



Tri-Valley ▲ San Joaquin Valley  
**REGIONAL RAIL AUTHORITY**

Board of Directors

Meeting Packet

November 10, 2021 at 2 p.m.



Tri-Valley San Joaquin Valley  
**REGIONAL RAIL AUTHORITY**

**AGENDA – BOARD OF DIRECTORS**  
**November 10, 2021 at 2:00 p.m. via teleconference**

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**CORONAVIRUS DISEASE (COVID-19) ADVISORY AND MEETING PROCEDURE**

This meeting will be held via teleconference in accordance with the Brown Act and Government Code § 54953(e), as a precaution to protect the health and safety of staff, officials, and the general public. The Board of Directors will not be physically in attendance, but will be available via video conference.

The regular meeting facilities for the meetings of the Board of Directors are currently closed to the public. Consequently, there will be no physical location for members of the public to participate in the meeting. We encourage members of the public to access the meeting online using the instructions listed on the agenda. Online attendees will have the opportunity to speak during Public Comment.

If you would like to submit public comment via email, please do so by 11:00 a.m. Wednesday, November 10, 2021 to [comments@valleylinkrail.com](mailto:comments@valleylinkrail.com). Please include “Public Comment November 10, 2021” and the agenda item in the subject line. In the body of the email please include your full name. Public comments submitted will be read during Public Comment and will be subject to the regular three-minute time restriction.

This Board of Directors meeting will be conducted on the web-video communication platform Zoom. To view and/or participate in this meeting, members of the public will need to either download Zoom from the website [zoom.us](https://zoom.us). It is recommended that anyone wishing to participate in the meeting complete the download process before the start of the meeting. To listen without viewing, members of the public may also join the meeting by calling in via telephone. A live stream will also be available on our YouTube channel without the ability to make public comment. All public comments will be subject to the regular three-minute time restriction.

There will be zero tolerance for any person addressing the Board making profane, offensive and disruptive remarks, or engaging in loud, boisterous, or other disorderly conduct, that disrupts the orderly conduct of the public meeting.

# TRI-VALLEY – SAN JOAQUIN VALLEY REGIONAL RAIL AUTHORITY

## AGENDA – BOARD OF DIRECTORS

November 10, 2021 at 2:00 p.m. via teleconference

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### How to listen and view meeting online:

- From a PC, Mac, iPad, iPhone or Android device click the link below:  
<https://zoom.us/j/93548110883>  
Password: **ValleyLink**
- To supplement a PC, Mac, tablet or device without audio, please also join by phone:  
Dial: 1 (669) 900-6833  
Webinar ID: 935-4811-0883  
Password: **898381**

*To comment by video conference, click the “Raise Your Hand” button to request to speak when Public Comment is being taken on the Agenda item. You will then be unmuted when it is your turn to make your comment for up to 3 minutes. After the allotted time, you will be muted.*

- Livestream online at: [Valley Link Rail YouTube Channel](#)

*No option to make Public Comment on YouTube live stream.*

### How to listen via telephone to the meeting:

- For audio access to the meeting by telephone, use the dial-in information below:  
Dial: 1 (669) 900-6833  
Webinar ID: 935-4811-0883  
Password: **898381**

*Please note to submit public comment via telephone dial **\*9 to raise your hand**. The meeting’s host will be informed that you would like to speak. If you are chosen, you will be notified that your request has been approved and you will be allowed to speak. You will then press **\*6 to unmute yourself**. Comments are limited to up to 3 minutes at the discretion of the board chair. After the allotted time, you will be muted by the host.*

### To submit written comments:

- Send public comments prior to the meeting by email, to [comments@valleylinkrail.com](mailto:comments@valleylinkrail.com)

*If you are submitting public comment via email, please do so by 11:00 a.m. on Wednesday, November 10, 2021 to [comments@valleylinkrail.com](mailto:comments@valleylinkrail.com)*

*Please include “Public Comment - November 10, 2021” and the agenda item to which your comment applies in the subject line. In the body of the email please include your full name. A list of the public comments submitted will be read during Public Comment and letters will be posted on the Authority’s website along with other meeting material.*

**TRI-VALLEY – SAN JOAQUIN VALLEY REGIONAL RAIL AUTHORITY**

**AGENDA – BOARD OF DIRECTORS**

**November 10, 2021 at 2:00 p.m. via teleconference**

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1. Call to Order and Pledge of Allegiance
2. Roll Call of Members
3. Public Comments:  
Members of the public may address the Board on any issues not listed on the agenda that are within the purview of the Authority. Comments on matters that are listed on the agenda may be made at the time the Board is considering each item. Time limits on public comments may be established by the Chair.
4. Consent Agenda – **ACTION**  
Recommend approval of all items on Consent Agenda as follows:
  - a. Minutes of October 13, 2021 Board of Directors Meeting.
  - b. Treasurer’s Report for September 2021.
  - c. Approve Resolution R17-2021 of the Board to conduct meetings using teleconferencing pursuant to Government Code 54953 as amended by AB 361
5. Fiscal Year 2021 Basic Financial Statements and Memorandum of Internal Control – **ACTION**
6. Executive Director’s Report – **INFORMATION**
7. Resolution R18-2021 AECOM Contract Agreement Addendum #5 – **ACTION**
8. Directors’ Discussion  
Comments, Questions and Agenda Requests
9. **Adjourn to CLOSED SESSION**
10. Closed Session pursuant to Government Code Section 54957(b): PUBLIC EMPLOYEE PERFORMANCE EVALUATION Title: Executive Director
11. Closed Session pursuant to Government Code Section 54957.6 CONFERENCE WITH LABOR NEGOTIATOR Agency Representative: Michael Conneran, Legal Counsel Unrepresented Employee: Executive Director
12. **Reconvene to OPEN SESSION**

**TRI-VALLEY – SAN JOAQUIN VALLEY REGIONAL RAIL AUTHORITY**

**AGENDA – BOARD OF DIRECTORS**

**November 10, 2021 at 2:00 p.m. via teleconference**

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13. Consideration of Modification to Stipend Payment Arrangement with Executive Director Michael Tree – **ACTION**  
Recommendation: Legal Counsel recommends that the Board consider a modification to the stipend payment arrangement with Executive Director Michael Tree
14. Next Meeting Details: December 8, 2021 at 2 p.m. location to be determined
15. Adjourn

*Upon request, the Tri-Valley-San Joaquin Valley Regional Rail Authority will provide written agenda materials in appropriate alternative formats, or disability-related modification or accommodation, including auxiliary aids or services, to enable individuals with disabilities to participate in public meetings. A speech-to-text option (live transcription) is now available on all Zoom meetings. Live transcription currently only supports English and the accuracy of the feature depends on many variables, such as but not limited to: background noise, volume and clarity of the speaker's voice, lexicons and dialects. Requests for any other reasonable accommodation should be submitted in writing, and must include: your name, mailing address, phone number and brief description of the requested materials and the preferred alternative format or auxiliary aid or service at least 2 days before the meeting. Requests should be sent to: [comments@valleylinkrail.com](mailto:comments@valleylinkrail.com).*

**AGENDA**

**ITEM 4 A**



Tri-Valley San Joaquin Valley Regional Rail Authority (TVSJVRRRA)  
Minutes of October 13, 2021 meeting via Zoom Teleconference

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1. **Call to Order and Pledge of Allegiance**

The meeting of the board of directors was called to order by Chair Veronica Vargas at 2:02 p.m. Director Leo Zuber lead the Pledge of Allegiance.

2. **Roll Call of Members**

**Members Present**

Chair Veronica Vargas, City of Tracy  
Vice Chair Melissa Hernandez, City of Dublin  
Director Paul Akinjo, City of Lathrop  
Director Benjamin Cantu, City of Manteca  
Director David Hudson, San Ramon  
Director Brittni Kiick (Livermore), LAVTA  
Director Bernice King Tingle, Mountain House  
Director John McPartland (District 5), BART (*\*arrived during Item 5*)  
Director Kathy Narum, City of Pleasanton  
Director Robert Rickman, San Joaquin County  
Director Karen Stepper, Town of Danville  
Director Bob Woerner, City of Livermore  
Director Leo Zuber (Ripon), ACE

**Members Absent**

Director David Haubert, Alameda County  
Director Dan Wright, City of Stockton

3. **Public Comments**

There was no public comment.

4. **Consent Calendar – ACTION**

Motion to approve all items on Consent Calendar as follows:

- a. Minutes of July 14, 2021 Board of Directors Meeting.
- b. Preliminary Treasurer's Report for June 2021, Treasurers Report for July and August 2021.

**Motion:** Hudson/Zuber

**Aye:** Akinjo, Cantu, Hudson, Hernandez, Kiick, Narum, Rickman, Stepper, Tingle, Vargas, Woerner, Zuber

**Nay:** None

**Abstain:** None

**Absent:** Haubert, McPartland, Wright

**Motion Passed**

5. **Executive Directors Report – INFORMATION**

Executive Director Michael Tree summarized the details of his staff report. Deputy Executive Director Kevin Sheridan shared a presentation on the Altamont Straightening and I-205 Alignment Concept. Tree and Sheridan took questions and comments from members of the board. Public comment was heard from Roland Lebrun, Octavio Silva and Vaughn Wolfe.

Tri-Valley San Joaquin Valley Regional Rail Authority (TVSJVRRRA)  
Minutes of October 13, 2021 meeting via Zoom Teleconference

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**6. Resolution R15-2021 Declaring Agency Meetings will continue to be held via Teleconference – ACTION**

Motion for the Board to adopt a resolution declaring that agency meetings will continue to be held via teleconference to ensure the health and safety of the public.

Attorney Michael Conneran introduced this item. He advised that due to the requirement of AB361 where the Board must declare every 30 days that it has reconsidered the circumstances of the state of emergency the board may be required to have a special meeting between the December 2021 and January 2022 meetings since there are over 30 days between meetings.

Directors discussed this item. Public comment was heard from Roland Lebrun.

**Motion:** Hudson/Stepper

**Aye:** Akinjo, Cantu, Hudson, Hernandez, Kiick, McPartland, Narum, Rickman, Stepper, Tingle, Vargas, Woerner, Zuber

**Nay:** None

**Abstain:** None

**Absent:** Haubert, Wright

**Motion Passed**

**7. Resolution R16-2021 AECOM Contract Agreement Addendum #4 – ACTION**

Motion to approve Resolution R16-2021 authorizing an increase of \$49,192 in Addendum #4, to a total addendum amount not to exceed of \$99,142 to the Professional Services Agreement with AECOM Technical Services, Inc.

Sheridan introduced this item. Directors discussed this item. There was no public comment.

**Motion:** Hudson/King-Tingle

**Aye:** Akinjo, Cantu, Hudson, Hernandez, Kiick, McPartland, Narum, Rickman, Stepper, Tingle, Vargas, Woerner, Zuber

**Nay:** None

**Abstain:** None

**Absent:** Haubert, Wright

**Motion Passed**

**8. Funding Acquisition Strategies and Financing Planning – INFORMATION**

Tree gave the floor to Consultant David Kutrosky of DBK Advisory Services. Kutrosky gave a presentation and overview of the work under Work Directive 0002 that has been started and will include the development of funding strategies for the Valley Link project. The board discussed this item. Public comment was heard from Roland Lebrun.

**9. Directors' Discussion**

There was no discussion.

Tri-Valley San Joaquin Valley Regional Rail Authority (TVSJVRRRA)  
Minutes of October 13, 2021 meeting via Zoom Teleconference

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10. **Adjourn to CLOSED SESSION pursuant to Government Code Section 54956.9(d)(1):**  
Conference with Legal Counsel – Existing Litigation; Alameda County Taxpayers' Assoc. v. Tri-Valley — San Joaquin Valley Regional Rail Authority et al., Alameda County Superior Court Case No. RG21110126
11. **Reconvene to OPEN SESSION**  
No reportable action was taken during closed session.
12. **Next Meeting**  
November 10, 2021 at 2 p.m.
13. **Adjourn (Stepper/Hudson)**  
Meeting adjourned without objection at 3:45 p.m.

**AGENDA**

**ITEM 4 B**





Tri-Valley San Joaquin Valley  
**REGIONAL RAIL AUTHORITY**

## STAFF REPORT

SUBJECT: Treasurer's Report for September 2021

FROM: Tamara Edwards, Director of Finance

DATE: November 10, 2021

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### **Action Requested**

Staff requests that the Tri-Valley – San Joaquin Valley Regional Rail Authority Board accept the Treasurer's Report for September 2021.

### **Background/Discussion**

The Treasurer's Reports shows all expenses and revenues for the month of September as well as the year to date totals.

The fund balance reflected on both the balance sheet and the expense report is the difference between the revenue received and the expenses. As the Rail Authority's funding is all on a reimbursement basis this will be reflected as a negative amount (expenses higher than revenues) until year end when accruals are done at which time the fund balance will be zero. Additionally, as all of the Rail Authority's funding is on a reimbursement basis LAVTA continues to provide the cash flow for the Rail Authority which is reflected in the funds due to LAVTA line item.

### **Attachments:**

1. September 2021 Treasurer's Report

## **ATTACHMENT 1**



**Tri-Valley San Joaquin Regional Rail Authority**  
**BALANCE SHEET**  
**FOR THE PERIOD ENDING:**  
**September 30, 2021**

**ASSETS:**

108 CASH-GENERAL CHECKING	899,126
120 ACCOUNTS RECEIVABLE	1,624,929
150 PREPAID EXPENSES	0

<b>TOTAL ASSETS</b>	<b>2,524,055</b>
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**LIABILITIES:**

205 ACCOUNTS PAYABLE	28,851
20501 DUE TO LAVTA	2,771,351
22110 PAYROLL CLEARING	0
211 PRE-PAID REVENUE	215,209
22000 FIT	5,502
22010 SIT	1,895
22020 FICA	2,028
22030 SDI	0
22090 Worker's Comp	763
22100 457	13,445

<b>TOTAL LIABILITIES</b>	<b>3,039,042</b>
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**FUND BALANCE:**

301 FUND RESERVE	0
304 GRANTS, DONATIONS, PAID-IN CAPITAL	0
30401 SALE OF BUSES & EQUIPMENT	0
FUND BALANCE	(514,987)

<b>TOTAL FUND BALANCE</b>	<b>-514,987</b>
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<b>TOTAL LIABILITIES &amp; FUND BALANCE</b>	<b>2,524,055</b>
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**Tri-Valley San Joaquin Regional Rail Authority  
REVENUE REPORT  
FOR THE PERIOD ENDING:  
September 30, 2021**

<b>ACCOUNT</b>	<b>DESCRIPTION</b>	<b>BUDGET</b>	<b>CURRENT MONTH</b>	<b>YEAR TO DATE</b>	<b>BALANCE AVAILABLE</b>	<b>PERCENT BUDGET EXPENDED</b>
	Caltrans		0	0	-	#DIV/0!
	MTC-Bridge Tolls	24,497,378	0	0	24,497,378	0.0%
	Alameda County/Strategic Development		0	0	-	#DIV/0!
	Government Relations/Community Engage		0	0	-	#DIV/0!
	<b>TOTAL REVENUE</b>	<b>24,497,378</b>	<b>0</b>	<b>0</b>	<b>24,497,378</b>	<b>0.0%</b>

Tri-Valley San Joaquin Regional Rail Authority  
EXPENDITURE REPORT  
September 30, 2021

ACCOUNT	DESCRIPTION	BUDGET	CURRENT MONTH	YEAR TO DATE	BALANCE AVAILABLE	PERCENT BUDGET EXPENDED
<b>Direct Labor and Benefits</b>						
	Executive Director	156,000	12,396	12,396	143,604	7.95%
	Deputy Executive Director	250,000	21,600	0	250,000	0.00%
	Administrative Assistant	95,000	7,699	7,699	87,301	8.10%
	Finance Director	45,000	3,500	3,500	41,500	7.78%
	Manager of Policy, Planning, and Environmental	180,000	11,942	11,942	168,058	6.63%
	Rail Engineering, and Construction Project Manager	195,000	12,938	12,938	182,063	6.63%
	IT support	5,000	0	0	5,000	0.00%
	Marketing Director	30,000	2,500	2,500	27,500	8.33%
	Employee Benefits	200,000	8,182	8,182	191,818	4.09%
	<b>TOTAL - Direct Labor</b>	<b>1,156,000</b>	<b>80,757</b>	<b>135,389</b>	<b>1,020,611</b>	<b>11.71%</b>
<b>Consultants/seconded staff</b>						
	Project Management support- Civil	335,000	49,888	49,888	285,112	14.89%
	Program Management Staff	3,119,684	228,396	228,396	2,891,288	7.32%
	General Engineering Consultants	17,148,694	0	0	17,148,694	0.00%
	Government Relations/Community Engagement	320,000	10,000	20,000	300,000	6.25%
	<b>TOTAL - Consultants</b>	<b>20,923,378</b>	<b>288,284</b>	<b>298,284</b>	<b>20,625,094</b>	<b>1.43%</b>
<b>Other Direct Costs</b>						
	Legal	430,000	6,748	6,748	423,253	1.57%
	Insurance	50,000	359	359	49,641	0.72%
	Audits	25,000	0	0	25,000	0.00%
	Line of Credit	125,000	0	0	125,000	0.00%
	Travel/Mileage/Mis	25,000	8,483	8,483	16,518	33.93%
	Office space/furnishings	180,000	5,000	16,402	163,598	9.11%
	ACTC	412,000	0	0	412,000	0.00%
	SJRRC	150,000	0	0	150,000	0.00%
	BART	440,000	0	0	440,000	0.00%
	Caltrans Reimbursement	540,000	0	0	540,000	0.00%
	Union Pacific Reimbursement	41,000	0	0	41,000	0.00%
	<b>TOTAL OTHER DIRECT COSTS</b>	<b>2,418,000.00</b>	<b>20,588.86</b>	<b>31,990.67</b>	<b>2,386,009</b>	<b>1.32%</b>
	<b>TOTAL OPERATING EXPENDITURES</b>	<b>24,497,378</b>	<b>389,630</b>	<b>465,664</b>	<b>24,031,714</b>	<b>1.90%</b>
	<b>LAVTA Expense</b>		<b>0</b>	<b>0</b>		
	<b>FUND BALANCE (OPERATING)</b>	<b>-</b>	<b>(389,630)</b>	<b>(465,664)</b>		

**AGENDA**

**ITEM 4 C**





## STAFF REPORT

SUBJECT: Resolution R17-2021 Declaring that Agency Meetings Will Continue To Be Held Via Teleconference

FROM: Michael Tree, Executive Director

DATE: November 10, 2021

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### Action Requested

Staff requests that the Board of Directors (Board) adopt a resolution declaring that agency meetings will continue to meet via teleconference to ensure the health and safety of the public.

### Background/Discussion

On March 4, 2020, Governor Newsom declared a State of Emergency to make additional resources available, formalize emergency actions already underway across multiple state agencies and departments, and help the State prepare for a broader spread of COVID-19. On March 17, 2020, in response to the COVID-19 pandemic, Governor Newsom issued Executive Order N-29-20, which suspended certain provisions of the Ralph M. Brown Act in order to allow local legislative bodies to conduct meetings electronically without a physical meeting place.

On June 11, 2021, Governor Newsom issued Executive Order N-08-21, which among other things, rescinded his prior Executive Order N-29-20, effective October 1, 2021. At that point, agencies would have transitioned back to public meetings held in full compliance with the preexisting Brown Act teleconference rules. Since the Governor issued Executive Order N-08-21, the Delta variant has emerged, causing a spike in cases throughout the state. As a result, the Governor's proclaimed State of Emergency remains in effect, and state and local officials, including San Joaquin Public Health Services, the California Department of Public Health and the Department of Industrial Relations, have imposed or recommended measures to promote social distancing.

On September 16, 2021, Governor signed Assembly Bill (AB) 361 into law, effective October 1, 2021, to allow agencies to use teleconferencing for public meetings during proclaimed state of emergencies without requiring the teleconference locations to be accessible to the public or a quorum of the members of the legislative body of the agency to participate from locations within the boundaries of the agency's jurisdiction. AB 361 will sunset on January 31, 2024.

Under AB 361, a local agency will be allowed to meet remotely without complying with prior Brown Act teleconference requirements when:

- The local agency holds a meeting during a state of emergency declared by the Governor, and either
  - State or local health officials have imposed or recommended measures to promote social distancing, or
  - The legislative body finds that meeting in person would present imminent risks to the health or safety of attendees.

As discussed above, state and local officials continue to recommend social distancing. Therefore, Valley Link can continue to conduct meetings via teleconference, as long as it adheres to the following emergency requirements under Government Code Section 54953(e)(2), added by AB 361:

1. The legislative body gives notice and posts agendas as otherwise required by the Brown Act, including directions for how the public can access the meeting.
2. The legislative body does not take formal action on any item whenever there is a disruption in the meeting broadcast.
3. The public is allowed to provide comment in real time.
4. The legislative body allows time during a public comment period for members of the public to register with any internet website required to submit public comment.

For upcoming teleconference meetings, the Board can continue to follow the AB 361 requirements by declaring every 30 days that it has reconsidered the circumstances of the state of emergency and either (1) the state of emergency continues to directly impact the ability of the members to meet safely in person, or (2) state or local officials continue to impose or recommend measures to promote social distancing. These findings can be made through the consent calendar.

### **Fiscal Impact**

There is no fiscal impact associated with this action.

### **Recommended Action**

Adopt the attached resolution declaring that meetings of the Tri-Valley-San Joaquin Valley Regional Rail Authority will continue to be held via teleconference in accordance with Assembly Bill 361 and the provisions of Government Code Section 54953(e).

### **Attachments**

1. Resolution R17-2021

## **ATTACHMENT 1**





**RESOLUTION NO. R17-2021**

\* \* \*

**RESOLUTION OF THE BOARD OF DIRECTORS OF THE TRI-VALLEY-SAN JOAQUIN  
VALLEY REGIONAL RAIL AUTHORITY DECLARING THAT AGENCY MEETINGS WILL  
CONTINUE TO BE HELD VIA TELECONFERENCE**

**WHEREAS**, on March 4, 2020, Governor Newsom declared a State of Emergency to make additional resources available, formalize emergency actions already underway across multiple state agencies and departments, and help the State prepare for a broader spread of COVID-19.; and

**WHEREAS**, on March 17, 2020, in response to the COVID-19 pandemic, Governor Newsom issued Executive Order N-29-20, which suspended certain provisions of the Ralph M. Brown Act in order to allow legislative bodies to conduct meetings electronically without a physical meeting place; and

**WHEREAS**, on June 11, 2021, Governor Newsom issued Executive Order N-08-21, which specified that Executive Order N-29-20 would remain in effect through September 30, 2021, at which point it would expire; and

**WHEREAS**, on September 16, 2021, the Governor signed Assembly Bill 361 into law as urgency legislation that goes into effect on October 1, 2021, amending Government Code Section 54953 of the Brown Act to allow legislative bodies to continue to meet remotely during a proclaimed state of emergency where state or local officials have recommended measures to promote social distancing; and

**WHEREAS**, the Governor's proclaimed State of Emergency remains in effect, and state and local officials, including San Joaquin County Public Health Services, the California Department of Public Health and the Department of Industrial Relations, have imposed or recommended measures to promote social distancing.

**NOW, THEREFORE, BE IT RESOLVED** that, in order to ensure the health and safety of the public, meetings of the Tri-Valley-San Joaquin Valley Regional Rail Authority will continue to be held via teleconference in accordance with Assembly Bill 361 and the provisions of Government Code Section 54953(e).

**APPROVED AND PASSED**, this 10<sup>th</sup> day of November, 2021.

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Veronica Vargas, Chair

**ATTEST:**

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Michael Tree, Executive Director

**AGENDA**

**ITEM 5**





Tri-Valley San Joaquin Valley  
**REGIONAL RAIL AUTHORITY**

## STAFF REPORT

SUBJECT: Fiscal Year 2021 Basic Financial Statements and Memorandum of Internal Control  
FROM: Tamara Edwards, Director of Finance  
DATE: November 10, 2021

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### **Action Requested**

Acceptance of the Authority's Basic Financial Statements (BFS).

### **Background**

The Finance Department has prepared the BFS following the guidelines of the Government Finance Officers Association and in conformance with generally accepted accounting principles for state and local governmental entities established by the Governmental Accounting Standards Board.

### **Discussion**

Attached for your review is the draft Basic Financial Statements for the fiscal year ending June 2021. This report includes the annual audit prepared by Maze and Associates and staff stating that for the period audited, there were no findings.

David Alvey from Maze and Associates will be attending the Board meeting to provide an overview and answer any questions.

### **Recommendation**

Staff recommends that the Board of Directors accept the Basic Financial Statements for Fiscal Year 2021.

### **Attachments:**

1. Draft Tri-Valley-San Joaquin Valley Regional Rail Authority FY2021 Basic Financial Statements
2. Memorandum of Internal Control

## **ATTACHMENT 1**



**TRI-VALLEY – SAN JOAQUIN VALLEY REGIONAL  
RAIL AUTHORITY  
BASIC FINANCIAL STATEMENTS  
June 30, 2021**

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**BASIC FINANCIAL STATEMENTS  
For The Year Ended June 30, 2021**

**Table of Contents**

	<b>Page</b>
<i>Independent Auditor's Report</i>	1
<i>Management's Discussion and Analysis</i>	3
<i>Basic Financial Statements</i>	
Statements of Net Position	8
Statements of Revenues, Expenses and Changes in Net Position	9
Statements of Cash Flows	10
Notes to Basic Financial Statements	11

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## INDEPENDENT AUDITOR'S REPORT

To the Board of Directors of  
Tri-Valley – San Joaquin Valley Regional Rail Authority  
Livermore, California

### *Report on Financial Statements*

We have audited the accompanying financial statements of the Tri-Valley – San Joaquin Valley Regional Rail Authority (the Authority) as of and for the year ended June 30, 2021, and the related notes to the financial statements, which collectively comprise the Authority's basic financial statements as listed in the Table of Contents.

### *Management's Responsibility for the Financial Statements*

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of the financial statements that are free from material misstatement, whether due to fraud or error.

### *Auditor's Responsibility*

Our responsibility is to express opinions on these financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the Authority's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Authority's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

### *Opinion*

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the Authority as of June 30, 2021, and changes in financial position and cash flows for the year then ended in conformity with accounting principles generally accepted in the United States of America.

***Other Matters******Required Supplementary Information***

Accounting principles generally accepted in the United States of America require that Management's Discussion and Analysis be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic or historical context. We have applied certain limited procedures to this information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

A handwritten signature in black ink that reads "Maze + Associates". The signature is written in a cursive, flowing style.

Pleasant Hill, California  
October 21, 2021

## MANAGEMENT DISCUSSION AND ANALYSIS

For the Year Ended June 30, 2021

The Tri-Valley-San Joaquin Valley Regional Rail Authority is required to prepare financial statements in accordance with Government Accounting Standards Board Statement Number 34 (GASB 34). GASB 34 required changes to the traditional financial statements and disclosures and required the preparation of a Management Discussion and Analysis (MD&A)— a narrative overview and analysis of the financial activities of the Authority for each fiscal year. This MD&A is for the fiscal year ended June 30, 2021.

GASB 34 requires the format of Authority-wide financial statements, which are contained in the Financial Section of the accompanying report. These Authority-wide statements include a Statement of Net Position and a Statement of Revenues, Expenses and Changes in Net Position. The Statement of Net Position presents information on all of the Authority's assets and liabilities with the difference of the assets minus the liabilities being the Authority's Net Position. The Statement of Revenues, Expenses and Changes in Net Position summarizes how the Authority's Net Position have changed over the fiscal year.

Page references are to the attached fiscal year ended June 30, 2021 basic financial statements.

### Background and Overview of the Presentation of the Financial Statements

The Authority's basic financial statements are comprised of four parts:

1. The Independent Auditor's Report
2. The Management Discussion and Analysis
3. The Basic Financial Statements
4. The Notes to the Financial Statements

1. *The Independent Auditor's Report*. This is an annual report prepared by the auditor to accompany the financial statements.
2. *Management Discussion and Analysis (MD&A)*. This report accompanies the GASB34 compliant financial statements. The MD&A must include:
  - A brief explanation of the presentation that makes up the basic financial statements and the relationship of one statement to another.
  - Condensed financial information, allowing comparison of current and prior fiscal periods.
  - Analysis of the Authority's overall financial position (Statement of Net Position), and results of operations (Statement of Revenues, Expenses and Changes in Net Position).
  - Any facts, decisions, or conditions known at the close of audit fieldwork that is expected to have a significant effect on the financial position or results of operations.

3. *Basic Financial Statements.* The basic Authority-wide financial statements are prepared under a set of rules referred to by their regulatory identifier, GASB 34. The Authority-wide financial statements are designed to provide a broader overview of the Authority's financial position, using an accounting basis similar to the model used in prior years.

The Statement of Net Position summarizes the Authority's assets and liabilities, with the difference of the two reported as Net Position (rather than equity). The Statement of Net Position is designed to provide information about the financial position of the Authority as a whole, including all of its capital assets and long-term liabilities, on a full accrual basis of accounting, similar to the accounting model used by private sector firms. Over time, increases or decreases in Net Position could serve as an indication of whether the overall financial position of the Authority is stable.

The following table summarizes the Net Position of governmental activities as of June 30, 2021 and June 30, 2020:

Table 1

Statement of Net Position	Year Ending 6/30/2021	Year Ending 6/30/2020
<b>Assets:</b>		
Cash and investments	\$0	\$0
Receivables	3,424,157	1,031,476
Capital assets (depreciated)	<u>0</u>	<u>0</u>
Total assets	<u>3,424,157</u>	<u>1,031,476</u>
<b>Deferred Outflows</b>		
Deferred Outflows	<u>0</u>	<u>0</u>
<b>Liabilities:</b>		
Accounts/Claims payable	1,515,889	1,031,476
Due to Other Governments	1,862,549	0
Net Pension Liability	0	0
Net OPEB liability	0	0
Unearned Revenues	73,807	0
Total liabilities	<u>3,452,245</u>	<u>1,031,476</u>
<b>Deferred Inflows</b>		
Deferred inflows	<u>\$0</u>	<u>\$0</u>
<b>Net Position:</b>		
Net investments in capital assets	0	0
Unrestricted	<u>(28,088)</u>	<u>0</u>
Total restricted Net Position	<u>\$(28,088)</u>	<u>\$0</u>

## Net Position

The Statement of Revenues, Expenses and Change in Net Position provides information about the Authority's revenues and expenses on the full accrual basis, with an emphasis on measuring the net revenues or expenses for each of the Authority's main activities. The Statement of Revenues, Expenses and Change in Net Position explains in detail the change in Net Position for a given year. The amounts in the Statement of Revenues, Expenses and Change in Net Position represent Rail Planning activities.

The following table summarizes the Statement of Revenues, Expenses and Change in Net Position, or the change in Net Position of governmental activities, for the year ended June 30, 2021 and June 30, 2020:

Table 2  
Statement of Revenues, Expenses and Change in Net Position

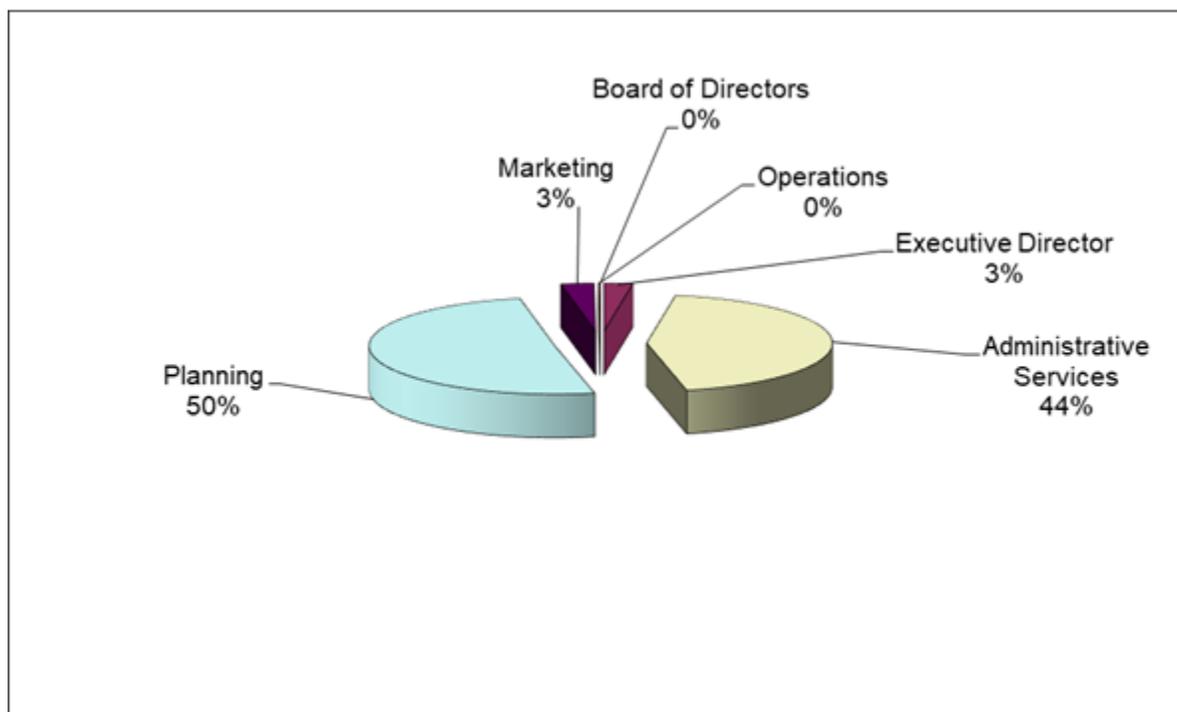
	Year Ending 6/30/2021	Year Ending 6/30/2020
<b>EXPENSES</b>		
Expenses, non-capital		
Board of Directors	\$0	\$0
Executive Director	144,190	2,285,294
Administrative Services	2,551,983	188,493
Planning	2,920,337	82,254
Marketing	166,070	325,217
Operations	<u>8,620</u>	<u>7,886</u>
Total Expenses, non-capital	<u>5,791,200</u>	<u>2,889,144</u>
Expenses, capital		
Depreciation	0	0
Total Expenses, capital	<u>0</u>	<u>0</u>
Total expenses	<u>5,791,200</u>	<u>2,889,144</u>
<b>REVENUES</b>		
Program operating revenues:		
Fare and contract revenues	\$0	\$0
Advertising and ticket concessions	<u>0</u>	<u>0</u>
Total operating revenues	<u>0</u>	<u>0</u>
Non-operating revenues, non-capital:		
Operating grants and contributions	<u>5,763,112</u>	<u>2,908,418</u>
Total non-operating revenues, non-capital	<u>5,763,112</u>	<u>2,908,418</u>
Total non-capital revenues	<u>5,763,112</u>	<u>2,908,418</u>
Total revenues	<u>\$5,763,112</u>	<u>\$2,908,418</u>
Transfers out	<u>0</u>	<u>0</u>
<b>CHANGE IN NET POSITION</b>	(28,088)	19,274
Net Position, beginning	<u>0</u>	<u>(19,274)</u>
Net Position, ending	<u>\$(28,088)</u>	<u>\$0</u>

## Expenses

Expenses, excluding depreciation, are sorted by department. A brief description of each department's function is as follows:

- *Board of Directors* All the costs associated with the Board of Directors including their stipends and professional development expenses are charged to this department.
- *Executive Director* The Executive Director is responsible for the general supervision of the administration of the transit system. All costs associated with this position, and projects that the Executive Director oversees are accounted for in this cost center.
- *Administrative Services* Specific department responsibilities include: financial reporting and analysis; oversight of all financial and compliance audits and preparation of the annual financial statements, human resources management; administration of grants; and general office administration. Significant costs charged to this department are salary and benefits for the eight accounting, grants, administrative and customer service positions, as well as utilities and facility maintenance expenses.
- *Planning* This department plans, organizes, directs, and implements the Authority's planning programs.
- *Marketing* The Marketing Department is responsible for planning, organizing, directing, and implementing the Authority's marketing and community outreach programs.
- *Operations Liability* insurance, are significant costs attributed to this department.

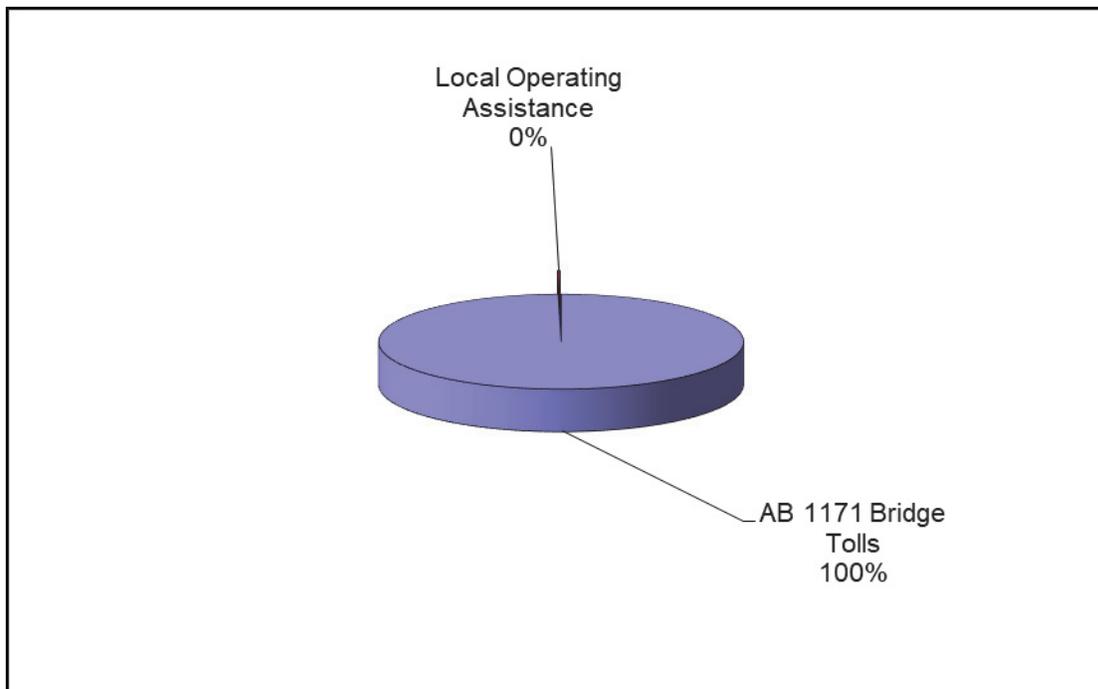
Below are the percentages by department for the fiscal year ending June 2021.



## Revenues

The Authority's primary source of operating revenue is AB1171 Bridge Tolls Administered by the Metropolitan Transportation Commission.

Below are percentages by funding source for the fiscal year ending June 2021.



#### 4. *Notes to the Financial Statements*

The notes provide additional information that is important to a full understanding of the data provided in the Authority-wide, and the traditional fund-based, financial statements.

Finally, there were no facts, decisions, or conditions known at the close of fieldwork that are expected to have a significant effect on the financial position or results of operations.

#### Contacting Authority Management

These Basic Financial Statements are intended to provide citizens, taxpayers, investors, and creditors with a general overview of the Authority's finances. Questions about this Report should be directed to the Authority, at Livermore Amador Valley Transit Authority, 1362 Rutan Court, Suite 100, Livermore, CA 94551.

**TRI-VALLEY - SAN JOAQUIN VALLEY  
REGIONAL RAIL AUTHORITY  
STATEMENT OF NET POSITION  
JUNE 30, 2021**

ASSETS

Current Assets:

Accounts receivable	\$ 3,424,157
Total Current Assets	<u>3,424,157</u>
Total Assets	<u>3,424,157</u>

LIABILITIES

Current Liabilities:

Due to other governments	1,862,549
Accounts payable and accrued liabilities	<u>1,515,889</u>
Total Current Liabilities	<u>3,378,438</u>

Long-term Liabilities:

Unearned revenues	<u>73,807</u>
Total Noncurrent Liabilities	<u>73,807</u>
Total Liabilities	<u>3,452,245</u>

NET POSITION

Unrestricted	(28,088)
Total Net Position	<u>\$ (28,088)</u>

See accompanying notes to financial statements.

**TRI-VALLEY - SAN JOAQUIN  
VALLEY REGIONAL RAIL AUTHORITY  
STATEMENTS OF REVENUES, EXPENSES,  
AND CHANGES IN NET POSITION  
FOR THE YEAR ENDED JUNE 30, 2021**

PROGRAM OPERATING EXPENSES	
Executive Director	\$ 144,190
Finance and Administration	2,551,983
Planning	2,920,337
Marketing	166,070
Operations	<u>8,620</u>
Total program operating expenses	<u>5,791,200</u>
PROGRAM OPERATING LOSSES	<u>5,791,200</u>
NON-OPERATING REVENUES	
Alameda County	14,958
Bridge Tolls	<u>5,748,154</u>
Total non-operating revenues	<u>5,763,112</u>
Changes in Net Position	(28,088)
Total Net Position - Beginning	<u>-</u>
Total Net Position - Ending	<u><u>\$ (28,088)</u></u>

See accompanying notes to financial statements.

**TRI-VALLEY - SAN JOAQUIN  
VALLEY REGIONAL RAIL AUTHORITY  
STATEMENT OF CASH FLOWS  
FOR THE YEAR ENDED JUNE 30, 2021**

<b>CASH FLOWS FROM OPERATING ACTIVITIES</b>	
Receipts from local agencies	\$ (2,392,820)
Payments to vendors	(4,337,577)
Payments for operations	<u>(294,723)</u>
Net cash provided by operating activities	<u>(7,025,120)</u>
<b>CASH FLOWS FROM NONCAPITAL FINANCING ACTIVITIES</b>	
Bridge tolls	5,748,154
Due to other governments	<u>1,276,966</u>
Net cash (used in) provided by capital and related financing activities	<u>7,025,120</u>
Net change in cash and cash equivalents	-
Cash and investments at beginning of period	<u>-</u>
Cash and investments at end of period	<u><u>\$ -</u></u>
<b>Reconciliation of operating income/(loss) to net cash provided by operating activities:</b>	
Operating income (loss)	\$ (5,791,200)
Adjustments to reconcile operating income/(loss) to net cash provided by operating activities:	
Changes in operating assets and liabilities:	
Accounts receivable	(2,392,820)
Prepaid expenses	139
Accounts payable	<u>1,158,761</u>
Net cash provided by operating activities	<u><u>\$ (7,025,120)</u></u>

See accompanying notes to financial statements.

**TRI-VALLEY – SAN JOAQUIN  
VALLEY REGIONAL RAIL AUTHORITY**

Notes to Financial Statements

June 30, 2021

<b>NOTE 1 – NATURE OF ORGANIZATION AND SIGNIFICANT ACCOUNTING POLICIES</b>
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**A. Description of Reporting Entity**

The Tri-Valley – San Joaquin Valley Regional Rail Authority (the Authority) is a public entity established pursuant to California Public Utilities Code Section 132651 et seq and its primary purpose is to plan, develop and deliver cost-effective and responsive transit connectivity between the San Francisco Bay Area Rapid Transit District's (BART) rapid transit system and the Altamont Corridor Express commuter rail service. The Authority was established on January 1, 2018.

The governing board (Board) of the Authority should be composed of one representative from each of the following entities to be appointed by the governing board, mayor, or supervisor for each entity:

- City of Dublin
- City of Lathrop
- City of Livermore
- Town of Danville
- City of San Ramon
- City of Manteca
- City of Pleasanton
- City of Stockton
- City of Tracy
- Mountain House Community Services District
- County of Alameda
- County of San Joaquin
- Livermore Amador Valley Transit Authority
- San Francisco Bay Area Rapid Transit District (BART)
- San Joaquin Regional Rail Commission

**B. Basis of Accounting**

The accompanying financial statements report the financial position of the Authority in accordance with accounting standards generally accepted in the United States of America. As the Authority is a governmental entity, the preparation of its financial statements is governed by the pronouncements of the Governmental Accounting Standards Board (GASB).

The Authority, as a proprietary enterprise, is accounted for on a flow of economic resources measurement focus using the accrual basis of accounting. Measurement focus refers to what is being measured; basis of accounting refers to when revenues and expenditures are recognized in the accounts and reported in the financial statements.

The Authority distinguishes *operating* revenues and expenses from *nonoperating* items. Operating revenues and expenses generally result from providing services and producing and delivering goods in connection with the Authority's principal operations. Operating expenses for enterprise funds include the cost of sales and services, administrative expenses, and depreciation on capital assets. All revenues and expenses not meeting this definition are reported as nonoperating revenues and expenses.

**TRI-VALLEY – SAN JOAQUIN  
VALLEY REGIONAL RAIL AUTHORITY**

Notes to Financial Statements

June 30, 2021

<b>NOTE 1 – NATURE OF ORGANIZATION AND SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)</b>
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*Statement of Net Position*– The statement of net position is designed to display the financial position of the Authority. The Authority’s fund equity is reported as net position, which is the excess of all of the Authority’s assets over all its liabilities. Net Position is divided into three captions under GASB Statement 34. These captions apply only to Net Position and are described below:

*Net investment in capital assets*, describes the Authority’s capital assets, including restricted capital assets, net of accumulated depreciation and reduced by the outstanding balances of any bonds, notes, or other borrowings that are attributable to the acquisition, construction, or improvement of those assets.

*Restricted* describes the portion of Net Position which is restricted as to use by the terms and conditions of agreements with outside parties, governmental regulations, laws, or other restrictions which the Authority cannot unilaterally alter. These principally include developer fees received for use on capital projects, debt service requirements, and fees charged for the provision of future water resources.

*Unrestricted* describes the portion of Net Position which is not restricted to use.

*Statement of Revenues, Expenses, and Changes in Net Position* – The statement of revenues, expenses, and changes in net position is the operating statement for proprietary funds. Revenues are reported by major source. This statement distinguishes between operating and nonoperating revenues and expenses and presents a separate subtotal for operating revenues, operating expenses, and operating income.

**C. *Use of Estimates***

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect certain reported amounts of assets and liabilities and disclose contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenditures during the reporting period. Actual results could differ from those estimates.

**D. *Capital Assets***

The additions to capital assets are capitalized at historical cost. Cost includes material, direct labor and fringe benefits, transportation, and such indirect items as engineering, supervision, and interest on borrowed funds during construction, net of interest earned on unspent construction proceeds. Repairs, maintenance, and minor purchases of equipment are charged to expenses as incurred.

**E. *Preoperating Costs***

In accordance with accounting principles generally accepted in the United States of America, preoperating costs which have no discernible future economic benefit are expensed as incurred.

**TRI-VALLEY – SAN JOAQUIN  
VALLEY REGIONAL RAIL AUTHORITY**

Notes to Financial Statements

June 30, 2021

<b>NOTE 1 – NATURE OF ORGANIZATION AND SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)</b>
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***F. Cash and Cash Equivalents***

The Authority considers all highly liquid investments with original maturities of three months or less when purchased to be cash equivalents.

***Fair Value Measurements***

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The Authority categorizes its fair value measurements within the fair value hierarchy established by generally accepted accounting principles. The fair value hierarchy categorizes the inputs to valuation techniques used to measure fair value into three levels based on the extent to which inputs used in measuring fair value are observable in the market.

Level 1 inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities.

Level 2 inputs are inputs – other than quoted prices included within level 1 – that are observable for an asset or liability, either directly or indirectly.

Level 3 inputs are unobservable inputs for an asset or liability.

If the fair value of an asset or liability is measured using inputs from more than one level of the fair value hierarchy, the measurement is considered to be based on the lowest priority level input that is significant to the entire measurement.

<b>NOTE 2 – RELATED PARTY TRANSACTIONS</b>
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Livermore Amador Valley Transit Authority (LAVTA) is named as the Managing Agency. The Authority does not have employees. LAVTA provides professional services as well as administrative services. LAVTA provides certain treasury management and accounting services including conducting all cash transactions and provided for the annual audit. LAVTA received \$274,267 for their services for the year ended June 30, 2021.

<b>NOTE 3 – RISK MANAGEMENT</b>
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The Authority carries special liability insurance through Alliant Insurances, including personal injury coverage (both bodily injury and property damage) and public officials errors and omissions in up to \$3,000,000, and fire damage liability up to \$1,000,000. The deductible is \$1,000 for this coverage. The Authority requires its consultants and any subconsultants, suppliers, temporary workers, independent consultants, or any other persons, firms or corporations that consult to procure and maintain at their sole cost and expense insurance coverages, including workers compensation and employer liability insurance, commercial general liability insurance, business automotive liability insurance, professional liability insurance, railroad protective liability insurance, and cyber liability insurance.

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## **ATTACHMENT 2**



**TRI-VALLEY – SAN JOAQUIN VALLEY REGIONAL  
RAIL AUTHORITY**

**MEMORANDUM ON INTERNAL CONTROL  
AND REQUIRED COMMUNICATIONS**

**FOR THE YEAR ENDED  
JUNE 30, 2021**

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**TRI-VALLEY – SAN JOAQUIN VALLEY REGIONAL  
RAIL AUTHORITY**

**MEMORANDUM ON INTERNAL CONTROL  
AND REQUIRED COMMUNICATIONS**

**For the Year Ended June 30, 2021**

**Table of Contents**

	<b><u>Page</u></b>
<b><i>Memorandum on Internal Control</i></b> .....	1
Schedule of Other Matters.....	3
<b><i>Required Communications</i></b> .....	7
<b>Significant Audit Matters</b> .....	7
Accounting Policies .....	7
Unusual Transactions, Controversial or Emerging Areas.....	8
Accounting Estimates.....	8
Disclosures .....	9
Difficulties Encountered in Performing the Audit.....	9
Corrected and Uncorrected Misstatements .....	9
Disagreements with Management.....	9
Management Representations .....	9
Management Consultation with Other Independent Accountants .....	9
Other Audit Findings or Issues.....	9
<b>Other Information Accompanying the Financial Statements</b> .....	10

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## MEMORANDUM ON INTERNAL CONTROL

To the Board of Directors of  
Tri-Valley – San Joaquin Valley Regional Rail Authority  
Livermore, California

In planning and performing our audit of the basic financial statements of the Tri-Valley – San Joaquin Valley Regional Rail Authority (Authority) as of and for the year ended June 30, 2021, in accordance with auditing standards generally accepted in the United States of America, we considered the Authority's internal control over financial reporting (internal control) as a basis for designing our auditing procedures that are appropriate in the circumstances for the purpose of expressing our opinions on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the Authority's internal control. Accordingly, we do not express an opinion on the effectiveness of the Authority's internal control.

A deficiency in internal control exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct misstatements on a timely basis. A material weakness is a deficiency, or a combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the Authority's financial statements will not be prevented, or detected and corrected, on a timely basis.

Our consideration of internal control was for the limited purpose described in the first paragraph and was not designed to identify all deficiencies in internal control that might be material weaknesses. In addition, because of inherent limitations in internal control, including the possibility of management override of controls, misstatements due to error or fraud may occur and not be detected by such controls. Given these limitations during our audit, we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

Included in the Schedule of Other Matters are recommendations not meeting the above definitions that we believe are opportunities for strengthening internal controls and operating efficiency.

This communication is intended solely for the information and use of management, Board of Directors, and is not intended to be and should not be used by anyone other than these specified parties.

*Maze + Associates*

Pleasant Hill, California  
October 21, 2021

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**MEMORANDUM ON INTERNAL CONTROL****SCHEDULE OF OTHER MATTERS****NEW GASB PRONOUNCEMENTS OR PRONOUNCEMENTS NOT YET EFFECTIVE**

The following comment represents new pronouncements taking affect in the next few years. We cite them here to keep you informed of developments:

**EFFECTIVE FISCAL YEAR 2021/22:****GASB 87 – Leases**

The objective of this Statement is to better meet the information needs of financial statement users by improving accounting and financial reporting for leases by governments. This Statement increases the usefulness of governments' financial statements by requiring recognition of certain lease assets and liabilities for leases that previously were classified as operating leases and recognized as inflows of resources or outflows of resources based on the payment provisions of the contract. It establishes a single model for lease accounting based on the foundational principle that leases are financings of the right to use an underlying asset. Under this Statement, a lessee is required to recognize a lease liability and an intangible right-to-use lease asset, and a lessor is required to recognize a lease receivable and a deferred inflow of resources, thereby enhancing the relevance and consistency of information about governments' leasing activities.

A lease is defined as a contract that conveys control of the right to use another entity's nonfinancial asset (the underlying asset) as specified in the contract for a period of time in an exchange or exchange-like transaction. Examples of nonfinancial assets include buildings, land, vehicles, and equipment. Any contract that meets this definition should be accounted for under the lease's guidance, unless specifically excluded in this Statement.

**GASB 89 – Accounting for Interest Cost Incurred before the End of a Construction Period**

The objectives of this Statement are (1) to enhance the relevance and comparability of information about capital assets and the cost of borrowing for a reporting period and (2) to simplify accounting for interest cost incurred before the end of a construction period.

This Statement establishes accounting requirements for interest cost incurred before the end of a construction period. Such interest cost includes all interest that previously was accounted for in accordance with the requirements of paragraphs 5–22 of Statement No. 62, *Codification of Accounting and Financial Reporting Guidance Contained in Pre-November 30, 1989 FASB and AICPA Pronouncements*, which are superseded by this Statement. This Statement requires that interest cost incurred before the end of a construction period be recognized as an expense in the period in which the cost is incurred for financial statements prepared using the economic resources measurement focus. As a result, interest cost incurred before the end of a construction period will not be included in the historical cost of a capital asset reported in a business-type activity or enterprise fund.

This Statement also reiterates that in financial statements prepared using the current financial resources measurement focus, interest cost incurred before the end of a construction period should be recognized as an expenditure on a basis consistent with governmental fund accounting principles.

## MEMORANDUM ON INTERNAL CONTROL

### SCHEDULE OF OTHER MATTERS

#### **GASB 92 – Omnibus 2020**

The objectives of this Statement are to enhance comparability in accounting and financial reporting and to improve the consistency of authoritative literature by addressing practice issues that have been identified during implementation and application of certain GASB Statements. This Statement addresses a variety of topics and includes specific provisions about the following:

- The effective date of Statement No. 87, Leases, and Implementation Guide No. 2019-3, Leases, for interim financial reports
- Reporting of intra-entity transfers of assets between a primary government employer and a component unit defined benefit pension plan or defined benefit other postemployment benefit (OPEB) plan
- The applicability of Statements No. 73, *Accounting and Financial Reporting for Pensions and Related Assets That Are Not within the Scope of GASB Statement 68, and Amendments to Certain Provisions of GASB Statements 67 and 68*, as amended, and No. 74, *Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans*, as amended, to reporting assets accumulated for postemployment benefits
- The applicability of certain requirements of Statement No. 84, *Fiduciary Activities*, to postemployment benefit arrangements
- Measurement of liabilities (and assets, if any) related to asset retirement obligations (AROs) in a government acquisition
- Reporting by public entity risk pools for amounts that are recoverable from reinsurers or excess insurers
- Reference to nonrecurring fair value measurements of assets or liabilities in authoritative literature
- Terminology used to refer to derivative instruments.

The requirements of this Statement are effective as follows:

- The requirements related to the effective date of Statement 87 and Implementation Guide 2019-3, reinsurance recoveries, and terminology used to refer to derivative instruments are effective upon issuance.
- The requirements related to intra-entity transfers of assets and those related to the applicability of Statements 73 and 74 are effective for fiscal years beginning after June 15, 2021.
- The requirements related to application of Statement 84 to postemployment benefit arrangements and those related to nonrecurring fair value measurements of assets or liabilities are effective for reporting periods beginning after June 15, 2021.
- The requirements related to the measurement of liabilities (and assets, if any) associated with AROs in a government acquisition are effective for government acquisitions occurring in reporting periods beginning after June 15, 2021.

#### **GASB 93 – Replacement of Interbank Offered Rates**

Some governments have entered into agreements in which variable payments made or received depend on an interbank offered rate (IBOR)—most notably, the London Interbank Offered Rate (LIBOR). As a result of global reference rate reform, LIBOR is expected to cease to exist in its current form at the end of 2021, prompting governments to amend or replace financial instruments for the purpose of replacing LIBOR with other reference rates, by either changing the reference rate or adding or changing fallback provisions related to the reference rate.

## MEMORANDUM ON INTERNAL CONTROL

### SCHEDULE OF OTHER MATTERS

#### **GASB 93 – Replacement of Interbank Offered Rates (Continued)**

Statement No. 53, Accounting and Financial Reporting for Derivative Instruments, as amended, requires a government to terminate hedge accounting when it renegotiates or amends a critical term of a hedging derivative instrument, such as the reference rate of a hedging derivative instrument's variable payment. In addition, in accordance with Statement No. 87, Leases, as amended, replacement of the rate on which variable payments depend in a lease contract would require a government to apply the provisions for lease modifications, including remeasurement of the lease liability or lease receivable.

The objective of this Statement is to address those and other accounting and financial reporting implications that result from the replacement of an IBOR. This Statement achieves that objective by:

- Providing exceptions for certain hedging derivative instruments to the hedge accounting termination provisions when an IBOR is replaced as the reference rate of the hedging derivative instrument's variable payment
- Clarifying the hedge accounting termination provisions when a hedged item is amended to replace the reference rate
- Clarifying that the uncertainty related to the continued availability of IBORs does not, by itself, affect the assessment of whether the occurrence of a hedged expected transaction is probable
- Removing LIBOR as an appropriate benchmark interest rate for the qualitative evaluation of the effectiveness of an interest rate swap
- Identifying a Secured Overnight Financing Rate and the Effective Federal Funds Rate as appropriate benchmark interest rates for the qualitative evaluation of the effectiveness of an interest rate swap
- Clarifying the definition of reference rate, as it is used in Statement 53, as amended

Providing an exception to the lease modifications guidance in Statement 87, as amended, for certain lease contracts that are amended solely to replace an IBOR as the rate upon which variable payments depend.

#### **GASB 97 – Certain Component Unit Criteria, and Accounting and Financial Reporting for Internal Revenue Code Section 457 Deferred Compensation Plans—An Amendment of GASB Statements No. 14 and No. 84, and a Supersession of GASB Statement No. 32**

The primary objectives of this Statement are to (1) increase consistency and comparability related to the reporting of fiduciary component units in circumstances in which a potential component unit does not have a governing board and the primary government performs the duties that a governing board typically would perform; (2) mitigate costs associated with the reporting of certain defined contribution pension plans, defined contribution other postemployment benefit (OPEB) plans, and employee benefit plans other than pension plans or OPEB plans (other employee benefit plans) as fiduciary component units in fiduciary fund financial statements; and (3) enhance the relevance, consistency, and comparability of the accounting and financial reporting for Internal Revenue Code (IRC) Section 457 deferred compensation plans (Section 457 plans) that meet the definition of a pension plan and for benefits provided through those plans.

This Statement requires that for purposes of determining whether a primary government is financially accountable for a potential component unit, except for a potential component unit that is a defined contribution pension plan, a defined contribution OPEB plan, or an other employee benefit plan (for example, certain Section 457 plans), the absence of a governing board should be treated the same as the appointment of a voting majority of a governing board if the primary government performs the duties that a governing board typically would perform.

## MEMORANDUM ON INTERNAL CONTROL

## SCHEDULE OF OTHER MATTERS

**GASB 97 – Certain Component Unit Criteria, and Accounting and Financial Reporting for Internal Revenue Code Section 457 Deferred Compensation Plans—An Amendment of GASB Statements No. 14 and No. 84, and a Supersession of GASB Statement No. 32 (Continued)**

This Statement also requires that the financial burden criterion in paragraph 7 of Statement No. 84, Fiduciary Activities, be applicable to only defined benefit pension plans and defined benefit OPEB plans that are administered through trusts that meet the criteria in paragraph 3 of Statement No. 67, Financial Reporting for Pension Plans, or paragraph 3 of Statement No. 74, Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans, respectively.

This Statement (1) requires that a Section 457 plan be classified as either a pension plan or an other employee benefit plan depending on whether the plan meets the definition of a pension plan and (2) clarifies that Statement 84, as amended, should be applied to all arrangements organized under IRC Section 457 to determine whether those arrangements should be reported as fiduciary activities.

This Statement supersedes the remaining provisions of Statement No. 32, Accounting and Financial Reporting for Internal Revenue Code Section 457 Deferred Compensation Plans, as amended, regarding investment valuation requirements for Section 457 plans. As a result, investments of all Section 457 plans should be measured as of the end of the plan's reporting period in all circumstances.

The requirements of this Statement that (1) exempt primary governments that perform the duties that a governing board typically performs from treating the absence of a governing board the same as the appointment of a voting majority of a governing board in determining whether they are financially accountable for defined contribution pension plans, defined contribution OPEB plans, or other employee benefit plans and (2) limit the applicability of the financial burden criterion in paragraph 7 of Statement 84 to defined benefit pension plans and defined benefit OPEB plans that are administered through trusts that meet the criteria in paragraph 3 of Statement 67 or paragraph 3 of Statement 74, respectively, are effective immediately.

The requirements of this Statement that are related to the accounting and financial reporting for Section 457 plans are effective for fiscal years beginning after June 15, 2021. For purposes of determining whether a primary government is financially accountable for a potential component unit, the requirements of this Statement that provide that for all other arrangements, the absence of a governing board be treated the same as the appointment of a voting majority of a governing board if the primary government performs the duties that a governing board typically would perform, are effective for reporting periods beginning after June 15, 2021. Earlier application of those requirements is encouraged and permitted by requirement as specified within this Statement.

***How the Changes in this Statement will Improve Financial Reporting***

The requirements of this Statement will result in more consistent financial reporting of defined contribution pension plans, defined contribution OPEB plans, and other employee benefit plans, while mitigating the costs associated with reporting those plans. The requirements also will enhance the relevance, consistency, and comparability of (1) the information related to Section 457 plans that meet the definition of a pension plan and the benefits provided through those plans and (2) investment information for all Section 457 plans.



## REQUIRED COMMUNICATIONS

To the Board of Directors of  
Tri-Valley – San Joaquin Valley Regional Rail Authority  
Livermore, California

We have audited the basic financial statements of the Tri-Valley – San Joaquin Valley Regional Rail Authority (Authority) for the year ended June 30, 2021. Professional standards require that we communicate to you the following information related to our audit under generally accepted auditing standards.

### Significant Audit Matters

#### *Accounting Policies*

Management is responsible for the selection and use of appropriate accounting policies. The significant accounting policies used by the Authority are described in Note 1 to the financial statements. No new accounting policies were adopted and the application of existing policies was not changed during the year, except as follows:

#### **GASB 84 Fiduciary Activities**

The objective of this Statement is to improve guidance regarding the identification of fiduciary activities for accounting and financial reporting purposes and how those activities should be reported.

This Statement establishes criteria for identifying fiduciary activities of all state and local governments. The focus of the criteria generally is on (1) whether a government is controlling the assets of the fiduciary activity and (2) the beneficiaries with whom a fiduciary relationship exists. Separate criteria are included to identify fiduciary component units and postemployment benefit arrangements that are fiduciary activities.

An activity meeting the criteria should be reported in a fiduciary fund in the basic financial statements. Governments with activities meeting the criteria should present a statement of fiduciary net position and a statement of changes in fiduciary net position. An exception to that requirement is provided for a business-type activity that normally expects to hold custodial assets for three months or less.

This Statement describes four fiduciary funds that should be reported, if applicable: (1) pension (and other employee benefit) trust funds, (2) investment trust funds, (3) private-purpose trust funds, and (4) custodial funds. Custodial funds generally should report fiduciary activities that are not held in a trust or equivalent arrangement that meets specific criteria.

A fiduciary component unit, when reported in the fiduciary fund financial statements of a primary government, should combine its information with its component units that are fiduciary component units and aggregate that combined information with the primary government's fiduciary funds.

This Statement also provides for recognition of a liability to the beneficiaries in a fiduciary fund when an event has occurred that compels the government to disburse fiduciary resources. Events that compel a government to disburse fiduciary resources occur when a demand for the resources has been made or when no further action, approval, or condition is required to be taken or met by the beneficiary to release the assets.

**GASB 90 – *Majority Equity Interests (an amendment of GASB Statements No. 14 and No. 61)***

The primary objectives of this Statement are to improve the consistency and comparability of reporting a government's majority equity interest in a legally separate organization and to improve the relevance of financial statement information for certain component units. It defines a majority equity interest and specifies that a majority equity interest in a legally separate organization should be reported as an investment if a government's holding of the equity interest meets the definition of an investment. A majority equity interest that meets the definition of an investment should be measured using the equity method, unless it is held by a special-purpose government engaged only in fiduciary activities, a fiduciary fund, or an endowment (including permanent and term endowments) or permanent fund. Those governments and funds should measure the majority equity interest at fair value.

For all other holdings of a majority equity interest in a legally separate organization, a government should report the legally separate organization as a component unit, and the government or fund that holds the equity interest should report an asset related to the majority equity interest using the equity method. This Statement establishes that ownership of a majority equity interest in a legally separate organization results in the government being financially accountable for the legally separate organization and, therefore, the government should report that organization as a component unit.

This Statement also requires that a component unit in which a government has a 100 percent equity interest account for its assets, deferred outflows of resources, liabilities, and deferred inflows of resources at acquisition value at the date the government acquired a 100 percent equity interest in the component unit. Transactions presented in flows statements of the component unit in that circumstance should include only transactions that occurred subsequent to the acquisition.

These pronouncements became effective, but did not have a material effect on the financial statements.

***Unusual Transactions, Controversial or Emerging Areas***

We noted no transactions entered into by Authority during the year for which there is a lack of authoritative guidance or consensus. All significant transactions have been recognized in the financial statements in the proper period.

***Accounting Estimates***

Accounting estimates are an integral part of the financial statements prepared by management and are based on management's knowledge and experience about past and current events and assumptions about future events. Certain accounting estimates are particularly sensitive because of their significance to the financial statements and because of the possibility that future events affecting them may differ significantly from those expected.

***Disclosures***

The financial statement disclosures are neutral, consistent, and clear.

***Difficulties Encountered in Performing the Audit***

We encountered no significant difficulties in dealing with management in performing and completing our audit.

***Corrected and Uncorrected Misstatements***

Professional standards require us to accumulate all known and likely misstatements identified during the audit, other than those that are clearly trivial, and communicate them to the appropriate level of management. We did not propose any audit adjustments that, in our judgment, could have a significant effect, either individually or in the aggregate, on the Authority's financial reporting process.

Professional standards require us to accumulate all known and likely uncorrected misstatements identified during the audit, other than those that are trivial, and communicate them to the appropriate level of management. We have no such misstatements to report to the Board of Directors.

***Disagreements with Management***

For purposes of this letter, a disagreement with management is a financial accounting, reporting, or auditing matter, whether or not resolved to our satisfaction, that could be significant to the financial statements or the auditor's report. We are pleased to report that no such disagreements arose during the course of our audit.

***Management Representations***

We have requested certain representations from management that are included in a management representation letter dated October 21, 2021.

***Management Consultations with Other Independent Accountants***

In some cases, management may decide to consult with other accountants about auditing and accounting matters, similar to obtaining a "second opinion" on certain situations. If a consultation involves application of an accounting principle to the Authority's financial statements or a determination of the type of auditor's opinion that may be expressed on those statements, our professional standards require the consulting accountant to check with us to determine that the consultant has all the relevant facts. To our knowledge, there were no such consultations with other accountants.

***Other Audit Findings or Issues***

We generally discuss a variety of matters, including the application of accounting principles and auditing standards, with management each year prior to retention as the Authority's auditors. However, these discussions occurred in the normal course of our professional relationship and our responses were not a condition to our retention.

**Other Information Accompanying the Financial Statements**

We applied certain limited procedures to the required supplementary information that accompanies and supplements the basic financial statements. Our procedures consisted of inquiries of management regarding the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We did not audit the required supplementary information and do not express an opinion or provide any assurance on the required supplementary information.

\*\*\*\*\*

This information is intended solely for the use of Board of Directors and management and is not intended to be, and should not be, used by anyone other than these specified parties.

*Maze + Associates*

Pleasant Hill, California  
October 21, 2021

**AGENDA**

**ITEM 6**





# Tri-Valley San Joaquin Valley **REGIONAL RAIL AUTHORITY**

## STAFF REPORT

SUBJECT: Executive Director's Report  
FROM: Michael Tree, Executive Director  
DATE: November 10, 2021

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### **Caltrans**

As reported at the July Valley Link Board meeting Caltrans approved the Project Initiation Document (PID) for the Valley Link project by the end of October (October 28, 2021). With the completion of the PID phase completed, the next step is to execute the Valley Link/Caltrans PA&ED Cooperative Agreement. Once approved Caltrans will prepare to begin reviewing Valley Link's environmental technical studies and preliminary engineering to gain consensus on the alternative analysis for the PA&ED phase. Valley Link's Deputy Executive Director met with Caltrans D04 Director to discuss project partnering and project delivery. It is anticipated that the Valley Link/Caltrans PA&ED Cooperative Agreement will be brought to the Board for approval at the December meeting.

### **Meeting with Stadler**

After meeting with train manufacturer Alstom in September, staff recently met with train manufacturer Stadler to continue discussions on hydrogen train technology. Stadler provided more details on the performance of their upcoming hydrogen trains, including schedules.



*Stadler Hydrogen Train on Display in Europe*

### **RFPs Advocacy and Financial Advisory Service**

It's anticipated that in December the Board will review recommendations for award of contracts for the Authority's State and Federal Advocacy Services, as well as the Authority's Financial Advocacy Services.

### **Meetings with Member Agencies**

Since the last Board meeting staff has held meetings to discuss station area planning and funding with the City of Tracy, Mountain House Community Services District the City of Lathrop and the County of San Joaquin. Efforts are moving forward in the planning to include transit oriented development and appropriate funding for the construction and maintenance of stations.

### **LAVTA's SAV project**

The Livermore Amador Valley Transit Authority (LAVTA) continues to plan for Phase II of its shared autonomous vehicle (SAV) program. Over the past 30 days \$2.3 million was identified for the project by the Metropolitan Transportation Commission, with LAVTA in the final group of applications for an additional \$700,000 in funding. Phase II will include higher speed, all electric SAVs and revenue passenger service from a high-density business park in Dublin to the Dublin/Pleasanton BART station. It is anticipated that Phase II will provide a replicable model for first/last mile passenger service into



*Example of SAV vehicles for LAVTA's Phase II*

Valley Link stations, which was a crowd favorite concept by residents in the Valley Link station area planning open houses.

**Continued Work Towards Funding in Sacramento**

Staff continues to work with policy makers in Sacramento on funding for the Valley Link project both from the budget surplus and towards upcoming grant opportunities. The most promising is the Transit and Intercity Rail Capital Program that will have applications due in March of 2022.

**AGENDA**

**ITEM 7**





# Tri-Valley San Joaquin Valley **REGIONAL RAIL AUTHORITY**

## STAFF REPORT

SUBJECT: AECOM Contract Agreement Addendum #5

FROM: Kevin Sheridan, Deputy Executive Director

DATE: November 10, 2021

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### **Action Requested**

Approve Resolution R18-2021 authorizing Addendum #5 to the Professional Services Agreement with AECOM Technical Services, Inc. (AECOM).

### **Background/Discussion**

The Authority initially entered into a Professional Services Agreement with AECOM on March 26, 2018, and has since approved four subsequent addenda (1-4) leading to the completion of the Project Feasibility Report, California Environmental Quality Act (CEQA) Final Environmental Impact Report (EIR), grant application materials, and design concepts in the Interstate 580 and Altamont Pass corridors. The total existing contract authorization is \$9,787,142.

In order to obtain federal funding, projects are required to complete the environmental analysis mandated by the National Environmental Policy Act (NEPA). Addendum #5 is necessary to have AECOM complete NEPA analysis and to prepare the necessary documentation for the Project Approval & Environmental Document (PA&ED) phase, in accordance with Caltrans and Federal Highway Administration (FHWA) requirements, which is required for the portion of the project located within the median of Interstate 580. Due to the complexity involved in widening Interstate 580, the need to conduct additional value engineering, and to permit consideration of the San Joaquin Council of Governments Interstate 205 Managed Lanes project currently in the PA&ED phase, additional environmental analysis will be required. It is anticipated that an Environmental Impact Study (EIS) will be required for NEPA approval, which will include the evaluation of a range of reasonable and viable alternatives for the project. The previously-approved EIR for the Valley Link Project will be the baseline alternative and any new alternative(s) would also require preparation of a Supplemental EIR under CEQA. As a result, a combined CEQA/NEPA environmental document will be prepared for the project's PA&ED phase. During the PA&ED phase, 30% design will be completed for the highway and rail component preferred alternative.

### **Fiscal Impact**

Board approval will authorize the Executive Director to negotiate and enter into contract Addendum #5 with AECOM to complete the PA&ED and 30% design plans, specifications, and estimates in conjunction with the Caltrans/FHWA and FTA NEPA/CEQA environmental clearances. Addendum #5 will increase the existing total contract authorization (\$9,787,142) by \$31,447,787, for a new total contract amount not to exceed \$41,234,929. This amount is within the total allocation (\$46.8 million) allocated by MTC (June 24, 2020) for this phase of work.

## **Recommended Action**

Approve Resolution R18-2021 authorizing the Executive Director to negotiate and enter into a contract Addendum #5 with AECOM in the amount of \$31,447,787, for new total contract amount not to exceed \$41,234,929.

## **Attachments**

1. Resolution R18-2021
2. Scope of Work for PA/ED and Rail Design Services

## **ATTACHMENT 1**





**RESOLUTION NO. R18-2021**

\* \* \*

**RESOLUTION OF THE BOARD OF DIRECTORS OF THE TRI-VALLEY-SAN JOAQUIN VALLEY REGIONAL RAIL AUTHORITY AUTHORIZING AN INCREASE IN ADDENDUM #5 OF \$31,447,787 TO THE PROFESSIONAL SERVICES AGREEMENT WITH AECOM TECHNICAL SERVICES, INC. FOR THE VALLEY LINK PROJECT**

**WHEREAS**, the Legislature adopted AB 758, establishing the Tri-Valley-San Joaquin Valley Regional Rail Authority (Authority) under California Public Utilities Code Section 132651 *et seq.*, to plan, develop and deliver cost-effective and responsive transit connectivity between the Bay Area Rapid Transit District's rapid transit system in the Tri-Valley and the Altamont Corridor Express commuter rail service;

**WHEREAS**, as required by AB 758, the Authority prepared and delivered an initial Project Feasibility Report to the Legislature on June 30, 2019 to explore the improvement of transit connectivity between the Tri-Valley and San Joaquin Valley; and

**WHEREAS**, pursuant to the final Project Feasibility Report, the Authority has been engaged in the design and environmental activities to advance the Valley Link Rail Project (Project) towards construction and eventual operation; and

**WHEREAS**, on March 26, 2018, the Authority entered into a Professional Services Agreement (Agreement) with AECOM Technical Services, Inc. (AECOM), for the preparation of a feasibility study, environmental documents and preliminary engineering services; and

**WHEREAS**, the Authority and AECOM have since entered into four addenda to the Agreement, bringing the total contract amount to \$9,787,142.

**WHEREAS**, on June 24, 2020 secured \$46.8 million from the Metropolitan Transportation Commission (MTC) for the Project including the preparation of 30% design plans, a federal environmental document, and various operational and technical reports that will allow the Project to advance expeditiously to meet the overall project schedule; and

**WHEREAS**, the Authority and AECOM desire to amend the Agreement, via Amendment #5 in the amount of \$31,447,787, bringing the total authorized contract amount to \$41,234,929.

**NOW, THEREFORE, BE IT RESOLVED** that the Board of Directors of the Tri-Valley-San Joaquin Valley Regional Rail Authority hereby authorizes the Executive Director to amend the Agreement, via Amendment #5 in the amount of \$31,447,787, bringing the total authorized contract amount to \$41,234,929.

**APPROVED AND PASSED**, this 10<sup>th</sup> day of November 2021.

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Veronica Vargas, Chair

**ATTEST:**

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Michael Tree, Executive Director

## **ATTACHMENT 2**



# Scope of Work

This scope of services is for the Engineering and Environmental phase of the Valley Link Project (Project). The Project will develop one or more projects necessary to achieve transit connectivity between the Bay Area Rapid Transit District's (BART) rapid transit system and the San Joaquin Regional Rail Commission's (SJRRRC) Altamont Corridor Express (ACE) commuter rail service, and to provide quality, seamless service to riders using the services operating between the Tri-Valley and the San Joaquin Valley.

## Task 1: Project Management

### 1.1 Project Administration

For the project, AECOM will be the prime consultant and manage the administration of the project work for the identified scope. Invoicing and progress reporting will occur monthly (up to 24 months).

AECOM shall prepare a monthly progress report to be submitted with each invoice. The report will include:

- Schedule, at a mutually agreed upon level of detail and including a schedule recovery plan for any delayed progress
- Summary of work activities for the month with key accomplishments, current work, and completed deliverables
- Summary of the following months anticipated work activities and any information needed from the Authority, other agencies, or the Authorities other consultants

AECOM will coordinate and manage progress of the project against the approved schedule, and will include internal meetings with the AECOM team to monitor project spending versus budget, progress toward completion of milestones or deliverable submittal, and any aspects of the scope of work.

AECOM will coordinate with and manage subconsultants included on the project. AECOM will oversee completion of subconsultant tasks and monitor progress against the approved schedule. AECOM will meet regularly, through the duration of the contract, with all subconsultants to discuss progress towards completion of deliverables or progress towards meeting appropriate milestones, identify any issues that might negatively affect the project schedule or budget, or identify any savings that might positively affect the project budget. Subconsultant invoices will be reviewed against progress discussed in regular meetings in order to manage each subconsultants spend against their respective budgets.

*Deliverables:*

- Monthly progress report and invoice

*Assumptions:*

- 24-month project schedule
- Monthly invoicing

### 1.2 Risk Management and Quality Control

AECOM will prepare a Project Quality Plan outlining quality control procedures for our scope of work. Our procedures will be consistent with the standards agreed upon with the Authority, as well as appropriate regulatory agencies, and planning, environmental and engineering professions. The provisions of the Project Quality Plan are applicable to work completed directly by AECOM; subconsultants may submit a Quality Assurance Plan, applicable to their specific work, which shall be subject to review and approval by AECOM. Approved subconsultant Quality Assurance Plans will be included in the AECOM Project Quality Plan.

AECOM subscribes to an organized, structured approach to quality as outlined in ISO 9001, which is an internationally recognized and acclaimed standard for our Quality Management Systems (QMS). AECOM confirms compliance through formal auditing and verification. The Project Quality Plan includes all requirements needed to perform planning, environmental and engineering services on this project.

The following items will be included in the quality management plan:

- Roles and Responsibilities
- Subconsultant Quality Requirements
- Document Control and Records Management
- Surveillance Monitoring
- Configuration Control (Version Labels, etc.)
- Quality Control/Review Procedures

As part of execution of the Project Quality Plan Technical Quality Reviews (TQR) will be completed on all contract required deliverables. This review includes sign off by the lead verifier, Deputy PM or the PM prior to any deliverable submittal to the client. TQR review and approval records will be available for review upon request.

AECOM believes that frequent communication and cooperation between all parties can help stakeholders navigate most risks at the project level. AECOM has prepared a preliminary risk register for review with the Authority, and we propose an agenda item during the project kick-off meeting for mutual review of the risk register. AECOM's project team will monitor project risks, and update the risk register as needed. AECOM will submit a current version of the risk register to the Authority quarterly. We believe that regular discussion and monitoring of project risks will aid the project team to avoid significant delays or issues and help complete the project successfully.

*Deliverables:*

- Project Quality Plan
- Risk register with quarterly updates

## 1.3 Schedule

AECOM will develop a project schedule, to include only AECOM's scope of work and at a mutually agreed upon level of detail, using Microsoft Project software. The initial schedule will be developed and reviewed with the Authority after contract execution, and the approved schedule will be recorded as the baseline schedule for the project. The project

schedule will then be updated monthly (up to 24 updates) and submitted to the Authority on a monthly basis as part of the Monthly Progress report.

*Deliverables:*

- Project schedule with monthly updates

*Assumptions:*

- Baseline schedule to be developed and maintained using MS Project

## 1.4 Authority Coordination

Up to four AECOM Team members will attend bi-weekly project management meetings with the Authority for the duration of the project (up to 24 months). AECOM will prepare agendas and notes which will include the action item log for each meeting, note any schedule concerns or updates to the schedule, and note any updates to the risk register.

Additionally, the Project Manager and task leads will stay in contact with the Authority Program Manager to manage tasks and provide updates and support to the Authority Program Manager.

The Principal-in-Charge will check in with the Executive Director on a quarterly basis to discuss the Executive Directors perception of project progress and support and to understand any concerns related to the project, AECOM or subconsultant teams, progress against the approved schedule, or if any additional support is required.

*Deliverables:*

- Authority bi-weekly meeting agenda and summaries/action items

*Assumptions:*

- Meetings will be held virtually; meetings at the Authority's offices will be limited to the PM and DPMs once a month

## 1.5 Project Meetings

### 1.5.1 Kick-Off Meeting

An initial Kick-off meeting with the Authority and key stakeholders (as necessary) will be held within two weeks of Notice-to-Proceed. The AECOM PM, Principal-in-Charge, and key Task Leads will attend. The meeting will cover the

status of the project, set the baseline schedule, and develop an initial risk register.

### 1.5.2 Technical Meetings

The Project Manager will have bi-weekly meetings with the AECOM team to discuss upcoming work and progress to date and review the schedule, deliverables, and budget. Discipline-focused meetings and other project team meetings will also be held as necessary to ensure team members have the resources and information, they need to deliver their task as expeditiously and efficiently as possible.

The AECOM team will facilitate progress meetings to track project activities and coordinate key personnel to meet project Environmental Impact Statement (EIS), Subsequent Environmental Impact Report (SEIR), and Engineering milestones. These progress meetings are to be conducted in two phases: progress meetings in support of the Draft EIS/EIR and 15% update phase and additional progress meetings in support of the Final EIS/EIR phases and 30% design.

A set of progress meetings will also include Authority staff and their contractor teams of related contracts to provide an integrated meeting, as needed. Up to 48 technical meetings will be supported with the Authority to review technical results of the EIS/EIR analysis, mitigation, or other environmental document items, 15% design, Caltrans PA/ED and 30% design.

Meetings will be held virtually. Agendas and bulleted meeting notes will be provided by AECOM.

#### *Deliverables:*

- Project kick-off meeting agenda and summaries/action items
- Attendance at up to 48 additional Technical Meetings with summaries/action items

#### *Assumptions:*

- Meetings will be held virtually; meetings at the Authority's offices will be limited to the PM and DPMs once a month

## 1.6 Document Control

The AECOM team will manage documents for AECOM contract required deliverables and work products. The project's Document Control process will include managing the following types of documents for the project:

- Administrative Documentation
- Analysis and Recommendations
- Contract Management Documentation
- External E-mails with Authority or external parties
- Plans and Processes
- Presentations
- Drawing Files

As part of document control, AECOM will also manage document storage for AECOMs work products. AECOM maintains a hardcopy file storage area for documents that are categorized as official records of the project. Hardcopy documents will be stored at the Oakland AECOM office. Project files may be accessible upon request. AECOM will set up an internal electronic project folder with all electronic files for the project to be hosted on the AECOM cloud server and stored in accordance with the AECOM Unified File Index Structure.

The AECOM design team will utilize ProjectWise to share and control versions of engineering documents within the AECOM project team. Use of ProjectWise network folders facilitates consistency in version control, easier sharing of large files, and efficiency with remote working environments within the engineering discipline. The ProjectWise folder will be maintained by the engineering task leads on the project team. The project will use Microsoft SharePoint to deliver, store and receive feedbacks on draft and final deliverables with the Authority.

The project's Document Controller will also establish standard naming conventions for all project documents. Standard naming conventions help ensure that documents are easily identifiable, logically placed, and assist with version control. Additionally, the project's Document Controller will establish standard formats and templates for specific project

documents as needed, such as the Monthly Progress Report, Risk Register, meeting agendas and notes, or other documents.

*Deliverables:*

- Access and maintenance of SharePoint

*Assumptions:*

- Microsoft SharePoint to deliver, store and receive feedbacks on draft and final deliverables, with the Authority
- CAD files will be stored and maintained in ProjectWise
- Established templates will be used
- Authority's PowerPoint template will be adhered to

## Task 2: 15% Preliminary Engineering

The purpose of this scope is to provide the engineering information needed to support the NEPA/Subsequent CEQA clearance associated with changes to the current CEQA cleared project in Segment 2 (Altamont) and 3 (Mountain House/I-205). The EIS/SEIR clearance for the currently cleared CEQA alignment will utilize previous engineering data prepared and any design associated with that alternative is not covered in these tasks or associated fee. An EIS/SEIR clearance for the new alignment alternatives requires the engineering detail for the alternatives to match. As such the types of plans and the detail on the plans for the new alignments will match that of the previous 15% preliminary engineering (PE) work. Task 2.2.1 outlines the proposed plan types and the information identified on each of those plans. The limits of the new 15% Preliminary Plans are from the top of the Altamont (Previous Station 4850+00) to the new Mountain House Station north of I-205 and following a lead track going to the Tracy operations and maintenance facility (OMF) Site.

### 2.1 Develop Altamont Straightening and I-205 Segment Preliminary Engineering (15% PE) Plans

AECOM will utilize existing data to produce a set of PE plans. To be efficient, the base mapping and aerial mapping from the previous 15% design will be utilized. This mapping was originally created for the feasibility work for the project as provided by SJRRC. New base mapping will be required for 30% design (See Task 2.4 and Task 3).

AECOM will use the same contour data used for the I-205 Concept Development process which was downloaded from Alameda County (2006 LiDAR) and Department of Water Resources (2007 Delta LiDAR). Geographic Information Systems (GIS) right-of-way (ROW) information readily available from the Counties will be used to determine design and any ROW impacts.

AECOM has been supporting the Authority to develop alignment alternative concepts for project. It is assumed that the alignment from the Altamont Straightening and I-205 Concept Development produced by AECOM through a previous Amendment will be used to produce the set of 15% PE Plans for the alternatives in Segment 2 (Altamont) and Segment 3 (Mountain House / I-205) (Figure 4 and Figure 5).

As a subconsultant to AECOM, KSN will develop new utility data research for the I-205 Concept Development.

As part of the new alternatives 15% design, an updated basis of design report will be produced and will support the Authority to drive project design decisions for future design efforts. The 15% PE plan set will match the scales and format of the current 15% plan set and will include the following plan types. AECOM has also included the estimated number of plan sheets required for each.

#### **Cover (1 sheet)**

The Cover sheet will match the Cover sheet from the previous 15% Plan Set but will include updated information.

#### **Key maps (2 sheets)**

Key map sheets will be updated and match the maps from the previous 15% Plan Set.

#### **Index of Drawings (3 sheets)**

Index of Drawings will include the Altamont Straightening and I-205 plans, and the index sheets will match the Index of Drawings from the previous 15% Plan Set.

#### **Track Typical Sections (8 sheets)**

Track Typical Section sheets will have a similar content as the previous 15% Track Typical Sections including structural assumptions for each section of the proposed alignment and location of retaining walls and bridge structures.

#### **Track Plan and Profile (16 sheets) 1" = 100' plan, 1"=10' profile**

Track Plan and Profile sheets will be completed for the Altamont Straightening Alternative and the I-205 Alternative and will match the previous 15% Plan Set. The set will include existing ROW

information, and the profile will include structural assumptions for retaining walls and bridges.

### **Stations Site Plan (1 sheet)**

The Station Area Plans will match the previous 15% Plan Set and include pedestrian access assumptions, preliminary parking layout that accommodates the demand based on ridership modeling, and existing ROW information.

### **OMF (2 sheets)**

OMF Plans will match the previous 15% Plan Set and include modifications to the existing City facility to accommodate access from I-205. A Temporary Layover Facility east of the Mountain House Station will be included in the event that reaching the City of Tracy OMF site in the near term is deemed cost prohibitive.

### **Right of Way (13 sheets) Plan and Plan, 1"=100'**

Right of Way Plans will match the previous 15% Plan Set and include existing ROW information and proposed takes, shaded and labeled for ease of viewing.

### **Utilities (10 sheets) Plan and Plan, 1"=100'**

Utility Plans will match the previous 15% Plan Set and include existing utility lines based on available utility data.

### **Temporary Construction Areas (10 sheets) Plan and Plan, 1"=100'**

Temporary Construction Area Plans will match the previous 15% Plan Set and include hatching of the area available to the contractor to build the project including potential laydown areas.

### **Structures (18 sheets)**

Structure Plans will match the previous 15% Plan Set and include a General Plan for each bridge needed for the new alignment. The General plan will include plan, section, and elevation.

Additionally, there is a chance that ridership updates will require enlarging the proposed parking designs at Isabel and Southfront Stations. Each station includes the Station Area Plan, ROW Plan, Utility Plan and Temporary Construction Area. Each of these sheets will be

updated with one revised parking scenario each. (8 sheets)

Estimated Total 15% PE plan set is 92 sheets. AECOM will develop and submit a Draft 15% PE Plan Set to the client. Based on one set of compiled comments received from the Authority, AECOM will update the plan set and produce a Final 15% PE Plan Set.

#### *Deliverables:*

- Draft 15% PE Plan Set (PDF & KMZ in plan view)
- Final 15% PE Plan Set (PDF & KMZ in plan view)

#### *Assumptions:*

- Track plan & profile assumes only the OMF site close to the Mountain House Station will be considered
- Structures assumes one general plan per structure that will show bridge, walls, sections and elevations (no additional element-specific sheets for any of the structures)
- Mountain House Station architectural plans not included as they will match the final 15% (AECOM 2020) prototypical center 20'-wide platform solution
- All files will be transferred electronically only in PDF and KMZ. No hardcopies will be submitted
- No design or deliverables will be developed for the I-580 segment (segment 1)
- It is assumed no changes to design or costs will be required due to the addition of BART vehicles or associated with core capacity outside of the Dublin-Pleasanton BART Station
- System design not assumed to be required until 30% design Task 3
- IOS Southfront station design and parking changes that are not included in the existing 15% design are not included in this scope or fee. 15% design for the

pedestrian bridge to the North will be provided by others.

- Overflow surface parking lot at the Isabel station will be designed and provided by others.
- OMF will be located at the City of Tracy site.
- The base mapping from the previous 15% design will be utilized. This mapping was originally created for the feasibility work for the project as provided by SJRRC. New base mapping will be required for 30% design (See Task 3).
- The aerial photo mapping used for the I-205 Concept Development process that was originally created for the feasibility work for the project
- LIDAR contour data used for the I-205 Concept Development process downloaded by AECOM from:
  - Alameda County 2006
  - 2007 DWR Delta
- GIS Right-of-Way information readily available from the Counties and downloaded by AECOM
- The alignment from the Altamont Straightening and I-205 Concept Development produced by AECOM and approved by the client will be considered to produce the set of PE Plans
- New utility data research for the I-205 Concept Development will be performed by KSN.
- As part of 15% design, an updated basis of design report will be produced and will support the Authority to drive project design decisions for future design efforts.

## 2.2 Develop Altamont Straightening and I-205 Segment 15% Preliminary Engineering Cost Estimate

Utilizing the previous developed 15% cost estimates for Segments 2 and 3 as a base, AECOM will update the cost estimates based on the Draft 15% PE Plan Set from Task 2.2.1 above. These estimates will be in 2018 dollars for comparison purposes. An escalation factor based on input from Valley Link staff will be applied to both cost estimates to bring costs to current year.

Based on comments on the draft cost estimate and updates to the plan set (Final 15% PE Plan Set), AECOM will update the estimate to produce the Final Altamont Straightening and I-205 Segment 15% PE Cost Estimate.

### *Deliverables:*

- Draft Altamont Straightening and I-205 15% Preliminary Engineering Cost Estimate (PDF & Excel)
- Final Altamont Straightening and I-205 15% Preliminary Engineering Cost Estimate (PDF & Excel)

### *Assumptions:*

- The base estimate to be updated will be the previous 15% cost estimate
- The north pedestrian bridge will be added to the capital cost estimate by others
- AECOM will prepare cost only for the Altamont Straightening and I-205 Segment No estimate will be developed for the I-580 segment designed by others
- For consistency, the estimate will remain in Fiscal Year 2018 dollars with a mutually agreed upon escalation to current year

## 2.3 – Design Support for NEPA/CEQA

The AECOM Engineering Team will coordinate with the environmental team to provide the engineering data needed for the EIS/SEIR evaluation. This data will include the environmental footprint definition which shows

the maximum impact zone for the alignment, ROW needs, utility impacts summary and construction quantities for the air quality evaluation. The AECOM Engineering Team will participate in Bi-Weekly coordination calls with the environmental team.

*Deliverables:*

- Environmental Footprint (KMZ)
- ROW Needs Spreadsheet (Excel)
- Utility Impacts Summary Table (Excel)
- Construction Data for the Air Quality Analysis (Excel)
- Construction Timeline
- Construction quantity estimations

*Assumptions:*

- ROW information will be based on readily available GIS data from the Counties
- Utility Plans will include utility data received prior to the Draft 15% Plan submittal
- Drainage Plans will not be included in this effort
- I-205 Freeway Roadway plans are not anticipated for this effort, all freeway work will be done under San Joaquin Council Of Government's (SJCOG) I-205 environmental work and therefore is not included in this scope of work
- It is assumed no changes to design or costs will be required due to the addition of BART vehicles or associated with core capacity outside of the Dublin-Pleasanton BART Station.

## 2.4 Surveying for the I-205 Connector

This project scope of services is limited to the revised Altamont Alignment as shown on Figure 2 the top of the Altamont to the new Mountain House Station on the North side of I-580. Project limits are predetermined and are shown in Figure 2 with the limits depicted with a cyan boundary. Kjeldsen, Sinnock & Neudeck, Inc., (KSN), will coordinate with AECOM and its

subconsultant, Vertical Mapping Resources, Inc. (VMR), to provide professional surveying and mapping services for the 30% design of improvements. Vertical Mapping Resources (VMR) will provide photogrammetric services. KSN will provide survey control and utility research and mapping.

### 2.4.1 Survey Control and Coordination Control

KSN will coordinate with team members, assist with right of entry for field surveys, and set aerial control panels at locations and frequency adequate to meet mapping accuracy standards of 1"= 100' horizontal scale mapping, with 1' contour intervals. Survey control will be based on the primary survey control network established for the project in 2019.

Photogrammetric mapping services (aerial photography, LiDAR, and aerial mapping) will be provided by Vertical Mapping Resources, Inc. The project aerial mapping limits are based on the preliminary alignment Google Earth file provide to KSN by AECOM.

*Deliverables:*

- PDF and text files of photo control layout and primary survey control network.

*Assumptions:*

- Only Altamont Straightening and I-205 Connector segments to be surveyed (to match the level of detail that is already done for other segments)
- All 15% survey (entire corridor) to be readily used for 30% PE (no additional survey required)

### 2.4.2 Utility Research and Mapping

KSN will provide existing utility research and mapping services along the project corridor. The first step of KSN's utility research and mapping process will identify the utility service providers that may be impacted by the proposed project. KSN will prepare a list of potentially impacted utilities using, 1) the list of utility subscribers to the local Underground Service Alert (USA) service, and 2) the list of utility providers that KSN has assembled over the years. The following is a brief description of the KSN's utility research process:

Utility Letter A – Immediately upon the receipt of the Notice to Proceed, KSN will send out the Utility Letter A to the utility companies. The A Letters will provide a description of the proposed project scope and limits and will formally request as-built documents and verification of the nature and location of existing utility facilities within the project limits. The documentation received from the utility companies will be reviewed. If necessary, follow-up communications with the utility companies will be made to clarify the size, type and extent of the existing facilities. KSN will compile the existing utility information onto an electronic “utility” drawing file.

KSN will maintain a utility contact summary sheet that will include pertinent information for each utility such as the contact person, address and telephone numbers, description of utility’s facilities, dates that the Utility Letters described above are sent, a summary of each utility’s response to the Utility Letters, etc. KSN will frequently update the utility contact summary and provide copies as necessary to the AECOM. No field surveys or site visits will be performed for this task, utility mapping will be constrained to the aerial topographic mapping.

*Deliverables:*

- Digital files of all utility mapping in AutoCAD format.
- PDF copies of all utility research documents.
- Utility contact summary.

*Assumptions:*

- KSN will provide utility mapping based on responses received from each utility owner, sheet layouts for 15% plans will be prepared by AECOM.

### 2.4.3 Aerial Survey

VMR will collect aerial imagery and LiDAR point cloud data of the proposed project site (Figure 2) at a resolution of 10cm and with a minimum of 10 points per square meter (ppsm). The imagery will be collected using either an Ultracam (or equivalent) digital sensor or a USGS calibrated film camera equipped with forward motion compensation. The LiDAR data will be collected with a CityMapper H2 sensor.

Utilizing this imagery, VMR will perform analytical aerotriangulation using Hexagon Geospatial’s ImageStation Analytical Triangulation (ISAT) software.

Planimetric mapping will be collected at a scale of 1” = 100’. VMR will collect all discernable planimetric features utilizing ImageStation digital photogrammetric workstations. From the LiDAR point cloud data, VMR will complete point cloud registration to the ground control and will classify the data to produce a bare earth DEM of the surface with 1’ contours. All mapping will meet FGDC accuracy requirements for geospatial data.

VMR will also perform digital orthorectification services for the project as outlined within the project limits shown in Figure 2. Control from the aerotriangulation and ground survey will be used to tie the digital images to actual ground coordinates. The LiDAR bare earth DEM will be used during the digital orthorectification process to adjust each image pixel into its correct position. VMR will use an exponential interpolation algorithm to perform the orthorectification processing.

*Deliverables:*

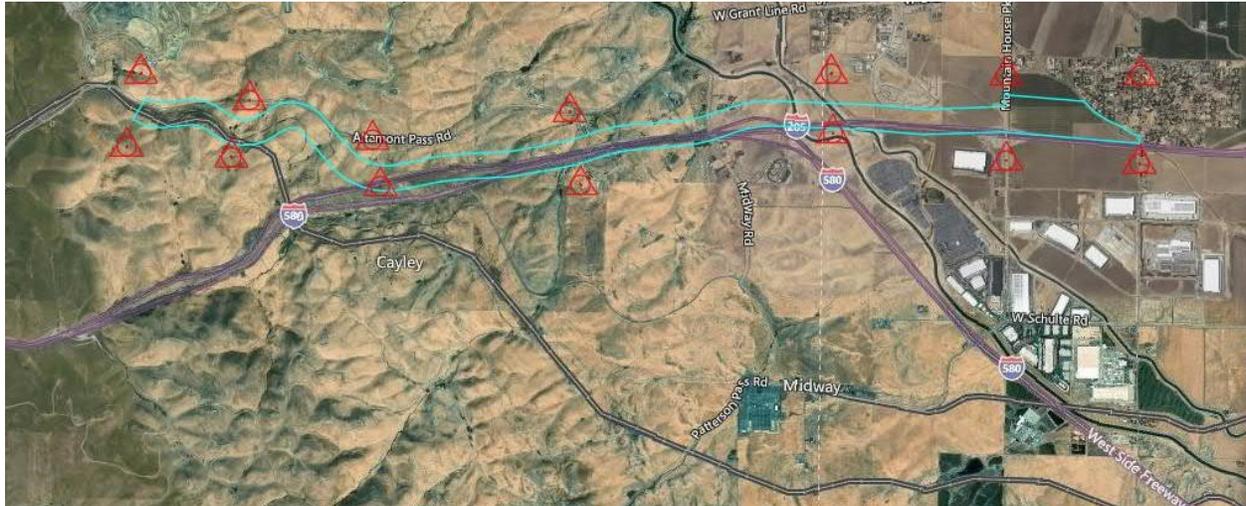
- Flight Layout with Control.
- LiDAR Collection.
- LiDAR DEM.
- Planimetric Mapping.
- Orthophotography

*Assumptions:*

- Flight Layout with Control will utilize 14 aerial control panels and be in Google Earth format.
- Aerial Imagery will be at 10cm resolution (color digital images).
- Point cloud collection at 10 ppsm.
- Aerotriangulation will be done using Integraph’s ISAT software.
- LiDAR classified for bare earth and 1’ contours, collected using a CityMapper H2 sensor.

- 1" = 100' planimetric mapping in AutoCAD.
- Color Orthophotography with 0.5' pixel resolution.

**Figure 2 Survey Right-of-Way**



## Task 3: 30% Rail Engineering

The purpose of this scope is to advance the approved 15% design to a 30% engineering level in preparation for a Design-Bid-Build delivery of the Project. The Project limits are from the Dublin-Pleasanton BART Station out to the Mountain House Station (running along I-580 and I-205) and to the Operations and Maintenance Facility just past the Mountain House Station. The project also includes development of a temporary maintenance facility at the top of the Altamont to support an interim operating segment. Work on the 30% design package will proceed after receipt of NTP from the Client.

### 3.1 30% Design Plans

AECOM will utilize the following existing data to produce a set of 30% Preliminary Engineering (PE) plans:

The new base mapping created during task 2.4

- Dublin-Pleasanton BART to the Altamont by VMR 2019
- Altamont Straightening and I-205 Segment to be done by VMR 2021/2022

Contour data created during the previous 15% design phase and task 2.4

- Dublin-Pleasanton BART to the Altamont by VMR 2019
- Altamont to Mountain House along I-580 and I205 by VMR 2021/2022

GIS ROW information readily available from the Counties and downloaded by AECOM as a base, reviewed and adjusted by using parcel information in Assessor Parcel Maps on the parcels identified as impacted by one (1) selected alignment alternative.

Track alignment developed during the 15% Design Phases and approved by the Client:

- Dublin-Pleasanton to Greenville: 15% Design by AECOM 2020 or 15% Design by WSP 2022

- Greenville to the Top of the Altamont: 15% Design by AECOM 2020
- Top of the Altamont to Mountain House via the Altamont Straightening and I-580/I205 Alignment: 15% Design by AECOM 2022
- Utility data collected in 2019 and 2021-2022 during the 15% design phase.
- AECOM assumes the production and submittal of draft and final plans for this 30% PE phase.

#### *30% Design General Assumptions:*

- Scope and fee for the 30% PE design assume the design of only one (1) alternative (LPA), selected at the end of 15% design stage.
- Scope and fee for the 30% PE design described in this document was based on the assumed alignment that runs from the BART Dublin / Pleasanton station along the median of I-580, through the Altamont Straightening alignment segment, and along I-205, with Mountain House as the terminus station. AECOM also assumes the design of one (1) OMF site, in proximity of Mountain House Station.
- AECOM assumes Draft and Final submittal for all deliverables
- Estimated number of sheets identified in this scope document pertains to Draft submittal only
- All 30% packages to be prepared for the future traditional (Design-Bid-Build) project delivery

#### **General sheets:**

- Cover (1 sheet)
- Key maps (2 sheets)
- Index of Drawings (15 sheets)

#### **Track (mainline corridor):**

- Track Plan and Profile - (48 sheets) 1" = 100' plan, 1"=10' profile
- Track Plan and Profile sheets will include:

- I-580 (Segment 1)
- Altamont Segment (Greenville to the top of the Altamont)
- Altamont Straightening Segment
- I-580 / I-205 shoulder Segment

Profile will also include structural assumptions for:

- Retaining walls
- Bridges
- Track Typical Sections (20 sheets)
- The consultant will refine the typical sections from the 15% design, providing more details
- Track Charts (48 sheets) 1" = 100' plan, 1" = 25' profile
- Plan & Profile
- Track Speeds
- Curve Information
- Track Types and Special Trackwork
- Grade Crossings

**Civil (mainline corridor):**

- Track Grading & Drainage Plan (24 sheets), 1" = 100' plan over plan, that will include:
- Cut & Fill limits
- Ditches and Inlets
- Track cross sections (at every 100'). 75 sheets (16 sections per sheet)
- Utilizing the new mapping data to provide a more detailed existing surface for the sections
- Miscellaneous grading & drainage details (4 sheets)
- Standard details (4 sheets)

**Stations:**

*Isabel Station, Southfront Station and Mountain House Station*

AECOM will refine the station plans from the 15% design. These plans will have more detailed dimensions and greater level of development to progress the design for subsequent design firms to advance the stations to Final Design completion. *Anticipated drawings are as follows:*

**Architectural**

- Platform Overall Plan – 1 sheet, 1" = 30'
- Platform Plan – 2 sheets, 1" = 10'
- Platform Elevation Plan – 2 sheets, 1" = 10'
- Platform Section Plan – 2 sheets, 1/4" = 1'
- Platform Details – 5 sheets, Scale varies
- Platform Access Plan and Elevation – 2 sheet per station, 1/4" = 1'
- Platform Access Section - 2 sheet per station, 1/4" = 1'

**Civil**

- Site Plan - 2 sheets, 1" = 50'
- Utilities - 2 sheets, 1" = 50'
- Drainage - 2 sheets, 1" = 50'
- ROW - 2 sheets, 1" = 50'
- Temp construction facilities - 2 sheets, 1" = 50'

**Electrical**

- Site Electrical Equipment Layout - 1 sheet, 1" = 50'
- Lighting Layout- 2 sheets, 1" = 50'
- Photometric Calculation - 2 sheets, 1" = 50'

**Landscape**

- Station area plan, 2 sheets, 1" = 50'

*BART Dublin Pleasanton Station*

This design shall include both the new Valley Link Station and modifications to the existing BART station. The 15% single Valley Link track 42' platform will be refined in accordance with comments received from BART and Valley Link. Further design development is anticipated for

modifications to the existing BART station for providing three new accesses through the existing north station wall to the BART concourse area. It is assumed that preliminary structural calculations will be performed for these accesses to show BART a workable solution. It is also assumed that preliminary construction staging plans will be prepared to show BART a workable solution. *Anticipated drawings are as follows:*

#### **Architectural**

- Overall Platform Plan – 1 sheet, 1" = 30'
- Platform Plan – 12 sheets, 1" = 10'
- Platform Elevation Plan – 4 sheets, 1" = 10'
- Platform Section Plan – 5 sheets, 1/4" = 1'
- Platform Details – 6 sheets, 1/4" = 1'
- Platform Access Plan, Section and Elevation – 8 sheets, 1/4" = 1'
- Details – 8 sheets

#### **Civil**

- Site Plan - 2 sheets, 1" = 50'
- Utilities - 2 sheets, 1" = 50'
- Drainage - 2 sheets, 1" = 50'
- ROW - 2 sheets, 1" = 50'
- Temp construction facilities - 2 sheets, 1" = 50'

#### **Electrical**

- Site Electrical Equipment Layout - 3 sheets, 1" = 50'
- Lighting Layout- 4 sheets, 1" = 50'
- Photometric Calculation - 4 sheets, 1" = 50'

#### *Assumptions:*

- Station improvements will include such items as canopies or shelters, map and schedule displays, urban furniture, and landscaping areas
- Landscaping and irrigation requirements will be included in the Preliminary Engineering Report

- Assumes BART will not require additional vertical circulation elements in their existing station
- Estimate include coordination with BART and other local agencies

#### **ROW (mainline corridor)**

AECOM will review and adjust Alameda County and San Joaquin County Assessor Parcel Map GIS parcels to best align with the visible surface features in the project base mapping. This effort will assist the team with identifying potential right of way impacts along the project alignment. No additional right of way mapping, records research, or surveys will be performed for the 30% design.

#### *Deliverables:*

- ROW plans (plan and plan), 24 sheets 1" = 100'

#### *Assumptions:*

- Data will be from readily available County Assessor parcel maps

#### **Operations & Maintenance Facility (OMF)**

This design shall include both the new OMF Yard and the planned buildings at this facility. These include a Rail Maintenance Building, an Operations and Administration Building, a Storage Warehouse, and two M.O.W. Building/Canopy structures. The 15% OMF Layout Site Plan will be developed and refined to provide a 30% level of detail for the various elements on the site, also including Access Roads, Employee Parking Areas, Landscape Areas, Storage Tracks, Service and Inspection Tracks (inside Maintenance Building) Drainage Basin, and Solar Farm. The Buildings will be programmed to determine the optimum size and layout for operational flow. Maintenance equipment will be identified in outline specifications and equipment layout plans. The Operations and Administration Building will incorporate a System Control Center with support Offices.

*Assumptions:*

- Facility requirements, including initial and future rolling stock capacity, will be provided to the design consultant prior to the development of yard and facility design

**Track - 6 sheets (plan view) 1" = 50'**

**Architectural**

**Maintenance Building**

- Overall Building Plans - 1 sheet, Scale varies
- Partial Plans (Floor, Roof, Equipment) – 6 sheets, Scale varies
- Overall Elevations – 4 sheets, Scale varies
- Partial Elevations – 2 sheets, Scale varies
- Sections – 4 sheets, Scale varies
- Enlarged Plans (Stair & Elevators, Interior Plans), 4 sheets, Scale varies
- Details – 6 sheets, Scale varies

**Administration Building**

- Overall Building Plan - 1 sheet, Scale varies
- Partial Plans (Floor, Roof) – 6 sheets, Scale varies
- Overall Elevations – 4 sheets, Scale varies
- Partial Elevations – 2 sheets, Scale varies
- Sections – 4 sheets, Scale varies
- Enlarged Plans (Stair & Elevators, Interior Plans), 6 sheets, Scale varies
- Details – 5 sheets, Scale varies

**Warehouse Building**

- Overall Building Plan – 1 sheet, Scale varies
- Partial Plans (Floor, Roof) – 4 sheets, Scale varies
- Overall Elevations – 2 sheets, Scale varies

- Partial Elevations – 1 sheet, Scale varies
- Sections – 2 sheets, Scale varies
- Enlarged Plans (Interior Plans) – 1 sheet, Scale varies
- Details – 3 sheets, Scale varies

**M.O.W. #1 & #2**

- Overall Building Plan - 2 sheets, Scale varies
- Partial Plans (Floor, Roof) – 4 sheets, Scale varies
- Overall Elevations – 4 sheets, Scale varies
- Partial Elevations – 2 sheets, Scale varies
- Sections – 2 sheets, Scale varies
- Enlarged Plans (Stair & Elevators, Interior Plans), 1 sheet, Scale varies
- Details – 4 sheets, Scale varies

**Civil**

- 6 sheets (plan view) 1" = 100', showing major site elements

**Drainage**

- 6 sheets (plan view) 1" = 100', showing preliminary drainage concepts

**Electrical**

- Site Electrical Equipment Layout - 4 sheets, 1" = 50'
- Lighting Layout- 5 sheets, 1" = 50'
- Photometric Calculation - 5 sheets, 1" = 50'

**Landscape**

- 4 sheets, reference plans and planting plans
- 2 sheets planting details

**Utilities**

- 6 sheets (plan and plan) 1" = 100', showing updated existing utilities in the OMF area

**ROW**

- 6 sheets (plan and plan) 1" = 100', showing adjusted APN GIS parcels in the OMF site

### **Temporary Construction Areas**

- 6 sheets (plan and plan) 1" = 100', showing adjusted APN GIS parcels in the OMF site

### **Utilities (mainline corridor)**

AECOM will use the updated mapping and aerials, developed during the 15% design along with updated existing utility data to refine the utility plans. This effort will include following up with non-responders from the 15% utility research and mapping task, updating the utility mapping with new data provided by responders, and adjusting the utility mapping to aerial topographic mapping. Design effort will include development of a preliminary design for any utilities that need to be relocated or protected in place. AECOM will maintain and update its utility contact summary sheet from the 15% utility research and mapping effort that will include pertinent information for each utility such as the contact person, address and telephone numbers, description of utility's facilities, dates that the Utility Letters are sent, a summary of each utility's response to the Utility Letters, etc. AECOM will coordinate with utility companies for determination of locations of power feeds to our facilities (grade crossings, signal, and comms facilities).

#### *Deliverables:*

- Utilities plans (plan and plan), 24 sheets 1" = 100'
- Utilities details, 10 sheets

#### *Assumptions:*

- Estimate includes hours for utility company coordination including meetings

### **Temporary Construction Areas (mainline corridor)**

AECOM will use the new background materials, mapping and aerials, developed in the 15% engineering phase to refine the staging, laydown, and access requirements for construction activities and update the temporary construction facility plans from the 15% design. Plans to include identification of the construction

corridor, access to the corridor, and laydown areas outside of the typical corridor.

#### *Deliverables:*

- Temporary Construction Area Plans (plan and plan), 26 sheets 1" = 100'

### **Roadway Plans**

AECOM will use the updated mapping and aerials, developed in the 15% design phase to refine the roadway plans. AECOM will analyze impacts to streets and intersections in the immediate station areas due to project improvements and operations. 30% PE scope will include the grade separation and at-grade crossings listed below for one (1) alternative. Anticipated drawings are as follows:

#### **Altamont Pass Rd./Carrol Rd. Grade Separation**

Typical Sections – 4 sheets, 1" = 50'  
Plan and Profile – 2 sheets, 1" = 50'  
Signing and Striping Plan – 2 sheets

#### **Altamont Pass Rd. at the Top of the Altamont. Grade Separation**

- Typical Sections – 4 sheets, 1" = 50'
- Plan and Profile – 2 sheets, 1" = 50'
- Signing and Striping Plan – 2 Sheets, 1" = 50'

#### **Dyer Road At-Grade Crossing Plan**

- Plan and Profile Plan – 1 sheet, 1" = 50'
- Typical Section – 1 Sheet, 1" = 50'
- Signing and Striping Plan – 1 sheet, 1" = 50'

### **Structures (Mainline Corridor inside Caltrans ROW)**

Scope described below includes the structural work pertaining to bridges and retaining walls, within the Caltrans ROW on the east side of the Altamont.

Structure designs will be developed to a 30% level and a type selection study in accordance with the requirements of project design criteria will be carried out. The structures listed in Table 4 are included in the scope of work.

Preliminary design will be performed to develop details for each of the alternatives. Results from the Draft Foundation Report will be used in developing design parameters. This includes preliminary analysis to aid development of structural elements such as depth of the superstructure, size and shape of the column members, shape and size of the bent caps, footing sizes, and abutment types. The analysis would be consistent with the preliminary nature of design and would not include steps necessary in developing final design. Special attention will be given to the following issues:

- Design issues such as design alternatives for superstructure, abutment, bent, and barrier
- Aesthetics and compatibility with the existing structure and surrounding areas
- Constructability and use of falsework
- Clearances for construction operations
- Foundation issues
- Seismic performance
- aesthetics issues
- Speed of construction
- Construction cost
- Construction impact and disruption to existing traffic during construction

- Impact to the environment – during construction as well as permanent
- Hazardous material related issues
- Specifications issues

The single type selection report will cover all the below-mentioned structures and will include a type selection memo, bridge site data list, a vicinity map, a general plan, preliminary construction cost estimate (general plan estimate) for each of the structures. The report will be submitted to the appropriate agencies for review and approval.

No further design will be conducted prior to the written approval of the Structure Type Selection. Once approval is received from the Agency on the proposed General Plans, Final General Plans and cost estimate will be submitted.

Preliminary Construction Quantity Estimates will be developed for the recommended bridge type. Estimates will be prepared using a format acceptable to the Agency. The list of items of work will be prepared based upon the available information.

The cost estimate will identify construction work items, quantities, unit costs, and summarize the estimated total project cost, including allowances for supplemental work, owner furnished materials, expenses, mobilization, and contingencies.

**Table 4A: Bridge Structures and Walls Assumptions for Scope and Fee**

Station	Feature Crossed - Structure Type	Structure Length (ft)	Approx Height (ft)	# of 30% Sheets	Type of Drawings
4975+00 to 5035+00	Cut with retention on one side	6000	15	8	Misc Details; P&P for retaining structures
5045+00 to 5055+00	Cut with retention on one side	1000	20	6	Misc Details; P&P for retaining structures
5071+00	Retaining walls & bridge	780	35	5	GP; FP, Misc Details; P&P for retaining walls
5085+00	Retaining walls & UP	1100	60	6	GP; FP, Misc Details; P&P for retaining walls
5085+50 to 5105+00	Cut with retention on one side	1950	60	6	Misc Details; P&P for retaining structures

Station	Feature Crossed - Structure Type	Structure Length (ft)	Approx Height (ft)	# of 30% Sheets	Type of Drawings
5122+50	Retaining walls & UP - Midway Road	1145	80	6	GP; FP, Misc Details; P&P for retaining walls
5130+00	Retaining walls & bridge	900	30	5	GP; FP, Misc Details; P&P for retaining walls

**Structures (Mainline Corridor Outside Caltrans ROW)**

Scope described below includes the structural work pertaining to bridges, retaining walls, grade separations and culverts outside of I-580 segment and for the structures not within the I-580 shoulder ROW on the east side of the Altamont, as well as all stations in the proposed rail corridor.

Structure designs will be developed to a 30% level in accordance with the requirements of project design criteria. The structures listed in Table 4 are included in the scope of work.

Preliminary design will be performed to develop details for the selected alternative alignment. Results from the Draft Foundation Report will be used in developing design parameters. This includes preliminary analysis to aid development of structural elements such as depth of the superstructure, size and shape of the column members, shape and size of the bent caps, footing sizes, and abutment types. The analysis would be consistent with the preliminary nature of design and would not include steps necessary in developing final design. Special attention will be given to the following issues:

- Design issues such as design alternatives for superstructure, abutment, bent, and barrier
- Aesthetics and compatibility with the existing structures and surrounding areas
- Constructability and use of falsework
- Clearances for construction operations
- Foundation issues
- Seismic performance
- Speed of construction
- Construction cost

- Construction impact and disruption to existing traffic during construction
- Impact to the environment – during construction as well as permanent
- Hazardous material related issues
- Specifications issues

The single structure recommendation memo will cover all the above-mentioned structures and will include a structure memo, bridge site data list, a vicinity map, a general plan, preliminary construction cost estimate (general plan estimate) for each of the structures. The report will be submitted to the Agency for review and approval.

Preliminary structure recommendations for stations will include pedestrian bridges, platforms, vertical circulation elements and access structures in the platform and the parking areas.

No further design will be conducted prior to the written approval of the Structure Recommendation. Once approval is received from the Agency, Final General Plans and cost estimate will be submitted.

Preliminary Construction Quantity Estimates will be developed for the recommended structure type. Estimates will be prepared using a format acceptable to the Agency. The list of items of work will be prepared based upon the available information.

The cost estimate will identify construction work items, quantities, unit costs, and summarize the estimated total project cost, including allowances for supplemental work, owner furnished materials, expenses, mobilization, and contingencies, as appropriate for the level of design development.

**Table 4B: Bridge Structures and Walls Assumptions for Scope and Fee**

Station	Feature Crossed - Structure Type	Structure Length (ft)	Approx Height (ft)	# of 30% Sheets	Type of Drawings
4750+00	Altamont Road Grade Separation	550	35	4	General Plan (GP); Foundation Plan (FP), Miscellaneous (Misc) Details; Plan and Profile (P&P) for retaining walls
4850+00	Altamont Road Grade Separation	450	35	4	GP; FP, Misc Details; P&P for retaining walls
4867+00	Retaining walls & UP Separation	400	35	4	GP; FP, Misc Details; P&P for retaining walls
4873+50	Cut with retention on one side	520	40	2	Misc Details; P&P for retaining structures
4881+00	Cut with retention on one side	600	40	2	Misc Details; P&P for retaining structures
4890+00	Multi-span viaduct	1275	80	6	GP; FP, Misc Details; P&P for retaining walls
4920+00	Drainage	900	45	5	GP; FP, Misc Details; P&P for retaining walls
4935+00	Retaining walls & bridge	750	40	5	GP; FP, Misc Details; P&P for retaining walls
4948+00	Retaining walls & bridge	600	45	4	GP; FP, Misc Details; P&P for retaining walls
4964+00	Retaining walls & bridge	1220	60	6	GP; FP, Misc Details; P&P for retaining walls
4973+00	Retaining walls & bridge	500	52	4	GP; FP, Misc Details; P&P for retaining walls
5154+00	Retaining walls & bridge	540	55	4	GP; FP, Misc Details; P&P for retaining walls
5158+50	Retaining walls & bridge - Aqueduct	450	30	4	GP; FP, Misc Details; P&P for retaining walls
5175+00	Retaining walls & bridge - Aqueduct	550	30	4	GP; FP, Misc Details; P&P for retaining walls
5242+25	Mountain House Parkway - Tunnel/Cut & Cover	350	30	4	GP; FP, Misc Details; P&P for retaining walls

## **Systems Design (Mainline Corridor & OMF)**

### **Signaling**

The purpose of this 30% Signaling design is to provide a basis for final design to be performed by the Final Design Team. The 30% design will identify potential equipment and clarify interconnections between the various equipment/subsystems. The 30% design will require assumptions that must be identified and included as part of the 30% deliverables.

Subsystems/equipment comprising the signaling system will include:

- Vital and Non-Vital Microprocessors
- Communication Network
- I-ETMS PTC System
- Operations Control Center (OCC)
- Wayside Signals
- Switch Machines
- Track Circuits
- AC/DC Power
- Train-to-Wayside Communication (TWC)
- Highway Grade Crossings (gates, flashers, signs, etc.)

Deliverables / Plans will include the following elements:

- Safe Braking Model: Defines the criteria to be used to calculate worst-case train braking distances, including the calculation methodology to incorporate the effect of grades.
- Double Line Track Plan: Provides baseline right-of-way, track configuration, highway crossing locations, and placement for wayside equipment and signal houses.
- Control Lines: Signal Route and Aspect drawings, depicting all possible signal aspect sequences.
- Typical Cable Plan: Provide a sample of all signal cables at specific locations.

- Typical Solutions: Generic plans for application at specific types of signal equipment locations, which include intermediate territory Wayside Automatic Signal locations, End of Siding locations, Universal 2 Track Interlockings, Terminal Interlockings and Highway Crossing locations.
- Specifications: Identification of the necessary Valley Link signals and train control specifications.
- System Architecture Block Diagram of interconnections between subsystems/equipment of the signaling system.
- Assumptions List, relevant to the signals and train control systems made at the time of the 30% design.

Signaling Plans:

- Double Line Track & Control Line Plans – 20 sheets
- Cable Plans & Crossing Approaches– 14 sheets
- Typical Plans
  - Typical Intermediate Wayside Automatic Signal Location – 4 sheets
  - Typical End of Siding Interlocking Location – 20 sheets
  - Typical 2 Track I Universal Interlocking - 20 sheets
  - Typical 2 Track Terminal Interlocking - 25 sheets
  - Typical Highway Grade Crossing Location – 10 sheets
- OCC Centralized Control System Block Diagrams - 2 sheets
- I-ETMS PTC System Block Diagrams - 2 sheets

*Assumptions:*

- The width of the right-of-way is sufficient for placement of typical wayside signaling equipment, and no specialized compact or low-profile equipment is required.
- The new Altamont Straightening portion of the Valley Link proposes double track operation from the proposed west switch of the Greenville Station Siding Track to the Mountain House station. For the purposes for the 30% signal design, it is being assumed that a universal (two crossover) interlocking will be provided approximately midway in the double track section, and that a set of universal crossovers will also be provided immediately west of the Mountain House station as part of the Terminal Interlocking there.
- Pulse Coded DC Electronic Track Circuits are assumed between Interlockings and Controlled Points under the presumption that initial operation will be with self-propelled rail vehicles. Should electrification be selected for portions of this or future extended territory, electrified versions of these track circuits (similar to those being utilized on the Caltrain electrification) will be substituted for the conventional DC versions. Similarly, if electrification is decided upon at some future date before or after the proposed signal equipment is in service, the signal system being proposed can be relatively easily converted to electrified versions of the DC Pulse Coded Track Circuits. It is assumed that DC track circuits will be utilized for Interlocking detector track circuits, also based on the presumption of initial non-electrified operation.
- Development of the Safe Braking Model and preparation Block Plan and Signal Route & Aspect drawings will require that the intended Valley Link vehicle braking characteristics are available upon notice to proceed. This information will also be essential for providing meaningful

operation analysis (since this is dependent on the signal block design).

- It is assumed based on future possible UPRR shared trackage with Valley Link east of the initial territory to Mountain House that I-ETMS will be utilized as the Positive Train Control system overlay to the vital wayside signal system over the entire Valley Link territory. Based on this understanding, the wayside signal system will be designed to incorporate interfaces to the I-ETMS PTC system at each interlocking and automatic signal location. Issues concerning Data Radio Coverage are expected to be considered by the Final Design Team.
- It has been assumed that existing agency approved plans and specifications relevant to signal system elements, in native file formats, will be made available in support our required task to identify and develop the necessary Valley Link signals and train control specifications.
- The list of items for use by the Final Design Team that clarifies understandings or lack of information that existed at the time of the 30% design will be provided as a deliverable. The Final Design Team will be responsible to bring these items to resolution prior to final design.

**Communications (mainline corridor & OMF)**

AECOM will prepare block-diagram 30% level of design for the comms systems with layout diagrams of proposed subsystem deployment. A typical station plan will be developed for the intermediate stations. Layouts will also be provided specific to the terminal stations at Dublin-Pleasant BART and Mountain House. AECOM will perform the radio coverage analysis to determine what measures need to be taken to ensure sufficient the Operations Radio coverage throughout the entire alignment and considering the Altamont Straightening segment. Anticipated drawings are as follows:

- Operations Radio – 5 sheets
- LAN – 1 sheet

- WAN and Network Management System– 2 sheets
- CCTV – 1 sheet
- Access Control System (AC)– 1 sheet
- PA/VMS – 1 sheet
- Smart Card Reader (SCR) Deployment – 1 sheet
- Fare Vending Machine (FVM) – 1 sheet
- Typical Layout of Station Control Communications Cabinet (CCC)– 1 sheet
- Telephone (TEL) – 1 sheet
- SCADA coverage – 2 sheets
- OCC/Backup OCC Facilities & MIMIC Display wall– 5 sheets
- O&M facility Communications Layout- 2 sheets
- Typical Station Platform Plan – 5 sheets
- BART Station Concourse Plan – 2 sheets
- Instrument House (IH) layout in Communication support of Signalling interface- 1 sheet
- Mountain House Plan of terminal station special features – 1 sheet
- AVL tracking of LRV location – 2 sheets
- Fire and Emergency Management Systems (FEMS)– 2 sheets
- Miscellaneous – 10 sheets
- Additional Deliverables:
  - Report of requirements for Operations Radio coverage analysis along the ROW; identifying blind spots and provisions to be taken
  - Special provisions to be taken for communications interfaces with Bart Communications systems
  - Report on coverage to be provided by SCADA
  - Fire and Emergency Management Provisions

- O&M Facility Functional Plan
- Central Control Facility Concept of Operation Plan
- UPS Power Consumption and Design Plan
- System Testing and Cutover Plan

*Assumptions:*

- Because of the measures it will take to straighten out the Altamont segment alignment it is recommended that a radio coverage analysis be performed, to determine what measures must be taken to assure Operations Radio coverage will be possible along the entire Alignment. This analysis is included in the scope.

## 3.2 – 30% Design Reports, Memos & Studies

### 3.2.1 Preliminary Basis of Design Report

AECOM will update the Basis of Design Report developed in the 15% design stage, to reflect the alignment modifications provided in the segment of the corridor outside of I-580. Report will cover one (1) alignment alternative, and it will incorporate Valley Link's latest version of Design Criteria, Specifications, and Standard & Directive Drawings where applicable. Design deviations shall be clearly identified, and further investigated in discipline-specific design work. It will include chapters dedicated to all major design disciplines in the project, including but not limited to: civil, track, structural, roadway, traffic & MOT, stations, ROW, utilities, drainage, geotechnical, systems / signals, communications, electrical and geotechnical. Report will also include operational, constructability, operations, systems, safety/security, cost-effectiveness, and community acceptance considerations.

*Deliverables:*

- Draft Preliminary Basis of Design Report
- Final Preliminary Basis of Design Report

### 3.2.2 CPUC Grade Crossing Applications

Work will include discussions with CPUC to define the steps in creating the crossing inventory for the new corridor, which will include all at-grade and grade-separated crossings. Pedestrian bridges to be included in the diagnostics process as well. Scope assumes the following crossings:

- All I 580 road/rail/ped crossings
- Altamont Pass Road at Carol proposed grade-separation
- Dire Rd at-grade crossing
- Altamont Pass Rd at top of Altamont proposed grade separation
- Grant Line Rd proposed grade separation
- Midway Rd proposed grade separation
- Mountain House Parkway proposed grade separation

#### *Deliverables:*

- Exhibits at each crossing to be used for diagnostic site visit (18 crossings)
- Minutes of diagnostic meetings (draft and final)

### 3.2.3 Geotechnical Studies

Scope presented in this task covers the rail corridor segment outside of I-580. The 30% PE design would include the following:

- Review of Available Geological and Geotechnical Data and Landslide Areas, that includes the review available information along the rail corridor, including geotechnical data and reports, LiDAR and aerial photographs, and published geologic maps, and published fault studies, to identify potential landslide areas.
- Preparation of Detail Work and HSP
- Pre-field Activities, which will include site reconnaissance to mark the exploratory boring locations for utility clearance. AECOM will apply for the necessary

permits as necessary, to the following agencies:

- Soil Boring Permit(s) - Alameda County
- Soil Boring Permit(s) - San Joaquin County
- Encroachment Permit(s) - Alameda County and San Joaquin County
- Permit(s) for private ROW entry, if required
- Encroachment Permit(s) for Caltrans and UPRR, if required
- Field Exploration Program, that will include up to twenty-six (26) exploratory borings to depths ranging from 50 to 75 feet below existing grade.
- Laboratory Testing Program, to evaluate certain characteristics of the foundation and subgrade soils
- Engineering Analysis and Report Preparation

#### *Deliverables:*

- Draft and Final Geotechnical Work Plan
- Draft and Final Preliminary Foundation Report
- Draft and Final Preliminary Geotechnical Design and Materials Report

#### **3.2.3.1 Phase 2 Fault Rupture, Hazard Study**

The Phase 2 Fault Rupture, Hazard Study will evaluate previously mapped traces of the Greenville fault that intersect the footprint of the rail alignment close to the elevated structure and proposed fill and develop co-seismic displacement estimates for primary and secondary faulting using deterministic and probabilistic approaches.

Work will include the following:

- Data Compilation and Geologic Mapping, in which we will augment existing data compiled during the Phase 1 office-based

analysis (2019) and perform geologic mapping of road and railroad cuts in the vicinity of the Valley Link alignment to, refine the location of the previously mapped Greenville fault strands, collect structural information to support the FDHA, and confirm potential trench locations

- Due to station and elevated structures locations at the Altamont Pass, the scope will consider a Phase 1 assessment of the Late Quaternary Black Butte-Midway fault(s) that intersect the alignment.
- Subsurface Investigation, that will include excavation of two trenches to intersect the primary eastern fault trace, the Graymer et al. (2006) fault trace, as well as confirm the location of primary and secondary faulting.
- Fault Displacement Hazard Assessment, to estimate future permanent ground deformation related to surface-fault rupture on the Greenville fault.

*Deliverables:*

- Draft and Final Surface Fault Rupture Hazard Report

### **3.2.4 Hazardous Materials Investigation & Analysis (Phase 1 Site Assessments)**

Scope in this task includes only Phase 1 Site Assessment. Initiation, content, and character of the Phase 2 Site Assessment would be contingent upon the results of the Phase 1 study, and it is therefore excluded from this 30% PE design scope.

It is assumed that the investigation & analysis for the rail corridor would not include I-580 segment, i.e. the limits for the evaluation would be from Greenville as the west limit, to the proposed Mountain House station. Furthermore, it is assumed that the median I-580 rail segment would not need a separate assessment.

*Deliverables:*

- Draft and Final Phase 1 Site Assessment Study

### **3.2.5 Drainage / Hydraulics**

AECOM will develop Hydrology and Hydraulic, Floodplain, and Stormwater Management studies to support the 30% design phase. Scope to include site visits, desktop analysis of previously published data, Flood Map changes analysis (if applicable), drainage design for the guideway corridor, coordination meetings attendance, obtaining approvals for the preliminary design for each jurisdictional authority.

The floodplain report will discuss design alternatives, impacts to floodplains, and major and minor cross drainage systems. The hydrology and hydraulics report will discuss local climate and watershed characteristics, design criteria for track alignment drainage concepts including aerial structures and at-grade sections, hydraulic analysis, and proposed onsite and offsite improvements.

The Stormwater Management Plan will identify proper performance of constructed infrastructure and identify pertinent agencies and governing storm water regulations. This report will identify the applicable storm water regulations on federal, state, regional, and local levels, which will serve as the basis for storm water mitigation proposed as part of the Project, both during construction and implementation. The drainage concepts are discussed in this report for the track alignment, grade separations, parcel takes, stations, and maintenance facilities currently proposed. This report also presents a “menu” of best management practices (BMPs), including structural and non-structural for during construction and post-construction, which can be implemented to mitigate water quality concerns based on the proposed improvements.

*Deliverables:*

- Draft Hydrology/Hydraulics Report
- Final Hydrology/Hydraulics Report
- Draft Floodplain Report
- Final Floodplain Report
- Draft Stormwater Management Plan
- Final Stormwater Management Plan

### 3.2.6 Preliminary Engineering Report

The Preliminary Engineering Report will summarize all the design findings and provide recommendations for future design stages. It will include chapters dedicated to all major design disciplines in the project, including but not limited to: civil, track, structural, roadway, traffic & MOT, stations, ROW, utilities, drainage, geotechnical, systems / signals, communications, electrical and geotechnical. Report will also include operational, constructability, operations, systems, safety/security, cost-effectiveness, and community acceptance considerations.

*Deliverables:*

- Draft Preliminary Engineering Report
- Final Preliminary Engineering Report

## Task 3.3 – 30% - Cost Estimates

### Capital Cost Estimates

AECOM will develop a design-based cost estimates for all infrastructure improvement elements from the 30% design. This cost estimate will be presented in a report that summarizes the assumptions used to develop the estimate, along with quantity calculations and unit cost backup. For the rail corridor, AECOM will produce preliminary grading model to derive a rough order of magnitude for earthwork to support Cost Estimate and inform future refinement of rail alignment and profile. Model will be limited in scope to account for basic drainage ditches and retaining walls. Model will not account for temporary construction excavations, grading for systems buildings and structures, intersection/grade crossing grading, drainage conveyance profiles. Cross sections will not be shown in standard border.

*Deliverables:*

- Draft 30% Capital Cost Estimate & Report
- Final 30% Capital Cost Estimate & Report

# Task 4: PA/ED Environmental Technical Studies

## Project Understanding for PA/ED

This section summarizes alternatives that will be evaluated in the combined NEPA and CEQA document<sup>1</sup>. Due to available and anticipated limited funding in the near term for construction, the Authority is focusing the NEPA/CEQA document on alternatives that end at Mountain House and the Tracy OMF, with a Minimal Operable Segment (MOS) to Southfront Road (See Figure 3). These alternatives are depicted schematically on Figures 4 and 5. This summary includes a number of alternatives that substantially deviate from the alternatives and variants evaluated in the CEQA EIR and will therefore require new data collection and analysis as summarized in Table 4.

**Figure 3 – CEQA Certified Alternative**



## No Build (assumed to be the same as the No Project Alternative in the CEQA EIR)

The No Project Alternative would result in no new rail transit or other transit connection being established between the Central Valley and Bay Area. Existing transit services between the Central Valley and Bay Area would continue, including Altamont Corridor Express (ACE) between Stockton and San Jose, Bay Area Rapid Transit (BART), and the various existing bus connections to BART.

The No Project Alternative assumes that Phase I of the ACE Extension, which would extend ACE service to Ceres, would be operational by 2023.

In addition, the No Project Alternative assumes the continuation of public commuter bus services operated by the San Joaquin Regional Transit District (San Joaquin RTD).

The No Project Alternative also assumes that the existing roadway system connecting the Central Valley and Bay Area (the central artery being Interstate [I]-580) will undergo maintenance but no capacity expansion projects.

## Build Alternatives

### CEQA Certified Alternative

- Alignment: I-580 Median, Alameda County Transportation Corridor, Stone Cut Alternative, Union Pacific Railroad (UPRR) in San Joaquin County
- Stations: Dublin Pleasanton, Isabel, Southfront Road Station Alternative, Mountain House Station Alternative
- OMF: Tracy OMF

### I-580 Section Alternatives

- North of I-580 Alignment, North of I-580 Isabel and Southfront Road Stations to be determined by and provided by others
- Managed Lane Conversion, Managed Lane Isabel and Southfront Road Stations to be developed under a separate scope and provided by others

### Altamont Section Alternative

- Alameda County Transportation Corridor Straightening as defined by a separate scope

### Mountain House Section Alternative

- North of I-580/I-205 Alignment; Mountain House I-205 Station, Spur to Tracy OMF as defined in Task 2

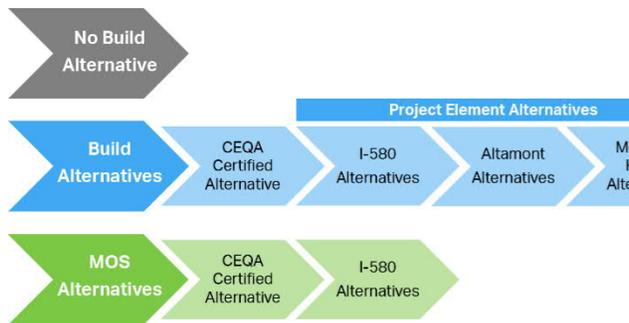
<sup>1</sup> If federal or local funds are received to accommodate construction to North Lathrop then AECOM and the Authority

will revisit the scope and associated fee to accommodate the full Phase 1 to Lathrop in the NEPA document.

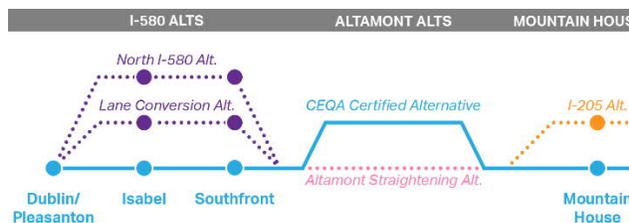
### Minimal Operable Segment (MOS)

- CEQA Certified Alternative (Alignment: I-580 Median; Stations: Dublin/Pleasanton, Isabel, Southfront Road; OMF: Interim Southfront Road OMF) with potential for expanded parking due to new horizon years
- I-580 Section Project Element Alternatives
- North of I-580 Alignment, North of I-580 Isabel and Southfront Road Stations, provided by others
- Managed Lane Conversion, Managed Lane Isabel and Southfront Road Stations, provided by others

**Figure 4 – Project Alternatives**



**Figure 5 – Comparison of Alternatives**



## 4.1 Environmental Technical Studies

Technical reports will be prepared to provide baseline and affected environmental data. This approach will be coordinated with FTA, Caltrans, and other Cooperating Agencies. The AECOM team will address the range of technical disciplines as required by NEPA and current FTA standard operating procedures (SOPs) and practices. The environmental process will reflect

FTA guidance and regulations, along with incorporating Caltrans SER guidance, templates, and annotated outlines, as applicable. A comprehensive set of strategies and environmental commitments will be identified to reflect current understanding. This will reflect agency consultation and public input received and relate to anticipated requirements and design features.

The following Technical Reports/Memoranda will be prepared per the Caltrans Project Study Report/Project Development Support (PSR/PDS) for the project:

- Community Impact Assessment (CIA)/Environmental Justice
- Visual Impact Assessment
- Section 106 Documentation, including an Area of Potential Effects (APE) Archeological Survey Report (ASR) and Historical Resources Evaluation Report (HRER), and Historic Property Survey Report (HPSR), as well as Native American Consultation.
- Preliminary Jurisdictional Determination from the U.S. Army Corps of Engineers (USACE) identifying wetlands and other Waters of the United States within the project footprint.
- Noise/Vibration Study
- Noise Abatement Decision Report (NADR)
- Natural Environment Study (NES)
- Biological Assessment (BA)
- Hazardous Materials
- Ridership Methodology
- Air Quality/Health Risk Assessment
- Energy
- Greenhouse Gas/Climate Change
  - Section 4(f) De Minimis

*Deliverables:*

- Administrative Draft Technical Reports in electronic format for review and comment

by the Authority. One review with a screen check is assumed

- Administrative Draft Technical Reports in electronic format for review and comment by Caltrans up to two rounds.
- Final Technical Reports in electronic format for review and comment by FTA up to two rounds.

*Assumptions:*

- No changes to the design or alternatives will occur once the project analysis has been started.
- No additional alternatives will be considered.
- If the Authority requires changes, additional fee and scope will be required and additional time will be required for completion
- All technical reports will rely on data available from the Certified CEQA EIR for the Certified EIR alternative supplemented by new data for the alternatives.
- All the project alternatives listed above under “Project Description” will be taken through full analysis. The only potential exception will be the I-580 Section Project Element Alternatives, should these alternatives prove infeasible per the results of analysis to be completed by others.
- This scope and budget assumes inclusion of the I-580 Section Project Element Alternatives. However, the feasibility of the I-580 Section Project Element Alternatives will be determined no later than November 1, 2021 and prior to the release of the NOI/NOP by others.
- All technical reports will be subject to one round of review/comment by the Authority with a follow up screen check review for comment incorporation, followed by up to two rounds of review/comment by FTA and Caltrans with additional FTA legal

sufficiency review. Submittal of all reports and documents will be conducted electronically; production of hardcopies is not included in this scope of work.

- Additional surveys, noise monitoring, data collection, and analysis will be required for the technical reports in compliance with federal regulations.
- New noise monitoring locations will be limited to a maximum of seven locations to accommodate analysis of the new alternatives. Existing noise data from the CEQA EIR will be used for all remaining locations in the noise model and will be accepted by Caltrans and the NEPA Lead Agency.
- Economic and ROW impacts will be addressed in the Community Impact Assessment (CIA) per federal requirements.
- Up to six new visual simulations will be required for the NEPA document and the Visual Impact Assessment (locations to be determined in consultation with Caltrans and FTA).
- No more than 10 additional historic-period properties in the Area of Potential Effects (APE) will require evaluation for eligibility and completion of Department of Parks and Recreation (DPR) 523 forms.
- No additional CEQA historic resources will be impacted by the project alternatives.
- The amended APE will be drafted and finalized with one round of review by the Authority, Caltrans, and FTA prior to submitting to the SHPO for concurrence.
- No additional fieldwork will be necessary for cultural resources.
- No archaeological resources are present within the archaeological APE and no Extended Phase I [XPI] work or subsurface excavation will be required.

- Project alternatives will not have adverse effects on Section 106 properties within the APE therefore no individual Section 4(f) evaluation.
- Protocol-level surveys for special-status wildlife species is not included, no Section 7 consultation.
- Potential Caltrans requirements for additional technical reports would be subject to additional scope and fee.
- All technical reports will be prepared in compliance with the templates found on the Caltrans SER and is assumed to be sufficient for NEPA.
- Travel demand modeling and interchange operational analysis is not included in this Task.
- No Section 6(f) resources will be impacted.
- The footprints for the Isabel Station, Southfront Road Station, and Mountain House Station Alternative may require expansion from the what was analyzed as part of the 2021 CEQA EIR to accommodate increased parking demand that reflect the updated ridership data. This scope and budget reflect task and budget to include the new footprint areas in the EIS/SEIR.

## 4.2 NEPA/CEQA

The project team anticipates this document to be a NEPA Environmental Impact Statement (EIS)/CEQA Subsequent Environmental Impact Report (SEIR) based on potential impacts the AECOM team believes will be identified through the environmental process as well as the substantial changes in the proposed project since completion of the 2021 CEQA Notice of Determination (NOD). AECOM will prepare the NEPA documentation in accordance with NEPA, current FTA EIS SOPs, and CEQ's July 2020 ruling. The CEQA documentation will be prepared in compliance with the CEQA Statutes and Guidelines, and the Caltrans SER. The NEPA documentation will be formatted in accordance with the United States Department of Transportation's (USDOT's) August 19, 2019

memorandum, "Interim Policy on Page Limits for NEPA Documents and Focused Analyses." AECOM will prepare the EIS/SEIR documentation in a concise, succinct, reader-friendly format with appropriate quality graphics and tables to communicate information to a non-technical audience. This scope assumes a combined Final EIS and Record of Decision in accordance with the 2015 Fixing America's Surface Transportation (FAST) Act. The environmental process will reflect FTA guidance and regulations, along with incorporating Caltrans SER guidance, templates, and annotated outlines, as applicable.

The following NEPA and or CEQA components for an EIS/SEIR will be undertaken by the consulting team:

- Prepare a NEPA Notice of Intent (NOI) and CEQA Notice of Preparation (NOP)
- Public Scoping
- Prepare Administrative Draft EIS/SEIR
- Prepare a Public Draft EIS/SEIR
- Conduct public meeting(s), Public Hearing and public outreach
- Responses to public comments
- Prepare Combined Final EIS/Record of Decision (ROD)
- Prepare a Final SEIR/Mitigation Monitoring and Reporting Program (MMRP), NOD, and Statement of Overriding Considerations (SOC)/Findings
- All public facing documents will be prepared in accordance to 508 compliance

### 4.2.1 EIS Annotated Outline

On July 16, 2020, the CEQ issued a Final Rule entitled "Update to the Regulations Implementing the Procedural Provisions of the National Environmental Policy Act." AECOM will prepare an EIS Annotated Outline per the current CEQ guidance and submit to FTA for review and comment. Upon receipt of FTA comments, AECOM will revise and finalize the EIS Annotated Outline and resubmit to FTA for

final approval. To the greatest extent feasible, the EIS Annotated Outline will be modeled after the EIS/SEIR Annotated Outline on the Caltrans SER.

*Deliverables:*

- Administrative Draft annotated outline for review and comment by the Authority
- Administrative Draft annotated outline for review and comment by the FTA and Caltrans
- Draft annotated outline for review and comment by the FTA and Caltrans
- Final annotated outline for review and comment by the FTA and Caltrans

#### **4.2.2 Administrative Draft EIS/SEIR**

It is assumed that a Preferred Alternative will be identified by the Authority and FTA prior to completing the Administrative Draft EIS/SEIR. The AECOM team will prepare an Administrative Draft EIS/SEIR to include the following:

- Cover Page and Abstract
- Table of Contents
- Executive Summary
- 1.0 Proposed Project/Purpose and Need
- 2.0 Project Alternatives
- 3.0 Affected Environment and Environmental Consequences
- 4.0 CEQA Significance Determinations
- 5.0 Agency and Public Involvement
- 6.0 Evaluation of Alternatives
- 7.0 List of Preparers
- 8.0 Distribution List
- Appendices, including the NOI/NOP, Section 4(f) de minimis Determination, technical studies, and other appendices as needed per 40 CFR 1502.10 and the Caltrans SER.

The Administrative Draft EIS/SEIR will include graphics where needed to facilitate understanding of the material and concepts.

Baseline existing conditions will be documented, impact evaluations will be conducted, and mitigation measures will be formulated. Submittal of the Administrative Draft EIS/SEIR to the Authority, Caltrans, and FTA will be conducted electronically. Cooperating Agencies will be provided 30 days for their review of Administrative Draft documents. Cooperating Agencies will be requested to provide comments electronically on an Authority provided template developed by the AECOM team. Production of hardcopies of the Administrative Draft EIS/SEIR is not included in this scope of work. Comments and revisions arising from the Authority, Caltrans, and FTA review will be incorporated into the Draft EIS/SEIR. The AECOM team will facilitate a comment resolution meeting(s) with the Authority, Caltrans, and FTA to expedite resolution of contentious issues. Key issues will be identified beforehand with a recommendation for action. The AECOM team will incorporate requested revisions from the Authority, Caltrans, and FTA into the Administrative Draft EIS/SEIR for review by cooperating agencies. If additional rounds of internal review are required before distribution to the cooperating agencies, additional budget may be required. The AECOM team assumes between one combined to three individual meetings with Authority, Caltrans, and FTA. The AECOM team will respond to comments in the electronic template sent to agencies and provide a Draft EIS/SEIR document to the Authority and FTA for their final review in four weeks.

*Deliverables:*

- Administrative Draft EIS/SEIR in electronic format for review and comment by the Authority.
- Administrative Draft EIS/SEIR in electronic format for review and comment by FTA.
- Administrative Draft EIS/SEIR in electronic format for review and comment by Cooperating Agencies /Caltrans
- Comment response template

#### **4.2.3 Draft EIS/SEIR**

Once the reviews by the Authority and agencies are complete, AECOM will prepare the Draft

EIS/SEIR. The AECOM team will prepare and deliver hard copies of the approved Public Review Draft EIS/SEIR to FTA and CD-ROMs or electronic media for distribution. The AECOM team will also submit electronic copies of all documents to the SCH as authorized by the Authority and make copies available for public review per the requirement of the CEQA Guidelines.

*Deliverables:*

- Screencheck Draft EIS/SEIR in electronic format for review and comment by FTA.
- Draft EIS/SEIR in electronic format for public and agency review.
- Two (2) hard copies of Draft EIS/SEIR and 30 CDs or electronic media
- eNEPA version of the Draft EIS/SEIR

#### **4.2.4 Response to Comments – Administrative Combined Final EIS/SEIR**

The AECOM team will prepare a Response to Comments document that will include responses to substantive issues raised on the Draft EIS/SEIR and include annotated comment letters. Cooperating Agencies will be provided 30 days for their review of Administrative Final EIS/SEIR. Cooperating Agencies will be requested to provide comments electronically on an Authority provided template developed by the AECOM team. Production of hardcopies of the Administrative Final EIS/SEIR is not included in this scope of work. The AECOM team will facilitate a comment resolution meeting(s) with the Authority, Caltrans, and FTA to expedite resolution of contentious issues. Key issues will be identified beforehand with a recommendation for action. The AECOM team will incorporate requested revisions from Authority, Caltrans, and FTA into the Administrative Final EIS/SEIR for review by cooperating agencies. If additional rounds of internal review are required before distribution to the cooperating agencies, additional budget may be required. The AECOM team assumes between one combined to three individual meetings with Authority, Caltrans, and FTA. The AECOM team will finalize the Final Draft document within 6 weeks of Cooperating Agency comments.

*Deliverables:*

- Comment response template
- Administrative Combined Final EIS/ROD/SEIR in electronic format for review and comment by the Authority.
- Administrative Combined Final EIS/ROD in electronic format for review and comment by FTA.
- Administrative Combined Final EIS/ROD in electronic format for review and comment by Cooperating Agencies.

#### **4.2.5 Combined Final EIS/SEIR**

AECOM will develop a combined draft, legal sufficiency draft, and Combined Final EIS/ROD document. Per current FTA SOPs, the Combined Final EIS/ROD will include, as applicable:

- Mitigation and Monitoring and Reporting Plan
- Section 106 determination;
- Final Section 4(f) evaluation and finding;
- Project-level air quality conformity;
- Discussion of wetland impacts and commitment to mitigation to obtain and comply with conditions of a Section 404 permit and Protection of Wetlands Executive Order 11990 finding;
- Floodplain finding.
- In addition to these determinations and findings, the Combined Final EIS/ROD will include:
  - Responses to substantive comments from the public and agencies;
  - Summary of changes since the Draft EIS; and
  - Clear identification of the preferred alternative (not only the alignment but also the locations of all the stations, maintenance facilities, and associated structures).

For the Combined Final EIS/ROD, the Authority's legal counsel will attest to the legal sufficiency of the document under State environmental laws, prior to requesting signature from FTA. FTA legal counsel will review the Combined Final EIS/ROD for legal sufficiency with CEQ and FTA environmental regulations, and other environmental requirements.

The AECOM team will prepare a Final EIS document that will incorporate revised material originally included in the draft EIR. All work products will be prepared using Microsoft Word and other formats that are compatible with the Authority's software applications, similar to the production of the draft EIS. All documents and plans will be the property of the Authority. The AECOM team will provide two paper copies to the lead agency and one electronic copy to each lead agency. The AECOM team will assist the Authority in providing the document in a PDF to the Authority and Caltrans that is within the requirements of their website posting. This includes providing a PDF set of eNEPA compliant files for the Federal Register. All PDF files will be compliant with California Government Code Section 7405, which requires that all state agencies comply with Section 508 of the federal Rehabilitation Act of 1973.

The AECOM team will also prepare a Final SEIR that will include responses to all comments received on the Draft SEIR, and text changes for the Draft SEIR in response to comments and/or requested by the Authority. The AECOM team will also prepare draft and final versions of the MMRP, NOD, and SOC/Findings for review and comment by the Authority.

*Deliverables:*

- Screencheck Combined Final EIS/ROD in electronic format for review and comment by FTA.
- Combined Final EIS/ROD in electronic format for public and agency review.
- Two hard copies of the Combined Final EIS/ROD and 30 CDs or electronic media.
- eNEPA version of Combined Final EIS/ROD for Federal Register

- Screencheck Final SEIR in electronic format for review and comment by the Authority
- Final SEIR Responses to Comments for commenting agency review.
- Administrative Draft and Final version of the MMRP, NOD, and SOC/Findings in electronic format.

*Assumptions:*

- If federal or local funds are received to accommodate construction to North Lathrop then AECOM and the Authority will revisit the scope and associated fee to accommodate the full Phase 1 to Lathrop in the NEPA document.
- FTA will be the NEPA Lead Agency.
- This scope assumes a combined Final EIS and Record of Decision in accordance with the 2015 Fixing America's Surface Transportation (FAST) Act.
- The CEQA documentation will be prepared in compliance with the CEQA Statutes and Guidelines, and the Caltrans SER. The NEPA documentation will be formatted in accordance with the United States Department of Transportation's (USDOT's) August 19, 2019 memorandum, "Interim Policy on Page Limits for NEPA Documents and Focused Analyses."
- All public facing documents will be prepared in accordance to 508 compliance
- The environmental process will reflect FTA guidance and regulations, along with incorporating Caltrans SER guidance, templates, and annotated outlines, as applicable.
- No changes to the design or alternatives will occur once the project analysis has been started.
- No additional alternatives will be considered.

- If the Authority requires changes, additional fee and scope will be required and additional time will be required for completion
- The NEPA/CEQA document will be on alternatives that end at Mountain House and the Tracy OMF, with a Minimal Operable Segment (MOS) to Southfront Road
- No Build is assumed to be the same as the No Project Alternative in the CEQA EIR with the exception of the horizon years as discussed in the ridership scope
- The No Build Alternative assumes that Phase I of the ACE Extension, which would extend ACE service to Ceres, would be operational by 2023.
- No Build assumes the continuation of public commuter bus services operated by the San Joaquin Regional Transit District (San Joaquin RTD).
- The No Build Alternative also assumes that the existing roadway system connecting the Central Valley and Bay Area will undergo maintenance, but no capacity expansion projects.
- All the project alternatives listed above under "Project Description" will be taken through full analysis. The only potential exception will be the I-580 Section Project Element Alternatives, should these alternatives prove infeasible per the results of analysis to be completed by others.
- All engineering design work to be completed by others or included in a separate task.
- This scope and budget assumes inclusion of the I-580 Section Project Element Alternatives. However, the feasibility of the I-580 Section Project Element Alternatives will be determined no later than November 1, 2021 and prior to the release of the NOI/NOP.
- AECOM will assist the NEPA Lead Agency in the drafting of a Notice of Availability for inclusion in the Federal Register. However, actual posting will be the responsibility of the NEPA Lead Agency.
- The alignment and stations to be evaluated as part of the CEQA Certified Alternative will not deviate from the existing 15% plans. Any changes will require a change in the scope and budget.
- FTA will accept the analysis and conclusions of the Authority approved CEQA document.
- The proposed widening of I-205 under the direction of the San Joaquin County Council of Governments (SJCOG) will be assumed to be a related action. Potential impacts associated with the I-205 widening project will not be evaluated as part of the Valley Link NEPA document.
- Client-initiated changes in the project description will require review of the existing scope of work, schedule, and budget to accommodate potential out of scope costs and schedule delay.
- All Altamont Section alternatives will avoid existing conservation easements.
- The NEPA document will require compliance with Section 7 (threatened and endangered species), Section 4(f) (cultural and recreational resources); and Section 106 (cultural resources); no Section 7 consultation will be necessary, an individual section 4(f) evaluation will not be necessary for the EIS.
- All documents prepared will follow appropriate templates required by the Lead Agency and the Caltrans SER, as appropriate.
- Administrative draft NEPA/CEQA document deliverables will be subject to one round of review/comment by the Authority, followed by two rounds of

review/comment by Caltrans, BART, and ACTC and two rounds of review/comment by FTA. Submittal of all reports and documents will be conducted electronically; production of hardcopies of administrative draft documents is not included in this scope of work.

- This scope assumes receipt of up to 300 discrete comments are received during public review of the Draft EIS/SEIR. The Authority will need to provide responses for comments if greater than 300 are received.
- Two hard copies of the Draft and Final EIS/SEIR will be provided to the Authority and 30 CDs or electronic media.
- This scope does not include tasks related to agency permitting.
- This scope does not include tasks related to revising the existing PSR/PDS or drafting a potential PSR/PDS for the portions of the project within the I-205 corridor.
- Caltrans will require a Project Report (PR) as part of Project Approval/Environmental Document (PA/ED), including Traffic Forecast Memo, Operations Analysis Report, Mandatory or Advisory Fact Sheets for Design Exceptions, and Right-of-Way Data Sheet, all to be completed in other tasks.
- No Section 6(f) resources are present in the study area
- See Table 4 for the assumptions associated with each resource and other NEPA/CEQA requirements
- It is assumed no changes to design or costs will be required due to the addition of BART vehicles or associated with core capacity outside of the Dublin-Pleasanton BART Station.

**Table 5 – Comparison of Existing CEQA Information and NEPA Requirements and Assumed Analysis Required for this Scope**

<b>Resource</b>	<b>Existing CEQA Analysis</b>	<b>NEPA Requirements for Scope</b>	<b>CEQA Certified Alignment</b>	<b>I-580 Section Project Element Alternatives Assumptions</b>	<b>Altamont Section Alternative</b>	<b>Mountain House Section Alternative</b>
<b>Purpose and Need</b>	N/A	Review to ensure inclusive of alternatives	Assume same	Review to ensure inclusive of alternatives	Review to ensure inclusive of alternatives	Review to ensure inclusive of alternatives
<b>Ridership</b>	Update horizon years and use new ACTC model	Assume updated data can be used for analysis	Update horizon years and use new ACTC model	Assume updated data can be used for analysis	Update horizon years and use new ACTC model	Update horizon years and use new ACTC model
<b>Cost Estimates</b>	Assume same	Assume existing data can be used for analysis	Assume same	To be completed by Others	To be completed in Task 4.3	To be completed in Task 4.3
<b>Traffic Modeling</b>	N/A	Analyze VMT base and horizon year travel data. Assume forecasts for base and future year and future year development	N/A	Traffic Forecast Memo, Operations Analysis Report to be completed by Others	Traffic Forecast Memo, Operations Analysis Report to be completed in Task 4.5	Traffic Forecast Memo, Operations Analysis Report to be completed in Task 4.5
<b>Construction Phasing</b>	Assume same	To be completed Task 2 and by others	Assume same	To be completed by Others	To be completed in Task 2	To be completed in Task 2
<b>Aesthetics</b>	Assume same	Assume existing data can be used for analysis. Assume up to 9 new visual simulations.	Assume Same	Assume existing data can be used for analysis. Assume up to 9 new visual simulations.	Assume existing data can be used for analysis. Assume up to 9 new visual simulations.	Assume existing data can be used for analysis. Assume up to 9 new visual simulations.
<b>Agricultural Resources</b>	Assume same	Complete USDA AD-1006 Farmland Conversion analysis	Assume Same	Complete USDA AD-1006 Farmland Conversion analysis	Complete USDA AD-1006 Farmland Conversion analysis	Complete USDA AD-1006 Farmland Conversion analysis

Resource	Existing CEQA Analysis	NEPA Requirements for Scope	CEQA Certified Alignment	I-580 Section Project Element Alternatives Assumptions	Altamont Section Alternative	Mountain House Section Alternative
<b>Air Quality</b>	State Guidelines	Discuss applicable air quality conditions in the project areas using Bay Area Air Quality Management District monitoring information. Construction emissions will be estimated using the Sacramento Metropolitan Air Quality Management District Roadway Construction Model. Will use emission factors from California Air Resources Board EMFAC2011. A Hot Spot analysis will also be undertaken.	Assume Same	Discuss applicable air quality conditions in the project areas using Bay Area Air Quality Management District monitoring information. Construction emissions will be estimated using the Sacramento Metropolitan Air Quality Management District Roadway Construction Model. Will use emission factors from California Air Resources Board EMFAC2011. A Hot Spot analysis will also be undertaken.	Discuss applicable air quality conditions in the project areas using Bay Area Air Quality Management District monitoring information. Construction emissions will be estimated using the Sacramento Metropolitan Air Quality Management District Roadway Construction Model. Will use emission factors from California Air Resources Board EMFAC2011. A Hot Spot analysis will also be undertaken.	Discuss applicable air quality conditions in the project areas using Bay Area Air Quality Management District monitoring information. Construction emissions will be estimated using the Sacramento Metropolitan Air Quality Management District Roadway Construction Model. Will use emission factors from California Air Resources Board EMFAC2011. A Hot Spot analysis will also be undertaken.
<b>Biological Resources</b>	State Methodology	Consultation regarding Section 7, NMFS, Section 401, Section 404 Rivers and Harbors Act, Migratory Bird Treaties and other protection acts. Protocol level surveys are not included.		Consultation regarding CESA, Section 1600, Porter-Cologne Act as/if necessary No formal Section 7	Consultation regarding Section 7, NMFS, Section 401, Rivers and Harbors Act, Migratory Bird Treaties and other protection acts No formal Section 7	Consultation regarding Section 7, NMFS, Section 401, Rivers and Harbors Act, Migratory Bird Treaties and other protection acts No formal Section 7 consultation will be necessary

Resource	Existing CEQA Analysis	NEPA Requirements for Scope	CEQA Certified Alignment	I-580 Section Project Element Alternatives Assumptions	Altamont Section Alternative	Mountain House Section Alternative
				consultation will be necessary	consultation will be necessary	
<b>Cultural Resources</b>	State Methodology	Section 106 compliance required. Assume no more than 10 historic-period properties in APE will require evaluation, no additional architectural resources within the APE and no archaeological resources. No anticipated Section 106 issues.	Revise existing analysis to conform to Section 106 requirements.	Expand APE to accommodate new project footprint. Assume 10 resources to be evaluated and no archaeology. Assume no resources affected	Expand APE to accommodate new project footprint. Assume 10 resources to be evaluated and no archaeology. Assume no resources affected	Expand APE to accommodate new project footprint. Assume 10 resources to be evaluated and no archaeology. Assume no resources affected
<b>Energy</b>	State Methodology	Assume existing data can be used for analysis	Assume Same	New analysis required for Alternative	New analysis required	New analysis required
<b>Geology/Soils</b>	State Methodology	Assume existing data can be used for analysis	Assume Same	Assume Same	New analysis required	New analysis required
<b>Greenhouse Gas Emissions</b>	State methodology	Conduct Climate Change/Green House Gas analysis and produce Conformity Report	Assume Same	New analysis required	New analysis required	New analysis required
<b>Hazardous Materials</b>	State Methodology	Perform Phase I Environmental Site Assessment	Assume Same	Assume Same	New analysis required	New analysis required
<b>Hydrology/Water Quality</b>	State Methodology	Assume new hydrological analysis, water quality analysis, and floodplain analysis	Assume Same	Assume new hydrological analysis, water quality analysis, and floodplain analysis	Assume new hydrological analysis, water quality analysis, and floodplain analysis	Assume new hydrological analysis, water quality analysis, and floodplain analysis

Resource	Existing CEQA Analysis	NEPA Requirements for Scope	CEQA Certified Alignment	I-580 Section Project Element Alternatives Assumptions	Altamont Section Alternative	Mountain House Section Alternative
<b>Land Use/Planning</b>	State Methodology	Analyze existing and future land use in the corridor and identify potential displacements	Assume Same	New analysis required	New analysis required	New analysis required
<b>Noise/Vibration</b>	FTA Methodology	Assume FTA Accepts Prior Methodology / Analysis / Result. Additional noise monitoring may be necessary.	Assume new noise analysis with one additional noise monitoring location near Southfront Road OMF	Assume new noise analysis with existing noise monitoring data text.	No additional analysis/monitoring.	Assume new noise analysis with existing noise monitoring data for portions of alignment within alternative. Up to 7 additional noise monitoring locations and new analysis for new alignment.
<b>Population and Housing</b>	State Methodology	Analyze socioeconomic and economic indicators	Assume Same	New analysis required	New analysis required	New analysis required
<b>Public Services</b>	State Methodology	Assume existing data can be used for analysis	Assume Same	New analysis required	New analysis required	New analysis required
<b>Recreation</b>	State Methodology	Assess recreational facilities using existing data	Assume Same	New analysis required	New analysis required	New analysis required
<b>Safety and Security</b>	State Methodology	Assess safety and security threats/issues	Assume Same	New analysis required	New analysis required	New analysis required
<b>Transportation and Traffic</b>	VMT Analysis	Conduct traffic assessment, pedestrian and bicycle facilities assessment, transit assessment	Assume Same	Assume Same	Updated VMT analysis required	Updated VMT analysis required
<b>Utilities and Service Systems</b>	State Methodology	Assume existing data can be used for analysis	Update Required	Update Required	Update Required	Update Required
<b>Environmental Justice</b>	N/A	Conduct assessment according to guidance provided under 2012 USDOT 5610.2(a), Updated Final Order on	N/A	New analysis required	New analysis required	New analysis required

Resource	Existing CEQA Analysis	NEPA Requirements for Scope	CEQA Certified Alignment	I-580 Section Project Element Alternatives Assumptions	Altamont Section Alternative	Mountain House Section Alternative
<p>Environmental Justice and the 2012 FTA Circular 4703.1, Environmental Justice Policy Guidance for Federal Transit Administration Recipients. In addition, an assessment per EO 13045 Effects on Children will be conducted.</p>						
<b>Section 4(f)</b>	N/A	Conduct Section 4(f) analysis	Assume de minimis for Iron House Trail. No other resources affected.	Assume de minimis for Iron House Trail. No other resources affected.	Assume no other resources affected	Assume no other resources affected
<b>EMI/EMF</b>	N/A	Include Analysis	Include Analysis	Include Analysis	Include Analysis	Include Analysis

## 4.3 Ridership

The scope below summarizes the work needed to develop ridership forecasts and the required outputs for the Valley Link NEPA/CEQA process, building upon the previous forecasting work undertaken for this corridor, using the same methodology to ensure consistency with previous results.

The ridership forecasts will be developed using two tools: (1) the ACE Passenger Rail Forecasting Model (“ACE Model”), and (2) the latest version of the Alameda County Transportation Commission (“ACTC Model”). For the regional model, the Consulting Team will use the ACTC 2019 model (a newer version than previously used in the joint forecasting process), which was updated for the Regional Transportation Plan (the Plan Bay Area 2040), which is the latest available version of the ACTC model. The updated version would need to be set up and integrated with the ACE model prior to generating ridership forecasts. Last-mile shuttle services will be reflected in the forecasts to the extent that they are included in the ACTC 2019 model. The Consulting Team will develop basic validation comparisons between the model estimated boardings and any available observed ridership data for routes in the model area, including the previous Valley Link ridership. The model network and access coding would be reviewed and updated as necessary.

Outputs from the ACE Model are combined with the ACTC Model to take advantage of the ACTC Model’s network assignment procedures, enabling better reporting of transfers and other ridership statistics.

The current forecast years for the ACTC model are 2020 and 2040. Since the forecasts years for the proposed Valley Link NEPA/CEQA process are 2030 or 2035 for opening day and 2050, the demographic data from the ACTC model would have to be interpolated / extrapolated to develop either 2030 or 2035 and 2050 year demographics in order to develop ‘2030’ or ‘2035’ and ‘2050’ year models. Note that only demographics would be updated, and other inputs would not be changed.

The next step in this process is to run the ACE Model to forecast ridership outside the geographic area of the ACTC Model. For this step, station-to-station trip tables are produced for the ACE network and the new Valley Link service.

Next, the ACTC Model is run, and the resulting station boardings are compared to boardings from the ACE Model. To facilitate this comparison, trips from the ACE Model are allocated to specific origins and destinations, approximated using a contiguous series of transportation analysis zones (TAZs) covering the geographic extent of the modeling effort. The results are then checked to avoid double-counting trips forecast in the ACTC Model, creating a combined set of transit trip tables to assign to the ACTC Model networks for generating ridership estimates for Valley Link.

The model runs that will be generated/analyzed in this process include the following for the IOS to Mountain House scenario:

- No Build scenario – rerun with the latest model
- I-580 segment – rerun with the latest model
- Altamont segment – new alignment (with reduced travel times).
- Mountain House segment – new alignment (with reduced travel times).
- Combined segment - run that combines the #2 and #3 changes for a 3rd new alternative.

Once the modeling process as outlined above is completed for each of the three new runs, we will produce a complete set of model outputs, including the following:

- Station boardings
- Station parking estimates
- VMT estimates
- Post-processing to split out BART results
- A modeling technical report will be drafted which will document the methods, assumptions and results of the ridership analysis.

*Deliverables:*

- Administrative draft modeling technical report
- Draft modeling technical report
- Final modeling technical report

*Assumptions:*

- Ridership will build upon the previous forecasting work undertaken for this corridor, using the same methodology to ensure consistency with previous results
- Three model runs for new alternatives and rerun of No Build and the I-580 runs.
- Draft and final modeling technical report will be reviewed and revised through two rounds of review prior to submitting the final report
- Traffic operations are not assumed as part of this scope of work
- STOPS modeling is not assumed as part of this scope of work
- Basis of use of the ACE/ACTC model for ridership forecasting will be documented in the modeling technical report. Additional written documentation and justification outside of the modeling technical report for use of the ACE/ACTC model (and not use of the STOPS model) for FTA is not assumed as part of this scope of work.
- Ridership modeling team will participate in bi-monthly team meetings for 16 months.
- Ridership modeling team will participate in eight coordination meetings with project partners including Caltrans, Authority and/or FTA.
- Additional updates to the travel demand and/or subsequent ridership modeling to support entry of the project into the FTA Capital Investment Grant Program Project Development or Entry to Engineering is not included in this scope of work

## 4.4 Operations Modeling

AECOM will conduct a rail simulation study of the Valley Link Project alternatives as described earlier in Task 4. The purpose of this simulation study will be to evaluate the station and alignment alternatives proposed in the Environmental Impact Report (EIR), with an Initial Operating Segment (IOS) ending at the Mountain House Station and determine run times and potential infrastructure (i.e. passing sidings) for 15% design.

### 4.4.1 Software

The rail model will be developed OpenTrack by OpenTrack Railway Technology Ltd. OpenTrack is an industry standard rail simulation tool which is capable of modeling and simulating complex networks, with an emphasis on scheduled passenger services. In our experience with various models, we have found that OpenTrack is especially useful for generating train schedules, determining meet points, analyzing runtimes, and investigating infrastructure improvements on dedicated transit/commuter alignments.

OpenTrack was developed at the Swiss Federal Institute of Technology and has since found a large following around Europe and in the North American market. It is used by over 300 companies, governments, and research institutes around the world, and our rail modeling team at AECOM has successfully used OpenTrack on Light Rail Transit (LRT) systems such as the Calgary LRT expansion and the newly built Waterloo LRT, as well as regional/commuter rail projects such as the Metrolinx GO Transit Regional Express Rail (RER) expansion in the Greater Toronto Area.

### 4.4.2 Data Requirements

In order to provide an accurate simulation of the corridor and vehicles, the following data is required for each proposed service route:

- Track alignment data (from the complete 15% design with the new additions for the alternatives)
- Curves
- Grades
- Track switches
- Track speeds and civil speed limits
- Proposed signal system (CBTC, CTC, etc.) and signal locations, if applicable
- Proposed passenger operation (from the certified CEQA document and appendix and 15% design)
  - Alternate routes
  - Hours of operation including peak and off-peak times

- Headways for peak and off-peak service
- Locomotive type for performance data. If non-standard or modified:
- Dimensions (length, width, height)
- Weight
- Number of axles
- Maximum adhesion
- Tractive effort curves
- Braking effort curves
- Acceleration/deceleration performance data
- Train Consists
  - Rolling stock (length and tons)

### **Maintenance/Layover Locations**

For track alignment and passenger operation data, AECOM will use available data from engineering drawings and reports prepared for earlier Valley Link work, including the certified EIR and the existing and proposed 15% design. Vehicle characteristic data will come from Stadler and Alstom for the hydrogen multiple-units and/or hybrid vehicles.

### **4.4.3 Model and Simulation**

A rail model will be developed for each of the service route alternatives, as shown in **Error! Reference source not found.** These alternatives are as follows:

1. CEQA Certified Alternative
2. I-580 Section Alternatives
  - a. North I-580 Alternative
  - b. Lane Conversion Alternative
3. Altamont Section Alternative
4. Mountain House Section Alternative

For each alternative, the infrastructure model will be built in OpenTrack using available data and proposed rail alignment. The passenger service will be simulated for an entire weekday, including all peak and off-peak periods. Equipment connections and deadheads to/from

the layover/maintenance locations will be included in the model, with attention paid to using a schedule that minimizes the number of equipment sets.

In order to create a close approximation of real-world operation, a performance reduction factor is typically applied to the locomotives to emulate careful driver performance. AECOM proposes to run each simulation using a 95% performance factor, or in other words the trains will run at least 5% below the speed limit and keep their acceleration/deceleration at least 5% below the maximum service rates at all times.

The first step of simulation for each service alternative will be a runtime analysis to determine intermediate station stop times and meet-points. Meet-points will be used to determine potential areas for passing sidings. This is an iterative process:

1. A suitable passing siding location is found close to the meet-point (i.e. a reasonably flat, tangent section of track, preferably avoiding other infrastructure such as tunnels or overpasses)
2. The simulation is re-run with the siding locations, and any necessary schedule adjustments to shift the meet-points onto the siding locations.
3. The new runtime analysis is used to refine the siding location, and the process repeats.

At this stage in the design, AECOM will limit the iterations to two passes. We have found that two passes are enough to find suitable siding locations and meet schedules for a high-level design. Any additional iterations typically do not result in any significant refinements and are not assumed.

Communication with key stakeholders is essential to producing a model that accurately represents the vision for the Valley Link Project. We will hold regular check-in meetings at key milestones via Microsoft Teams, including a presentation of our results and findings ahead of the Draft Rail Simulation Technical Memo. This will provide an opportunity to share progress, provide clarifications if necessary, and to receive feedback and suggestions as the study progresses.

- The Rail Simulation Technical Memo will include the following:
- information from interim Power Point presentation(s) to client on key findings
- Description of methodology
- Analysis of each scenario, including:
  - Assumptions
    - Fixed
    - Parameters (Variables and their values)
  - Train service and route simulated
  - Runtime analysis.
    - Train schedules
    - Time-distance (stringline) graphs
  - Recommended siding locations and any additional required infrastructure

*Deliverables:*

- Draft Rail Simulation Technical Memo
- Final Rail Simulation Technical Memo

*Assumptions:*

- Rail model will be developed OpenTrack by OpenTrack Railway Technology Ltd.
- The purpose of this simulation study will be to evaluate the station and alignment alternatives proposed in the Environmental Impact Report (EIR), with an Initial Operating Segment (IOS) ending at the Mountain House Station and determine run times and potential infrastructure (i.e. passing sidings) for 15% design.
- For track alignment and passenger operation data, AECOM will use available data from engineering drawings and reports prepared for earlier Valley Link work, including the certified EIR and the existing and proposed 15% design.
- Vehicle characteristic data will come from Stadler and Alstom for the hydrogen multiple-units and/or hybrid vehicles
- run each simulation using a 95% performance factor
- AECOM will limit the iterations to two passes. Any additional iterations are not assumed.

# Task 5: PA/ED Highway Design and Engineering Technical Reports

This scope of services is specifically based to provide the Authority with (Caltrans) Project Approval and Environmental Document Services (PA&ED) for the Valley Link Project between the existing Dublin-Pleasanton BART Station and the proposed Mountain House Station in San Joaquin County. The environmental document services are listed under a separate task.

The Caltrans-approved Project Study Report-Project Development Support (PSR-PDS), will serve as the starting point for PA&ED services. The next step of the project development process will involve preliminary engineering and complete environmental documentation. All design work will conform to Caltrans standards, guidelines, manuals, and policies. All work will conform to applicable federal, state, and local codes and other regulatory requirements. This scope of work assumes that the PA&ED Phase will include development of two (2) Build Alternatives:

- Alternative 1: The alternative presented in the PSR-PDS, except with the recent (2021) revisions made to the rail alignment east of Greenville Road, and the east limit of the project being revised to the proposed Mountain House Station (See Figure 4 and Figure 5).
- Alternative 2: Similar to Alternative 1, currently being developed by the WSP/Mark Thomas (WSP/MT) team, that eliminates one Express Lane on I-580 in the eastbound direction.

The AECOM team will perform all of the tasks described below for Build Alternative 1 only except for the associated tasks under Task 5.2 (Traffic Forecast and Operation Analysis).

It is assumed that the WSP/MT team will complete all engineering work related to Build Alternative 2 except as noted under Task 5.2.

## 5.1 – Caltrans Coordination

### 5.1.1. Caltrans Project Development Team (PDT) Meetings

This task involves meetings and support specific to PA/ED. Assumptions have been made regarding the type and number of meetings that are necessary for effective project delivery.

AECOM will assist the Authority with the Project Development Team (PDT) to guide and assist in the design development of the Project. The PDT members will be made of Caltrans management and functional unit staffs from District 4 (D4) and District 10 (D10), design team members and other project stakeholders. For budgeting purposes, a total of twenty (20) PDT meetings are assumed. These may include meetings focused on specific topics, such as design alternatives, traffic study technical approach, data collection, traffic forecasts, traffic operations and other technical studies. AECOM will prepare agendas, other meeting materials (exhibits, PowerPoint presentations, etc.), draft and final meeting minutes and action items.

### 5.1.2. Caltrans Coordination in Segment 2

Due to the recent (Fall 2021) revision to the rail alignment inside the Caltrans right-of-way and along north side of I-580 and I-205 in Segment 2, AECOM will coordinate with D4 and D10 staff regarding any design concerns and to ensure that this approximate 3.5-mile segment of the rail alignment doesn't preclude future widening of the Caltrans facilities. AECOM will develop cross sections at 500-foot intervals to evaluate the rail design and its potential impact to the adjacent Caltrans facility.

In addition, AECOM will coordinate with Caltrans regarding any additional updates required for the TMP, SWDR, drainage-related reports, and right-of-way data sheets. We will also evaluate any construction concerns, such as ingress/egress of construction vehicles. It is assumed that the rail alignment does not impact any utilities inside of (or spanning across) Caltrans right-of-way.

Deliverables:

- Attendance at up to twenty (20) PDT meetings

- Meeting agendas, minutes, action items list
- Relevant Correspondence

## 5.2 – Traffic Forecast and Operation Analysis

AECOM will perform the following tasks to prepare the traffic analyses to support the project. Since the project runs through both the Alameda County and San Joaquin County, the traffic scope has been separated for Alameda County, which will be reviewed and approved by Caltrans District 4 staff and for San Joaquin County, which will be reviewed and approved by Caltrans District 10 staff.

### 5.2.1. Existing Conditions

#### 5.2.1.1. Traffic Study Limits and Methodology

The following lists the traffic study limits, traffic analysis tools and traffic alternatives. AECOM will confirm the traffic operational analysis and forecasting methodology components, including the data collection plan; horizon years; future year baseline network assumptions; analysis network and boundaries for operational analysis modeling; analysis methodology/tools for freeway, freeway ramps and local intersections; operational model calibration/validation requirements; and measures of effectiveness (MOEs). AECOM will document the available data and methodology for conducting the traffic operations report including the software to perform the analyses in a Traffic Operations Methodology Memorandum. The analysis years include existing conditions, opening year, and design year conditions. AECOM will submit a Traffic Operations Methodology Memorandum to Caltrans for their review and approval.

#### Traffic Study Limits

##### Alameda County (Caltrans District 4)

###### *Freeway*

AECOM will analyze I-580 from the I-580/ San Ramon Road interchange to the I-580 / North Flynn Road interchange.

###### *Interchanges*

AECOM will analyze the following 7 interchanges (to be confirmed by the PDT):

- I-580 / Hopyard Road-Dougherty Road
- I-580 / Hacienda Drive

- I-580 / Airway Boulevard
- I-580 / Isabel Avenue
- I-580 / First Street
- I-580 / Vasco Road
- I-580 / Greenville Road

For CEQA, due to the proposed rail alignment, AECOM will analyze the above listed interchanges since they are expected to have the maximum traffic operational impacts. The ramp intersections at the above identified interchanges will be analyzed. The analysis will be conducted for the existing conditions, Opening Year (2030) No Build and Build conditions, and Design Year (2050) No Build and Build conditions.

However, if any traffic impacts (increase in traffic volumes) based on the Traffic Forecasts' difference plots between the No Build and Build conditions are identified at any other interchange locations not listed above and are within the project study limits, a detailed evaluation of those interchanges will also be included for an additional budget at the PDT's direction, which can also be discussed.

#### *Local City Intersections*

In addition to the above listed interchanges, city street segments and local city intersections around the station/parking area, including the driveways, will be analyzed per the respective local jurisdiction's guidelines.

Hence, AECOM assumes analyses of up to 30 intersections (ramp + local) and 30 segments in the project study area, which will be confirmed with the PDT. The intersections will be analyzed for the existing conditions, Opening Year (No Build and Build conditions), and Design Year (No Build and Build conditions). If the proposed project impacts the intersection operations, necessary mitigation will be included after consulting with Caltrans and respective Cities within Alameda County.

If the PDT decides to analyze more intersections / segments than what is noted above, a detailed evaluation of those intersections can also be included for an additional budget at the PDT's direction.

## **San Joaquin County (Caltrans District 10)**

### **Freeway**

No freeway mainline analysis will be conducted in the PA&ED phase of the project, because the Valley Link Project is not anticipated to add any new traffic to the mainline or modify the existing/future planned lane geometry within San Joaquin County. But, a qualitative assessment of the Freeway operations under No Build and Build conditions will be documented. This qualitative assessment will exhibit the difference in vehicular trips and its circulation based on the travel demand model forecasts between the No Build and Build conditions.

### **Interchanges**

AECOM will analyze the following 2 interchanges (to be confirmed by the PDT):

- I-580 / Patterson Pass Road
- I-205 / Mountain House Parkway

For CEQA, due to the proposed rail alignment, AECOM will analyze the above listed interchanges since they are expected to have the maximum traffic operational impacts based on the proximity to the proposed stations. The ramp termini intersections at the above identified interchanges will be analyzed. Merge/ Diverge analysis will also be performed at the above listed interchanges. The analysis will be conducted for the existing conditions, Opening Year (2030) No Build and Build conditions, and Design Year (2050) No Build and Build conditions.

However, if any traffic impacts (increase in traffic volumes) based on the Traffic Forecasts' difference plots between the No Build and Build conditions are identified at any other interchange locations not listed above and are within the project study limits, a detailed evaluation of those interchanges can also be included for an additional budget at the PDT's direction, which will be discussed.

### **Local City Intersections**

In addition to the above listed interchanges, city street segments, local city intersections around the station/parking area, including the driveways, will be analyzed per the respective local jurisdiction's guidelines.

Hence, AECOM assumes analyses of up to 15 intersections (ramp + local) and 15 segments in the project study area, which will be confirmed

with the PDT. The intersections will be analyzed for the existing conditions, Opening Year (No Build and Build conditions), and Design Year (No Build and Build conditions). If the proposed project impacts the intersection operations, necessary mitigation will be included after consulting with Caltrans and respective Cities within San Joaquin County.

If the PDT decides to analyze more intersections / segments than what is noted above, a detailed evaluation of those intersections can also be included for an additional budget at the PDT's direction.

## **Traffic Analysis Tools**

### **Alameda County**

Since the most traffic operational impacts are anticipated with the Valley Link proposed to be constructed in the median of I-580, AECOM will use Vissim for the freeway mainline analysis for the I-580 segment in Alameda County, and Synchro/Sim-Traffic software for the intersection operations. SIDRA software will be used for the roundabout evaluation at the ramp termini intersections at the identified 7 study interchanges within Alameda County.

### **San Joaquin County**

Since no capacity changes are anticipated along the I-508 and I-205 segments in San Joaquin County, no major traffic operational impacts are anticipated to the Freeway mainline. As a result of this project, traffic impacts are anticipated at the ramps that are at close proximity to the proposed stations due to the changes in traffic circulation. Hence, AECOM will use HCS+ software for merge/diverge analysis at the identified interchanges in San Joaquin County and Synchro/Sim-Traffic software for the local intersection operations. SIDRA software will be used for the roundabout evaluation at the ramp termini intersections at the identified 2 study interchanges within San Joaquin County.

## **Traffic Alternatives**

Traffic operations of the following alternatives will be analyzed:

- No Build Alternative – Same as existing with approved projects for Opening Year (2030) and Design Year (2050).
- Build Alternative 1 – Construction of Valley Link in the median of I-580 with no changes to the existing lane geometry of I-580. This is the same build alternative

that was developed for the PSR-PDS, except as noted above with recent revisions made to the rail alignment east of Greenville Road.

- Build Alternative 2 – Construction of Valley Link in the median of I-580 with the removal of one eastbound express lane from I-580 to minimize the impacts to ramps and frontage roads.

### **Alameda County**

For the I-580 segment in Alameda County, under both the No Build and Build Alternatives, AM and PM peak period conditions will be considered for the micro simulation modeling analysis. AM peak period analysis will be performed between 5 – 10 AM and PM peak period analysis will be performed between 3 – 7 PM. Midday period 10 AM – 3 PM analysis will also be performed using spreadsheet calculations and concepts of demand/ flow/ queue/ delay. The ramp termini intersections and local city intersections will also be analyzed for all the three alternatives mentioned above for AM and PM peak hours.

### **San Joaquin County**

For the mainline segments (I-205 and I-580) in San Joaquin County, AECOM will not perform any mainline analysis because the Valley Link Project would not add any new traffic to the mainline or modify the existing/future planned lane geometry. Any qualitative assessments of the freeway operations under this Build alternative will be documented. These qualitative assessments will exhibit the difference in vehicular trips and its circulation based on the travel demand model forecasts between the No Build and Build Alternatives conditions under both the opening year and design year conditions. HCS+ software would be used for merge/diverge analysis at the 2 study interchanges identified and Synchro/Sim-Traffic software would be used for the ramp termini and local intersection operations. The analysis would be performed for the AM and PM peak hours for all the three alternatives.

#### **5.2.1.2 Data Collection & Field Observation**

AECOM will contact the respective Caltrans and local jurisdictions to obtain the most current mainline, ramp and intersection data within the project study area. Traffic volumes will be collected from both Caltrans PeMS and Caltrans Census and compared. Between the two, the traffic volumes that would most represent the existing conditions will be used for the traffic

operational analysis. If there's any missing data, AECOM will collect new data through a third-party vendor. Guidelines from the Traffic Operations Policy Directive – Traffic Count Baseline Guidance during the Coronavirus Disease 2019 (COVID – 19) Pandemic (dated December 7, 2020) will be followed for the traffic data collection process. Extracted Mainline data will be used in the future forecast adjustment process. Freeway speed data will be obtained from the INRIX database.

The most current ramp metering data, which include metering rates, the number of lanes (single-occupancy vehicles [SOVs] and high-occupancy vehicles [HOVs]) and ramp meter hours of operations will be collected. In addition, any other planned improvements at the ramps will be collected from the Caltrans ramp metering group.

If the intersection data is more than two years old, AECOM will collect new data through a third-party vendor. The intersection data would be collected from 5-10 AM and 3-7 PM. The data would cover motor vehicles, bicyclists, and pedestrians (as appropriate). Lane configurations posted speed limits, and queues on the key facilities will be observed. Existing and proposed pedestrian/bicycle facilities, and transit service will be noted. The most recent three years of collision history will be requested from Caltrans.

Field observations will be performed during the peak hours to capture queues and other relevant information.

#### **5.2.1.3 Existing Data Processing**

AECOM will compile the intersection and mainline data to evaluate the collected data for existing conditions. The processed data and the assumptions with which the data was processed will be presented in a Data Collection Memorandum to Caltrans for their review and comment.

#### **5.2.1.4 Existing Conditions Analysis**

AECOM will use Vissim for the freeway mainline analysis for the I-580 segment in Alameda County, HCS+ software for merge/diverge analysis for the interchanges in San Joaquin County and Synchro/Sim-Traffic software for the local intersection operations.

**Vissim Analysis** - The main goal/objective of Vissim model simulation is to capture cumulative hours of operational effects such as queues, weaving, merge/diverge and ramp metering for

the Freeway mainline. The Vissim model would not include ramp termini intersections or closely spaced adjacent intersections. Ramp and closely spaced intersections will be analyzed separately using Synchro/Sim-Traffic Model. The freeway mainline analysis will be conducted for the typical weekday AM (5:00-10:00 AM) and PM (3:00-7:00 PM) peak periods.

After building the Vissim model, the preliminary demand traffic data, vehicle classification, and truck percentages will be used to input to the Vissim model for calibration. During the model calibration process, various parameters will be adjusted until the model is calibrated to match the field observed conditions such as traffic flows, bottleneck locations, and congestion patterns. The Vissim model will be calibrated using Caltrans and the FHWA Guidelines for Applying Traffic Microsimulation Modeling Software (FHWA, 2004). After the model is calibrated, data will be summarized in terms of level of service (LOS), delay, speed profile bottleneck locations, queue lengths and travel times for every 30 minutes. In addition to above information, AECOM will also provide networkwide (Vissim network) measures of effectiveness (MOEs) such as vehicle miles travelled (VMT), vehicle hours travelled (VHT), vehicle hours delay (VHD), average speed and travel time.

**Ramp Termini Intersection and Local City Street Intersection Analysis** - Synchro/Sim-Traffic models will be coded for the ramp termini and closely spaced study intersections and calibrated to the field observed conditions such as queues and LOS for existing conditions. The 95th percentile queues for off- and on-ramps along with other movements will be reported, which will be compared to the available queuing space on the ramps.

Correlation between Synchro/Sim-Traffic and Vissim Models. Since it is proposed to use two different models for the mainline and local intersections, the following process will be used to correlate between the two models: first, the AECOM team will run the Vissim model for the mainline analysis. The worst peak hour off-ramp output volumes from the Vissim model will be used as the off-ramp input volumes in the Synchro/Sim-Traffic software for the ramp terminal intersection analysis. Similarly, the same worst peak hour of off-ramp will be selected for on-ramp also and the Synchro/Sim-

Traffic model output will be adjusted to match with the Vissim model volumes.

**Merge/ Diverge analysis** - Merge and diverge analysis will be conducted at the study interchanges for the AM and PM peak hours and LOS will be reported as a result. The on-ramps and off-ramps will be analyzed for queues if the project proposes to move the gore points.

**Local Street Intersection Analysis** – For all the other study intersections apart from the ramp intersections, Synchro/ Sim Traffic analysis will be conducted for the AM and PM peak hours. LOS, and 95<sup>th</sup> percentile queues will be reported.

#### 5.2.1.5 Existing Conditions Memorandum

AECOM will prepare an Administrative Existing Conditions Memorandum that documents the analysis described in the above task. The draft document will be submitted to Caltrans D4 & D10, Authority, FHWA, Cities and other stake holders for review and comment prior to being circulated to all the Caltrans functional units. AECOM will review comments on the Administrative Draft memorandum and submit a Draft Existing Conditions memorandum to Caltrans for review and comment. AECOM will prepare a response to the Caltrans comments and update the Existing Conditions Memorandum. The information contained in this document will be included in the Traffic Operations Analysis Report (TOAR).

### 5.2.2. Traffic Forecasts

#### 5.2.2.1 Travel Demand Model Methodology

AECOM will develop the future traffic forecast volumes for the study area using the most current ACTC (2018) travel demand model that was developed and maintained by the Alameda County Transportation Commission (ACTC) which is calibrated and validated to the region. We understand the current model has a 2010 base year. This model is capable of forecasting the opening year 2020 and design year 2040 volumes. This model includes roadway networks from San Joaquin County as well. The updated model includes the changes to roadway/transit networks from the programmed projects identified in the MTC 2040 Regional Transportation Plan to reflect the Association of Bay Area Governments (ABAG) 2040 job-housing forecasts from Plan Bay Area. A Traffic Forecasting Methodology memorandum will be submitted as a part of this task.

## Traffic Forecast Alternatives

For this study, traffic forecasts will be developed for the following alternatives:

### No Build Alternative

For this alternative, the latest ACTC model (2018 version) would be used to develop the forecasts on the highway.

### Build Alternative 1

For this alternative, the latest ACTC model (2018 version) would be used to determine the forecasts on the highway. The effects of transit improvements have already been estimated and approved by the Valley Link Authority, so no new transit forecasts will be performed as a part of the PA&ED phase. But instead, the approved ridership forecasts will be used to refine the highway network assignment using the latest version of the model, to ensure the highway forecast (which was not a focus of the previous work) is appropriate for the traffic operational analysis. Projected Project ridership and parking information will be used to find the in and out trips during each peak period/ peak hour. AECOM will use the following to conduct the forecast and operation work:

- a. Approved ACTC/SJCOG Travel Demand model's ridership forecasts.
- b. Latest ACTC (2018) travel demand model's traffic forecast.

### Build Alternative 2 (Removal of one eastbound express lane from I-580)

For this alternative, the latest ACTC model (2018 version) would be used to determine the forecasts on the highway. However, since the removal of one express lane would have an impact on the rail operations (more transit ridership is anticipated as result of the increased congestion along I-580 eastbound), the transit model would be rerun to obtain the new transit forecasts for this alternative. These ridership forecasts will then be used to refine the highway network assignment using the latest version of the model, to ensure the highway forecast is appropriate for the traffic operational analysis. Projected Project ridership and parking information will be used to find the in and out trips during each peak period. AECOM will use the following to conduct the forecast and operation work:

- a. ACTC/SJCOG Travel Demand model's ridership forecasts developed for Build Alternative 2.

- b. Latest ACTC (2018) travel demand model's traffic forecast.

### 5.2.2.2 Model Validation

The model validation process involves the adjustment of model parameters on the roadway network, as well as other key model components. Since the model year 2020 scenario is close to the existing year, the 2020 model volumes for the study area will be compared to the existing counts (pre-COVID 2019).

The model parameters will be adjusted until the model attains the following validation criteria drawn from the 2010 California Regional Transportation Plan Guidelines, California Transportation Commission, ACTC model validation standards.

- Correlation Coefficient, greater than 0.88
- Percent of Freeway Links within 20% of Counts, at least 75%
- Percent of Freeway Links within 10% of Counts, at least 50%
- Percent Root Mean Square Error (RMSE), less than 40%
- Model/Counts Ratio will also be reported. Although there is no specified threshold for this metric, industry uses a threshold of "within 10%" of the sum of all locations.

After making the necessary changes to the 2020 model network, AECOM will compare the 2020 forecast volumes from the model to the existing demand volumes. The 2020-year model will be checked against existing mainline; ramp and intersection AM and PM peak hours/peak periods and ADT demand counts. It is assumed that the model validation can be accomplished with network constraints and adjustment without making any land use changes. After checking all the existing demand volumes and making model adjustments as necessary, AECOM will prepare a Travel Demand Model validation memorandum for the Caltrans Forecasting group for their review and concurrence.

### 5.2.2.3 Opening Year (2030) and Design Year (2050) No-Build and Build Forecasts

After completion and approval of the model validation, AECOM will check the future year model networks for projects along the study corridor. The future approved project information

will be obtained from the 2040 MTC RTP and from other appropriate agencies including ACTC. Most projects have already been included in the ACTC model development. AECOM will develop the future year forecast volumes for opening year 2030 and design year 2050 conditions for all the available time periods. The forecasts will be provided to the traffic team which will generate future hourly volumes based on the existing demand volume profile.

Since the model only provides forecast for 2020 and 2040, the 2020 and 2040 model forecasts for all scenarios will be extrapolated out to 2030 opening year and 2050 design year based on interpolation/extrapolation methods approved by Caltrans.

#### 5.2.2.4 Forecast Adjustments for Opening Year 2030 and Design Year 2050 Conditions

Forecasts for each scenario and model time period will be adjusted based on the incremental method from NCHRP-255, which is as follows:

#### 5.2.2.5 Model Outputs

Model outputs will include mainline, ramp and ramp termini intersection volumes. In addition, AECOM will also extract the following performance measures along the study corridor and overall network, including VMT, VHT, VHD, and average speed for comparison to understand the net benefits of each alternative. All this information will be based on forecast model results and may require operational analysis before the final selection of a preferred project will be made.

This data will be summarized in a Traffic Forecasting Memorandum and submitted to the Authority, Caltrans D4 & D10, Cities and other stake holders for review and approval.

#### Local City Street Intersections – San Joaquin County

For local city intersections, where the forecasted volumes are not available from the ACTC model, latest SJCOG model outputs would be obtained for all the available time periods and would be used to determine the forecasted volumes for the opening year and design year.

#### 5.2.2.6 Environmental Support (Noise / Air Quality / Greenhouse Gas)

AECOM will provide support to the environmental team with specific model outputs for noise, air quality and GHG analysis. The

outputs would be for existing year (2019), opening year (2030) and design year (2050). These tasks include:

- Coordination with the environmental team
- AADT and peak hour volume/speed on mainline and legs of major interchanges and intersections (directional)
- VMT by speed bin (5 mph)

In addition, additional traffic data may be needed to justify why this project is not a project of air quality concern in the interagency consultation process for PM2.5, including:

- Mainline AADT
- Truck percentage/truck AADT

In addition, AECOM will extract subarea and regional model information along the study corridor to assist the PDT to understand the benefits of each alternative, including overall network VMT, VHT, Vehicle Hours of Delay (VHD) and speed data.

Final Adjusted 2030/2050 Forecast Volumes = Existing Demand Volumes + (Raw 2030/2050 Forecast - Base Year Forecast)
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### 5.2.3 Future Traffic Operational Analysis

#### Alameda County Freeway Analysis

AECOM will use Vissim for the freeway mainline analysis for the No Build and two Build Alternatives analysis, HCS+ software for merge/diverge analysis for the No Build, Build Alternative 1 and 2 analysis and Synchro/Sim-Traffic model for the local intersection operations analysis for the No Build, Build Alternative 1 and 2. All the analysis will be performed for both the opening year (2030) and design year (2050) conditions.

#### No Build Alternative

In this scenario, AECOM will analyze I-580 from I-580/ San Ramon Road interchange to I-580 / North Flynn Road interchange. The entire corridor will be coded in Vissim. The Vissim network will incorporate all the mainline and interchange improvements to reflect the approved projects that have been included in the Regional Transportation Plan (RTP). Once the

Vissim network is coded, it will be simulated with the approved forecast volumes.

After completing the peak period analysis, mainline and ramp data will be summarized. The MOEs evaluated would include mainline level of service, density, speed and travel time for peak period and peak hour for the freeway. In addition to the above measures, AECOM will report VMT, VHT, VHD, average speed. In addition, the AECOM will identify bottlenecks, queues associated with these bottlenecks, and vehicle and person throughput.

After completion of the mainline analysis, AECOM will perform analysis of ramp termini intersections for AM and PM peak hour periods using Synchro based Vissim outputs and forecast turning movements. Intersection LOS and delay, and 95th percentile queue lengths will be summarized and submitted to Caltrans D4, Authority, Cities and other stake holders for review and approval.

The mid-day (10:00 AM to 3:00 PM) mainline and ramp data will be summarized for PDT team review and may be used for the comparison of No Build and Build Alternative. This would not include ramp intersection turning movements.

The analysis will be performed for Opening Year (2030) and Design Year (2050).

### **Build Alternative 1**

In this build alternative, the traffic study limits and Vissim analysis hours would be same as the No Build alternative. In this alternative, no change in capacity to the I-580 segment is proposed with the construction of Valley Link in the median of I-580. Under this alternative as well, the entire corridor will be coded in Vissim. The Vissim network will incorporate all the mainline and interchange improvements to the reflect the approved projects that have been included in the Regional Transportation Plan (RTP). Once the Vissim network is coded, it will be simulated with the approved forecast volumes.

After completing the peak period analysis, mainline and ramp data will be summarized. The MOEs evaluated would include mainline level of service, density, speed and travel time for peak period and peak hour for the freeway. In addition to the above measures, AECOM will report VMT, VHT, VHD, average speed. In addition, the AECOM will identify bottlenecks, queues

associated with these bottlenecks, and vehicle and person throughput.

After completion of the mainline analysis, AECOM will perform analysis of ramp termini intersections for AM and PM peak hour periods using Synchro based Vissim outputs and forecast turning movements. Intersection LOS and delay, and 95th percentile queue lengths will be summarized and submitted to Caltrans D4, Authority, Cities and other stake holders for review and approval.

The mid-day (10:00 AM to 3:00 PM) mainline and ramp data will be summarized for PDT team review and may be used for the comparison of No Build and Build Alternatives data. This would not include ramp intersection turning movements.

The analysis will be performed for Opening Year (2030) and Design Year (2050).

### **Build Alternative 2**

In this build alternative, the traffic study limits and Vissim analysis hours would be same as the No Build alternative. In this alternative, the second I-580 eastbound express lane would be removed to minimize the impacts to ramps and frontage roads with the construction of Valley Link in the median of I-580. Under this alternative as well, the entire corridor will be coded in Vissim. The Vissim network will incorporate all the mainline and interchange improvements to the reflect the approved projects that have been included in the RTP. Once the Vissim network is coded, it will be simulated with the approved forecast volumes.

After completing the peak period analysis, mainline and ramp data will be summarized. The MOEs evaluated would include mainline level of service, density, speed and travel time for peak period and peak hour for the freeway. In addition to the above measures, AECOM will report VMT, VHT, VHD, average speed. In addition, the AECOM will identify bottlenecks, queues associated with these bottlenecks, and vehicle and person throughput.

After completion of the mainline analysis, AECOM will perform analysis of ramp termini intersections for AM and PM peak hour periods using Synchro based Vissim outputs and forecast turning movements. Intersection LOS and delay, and 95th percentile queue lengths will be summarized and submitted to Caltrans D4,

Authority, Cities and other stake holders for review and approval.

The mid-day (10:00 AM to 3:00 PM) mainline and ramp data will be summarized for PDT team review and may be used for the comparison of No Build and Build Alternatives. This would not include ramp intersection turning movements.

The analysis will be performed for Opening Year (2030) and Design Year (2050).

#### **Freeway Ramps and Intersection Analysis**

AECOM will use Synchro/Sim-Traffic software for the local intersection operations analysis for the No Build, Build Alternative 1 and 2. All the analysis will be performed for both the opening year (2030) and design year (2050) conditions.

#### **San Joaquin County Freeway Analysis**

For the mainline segments (I-205 and I-580) in San Joaquin county, AECOM will not perform any mainline analysis because the Valley Link Project would not add any new traffic to the mainline or modify the existing/future planned lane geometry. Any qualitative assessments of the freeway operations under this Build alternative will be documented. These qualitative assessments will exhibit the difference in vehicular trips and its circulation based on the travel demand model forecasts between the No Build and Build Alternatives conditions under both the opening year and design year conditions.

#### **Freeway Ramps and Intersection Analysis**

AECOM will use HCS+ software for merge/diverge analysis for the No Build, Build Alternative 1 and 2 analysis and Synchro/Sim-Traffic software for the local intersection operations analysis for the No Build, Build Alternative 1 and 2. All the analysis will be performed for both the opening year (2030) and design year (2050) conditions.

### **5.2.4 ICE Memorandum**

AECOM will prepare and evaluate alternatives which meet the Caltrans Intersection Control Evaluation (ICE) policy for all the ramp termini intersections at the 9 identified study interchanges (7 study interchanges in Alameda County and 2 study interchanges in San Joaquin County). SIDRA software would be used for the analysis of the roundabouts, Synchro/ Sim Traffic would be used for the analysis of stop control and signal. The findings of the

evaluations will be documented in a draft and final ICE memorandum and submitted to the respective Caltrans district, and Authority for their review and approval.

### **5.2.5 Traffic Operations Analysis Report**

A draft administrative, draft, and final TOAR will be completed for the No Build Alternative and Build Alternative.

#### **5.2.5.1 Existing Conditions**

The TOAR will incorporate the analyses documented in the existing conditions memorandum. This will include the results for the freeway mainline analysis, freeway diverge/merge analysis, ramp analysis, intersection analysis, intersection queuing, and collision data analysis.

#### **5.2.5.2 Opening Year Conditions**

AECOM will include the No Build and Build Alternatives for the opening year analysis. This will include the results for the freeway mainline analysis, freeway diverge/merge analysis, ramp analysis, intersection analysis, intersection queuing, and collision data analysis.

#### **5.2.5.3 Design Year Conditions**

AECOM will include the No Build and Build Alternatives for the opening year analysis. This will include the results for the freeway mainline analysis, freeway diverge/merge analysis, ramp analysis, intersection analysis, intersection queuing, and collision data analysis.

#### **5.2.5.4 Administrative Draft TOAR**

AECOM will prepare an administrative draft TOAR that documents the analyses described above. The administrative draft will be submitted to the Authority and the PDT for review and comment prior to circulation to the Caltrans D4 and D10 functional units.

#### **5.2.5.5 Draft TOAR**

AECOM will finalize the draft TOAR and submit to the Authority and Caltrans for review and comment. After comments are received from Caltrans, AECOM will review the comments and prepare initial responses. AECOM will meet with the Caltrans D4 and D10 functional units to review their comments and resolve any outstanding issues.

### 5.2.5.6 Final TOAR

AECOM will finalize the TOAR, incorporating any necessary changes based on Caltrans comments, and submit for approval.

## 5.2.6 Toll Optimization Model

### Develop the I-580 Network in the Toll Optimization Model (TOM) Model

ECONorthwest (ENW) will set up the corridor network details in the TOM model, extract and prepare PeMS data for the corridor, and work with the demand modelers to prepare those inputs to the managed lane modeling. Traffic data development for use in the TOM process typically involves obtaining link-level, vehicle-class specific volume estimates. These data are obtained typically from the emulation of a traditional HOV managed lane policy. This data then serves as a seed for the implementation of tolls, objectives, business rules, and other constraints within the TOM framework.

### Base Year Calibration

ENW will acquire a base year demand model run that emulates the managed lane configuration as it exists today. The Rapid TOM model will be run, and parameters adjusted to yield revenue and traffic estimates that approximate current revenue and operating conditions. Factors that may be adjusted in the TOM model include values of time, managed lane participation rates, HOV vehicle shares, toll rate objectives and minimums and maximums.

### Scenario Evaluation

There will be two different corridor configurations to model in the regional demand model and in the TOM model. The first model run will be a future year run of the existing operating dual-lane configuration. The second run will be the conversion from a dual lane to a single-lane managed lane in the eastbound direction and the existing single lane in the westbound direction. The TOM model will produce information that is then utilized by the operational modeling team in simulating traffic operations.

### Reporting

ENW will provide the TOM output, which yields approximately 160 output measures for each corridor link, covering all of the Measures of Effectiveness (MOEs) contemplated in the typical HOT lane evaluation process, e.g.:

1. Level of service on HOV/HOT lane and mixed flow lanes

2. Travel Time in HOV/HOT Lane and mixed flow lanes
3. Speed in HOV/HOT lane and mixed flow lanes
4. Duration of Congestion
5. Vehicle Hours of Delay
6. Person Hours of Delay
7. Hours of HOT operation and/or reversion to HOV only
8. Full Benefit-Cost analysis (when compared with Base Case or No-Build forecasts)

#### Task 5.2 Deliverables:

- Traffic Operations Methodology Memorandum (Draft and Final)
- Traffic Forecasting Methodology Memorandum (Draft and Final)
- Traffic Data Collection Memorandum (Draft and Final)
- Traffic Forecasting Validation Memorandum (Draft and Final)
- Existing Conditions Memorandum (Draft and Final)
- Traffic Forecasting Memorandum (Draft and Final)
- ICE Memo (Draft and Final)
- Administrative Draft, Draft, and Final TOAR
- TOM Output

## Task 5.3 – Highway Preliminary Engineering (30% Design)

### 5.3.1 Data Collection and Review

AECOM will coordinate with the Authority, Caltrans, and other affected agencies to identify and collect data relevant to the project such as as-built plans, logs of test borings, details of planned development projects affecting the project area, related technical reports, right of way/easement records, traffic and accident data, and existing utility information. For the latter, we will contact the utility owners to obtain their facility maps and prepare a master utility file in MicroStation to help identify potential utility

conflicts. The collection of data developed for the PSR-PDS will also be reviewed. A database of requests will be used to track progress.

### 5.3.2 Project Implementation Plan and Design Variation Documentation

Early coordination and discussion with the Authority and Caltrans are imperative to reach consensus on the appropriate level of documentation that will be needed to complete PA&ED. In addition, the evaluation and development of Build Alternative 1 (by AECOM) and Build Alternative 2 (by WSP/MT) will continue with the available data produced during the Project Initiation Document (PID) phase.

The project's purpose and need that has been approved for the environmental document, will be used.

An evaluation matrix comparing proposed design variations of the Build Alternatives will be completed for the Authority's and Caltrans' review. The intent is to provide the PDT with sufficient data and information to evaluate the design variations early on and to reach consensus on the scope of the Build Alternatives. Evaluation criteria will include cost, traffic operations, safety, nonstandard design features, environmental impacts, right of way, utility relocation requirements, and other project goals, as needed. The evaluation criteria and results will be presented to the Authority, Caltrans, and key stakeholders for review. Not moving forward with a design variation will be supported with documentation that provides the justification why it was not developed further during the PA&ED phase.

This includes reaching a clear understanding and agreement on the following:

- Limits of the project and environmental study area
- Traffic study scope and assumptions
- Environmental technical studies
- Review cycles and durations
- Design variation evaluation matrix and evaluation process

After reaching an understanding with Caltrans, AECOM will document the project's scope and will link it to the CPM schedule that accounts for all activities and reviews needed to complete the PA&ED phase.

A memorandum summarizing the design variations evaluated during the PID phase, and any revisions to the scope of work, if needed, will be submitted to Authority for review. All comments will be addressed, and the final document will be distributed to the PDT.

For budgeting purposes, this task will include a summarization and documentation of the following design variations that were evaluated previously by the WSP/MT team. It is anticipated that these will be documented in the Project Report as "Rejected Alternatives", and not be studied further during the PA&ED phase.

- Elimination of one express lane on eastbound I-580.
- Shift of the rail alignment (to the north of I-580).
- Elimination of the Stone Cut Alternative and the tunnel alignment on the Altamont Pass.

### 5.3.3 Update Build Alternative 1

In parallel with the traffic forecast and operations analysis, AECOM will refine Build Alternative 1 to further define the major features of the project; and to establish the basis for the engineering reports and the criteria for final design. Preliminary engineering will determine ROW requirements and utility relocation needs, and confirm rail and roadway geometrics, which could affect the environmental impacts to the project.

### 5.3.4 Nonstandard Geometric Features

The geometrics of the existing Caltrans' facilities and the proposed alternative will be checked for nonstandard features for Build Alternative 1. Geometric refinements will be investigated to assess if any nonstandard features can be improved or eliminated. A list of **Boldfaced** and Underlined design standard exceptions will be identified and coordinated with the Caltrans HQ geometrician and District 4 staff. As a starting point, AECOM will use the design standard exceptions that were noted in the PSR-PDS: Six (6) **Boldfaced** exceptions and four (4) Underlined exceptions.

After concurrence of the project's geometrics is reached, a Design Standard Decision Document (DSDD) will be developed and submitted to Caltrans for review and comment.

AECOM will address comments and submit the final DSDD for Caltrans approval prior to submittal of the Draft Project Report. Traffic safety and operations, accident analyses, physical constraints, cost to make standard, access control, and environmental impacts will be some of the factors justifying the design.

### 5.3.5 Preliminary Engineering (30%) Drawings

AECOM will advance Build Alternative 1 and develop the following drawings for a 30% design submittal. For budgeting purposes, the number of sheets is shown in parentheses.

- Title Sheet and Location Map (1)
- Typical Cross Sections (5)
- Key Map and Line Index (1)
- Layout (25)
- Profile and Superelevation Diagram (4)
- Drainage Plans (35)
- Sanitary Sewer & Utility Plans (25)
- Stage Construction Plans (15)
- Detour Plans (if required) (3)
- Pavement Delineation and Sign Plans (25)
- Electrical Plans<sup>^</sup> (25)
- Conceptual Landscaping and Aesthetic Concept Plans (30)
- Retaining Wall Plans\*
- Structure Plans\*

<sup>^</sup> May include modifications related to the following facilities: express lanes, ramp metering and freeway lighting.

\* These plans will be developed as part of the APS, see Task 5.4.7.

### 5.3.6 Preliminary (30%) Cost Estimates

Preliminary construction cost estimates will be developed for Build Alternative 1 using Caltrans 11-page format to provide initial construction, right of way, and utility relocation costs to support the funding plan of the project. Unit costs will be based on data developed by previous studies and/or similar projects, and

individual items will be quantified. Existing and proposed ground surfaces will be modeled to enable earthwork quantities to be established.

*Task 5.3 Deliverables:*

- Design Variation Summary and Evaluation Memo (Draft and Final)
- Design Standard Decision Document (Draft and Final)
- Preliminary Engineering (30%) Drawings
- Preliminary (30%) Cost Estimate

## Task 5.4 – Engineering Technical Studies

### 5.4.1 Preliminary Right-of-Way (ROW) Requirements & Data Sheet

AECOM will coordinate ROW requirements for Build Alternative 1 and will prepare right-of-way requirement maps identifying the parcels that will be impacted by the improvements. The approximate dimensions and areas of property acquisitions and/or easements will be shown. This information will be documented in a database including ownership information, land use, ROW capital improvements (e.g. driveway, fence improvements) in compliance with Caltrans Exhibit 4-ex-02w.

AECOM will analyze ROW impacts and prepare cost estimates. The cost estimates will summarize potential property acquisition costs. The cost estimate will be provided in Caltrans ROW Data Sheet format. A draft Right of Way Data Sheet will be prepared for Build Alternative 1. Upon submittal to Caltrans and receipt of comments, the ROW Data Sheet will be updated and finalized. Assumptions and limiting conditions will be incorporated into the estimate. The right of way cost estimate is not an appraisal and utilizes resources such as sales data and listings available in the market, field inspections and interviews with brokers and Assessor's information. These types of resources and investigations do not require interaction with owners and no owner or occupant contacts will be initiated. ROW information will also be summarized in the ROW Data Sheet (Caltrans Exhibit 4-ex-4).

### 5.4.2 Utility Coordination and Encroachment Policy Exception Request (EPER)

AECOM will develop existing utility mapping from available facility maps provided by the utility owners within the project area, and identify utilities that may be impacted by the proposed project improvements. AECOM will:

- Review and update as-built utility information
- Prepare existing utility maps
- Submit utility maps to affected utility owners
- Field verify utility locations with utility owners
- Identify potential utility conflicts, and
- Prepare Utility Relocation Memorandum
- Maintain a Utility Relocation Log
- Prepare Utility Information Sheet (Caltrans Exhibit 4-ex-5)
- Identify utility impacts caused by the proposed construction
- Develop utility plans (U drawings) that indicate utilities to be relocated

AECOM will identify realistic utility relocation options and associated capital costs for Build Alternative 1. AECOM will then coordinate with Caltrans, utility companies and other affected stakeholders to investigate alternatives to specific utility relocations. If a tentative agreement is reached on maintaining specific utilities within state right of way, a draft Encroachment Policy Exception Request of that facility will be prepared and processed through Caltrans. AECOM will maintain a log of all correspondence for this study.

### 5.4.3 Transportation Management Plan (TMP)

AECOM will prepare a draft Transportation Management Plan (TMP) for Build Alternative 1 in accordance with Caltrans TMP guidelines. AECOM will work with the traffic engineering team and other relevant technical personnel (such as roadway design engineers, right-of-way specialists and environmental staff) to obtain the necessary project information and help identify

potential issues or concerns. This collaboration will help to develop the best combination of design, construction staging, and work zone management strategies.

If traffic studies are needed to develop TMP strategies, these will be initiated as soon as possible to make sure that the needed data is available. As information becomes available, the preliminary scope and cost of the overall TMP and the individual elements will continue to be refined. The AECOM team will coordinate the TMP strategies with the appropriate functional units at Caltrans, with each team member handling their area of expertise.

AECOM will use the traffic counts of I-580 and ramps where closures may be required. The TMP will include mitigation measures for lane and/or ramp closures and/or other construction-related, traffic issues.

A PowerPoint presentation will be prepared for a Caltrans constructability review meeting. Details (exhibits, typical sections, etc.) will be developed to demonstrate construction feasibility (constructability) for Build Alternative 1, which will be presented at the meeting. TMP elements will be highlighted and presented, together with lane closure and detouring elements, if applicable. Comments from the meeting will be addressed and incorporated into the final TMP.

### 5.4.4 Storm Water Data Report

AECOM will prepare a Storm Water Data Report (SWDR) summarizing the project impacts to water quality, general minimization measures, and recommended best management practices (BMPs) for Build Alternative 1. The SWDR will address the impacts from the project improvements; and will use Caltrans' standard checklists. AECOM will propose conceptual minimization measures that meet the criteria set by the Regional Water Quality Control Board (RWQCB) and Caltrans' NPDES Permit.

Additionally, AECOM will address the need for erosion control measures and prepare a preliminary hydromodification assessment to determine the magnitude of the impacts and the extent of mitigation measures.

### 5.4.5 Drainage Impact Study and Hydromodification Report

AECOM will coordinate with the Authority and Caltrans, and review as-built plans, previous studies, and the proposed improvements to determine the existing drainage patterns; and assess potential impacts to, or deficiencies of,

existing storm drain systems in the project area. AECOM will determine the required drainage improvements of Build Alternative 1. AECOM will assess opportunities for storm water management and water quality solutions to minimize environmental impacts by the project. AECOM will perform hydrologic and hydraulic analyses, develop a conceptual drainage design and provide a cost estimate of the proposed drainage improvements. AECOM will summarize the findings in a Drainage Impact Study and Hydromodification Report.

The Alameda County Clean Water Program identifies the project area as potentially susceptible to hydromodification; therefore, the project will be required to comply with hydromodification management requirements. AECOM will propose and coordinate design features and calculations of the hydromodification management measures with the Caltrans Stormwater Coordinator.

#### **5.4.6 Location Hydraulic Study and Floodplain Evaluation Report**

Based on the preliminary qualitative hydrologic, hydraulic, and geomorphic assessments, the Project may potentially result in floodplain encroachment. AECOM will prepare a Location Hydraulic Study and a Floodplain Evaluation Report Summary to document the investigation and determine the specific impacts to the floodplain. The improvements in the Tri-Valley segment crosses over several creeks in the I-580 corridor: the Tassajara Creek, Cottonwood Creek, Arroyo Las Positas Creek, and Arroyo Seco Creek. Per Table 7-3 of the PSR-PDS, the following bridges will be widened and will require Location Hydraulic Studies:

- Tassajara Creek Bridge (Widen) (Bridge No. 33-0015R)
- Collier Canyon Creek Bridge (Replace)
- Arroyo Las Positas Creek (Widen) (Bridge No. 33-0012 and 33-012S)
- Arroyo Las Positas Creek (Replace) (Bridge No. 33-0203)
- Creek Bridge (Widen) – Portola
- Arroyo Las Positas Creek (Widen) (Bridge No. 33-0085)

The Location Hydraulic Study is a preliminary study of base floodplain encroachments and will

be performed by an AECOM California-licensed Civil Engineer with hydraulic expertise. A hydraulic model (USACE HEC-RAS) will be created to determine if there are the floodplain encroachment impacts due to the project. FEMA has completed detailed studies for these crossings and AECOM will request the backup hydraulic models for the effective Flood Insurance Rate Maps (FIRM).

AECOM's Location Hydraulic Study will include the following: National Flood Insurance Program (NFIP) maps, evaluation and discussion of the practicability of the proposed alternative to any longitudinal encroachments. The report will summarize the parameters used to create the hydraulic model for the widened bridges over water crossings, as well as changes floodplain water surface elevations and boundaries for both existing and project conditions.

AECOM will include evaluation and discussion of the practicability of alternatives to any significant encroachments or any support of incompatible floodplain development. AECOM will consult with local, state, and federal water resources and floodplain management agencies to determine if the proposed project is consistent with existing watershed and floodplain management programs. AECOM will obtain current information on development and proposed actions in the affected watershed.

#### **5.4.7 Advanced Planning Studies**

AECOM will prepare Advance Planning Studies (APS) for the following structures (23 bridge structures and 35 special designed retaining walls) associated with Build Alternative 1:

- Dougherty Road UC (Widen)
- Tassajara Creek Bridge (Widen) (I-580)
- Tassajara Creek Bridge (Widen) (Creek Path)
- Collier Canyon Creek Bridge (Replace)
- Airway Blvd (UC) (Replace) – West
- Arroyo Las Positas Creek (Widen) (Location #1)
- Arroyo Las Positas Creek (Replace)
- Creek Bridge (Widen) – Portola
- North Livermore Ave UC (Widen)
- Greenville Viaduct (New)

- Arroyo Las Positas Creek (Widen) (Location #2)
- Las Colinas Rd OC (Replace)
- First St OC (Replace)
- Vasco Rd OC (Replace)
- 2 Pedestrian OC (New)
- 7 New Structures Supporting Tracks in I-580 Median
- 35 New Special Designed Retaining Walls

The bridge and special design wall APSs will be prepared in Caltrans format using Caltrans Office of Special Funded Project (OSFP) Information and Procedures Guide 3-2 and Caltrans Memos to Designers (MTD) 1-8. The APSs will include structure plans, APS Checklist, Design Memo, and Itemized Cost Estimate. A Structure Preliminary Geotechnical Report (SPGR) will be prepared to provide geotechnical recommendations for the proposed structures.

The APS drawings will include the following:

- Plan, profile, elevation, and typical sections showing the structure type recommendations
- General dimensions of the structures, such as overall length, widths, and depths
- Vertical clearances, where applicable
- General aesthetics recommendations
- Foundation type recommendations
- Abutment and bent type recommendations
- Approach slab, and barrier type

The APS Design Memo will include the following:

- Important or unusual design assumptions or structural features
- Caltrans requirements such as aesthetics, improvements in the vicinity of the structure, or other obstructions
- Special foundation requirements (if any)
- Construction requirements, including limited site accessibility, vertical clearance

restrictions, and limits on nighttime/daytime work

- Record of discussions with Caltrans personnel concerning any key assumptions
- Accelerated Bridge Construction (ABC) Questionnaire
- Risk Assessment Form

An APS Construction Cost Estimate will be developed by estimating quantities for major items of work and assigning prices to each item. A contingency factor of 25% and mobilization factor of 10% of the total of the items cost will be added to the estimate.

### 5.4.8 Preliminary Geotechnical Engineering

Kleinfelder will perform a limited number of site-specific geotechnical borings and field and laboratory testing. Kleinfelder proposes to begin with pre-field planning, a review of available existing data, and securing the applicable permits required to perform the initial geotechnical investigation. Following the approval of all required permits, Kleinfelder proposes to drill a total of twelve (12) preliminary exploratory borings to depths of 100 feet and conduct necessary field and laboratory testing. Upon completion of the field and laboratory testing, Kleinfelder will prepare a draft SPGR in support of the APS for structures. Twenty-three (23) separate SPGRs are planned to support each bridge structure and one (1) SPGR is planned to support the 35 New Special Designed Retaining Walls. Additionally, a separate Preliminary Geotechnical Design Report (PGDR) will be prepared for the corridor to support the Caltrans PA process. Kleinfelder will use experience and understanding of the project to interact with designers and Caltrans to submit final SPGR's and PGDR after receiving comments. The reports will be prepared in accordance with Caltrans procedures, manuals, and standards.

#### 5.4.8.1 Review of Available Geologic and Geotechnical Data

Kleinfelder will review available information along the corridor, including published geologic data, previous geotechnical data and reports, As-Built drawings, and Log of Test Borings (LOTBs). Based on this review, the total number of preliminary exploratory borings and locations

may be adjusted to supplement areas lacking available data to support the PA process.

#### 5.4.8.2 Detailed Work and Health and Safety Plan Preparation

Kleinfelder will prepare a detailed work plan as well as a health and safety plan prior to performing the field investigation. The health and safety plan will be used to document safety protocols to be used during fieldwork. One work plan and health and safety plan will be prepared to cover the entire field investigation.

#### 5.4.8.3 Pre-field Activities

Kleinfelder will perform a site reconnaissance to review project limits and mark the exploratory boring locations for utility clearance. Kleinfelder will use the work plan prepared under Task 5.4.8.2 to submit the following permit applications as necessary:

- Soil Boring Permit(s) – Alameda County
- Encroachment Permit(s) – City of Livermore and City of Dublin

We will also notify subscribing utility companies via Underground Service Alert (USA) at least 72-hours, as required by law, prior to performing the exploratory borings.

Additional permits that may be needed and will be obtained by others include:

- Right-of-Entry for private properties and/or encroachment permit from Caltrans (to be obtained by AECOM)

To satisfy all the permit requirements during the permit application process, additional input and information may be required from other members of the design team, i.e., environmental, biological, cultural/historical, etc.

#### 5.4.8.4 Field Exploration Program

Kleinfelder will advance a total of twelve (12) exploratory borings to depths of 100 feet below existing grade. Table 6 provides the list of the preliminary proposed boring locations and depths for the project.

The borings will be drilled using hollow-stem auger and/or rotary-wash drilling methods with truck-mounted drilling equipment. Soil samples will be collected in the borings generally at 5-foot intervals. Soil samples will be collected using a 2-inch outside diameter, split-barrel sampler in general accordance with the standard penetration test (SPT) and a 3-inch outside

diameter, split-barrel “California-type” sampler. The SPT and California-type samples will be obtained by driving with a 140-pound hammer free falling a distance of 30 inches, in general accordance with the American Society for Testing and Materials (ASTM) procedures. The borings will be drilled to the depth described above or to practical refusal, whichever is shallower.

Estimates of the undrained shear strength of cohesive soils will be made using a hand-held pocket penetrometer and/or a Torvane shear device, as appropriate. Kleinfelder will maintain a log of the soils encountered and obtain samples for visual examination, classification, and laboratory testing.

Upon completion of drilling, the borings will be backfilled with cement grout in accordance with Alameda County Environmental Health Department (ACEHD) requirements. Boring drill waste will be drummed and disposed of offsite.

After the field exploration is complete but prior to establishing the laboratory test program, Kleinfelder will brief the design team regarding the conditions encountered.

#### 4.8.5 Laboratory Testing Program

Laboratory testing will be performed to evaluate certain characteristics of the foundation and subgrade soils. Anticipated tests include:

- In-place density and moisture content, ASTM D2937
- Atterberg limits, ASTM D2487
- Unconsolidated Undrained Shear Strength, ASTM D2850
- Unconfined Compressive Strength of Cohesive Soil, ASTM D2166
- One dimensional consolidation, ASTM D2435
- Direct Shear, ASTM D3080
- Grain-size distribution without hydrometer, ASTM D422
- Maximum Density and Optimum Moisture, ASTM D1557
- R-value, California Test Method No. 301
- Soluble sulfate, California Test Method No. 417

- Soluble chloride, California Test Method No. 422
- Minimum electrical resistivity, California Test Method No. 643

**Table 6: Proposed Geotechnical Exploration Limits**

Approximate Coordinates for Boring Location	Depth (feet)	Structures
37.702401, -121.899366	100	Dougherty Road UC (Widen)
37.702018, -121.879202	100	Median Bridge over Tassajara Creek, Tassajara Creek Bridge (Replace) (I-580) and Tassajara Creek Bridge (Widen) (Creek Path)
37.699548, -121.800403	100	Collier Canyon Creek Bridge (Replace), Airway Blvd (UC) (Replace) – West, Median Bridge over Collier Canyon Creek and Pedestrian Bridge OC (New)
37.699346, -121.784757	100	Creek Bridge (Widen) – Portola, Median Bridge over Arroyo Las Positas Creek, Arroyo Las Positas Creek (Widen) (Location #1), and Arroyo Las Positas (Replace)
37.700151, -121.774236	100	North Livermore Ave UC (Replace), North Livermore Ave UC (Widen) and Median Bridge at the North Livermore Ave UC
37.703317, -121.759007	100	Median Bridge over Arroyo Las Positas Creek (Widen) (Location #2)
37.702448, -121.755925	100	Las Colinas Rd OC (Replace)
37.701437, -121.741384	100	First St OC (Replace)
37.704490, -121.732900	100	Pedestrian Bridge OC (New)
37.707837, -121.724341	100	Vasco Rd OC (Replace)
37.718784, -121.699593	100	Greenville Viaduct (New)
37.721529, -121.696922	100	Greenville Viaduct (New)

**5.4.8.6 Engineering Analysis and Report Preparation**

After the completion of the field and laboratory phases, preliminary engineering analyses will be conducted and draft SPGR’s and a PGDR will be prepared in general accordance with Caltrans standards, procedures, and Geotechnical Manual. Subsequently, final SPGR’s and PGDR will be prepared after review comments have been received.

The SPGR will present comments and preliminary geotechnical recommendations to aid in development of APS for the bridges and special designed retaining walls. It is anticipated that the following specific items will be included in the SPGR:

- A description of the proposed project.
- Discussion of the field and laboratory testing programs.
- Comments on the regional geology and site geotechnical conditions, including groundwater.
- Comments on scour data, if applicable.
- Seismic information for ground motion hazard including preliminary peak ground acceleration and ARS curve based on Caltrans web-based tool, ARS Online v3.0.

- Other seismic hazards including potential for liquefaction, seismically induced settlements, and lateral spreading.
- Preliminary geotechnical parameters and recommendations including discussion of appropriate shallow and deep foundation alternatives.
- Recommendations for additional (future) field investigation and laboratory testing.

The PGDR will be prepared to support the preliminary design of roadway, embankments, cut slopes, earthwork, and pavement sections. It is anticipated the PGDR will include the following:

- Geologic and seismic setting, including comments on liquefaction potential.
- Comment on potential ground water issues, as appropriate.
- Comment on the corrosion characteristics of on-site soils.
- Comment on earthwork requirements for embankment fill and structure backfill, as appropriate.
- Preliminary recommendations for embankment and cut slope gradients, as appropriate.
- Comments on anticipated settlements of embankments and bridge approaches, as appropriate.
- Preliminary geotechnical recommendations for Caltrans standard-type retaining walls and sound walls.
- Preliminary recommendations for new flexible and rigid pavement sections.
- Gradation (results of sieve analysis) of native soils at major stream crossings for use in scour analysis by the drainage design team and the project Hydraulic Report.
- Comments on soil types and general infiltration characteristics of on-site soils based on typical soil properties. Percolation tests for determination of in-situ infiltration rates for BMPs should be conducted at a later date once the locations for potential basins are known.

### 5.4.9 Life Cycle Cost Analysis

AECOM will prepare a pavement Life Cycle Cost Analysis (LCCA) of Build Alternative 1 for the proposed improvements requiring new pavement, with the results summarized in a report. The LCCA will be performed per procedures and guidelines from the latest Caltrans Pavement Policy Bulletin and using Real cost software. A pavement strategy checklist will be developed.

### 5.4.10 Value Analysis

A Value Analysis (VA) Study will be performed by Procura360 (P360). The purpose of the VA Study will be to investigate potential improvements to project quality, and reductions in cost, property impacts, and/or environmental impacts associated with Build Alternative 1. Members of the PDT and Caltrans staff will be invited to participate. AECOM will support P360 by attending the VA Workshop, providing relevant project information, and following up with the recommendations noted in the Implementation Action Report.

P360's scope of the work will include the following:

- Provide a qualified, independent Certified Value Specialist (CVS) team leader to lead a VA study in accordance with Caltrans value methodology.
- Facilitate three VA Study Meetings:
  1. A pre-study meeting
  2. A 5-day VA Workshop, and
  3. An Implementation Action Meeting
- Document the VA study findings in accordance with the Caltrans VA Report Guide, including pre-study documentation, a preliminary VA report, Interim Implementation Action Report (if needed) and the Final VA report.
- Assist in recruiting VA study participants.
- Ensure that applicable data and correspondence and any other relevant information necessary for the VA study is collected, developed, and distributed.

### 5.4.11 Landscape & Aesthetics Concept

AECOM will prepare a technical memorandum that provides agreed upon guidance for the future development of the landscape and aesthetics elements of Build Alternative 1. For budgeting purposes, it is anticipated that the aesthetic elements will include the Greenville Viaduct and retaining wall surface textures only, with two concepts developed for each.

### 5.4.12 Preliminary Hydraulic Report (PHR) (Optional)

A Preliminary Hydraulics Report (PHR) is required for the development of Advance Planning Studies (APS) at the Project Study Report (PSR) stage or at the Project Report (PR) stage. The PHR shall identify hydrologic factors and parameters that will affect the selection of the structure. The PHR does not necessarily have to be based on a thorough hydrologic study, but the study must be detailed enough so the proper structure layout and type can be identified. This Task is for the preparation of applicable hydraulic models and Draft Preliminary and Preliminary Hydraulic Reports for the following bridges:

- Tassajara Creek (Bridge No. 33-0015L)
- Arroyo Las Positas (Bridge No. 33-0012 and 33-012S)
- Arroyo Las Positas (Bridge No. 33-0203)
- Arroyo Las Positas (Bridge No. 33-0085)

Hydraulic reports will comment on waterway adequacy and stream stability; include water surface elevations (WSEL), velocities and freeboard for 50-year and 100-year discharges; include 200-year discharges, WSEL and velocities for scour countermeasure design including maximum velocities determined in front of each abutment; historic and potential future channel degradation, drift, flood stage, backwater, scour, unusual hydraulic characteristics, and/or other applicable hydraulic-related factors which may impact the design. The hydraulics engineer shall review and evaluate the following:

1. Maintenance Record Evaluation
  - a. Discussion with Project Manager/District
  - b. District Hydraulics may provide historical problems, local maintenance

issues, requirements for test borings, pile driving, bank protection issues, etc.

- c. Peer Review consideration
2. Mitigation Measure Recommendations
3. Feasibility Evaluation
  - a. Potential Environmental / Agency Considerations (CVFPB, USACE, etc.)
  - b. Discharge
  - c. Water Surface Elevation
  - d. Debris Potential
  - e. Scour Potential

The preliminary evaluation does not necessarily have to be a thorough hydraulic study but must be detailed enough so the proper structure type(s) can be identified by the structure designer.

The Preliminary Hydraulics Report (PHR) will include discussion regarding:

- Hydraulic problems or issues (drift, degradation, aggradation, migration, stream stability, gravel mining, channel encroachments, backwater effects, reported scour, etc.)
- Pier/foundation type recommendation
- Suggested minimum soffit elevation based on applicable vertical freeboard
- High water elevation
- Allowable freeboard
- Flow rates (50, 100-year, and record) and in some cases 200-year
- WSEL (50, 100-year, and record) and in some cases 200-year
- Minimum main span length
- Preliminary total scour depth
- Current scour rating (NBIS Item 113 code and definition)
- Hydraulic skew

AECOM assumes that one round of comments will be received from Caltrans for the PHR. Draft and final versions of the report will be delivered electronically in PDF format.

Task 5.4.12 Deliverables:

- Preliminary Hydraulic Report (Draft and Final) for Bridge Nos. 33-015L; 33-0012 and 33-0012S; 33-0203; and 33-0085.
- Digital files containing the hydraulic models, if used.

*Task 5.4 Deliverables (Excluding Task 5.4.12):*

- Preliminary Right of Way (R/W) Requirements & Data Sheet (Draft and Final)
- Utility Plans (Draft and Final)
- Encroachment Policy Exception Request Memo (if needed)
- Transportation Management Plan (Draft and Final)
- Storm Water Data Report (Draft and Final)
- Drainage Impact Study and Hydromodification Report (Draft and Final)
- Location Hydraulic Study and Floodplain Evaluation Report (Draft and Final)
- Advance Planning Study (Draft and Final)
- Twenty-three (23) Preliminary Structural Geotechnical Reports for bridge structures indicated in Task 5.4.7 (Draft and Final)
- One (1) SPGR for all special-designed (non-standard) retaining walls (Draft and Final)
- One (1) Preliminary Geotechnical Design Report for the corridor (Draft and Final)
- Life Cycle Cost Analysis (Draft and Final)
- VA Report
- Interim Implementation Action Report (if needed)
- Landscape & Aesthetics Concept Memo (Draft and Final)

## 5.5 – Project Report

The approved PSR-PDS for the project provided agreement on the design concept, design scope, schedule and estimated cost of the project for programming. The project will require environmental clearance and Caltrans approval

of the Project Report (PR). A Draft Project Report (DPR) is prepared to obtain approval to publicly circulate the Draft Environmental Document (DED) and to schedule a public hearing. The DPR is revised following circulation of the DED, consideration of public comments, and the selection of the Preferred Alternative. The Final Environmental Document (FED) is then approved by Caltrans to reach environmental clearance, after which, Caltrans would then approve the Project Report. The Final Project Report will recommend that the preferred Build Alternative be approved and that the project proceed to the final design (PS&E) phase.

### 5.5.1 First Draft Project Report

A Draft Project Report (DPR) will be prepared based on the project description, technical reports and other studies developed during the project. The DPR documents the need for the project, summarizes key points from the environmental document, and summarizes scope, cost, and overall project impacts to enable an informed decision to be made to proceed toward project approval. The DPR will be based on Appendix K (Preparation Guidelines for Project Report) of the Caltrans Project Development Procedures Manual (PDPM).

### 5.5.2 Second Draft Project Report

Based on the Authority's and Caltrans' comments, a second Draft Project Report will be prepared and submitted for the Authority's and Caltrans' backcheck and final review.

### 5.5.3 Draft Project Report Approval

The Authority's and Caltrans' second round of comments will be addressed and the DPR will be finalized and submitted for approval to publicly circulate the DED.

### 5.5.4 First Project Report

The DPR will be revised following circulation of the DED, consideration of public comments, and the selection of the Preferred Alternative. The first submittal of the PR will be prepared incorporating public comments.

### 5.5.5 Second Project Report

After comments are received from the Authority and Caltrans, they will be addressed and incorporated, as needed, into the PR, which will then be re-submitted for final review.

## 5.5.6 Final Project Report (Project Approval)

After comments are received from the Authority and Caltrans, they will be addressed and incorporated into the PR, which will then be re-submitted to Caltrans for approval.

### Task 5.5 Deliverables:

- First Draft Project Report
- Second Draft Project Report
- Draft Project Report Approval
- First Project Report
- Second Project Report
- Final Project Report

### Assumptions:

The estimate of labor hours and time scheduled to perform the work is limited by the following assumptions.

### General

- Two Build Alternatives will be studied during the PA&ED phase. Except for Task 5.2, AECOM will perform the tasks described under Task 5 for Build Alternative 1 only.
- The following number of meetings are anticipated:
- 20 PDT Meetings (Caltrans D4 and D10 staff will be invited to attend each PDT, as appropriate); separate meetings for each District are not anticipated.
- 10 Agency Coordination Meetings
- 60 Internal Design Team Coordination Meetings
- The project's purpose and need, approved for the environmental document, will not be modified.
- The project limits will be based on the limits shown in the PSR-PDS.
- No roadway or utility design work is included on I-580 and I-205 within the Segment 2 for the new rail alignment along the north side of these two freeway facilities.

- All project deliverables will be prepared using English units.

### Data Collection

- AECOM will use the LiDAR base mapping that was used for the PSR-PDS. Topographic mapping of the I-580 corridor, and the corresponding ABC process required by Caltrans, will be completed after 30% and prior to final design.
- AECOM will include right-of-way lines, existing horizontal control, utility, and drainage facilities on the base mapping using available record data.
- Right-of-way maps will be available from Caltrans.
- Right-of-way delineation will be based on as-built information. No field verification is proposed.

### Traffic

- AECOM will collect traffic counts up to 15 locations on I-580, which includes the mainline and ramps, 30 intersections and 30 segments in Alameda County, and 20 intersections & 20 segments in San Joaquin County.
- Ramp termini intersection analysis will be performed at the 11 study interchanges (7 interchanges in Alameda County and 4 interchanges in San Joaquin County) identified in the scope. Merge/ diverge analysis will be performed at the 4 study interchanges in San Joaquin County identified in the scope. The analysis will be conducted during the AM and PM peak hours.
- Vissim Analysis will be performed only for the I-580 segment from I-580 / San Ramon Road interchange to I-580 / N Flynn Road interchange for the AM (5 – 10 AM) and PM (3 – 7 PM) peak periods for Existing, No Build and two Build Alternatives for the opening and design year.
- The Intersection Control Evaluation will be performed at the ramp termini intersections of the 11 study interchanges that are impacted by the project.

Electronic traffic model files will be submitted for technical reviews.

### **Hydraulics & Hydrology**

- AECOM will not perform a scour analysis for any watercourses in the project area.
- Detailed floodplain analysis other than the specified in the scope of work, is not included.
- AECOM assumes that the study described under Task 5.4.6 will conclude that there is no encroachment and/or minimal impact to the floodplain; therefore, a Summary Floodplain Evaluation Report will be completed.

### **Utilities**

- Fees may be required by utility companies and are not included.

### **Aesthetics**

- Two aesthetic concepts of the Greenville Viaduct and retaining wall surface textures will be developed.

### **Geotechnical**

- The Authority will provide or arrange right-of-entry and unrestricted access to the boring locations.
- All exploration locations will be made accessible to pickup trucks and a truck-mounted drill rig prior to the arrival of the field crew on site.
- No more than one mobilization/demobilization of the drilling field crew.
- All utilities will be marked at the exploration locations prior to the arrival of the field exploration crews. All boring locations will be surveyed and/or staked by the Project Team Licensed Surveyor.
- The borings will be located away from existing concrete flatwork. If other man-made obstructions are encountered at exploration locations that do not permit advancement of the explorations, the additional time required to relocate

borings for new attempts will be billed on an additional time-and-materials basis.

- The project owner/agency (Authority) will be listed as the generator for disposal of drill waste (cuttings and fluids). Kleinfelder will not be listed as the generator. The manifest or bill of lading for transport and disposal of drums needs to be signed by the Authority or their authorized representative.

### **Miscellaneous**

- Caltrans and the Authority will execute a Cooperative Agreement for the PA&ED.
- The Systems Engineering Management Plan (SEMP) and Concept of Operations (ConOps) will be completed by Alameda CTC's toll system consultant.

The following items are not included in this scope of work:

- Utility potholing work
- Preparation of agreements between agencies
- Freeway agreement
- Land survey services
- ROW hard copy and appraisal maps; temporary construction easements; and legal descriptions
- ROW acquisition service
- ROW record maps
- Title reports
- Landscaping and highway planting (except as noted in Task 5.4.11) and irrigation
- A Supplemental PSR-PDS
- Submission of CAD files to Caltrans

## Task 6 – Outreach

The AECOM Team will support the Authority in coordination with the Board of Directors (Board), Executive Steering Committee (ESC), Technical Advisory Committee (TAC), and State and local agencies for the duration of the 30% design and CEQA/NEPA documentation process (included in this fee is up to 24 months of outreach support from NTP). If the schedule extends beyond 24 months AECOM will pause work and not incur additional costs until additional scope and/or fee is negotiated with the Authority in good faith.

### 6.1 Executive Steering Committee (ESC)

AECOM will provide support to the Authority for the ESC meetings (up to 1 per month) for 24 months. Support will include attendance and if necessary, present and/or development of PowerPoint slides on technical data associated with the design, environmental process, and/or outreach process for the Valley Link Project. The AECOM PM or technical lead (up to two people per meeting) will attend each meeting.

#### *Deliverables:*

- Draft and Final ESC PowerPoint slides on technical topics (up to 24 sets of slides)

#### *Assumptions:*

- AECOM will provide support to the Authority for the ESC meetings (up to 1 per month) for 24 months

### 6.2 Agency Coordination and Consultation

The focus of coordination will be on agencies with permitting authority or directly affected agencies. Cooperating/Responsible Agencies are anticipated, including the Caltrans, United States Fish and Wildlife Service (USFWS), the United States Army Corps of Engineers (USACE), BART, and the Alameda County Transportation Commission (Alameda CTC). Agency participation and roles will be confirmed at project inception. Local jurisdictions in which the project will be constructed will also be coordinated with.

The AECOM team will participate in ongoing agency coordination meetings (see Task 5.2.1 and Task 5.2.2 for scope and number of meetings). While MOUs for federal permitting

agencies will be supported if they are required for the ROD/NOD, supporting the Authority through the permitting process is not included in this scope or fee and would be considered as an Optional Service.

#### 6.2.1 Agency Workshops

AECOM will provide support to the Authority for agency workshops (up to 1 per month) for 24 months. Support will include attendance and if necessary, present and/or development of PowerPoint slides and/or handouts on technical data associated with the design, environmental process / consultation, and/or outreach process for the Valley Link Project. The AECOM PM or technical leads (up to four people per workshop) will attend each workshop. AECOM will support the coordination of the workshops with agencies in coordination with the Authority administrative assistant and PM. AECOM will develop an agenda and meeting notes for workshops coordinated by AECOM or where the main purpose is for the 30% design, environmental process / consultation, and/or outreach. A workshop is defined as a meeting that has more than one stakeholder agency or has a duration over one hour.

#### 6.2.2 Agency Meetings

AECOM will provide support to the Authority for agency meetings (up to 4 per month) for 24 months. Support will include attendance and if necessary, present and/or development of PowerPoint slides on technical data associated with the design, environmental process, and/or outreach process for the Valley Link Project. The AECOM PM or technical leads (up to three people per meeting) will attend each meeting. AECOM will support the coordination of the meeting with agencies in coordination with the Authority administrative assistant and PM. AECOM will develop an agenda and meeting notes for meetings coordinated by AECOM or where the main purpose is for the 30% design, environmental process / consultation, and/or outreach. A meeting is defined as a meeting that has no more than one stakeholder agency and has a duration equal to or less than one hour.

Key stakeholders that will be a focus of the coordination effort include the below. Additionally, Alameda CTC, San Joaquin Regional Rail Commission, counties and cities will be coordinated with. AECOM team will support the preparation and management of agency meetings using the following materials:

- Agenda
- Review of Action Items from previous meeting
- Project Progress Updates
- Design Update (as appropriate)
- Public Outreach Update (as appropriate)
- Environmental Documentation Update (as appropriate)
- Meeting minutes

**California Department of Transportation (Caltrans)** - It is assumed that the Caltrans will serve as a Cooperating Agency and a signatory of the NEPA/CEQA documentation with FTA. The AECOM team will work closely with the Caltrans Division of Environmental Analysis to identify Caltrans environmental standards, policies procedures, and practices to be implemented in the environmental process. The AECOM team will utilize the Standard Environmental Reference (SER) for guidance and Caltrans forms/templates. Caltrans will be a joint partner in all reviews of documents / materials and will be a part of agency consultation and stakeholder coordination activities.

A meeting will be scheduled after completion of the transportation section of the Administrative Draft EIS/SEIR, prior to the Public Draft EIS/SEIR release to review the project with Caltrans for concerns. The assumed meetings/workshops are included in Task 5.02 and Task 5.03 scope and associated fee.

**Federal Transit Administration (FTA)** - It is assumed that the FTA will be the NEPA lead agency. The AECOM team will actively participate in FTA meetings and other relevant coordination meetings with FTA Region 9 and Headquarters to advance the NEPA document. The assumed meetings/workshops are included in Task 5.02 and Task 5.03 scope and associated fee.

**BART Coordination and Support** - The AECOM Team in coordination with the Authority will negotiate solutions to comments or concerns by BART. BART has reviewed the conceptual design and identified a few comments to be addressed including fare gates, vehicles, core capacity, and tail track for added capacity. AECOM will review design changes located at the Dublin-Pleasanton BART Station, but it is assumed no changes to design or costs will be

required due to the addition of BART vehicles or associated with core capacity outside of the Dublin-Pleasanton BART Station. A meeting will also be scheduled after completion of the transportation section of the Administrative Draft SEIR, prior to the Public Draft SEIR/EIS release to review the project with BART for fatal flaw language or other issues. The assumed meetings/workshops are included in Task 5.02 and Task 5.03 scope and associated fee.

### **6.2.3 Technical Advisory Committee (TAC)**

AECOM will provide support to the Authority for the TAC meetings (up to 1 per every 2 months, total not to exceed 12 meetings) for 24 months. Support will include attendance and if necessary, present and/or development of PowerPoint slides on technical data associated with the design, environmental process, and/or outreach process for the Valley Link Project. The AECOM PM or technical leads (up to four people per meeting) will attend each meeting. The TAC is assumed to be consistent with the previous TAC and include the following agencies:

- Alameda CTC
- BART
- Caltrans D4 and D10
- MTC
- SJCOG
- Member cities and counties
- Develop a TAC charter with the agencies at the first TAC meeting.

#### *Deliverables:*

- Draft and Final TAC PowerPoint slides on technical topics (up to 12 sets of slides)
- Draft and Final TAC Charter
- Draft and Final Agency Workshop PowerPoint slides and/or handouts on technical data (up to 12 sets of slides and handouts)
- Draft and Final Agency Workshop agenda and meeting notes, if workshops coordinated by AECOM or where the main purpose is for the 30% design, environmental process, or outreach on technical topics

- Draft and Final Agency Meeting PowerPoint slides on technical topics
- Draft and Final Agency Meeting agenda and meeting notes, if meetings coordinated by AECOM or where the main purpose is for the 30% design, environmental process, or outreach on technical topics

*Assumptions:*

- Included in this fee is up to 24 months of outreach support from NTP. If the schedule extends beyond 24 months AECOM will pause work and not incur additional costs until additional scope and/or fee is negotiated with the Authority in good faith.
- AECOM will provide support to the Authority for agency workshops (up to 1 per month) for 24 months. A workshop is defined as a meeting that has more than one stakeholder agency or has a duration over one hour.
- AECOM will provide support to the Authority for agency meetings (up to 4 per month) for 24 months.
- A meeting is defined as a meeting that has no more than one stakeholder agency and has a duration equal to or less than one hour.
- AECOM will provide support to the Authority for the TAC meetings (up to 1 per every 2 months, total not to exceed 12 meetings) for 24 months.
- The TAC is assumed to be consistent with the previous TAC members

## 6.3 Board of Directors

AECOM will provide support to the Authority for the Board meetings (up to 1 per month) for 24 months. Support will include attendance and if necessary, present and/or development of PowerPoint slides and/or staff reports on technical data associated with the design, environmental process, and/or outreach process for the Valley Link Project. The AECOM PM or technical lead (up to two people per meeting) will be in attendance at each meeting.

*Deliverables:*

- Draft and Final Board PowerPoint slides on technical topics (up to 24 sets of slides)
- Draft and Final staff reports (up to 24)

*Assumptions:*

- AECOM will provide support to the Authority for the Board meetings (up to 1 per month) for 24 months.

## 6.4 Outreach for CEQA/NEPA Process (PA/ED)

The start of the NEPA process occurs once an agency determines to take an action. A Notice of Intent (NOI) must be published in the Federal Register and Scoping needs to occur. The CEQA process will be initiated with submittal of a Notice of Preparation (NOP) to the State Clearinghouse (SCH). Outreach support for the CEQA/NEPA process from initiation through completion is described below.

### 6.4.1 Section 139 Coordination Plan

The AECOM team will develop a coordination plan that complies with SAFETEA LU 6002 and subsequent reauthorizations. It will define appropriate levels and types of coordination for different entities and aspects of the project. Examples of the approach will address:

- Coordination with FTA, Caltrans and the Authority's project management lead
- Coordination with local agency's on design, environmental analysis and impacts assessment, and first/last mile elements
- Local government team meetings as part of a TAC (see Task 5.2.3) to share information with municipalities along corridors that will be shared with the public
- Agency meetings (Task 5.2.1 and Task 5.2.2), including state and federal regulatory agencies
- Points in the stakeholder process where comments are expected: This includes cooperating agencies, participating agencies, responsible agencies, local governments, and other state and federal

regulatory agencies that may have interest

The coordination plan will map out the key elements of agency coordination during the NEPA processes. The AECOM team recommends the following agency coordination approaches:

- Initiating coordination with cooperating and participating agencies and tribes during scoping to gain an early understanding of environmental considerations from their perspectives
- Conducting an agency meeting during scoping to introduce agencies to the project and team and share interagency input
- Creating a schedule for agency meetings through the study to discuss environmental considerations and collaborate on identified issues (these meetings are covered in Task 5.2.1 and Task 5.2.2 scope and fee)

An administrative draft, draft and final draft Coordination Plan will be developed in coordination with FTA and the Authority.

#### **6.4.2 NEPA/CEQA Scoping**

Scoping will be conducted early in the NEPA/CEQA documentation process to engage stakeholders, present the project alternatives, and determine the scope of environmental reports.

Cooperating Agencies will be identified early in the scoping process in cooperation with FTA and Caltrans. Letters to potential Cooperating Agencies will be drafted for Authority signature regarding their desire to participate as Cooperating Agencies. This scope of work assumes the only Cooperating Agencies will be Caltrans and up to two additional agencies.

The AECOM team proposes holding a resource agency scoping meeting with Cooperating, Participating, and trustee (partner) agencies. FTA highly recommends an agency scoping meeting in their environmental SOP 7, and the AECOM team has found it effective for distributing project information and receiving scoping input from agencies. At the agency scoping meeting, the AECOM team will present preliminary resource study areas,

methodologies, project background, and alternatives.

Cooperating Agencies will be invited to participate in Scoping and to comment on the Draft and Final EIS/SEIR documents. For agencies that involve official consultation, the AECOM team will work with those agencies regarding issues early and throughout the environmental process.

The AECOM team, with the Authority and FTA/Caltrans, will review the Purpose and Need for the project to ensure it captures all project elements.

AECOM will support the Notice of Preparation (NOP) / Notice of Intent (NOI) under CEQA and NEPA.

An NOI will be developed, including purpose and need, preliminary description of alternatives, expected impacts, anticipated permits, a schedule for decision-making, a description of the scoping process, and a request for comments. The NOI will be provided to the Authority, Caltrans, and FTA for comment. The AECOM team will revise and resubmit for inclusion by the lead agency in the Federal Register.

An NOP will be drafted following the template and requirements posted at the SCH website and will reference the prior CEQA documentation. The NOP will be provided to the Authority, FTA, and Caltrans for comment. The AECOM team will revise and resubmit for posting on the SCH by the Authority.

AECOM will develop draft and final language for the notifications and provide to the Authority for distribution and notification through the newspapers, to the Board, the project email list, and the interested property holders. AECOM will work with the Authority and FTA / Caltrans on setting up the process for and completing Scoping for the project. This will include holding one agency scoping meeting and two public scoping meetings. The AECOM team will plan, prepare materials for and attend (up to five team members) public scoping meetings in the project area.

The AECOM team will summarize agency comments and substantive public comments received in an overall Scoping Report. It is assumed that the scoping process will not result in an expansion of the number of alternatives to be evaluated in the NEPA/CEQA document. One

administrative draft, one draft and one final response to scoping comments and Scoping Report will be prepared.

### **6.4.3 Database, Website, and Fact Sheet**

The AECOM team will support the Authorities maintenance of the public and stakeholder database containing all contacts from outreach meetings and interested individuals for Project email updates. AECOM will provide database updates after each public meeting and hearing as well as sign in sheets for stakeholder meetings for the Authority to utilize in updating the database.

At up to six key milestones, AECOM will provide website updates including text, graphics, maps, and other task deliverables for uploading. AECOM will also create up to four fact sheets (no more than 4 page) for use by the Authority during the 24-month schedule.

### **6.4.4 Notice Support for Draft EIS/SEIR**

The AECOM team will prepare and distribute notification for Notice of Completion (NOC) for distribution of the Notice of Availability (NOA) of the Draft EIS/SEIR. The distribution and notification of the NOA and Public Draft EIS/SEIR will be undertaken by the consultant outreach team. The environmental team will work with the outreach team to ensure that noticing for the NOA and Public Draft EIS/SEIR meets the statutory requirements under CEQA/NEPA.

### **6.4.5 Draft EIS/SEIR Public Hearings and Comment Period**

Upon release of the Draft EIS/SEIR there will be two public hearings. The AECOM team will plan, prepare materials for and attend (up to five team members) the public hearings in the project area – one in the Tri-Valley and one in the San Joaquin Valley. The Authority will provide a court reporter for the hearings and also provide the transcript and a database of comments from the transcript. AECOM will take the database, other comments received at the hearings, and comments from the draft comment period to create a comprehensive list of comments. At the conclusion of the comment period all comments will be collated, categorized, and responded too. One administrative Draft, one draft and one final response to comments will be prepared (note:

response to comments is accounted for in the CEQA/NEPA (Task 4.2).

### **6.4.6 CEQA Certification Support**

The AECOM team will plan for and develop materials for and attend one Authority Board Meeting for the certification of the Final EIS/SEIR.

### **6.4.7 Notice Support for Combined Final EIS/EIR/ROD**

It is assumed that the AECOM team will develop materials (notice language, map, property owner letter template, website and email language and map) for the notification for the Combined Final EIS/SEIR/ROD and the Authority will be responsible for the distribution of the materials including newspaper adds, website posting, email blast, and any mailings. The AECOM team will support the Authority in preparing language for the posting in the federal register with FTA, FHWA and EPA. The AECOM team will outline the requirements for and prepare materials in conformance with the statutory requirements under CEQA/NEPA. One administrative draft for the Authority, one administrative draft for Caltrans and FTA, and one final set of materials for federal register posting will be developed.

#### *Deliverables:*

- One administrative Draft, one draft and one final Section 139 Coordination Plan provided in electronic form
- One administrative draft for the Authority, one administrative draft for Caltrans and FTA, and one final set of materials for the Notice of Preparation (NOP) / Notice of Intent (NOI) provided in electronic form
- Draft and Final Scoping letter invitation (provided in electronic form) to stakeholders and agencies for distribution by the Authority
- Draft and final language for the NOP/NOI and scoping notifications and provide to the Authority for distribution and notification through the newspapers, to the Board, the project email list, and the interested property holders provided in electronic form
- Attendance at (Up to five consultant team members) and draft (electronic only) and

- final printed materials (sign in sheet, notice language, comment form, up to 10-boards) for one agency scoping meeting and two public scoping meetings.
- One administrative draft, one draft and one final response to scoping comments provided in electronic form
  - One administrative draft for the Authority, one administrative draft for Caltrans and FTA, and one final Scoping Report provided in electronic form
  - Public and Stakeholder contact information after public meetings/hearings and sign-in sheets after stakeholder meetings for the Authority to update the project database provided as copies of sign-in sheets
  - Draft and final website updates (six rounds) including text, graphics, maps, and other task deliverables for uploading by the Authority provided in electronic form.
  - Up to four draft and final fact sheets provided in electronic form (PDF only) (no more than 4 pages)
  - One administrative draft for the Authority, one administrative draft for Caltrans and FTA, and one final set of materials for the Notice of Availability (NOA) of the Public Draft EIS/SEIR provided in electronic form
  - One draft (electronic only) and one final set of printed materials (sign-in sheets, comments forms, up to 10 display boards) for the Draft EIS/SEIR public hearings
  - Attendance at the hearings (up to 5 staff members)

- One administrative draft for the Authority, one administrative draft for Caltrans and FTA, and one final Draft EIS/SEIR comment database with responses provided in electronic form
- One draft and one final notice language for Authority distributed letters, website, email blast and newspaper ads for the Combined FEIR/FEIS/ROD provided in electronic form
- One administrative draft for the Authority, one administrative draft for Caltrans and FTA, and one final set of materials for federal register posting for the Combined FEIR/FEIS/ROD provided in electronic form

*Assumptions:*

- While MOUs for federal permitting agencies will be supported if they are required for the ROD/NOD, supporting the Authority through the permitting process is not included in this scope or fee and would be considered as an Optional Service.
- This scope of work assumes the only Cooperating Agencies will be Caltrans and up to two additional agencies.
- Upon release of the Draft EIS/SEIR there will be two public hearings.

## Task 7: Optional Services

These services will be provided to the Authority on an as needed basis, and the cost for these services are not included in the current scope and fee. The Authority could access the AECOM Team to provide support for any of these services or others as deemed necessary. A list of potential support areas is included below.

### 7.1 Design

1. Systems Engineering Management Plan for Managed Lanes

### 7.2 Funding

1. Strategic support in federal, state and local funding
2. Development of a grants approach for the next 24-months
3. Funding and Financing Plan Update -2022
4. Grant planning, applications, and funding allocation support
  - BAAQMD - 2022
  - SJAQMD -2022
  - ATP - 2022
  - Raise – 2022
  - INFRA – 2022
  - Congested Corridors
  - TIRCP – Fall 2021
  - Raise – 2023
  - INFRA – 2023
  - MTC RM 1

- MTC RM 3
  - Livermore Impact Fee Agreement
  - CRISI - 2022
  - FASTER Support
  - SJCOG Measure Support
  - MTC RTP Update Support
5. FTA Capital Investment Grant Program (New Starts) Program
    - Entry to Project Development strategy and support
    - Entry to Engineering strategy and support
    - Full Funding Grant Agreement support
  6. Development of Board Policies, including but not limited to the following
    - Parking Policy
    - Fare Policy

### 7.3 Outreach

1. Visual simulations
2. Animations
3. Virtual townhalls
4. Outreach plans
5. Surveys and analysis
6. Outreach roadshows to reach public

# Fee

Below is the proposed fee for the PA/ED and Rail Design Service for the Valley Link Rail Project.

**Table 7: Fee for the PA/ED and Rail Design Service for the Valley Link Rail Project**

<b>Task</b>	<b>Fee</b>
<b>Task 1</b> Project Management	\$1,940,136
<b>Task 2</b> 15% Preliminary Engineering Altamont Straightening and I-205 Segment	\$564,920
<b>Task 3</b> 30% Rail Engineering	\$14,703,860
<b>Task 4 / Task 5</b> Caltrans Project Approval (PA) / Environmental Technical Studies (ED)	\$16,932,767
<b>Task 6</b> Outreach	\$1,232,604
<b>Task 7</b> Optional Services	N/A
<b>Total</b>	<b>\$35,374,287</b>