iv) compromise the structural layout of the SFTC, and v) not conform to design requirements. Each finding is detailed out below.

#### **Adverse Impacts to Other Existing Buildings**

The proposed alignment goes under multiple buildings, and will have greater ROW impacts than the current DTX alignment, located predominantly in the public ROW. The tracks and a mined crossover on the proposed alignment would be located under Moscone Center, which is in itself an underground facility with deep piles. Park Tower, currently under construction, sits on deep foundations and two levels of parking below grade, which would be in the path of the tunnel proposed by Mr. LeBrun. The tunnels for Mr. LeBrun's alignment would also pass under Moscone Center, Yerba Buena Gardens, and the SFMoMA. Since much of the Moscone facility as well as SFMoMA subsurface structures are located in the way of the proposed alignment its construction would be unacceptably disruptive and costly.

The two curves that would be necessary from 7<sup>th</sup> Street would not meet CHSRA standards. Mr. LeBrun's drawings do not seem to be to scale as preliminary layouts determined impacts to all three facilities. In addition, the curves impact many more buildings in the transition from 7<sup>th</sup> Street to Minna and Natoma, respectively. In addition, even by Mr. LeBrun's assumption, the grade coming up to the train box after passing under Moscone Center would be 3.5% or more. CHSRA has a maximum grade of 2.7% so this alignment would not meet CHSRA criteria for continued operation. Finally, the wider footprint of the throat structure in Mr. LeBrun's concept would affect two additional properties that are clear of the planned alignment. Impacting these two properties would require re-opening the environmental document again, delaying the project further with no possibility of improvement over the current proposed alignment.

#### **Operational Constraints and Safety Risks**

The two single-track tunnels proposed by Mr. LeBrun would constrain operations, create severe safety risks, and pose maintenance challenges. The February 2018 SFCTA's peer review panel made up of five construction, operations, and maintenance experts, identified a need for three tracks into/out of the station to allow for anticipated operational inconsistencies without affecting train travel up and down the Peninsula main line. This determination of three tracks was not specific to the alignment itself but to address issues going in and out of the SFTC and the need to absolutely ensure that operations can be maintained even when there are incidents. This additional track allows for train service to continue if a train were disabled where the tracks enter the station. Mr. LeBrun's concept does not account for this. Twin-bore single-track tunnels, as recommended by Mr. LeBrun, fail to achieve the required operational flexibility provided by a third track, which is required by Caltrain and CHSRA. In addition, to meet safety standards for sufficient egress/access, Mr. LeBrun's option would require longer, numerous, and more expensive cross-passages between tunnels. Constructing the passages would disrupt businesses and circulation on Second Street and would be difficult to locate, given the large number of existing buildings with deep foundations and below-grade parking.

#### **Design Requirements**

Relocating a planned 4<sup>th</sup>/Townsend station to 7<sup>th</sup> Street, as suggested by Mr. LeBrun, would undermine the planning and land use-transportation coordination at the core of the Central SoMa Plan and the Central Subway alignment. As currently, an escalator at Fourth Street will provide convenient access to the Central Subway from the underground 4<sup>th</sup>/Townsend Station currently planned for DTX. The proposed alignment would eliminate the connection with the Central Subway, which received \$65 million towards construction due to HSR connectivity funds.

In addition, the Central SoMa plan upzoned the area based on a train station at 4<sup>th</sup>/Townsend. Moving the station would require longer walking distances for these higher density neighborhoods and for those making the connection between Muni Metro and Caltrain. Additionally, relocating the 4<sup>th</sup>/Townsend Station would not eliminate the cut-and-cover construction techniques and the resultant impacts, as Mr. LeBrun contends. 7<sup>th</sup>/Townsend ground conditions still require cut-and-cover construction. The relocation would also lose the advantage of the adjacent 4<sup>th</sup>/King railyard as a potential staging area for construction materials of the DTX.

#### **Structural Compromise to the SFTC**

The SFTC construction is now complete. In order to accommodate Mr. LeBruns's proposal, the west end of the brand-new building would have to be demolished and rebuilt to accommodate the different approach of the proposed alignment and move the load bearing elements to another location. This would mean that the new bridge from the Bay Bridge, which connects to the terminal at the west end, would most likely have to be taken out of service (if not partly demolished), eliminating bus service on the bus deck for the duration of demolition and construction of the modifications. This very expensive proposition would require major structural changes to the SFTC. Having the tracks approach the train box from a different direction will require the relocation of the already-built columns at the west end of the station. Since the west end carries a significant portion of the structural load of the station, any change to the western wall would require modifying the rest of the SFTC. The SFTC opened for bus operations on August 12, 2018. Modifications to the structural elements within the building would impact bus operations on the bus level.

#### **Travel Times**

Mr. LeBrun's claims the 7<sup>th</sup> St alignment will save three minutes travel time. Unfortunately, this claim is unrealistic, since the current travel time from 4<sup>th</sup>/Townsend into the SFTC is anticipated to be three minutes, so, under Mr. Lebrun's claim this time would shrink to zero. Mr. LeBrun states that the current DTX alignment has a longer travel time, due to three sharp curves with a maximum speed of 25 mph. This statement is incorrect. The curve speeds on the DTX alignment are 35 mph between 7<sup>th</sup>/Townsend and 2<sup>nd</sup>/Townsend. And while the final curve speed entering the SFTC is 22 mph, trains are required to slow down regardless of

curve radius because the SFTC is a terminal station. In 2007, TJPA engaged Deutsche Bahn International (DBI) GmbH, the engineering division of the German high-speed rail operator, to peer review the Transit Center and DTX alignment, configurations, and design criteria in relation to current practice in Europe and elsewhere. The peer review report prepared by DBI, and available for review online, concluded that "operating speeds on the DTX approach to the Transit Center are comparable to several major terminals in Europe and do not adversely affect the operation of the Transit Center." Finally, for over two years during the RAB Study, the TJPA, Caltrain and CHSRA simulated rail operations between 4th/Townsend and the SFTC that met the needs of both train operators.

#### **Peer Review**

Mr. LeBrun states that the 7<sup>th</sup> Street alignment was not reviewed by the SFCTA-convened DTX Peer Review. This is correct. The Peer review had a limited scope, which was to review three independent operational studies to determine whether two or three tracks are needed for the DTX as well as opining on other operational elements of the project. Therefore, alternative alignments were not part of the scope.

#### **Cost and Schedule Impacts**

Mr. LeBrun's assertions that the costs could be lowered to a total of \$1.3B with the extension through the west side of the SFTC are unsubstantiated, particularly since both alignments are practically the same length. Lacking backup information, we can only guess that he did not factor in the additional right-of-way costs, the need for a third track, crossover passages in the tunnel, ventilation structures, nor the demolition and reconstruction of the west end of the SFTC, not to mention the extension of the train box one block to the west. MTC, TJPA, and various City departments along with Caltrain and other agencies have reviewed the DTX cost as currently envisioned and estimated it at \$4 billion. There is no information to support the assertions Mr. LeBrun puts forth.

#### Conclusion

The RAB Study, its peer review panels, and expert opinions all demonstrate the strengths of the Pennsylvania Avenue Alignment over other alignments to the Salesforce Transit Center (SFTC). However, at the current preliminary engineering stage 5-8% design completion) additional analysis and public outreach will be necessary to better understand needs, constraints and impacts. Agreeing on a preliminary preferred alignment is the best way to further the analysis and identify those impacts while also moving towards a common goal. We hope the above responses adequately address the concerns of CAC members as they have for the project team, consultants, peer reviewers, and the RAB Citizen's Working Group. If so, we look forward to returning to the SFCTA CAC for their approval of the Motion of Support.

As always, if there are any questions, feel free to contact me.

Sincerely

Susan Gygi, PE Project Manager SF Planning Department