



CONNECT NORTHERN CALIFORNIA



STAGE GATE 2 EQUITY ADVISORY COUNCIL (EAC) INPUT REPORT

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Acronyms and Abbreviations

ACRONYM/ABBREVIATION	DEFINITION
BART	San Francisco Bay Area Rapid Transit District
CCJPA	Capitol Corridor Joint Powers Authority
CBO	community-based organization
EAC	Equity Advisory Council
ECO	environmental constraints and opportunities
MTC	Metropolitan Transportation Commission
UC	University of California
UPRR	Union Pacific Railroad
VA	Veterans Affairs
VMT	vehicle miles traveled

Link21 Program Team Names

TEAM NAME	TEAM MEMBERS
Program Management Consultants (PMC)	The HNTB Team
Program Management Team (PMT)	BART/CCJPA + PMC
Consultants	Consultants supporting program identification/project selection
Link21 Team	PMT + Consultants

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1. Executive Summary

1.1. Background and Purpose

In early 2023, the Link21 Team¹ established the Equity Advisory Council (EAC). This body, currently with 18 persons, consists of members of the public with professional and lived experience in equity. Input from the EAC supplements findings from other engagement and technical work to support development of the Link21 Program (Link21).

The Link21 Team engaged the EAC on important topics related to Stage Gate 2 work to develop a draft Stage Gate 2 staff recommendation for a Preliminary Project, including a train technology (BART or Regional Rail²) for the new transbay passenger rail crossing project (Crossing Project). The EAC provided guiding input on work such as:

- Environmental constraints and opportunities (ECO)
- Business case approach, especially for evaluating equity benefits
- Anti-displacement
- Preliminary Purpose and Need
- Concept development

The EAC provided input through eight public meetings (as of February 2024), in which members had the opportunity to comment on materials presented and questions posed by the Link21 Team. Members also had the opportunity to comment through office hours sessions offered in addition to the public meetings and surveys distributed by the Link21 Team. This document summarizes how EAC input:

- Was incorporated into or reflected in the technical work conducted in support of Stage Gate 2.
- Relates to the train technologies evaluated for Stage Gate 2.
- Is informing the scope for post-Stage Gate 2 work.

The involvement of the EAC in program work provides a piece of key evidence in support of the Link21 Team's Stage Gate 2 equity statement to *fully implement the Equity Commitment through the whole development process and recommend a Preliminary Project that advances equity*. Documentation of the EAC's input also supports the Stage Gate 2 statements about development and evaluation, engagement and outreach, and readiness.

¹ San Francisco Bay Area Rapid Transit District (BART), Capitol Corridor Joint Powers Authority (CCJPA), Program Management Consultants (PMC), and Consultants supporting program identification/project selection (Consultants)

² It could include intercity, commuter, or high-speed rail.



1.2. EAC Input Themes

The EAC is a diverse group with many viewpoints. Though members have different lived experiences and professional backgrounds, several common opinions and priorities emerged across the group’s first eight meetings. **Table 1-1** summarizes these key input themes and how they relate to findings about Link21 BART and Regional Rail service. At its January 2024 meeting, EAC members confirmed that they felt the themes in Table 1-1 reflected the most prominent types of input raised since the group’s inception. Additional detailed input is included in [Chapter 4](#).

Table 1-1. Key EAC Input Themes

EAC INPUT THEMES	RELATED NOTABLE FINDINGS
<p>Serving locations outside the immediate Transbay Corridor (e.g., Millbrae) and throughout the Northern California Megaregion (Megaregion) (e.g., Sacramento) is important.</p>	<p>Regional Rail offers the potential to introduce improved service to and connections between parts of the Megaregion that do not have existing direct transbay rail access through BART. The evaluated Regional Rail concept would create 370 new one-seat-ride station pairs, compared to 290 for the BART concept. Regional Rail also provides the potential to leverage numerous planned investments throughout the Megaregion, while BART’s ability to leverage planned projects is more geographically restricted.</p>
<p>Priority populations must receive a high proportion of benefits for Link21 to be equitable.</p>	<p>Both BART and Regional Rail showed the potential to provide a high percentage (roughly 40% or more) of benefits to priority populations, with a slightly higher percentage of new rail trips being taken by priority populations residents with Regional Rail (41% compared to 39%).³</p>
<p>Some communities are underserved by rail, even if alignments go through them. New stations, including infill stations, could help resolve this disparity.</p>	<p>Analysis into transportation needs and the service benefits of a new crossing identified that both the BART and Regional Rail Representative Concepts would increase access to rail. Notably, the evaluated Regional Rail concept would give 64,000 more residents access to Urban Metro service, compared to 22,000 for the BART concept. Whether and which new stations would be included would be assessed in post-Stage Gate 2 work.</p>

³ There is 32.4% of the Megaregion’s population that lives in priority populations areas.



EAC INPUT THEMES	RELATED NOTABLE FINDINGS
<p>Preventing displacement is paramount and must be considered from the beginning of work.</p>	<p>Analysis demonstrates there is a higher risk for indirect displacement with the Regional Rail Representative Concept than the BART Representative Concept. This is largely because some of the areas served by the Regional Rail Representative Concept lack existing robust anti-displacement policies. The methodology does not consider the potential benefits of new anti-displacement policies. The Link21 Team is producing an Anti-displacement Toolkit to decrease this risk. The toolkit will assist Link21 and local communities in assessing potential indirect displacement and identifying effective anti-displacement policies.</p> <p>Due to the broad assumptions in the Regional Rail Representative Concept about right-of-way needs, Regional Rail also carries an increased risk of direct displacement compared to BART. The Link21 Team has identified possible options that would leverage existing tracks more, which could reduce the direct displacement potential of Regional Rail. Studying those options further would be a priority after Stage Gate 2 if Regional Rail is advanced.</p>
<p>Having reliable train service across more hours of the day is important for equity, especially for workers commuting in late night and early morning hours.</p>	<p>Analysis suggests there is the potential for expanded service hours with either a BART or Regional Rail Crossing Project. Operating longer hours, especially 24 hours a day, would require policy changes beyond Link21.</p>
<p>Frequency is a critical service characteristic that should be prioritized.</p>	<p>The conceptual service plan for the Regional Rail Representative Concept includes 16 transbay trains per direction per peak hour, compared to 24 for BART. A Regional Rail Crossing Project could still be responsive to the EAC’s emphasis on frequency, as the relative increase in frequency is greater for Regional Rail — 16 trains an hour means a train every 3.75 minutes, which is a far higher frequency than exists for Regional Rail today.</p> <p>With both technologies, there is also the possibility to increase frequency above the conceptual service plan assumptions if other improvements to the system are made.</p>
<p>Quality local transit options that allow people to reach rail stations are essential for equity.</p>	<p>Since the stations that will be a part of Link21 will not be determined by Stage Gate 2, robust coordination with transit partners on connecting routes has not started yet. Regardless of the technology selected for the new crossing, once station work is sufficiently advanced, the Link21 Team will work closely with other agencies to discuss connecting transit improvements.</p>

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EAC INPUT THEMES	RELATED NOTABLE FINDINGS
<p>The lack of a unified fare system, high fare costs, and barriers to using cash pose equity issues.</p>	<p>Link21’s analysis uses fare assumptions from the Metropolitan Transportation Commission’s (MTC) <i>Plan Bay Area 2050</i> for Bay Area trips. <i>Plan Bay Area 2050</i> includes a distance-based fare structure that is the same for all services and has a 50% discount for low-income riders. This means that, unlike today, a trip between Coliseum and Richmond would cost the same whether on BART or Capitol Corridor.</p> <p>This type of fare structure would increase the financial accessibility of Regional Rail to low-income households. Under those assumptions, more than half of new trips for the BART (57%) or Regional Rail (56%) concepts would be taken by lower income individuals.</p> <p>The Link21 Team will stay engaged with fare discussions to advocate for a structure that allows the projected benefits to low-income households to be realized.</p>
<p>Riders must feel safe using transit.</p>	<p>Addressing safety on BART and Regional Rail requires systemwide efforts and policies that are beyond the scope of Link21. As more work on stations begins after Stage Gate 2, the Link21 Team will consider how station design features could enhance personal safety. The Link21 Team will elevate public input around safety to the stakeholders involved in safety policies.</p>
<p>Transit must be accessible to people of all abilities for the system to be equitable.</p>	<p>Regardless of the technology for the new crossing, Link21 work must be designed to meet the accessibility needs of all potential riders, especially individuals with disabilities. As more work on stations begins after Stage Gate 2, the Link21 Team will work with stakeholders from the disability community to understand what considerations should go into station design. The Link21 Team will also uplift what it hears about accessibility to partners to promote improved accessibility across the transit network.</p>

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2. Introduction

2.1. Link21 Equity Background

The Link21 Team is committed to advancing equity through its work. Consistent with BART's Office of Civil Rights, the Link21 Team defines equity as the state, quality, or ideal of being just, impartial, and fair. It is a state in which an individual's background does not predetermine or predict their opportunity. The Link21 Team's approach to equity was first outlined in the *Equity Blueprint Plan*, which advances a three-pronged strategy for addressing equity on Link21:

1. **Reflect:** Understand internal biases in assessing impacts and benefits.
2. **Contextualize:** Consider history, lessons learned from previous projects, and community needs.
3. **Co-create:** Work with experts, peer agencies, community organizations, and the public to craft program elements that reflect a wide range of views, perspectives, and context relevant to the impacts and benefits associated with Link21.

In co-creation, the Link21 Team emphasizes “designing with” communities that have been marginalized,⁴ not “designing for” them. Instead of conducting engagement that allows the Link21 Team to *learn about* or *learn from* these communities, the Link21 Team endeavors to establish *partnerships* with communities that have been marginalized so they can directly shape the parts of the work most important to them.

This commitment to co-creation is a key part of Link21's [Equity Vision Statement and Equity Commitment](#), which underlines the importance of having lived experience to affect program decisions. The *Equity Commitment* includes obligations to:

- Implement processes that advance equity through all aspects of Link21.
- Invest in accessible and accountable community engagement.
- Partner with community members most impacted by past transportation projects to identify and avoid, mitigate, or minimize impacts while maximizing benefits to these communities that have been marginalized, including priority populations.⁵

Consistent with the *Equity Commitment*, the Link21 Team conducted three rounds of community co-creation early in the planning process, between February 2021 and June 2022, where they partnered with community-based organizations (CBO) to host

⁴ The Link21 Team defines communities that have been marginalized as communities that have experienced an unjust distribution of societal benefits and burdens. Among other groups, communities of color and low-income communities are a part of the Link21 Team's understanding of communities that have been marginalized.

⁵ Priority populations is a Link21-specific designation of the census tracts in the Northern California Megaregion (Megaregion) where people are most impacted by negative economic, mobility, community, health, and safety outcomes.



workshops where individuals from communities that have been marginalized could influence key work. The CBOs and community members were compensated for their effort and expertise. Through those rounds of community co-creation, participants shaped foundational work including:

- Goals, objectives, and business case metrics
- Equity vision statement and commitment
- Definition of priority populations
- Understanding of community mobility needs

2.2. EAC Background

While this community co-creation, as well as other engagement work, was critical to establishing an equitable process for Link21, the Link21 Team recognized there needed to be additional ways for communities that have been marginalized to be key partners as work advanced. To open another path for communities that have been marginalized to shape Link21, the Link21 Team developed a proposal for an EAC. The main goals of the EAC are to:

1. Integrate lived experts (those who have lived experience in inequitable transportation and infrastructure) into Link21, especially for interim non-Board decisions.
2. Supplement other co-creation activities, such as co-creation workshops, to increase opportunities for community partnership and to provide influence at key points in Link21's development.
3. Introduce a community-driven body that has the benefit of long-term engagement with the program, which allows for deeper discussions and stronger community alignment with how Link21 progresses.

Further information about the guiding vision for the EAC can be found in the [EAC Project Charter](#). Additional detail on how the EAC works can be found in the [EAC Project Bylaws](#).

A month-long open call for applications was issued in July 2022 to fill up to 20 spots for an initial two-year term on the EAC. The opportunity was widely promoted through BART, CCJPA, and Link21 communications channels (e.g., websites, emails, social media), and it was directly communicated to CBOs and governmental partners.

In August 2022, a selection committee consisting of BART staff, representatives from the California Department of Transportation (Caltrans) and MTC, and an equity advisor from the Link21 Engagement and Outreach Consultant Team convened to review the 86 complete applications and to recommend an inaugural cohort of EAC members. After considering the strength of the applications and the socioeconomic and

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geographic diversity of the Megaregion, the selection committee named 18 people to the EAC (**Table 2-1**).

Table 2-1. EAC Membership: February 2023⁶

EAC MEMBER	GEOGRAPHIC AREA	EAC MEMBER	GEOGRAPHIC AREA
Ameerah Thomas	Oakland	Gracyna Mohabir	San Jose
Angela E. Herring	Sacramento	Harun David	Richmond
Beth Kenny	Alameda	Landon Hill	Oakland
Clarence R. Fischer	Cherryland	Linda Braak	Davis
Cory Mickels	San Francisco	Mica Amichai	Oakland
David Sorrell	Union City	Samia Zuber	San Francisco
David Ying	San Leandro	Stevon Cook ⁷	Oakland
Elizabeth Madrigal	Seaside	Taylor Booker	Hercules
Fiona Yim	Berkeley	Vanessa Ross Aquino	San Francisco

The areas listed in Table 2-1 reflect how EAC members identified their geography on their application. Many EAC members bring lived experience from multiple places, as they may live and work in different places, have previously lived in a different location, or have familial and cultural connections to another city or neighborhood. When reviewing applicants who listed Oakland and San Francisco, the two largest cities on either side of the Crossing Project, as their location, the selection committee also considered any neighborhood identified by the applicant.

All EAC members are compensated for their time and contributions per the [EAC: Honorarium Pilot](#) guidelines, which scopes EAC members to attend up to six three-hour-long meetings per year and to contribute an additional three hours of monthly work outside of meetings.

2.2.1. How the EAC Operates

The main forum for collaboration with the EAC is at meetings held every other month. Meetings are scheduled to be either 2 hours and 30 minutes or 2 hours and 45 minutes long and are held over Zoom. Although the EAC is not subject to Brown Act regulations, the Link21 Team considers public transparency an important part of the EAC. Meetings are open to the public, meeting materials are posted on BART's Legistar site and the EAC page on the Link21 website, and there are agenda items for public comment.

⁶ Hayden Miller (San Francisco) was recommended for membership by the Selection Committee, but initially he was too young to serve on the body. He joined the EAC starting with the January 2024 meeting.

⁷ Stevon Cook resigned from the EAC prior to the November 28, 2023, meeting due to professional and familial obligations.



The Link21 Team offers voluntary office hour sessions in the weeks following each EAC meeting to provide space for EAC members to ask more questions and to have additional discussion about topics from the last meeting's agenda. Staff from the appropriate parts of the Link21 Team attend office hours. Office hours are only open to EAC members. The Link21 Team also interacts with EAC members via email and phone. Surveys requesting further input are sent after each meeting. Additional details on how the Link21 Team works with the EAC are in [Chapter 5](#).

2.3. Purpose of the Report

This report serves as a summary of EAC input related to Stage Gate 2 work and how that input has been considered in technical work, relates to the technologies evaluated for Stage Gate 2, and has been accounted for in post-Stage Gate 2 scope planning. It focuses on EAC input that is relevant to Stage Gate 2, rather than input related to the logistics of the EAC's operation (e.g., a survey about how to improve meetings) or informational questions (e.g., why are BART and CCJPA the lead agencies). By focusing on the EAC's contributions to Link21 work, including future scoping considerations, this report provides evidence of the EAC's ongoing advisory for Stage Gate reviews. Much of the information in this report comes from *Follow-Up to Previous EAC Feedback* memos the Link21 Team started producing as a part of meeting packets starting in June 2023.

This report will be included as evidence during stage gate reviews, primarily in support of the Stage Gate 2 Equity Statement, which states that the Link21 Team has “fully implemented the Equity Commitment through the whole development process and has recommended a Preliminary Project that advances equity.” Outlining the influence of the EAC demonstrates the Link21 Team's efforts to fulfill the Equity Commitment. Showing the connection between EAC input and the evaluation of both technologies will also provide evidence that the forthcoming draft Stage Gate 2 staff recommendation for a Preliminary Project is one that can advance equity. As the EAC's input also guides future scoping for Link21, this report also supports the Stage Gate 2 Readiness Statement by demonstrating that the EAC has shaped key equity considerations for post-Stage Gate 2.

For more direct comparisons of the evaluation results for BART and Regional Rail, see the Stage Gate 2 business case materials.

2.3.1. Report Structure

The remaining report sections are:

- **Chapter 3:** provides additional detail on the EAC's role in Stage Gate 2 and introduces the major topics that were brought to the EAC for input.
- **Chapter 4:** details what EAC input was heard on those topics and how it was considered in Link21 work.



- **Chapter 5:** explains how the EAC developed over the year and demonstrates that the Link21 Team’s approach to working with the EAC leaves the group poised to continue providing valuable influence post-Stage Gate 2.
- **Chapter 6:** reiterates major Stage Gate 2-related EAC input themes and summarizes evaluation results for each.

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3. EAC and Stage Gate 2

3.1. Stage Gate 2

Stage gates are key points in the development and delivery of Link21 that provide fundamental strategic definition to Link21's progress. They memorialize the actions made at the appropriate board and executive levels of authority based upon staff recommendations. Among the many actions that must be made over Link21's life cycle, stage gates capture the foundational guidance that determine Link21's direction, effectively closing one part of the life cycle, opening the next, and confirming support for continued investment and progress of the program to the next stage gate.

At Stage Gate 2, the BART and CCJPA Boards of Directors (Boards) will consider whether to “advance the identified Preliminary Project to be refined, with continued community, stakeholder, and public engagement, into a Proposed Project ready for Environmental Review.” In practice, this means the Boards will take action on the **train technology** for the Crossing Project (i.e., whether BART or Regional Rail will operate in the new crossing).

To support the forthcoming draft Stage Gate 2 staff recommendation, the Link21 Team will provide evidence for four statements:

- **Development and Evaluation:** Completed robust development and evaluation to confirm the megaregional need to continue work and to recommend a Preliminary Project for advancement that is in line with the vision, goals, and objectives that were approved at Stage Gate 1.
- **Engagement and Outreach:** Engaged stakeholders and the public across the Megaregion, and they have shaped the development and recommendation of a Preliminary Project for advancement.
- **Equity:** Fully implemented the Equity Commitment through the whole development process and recommended a Preliminary Project that advances equity.
- **Readiness:** Secured people, processes, funding, and tools to readily deliver Stage Gate 3.

3.2. EAC's Role in Stage Gate 2

The *EAC Project Charter* states that the EAC will “to the extent possible, be integrated into the Stage Gate approvals process for key Link21 workflows and other decisions that directly affect their communities and lives. Input will inform Board approval discussions.”

In alignment with this, the EAC's role in Stage Gate 2 is to provide *ongoing advisory*. This means the EAC will regularly provide input — through meetings, office hours, and

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other communications — that shapes the development of key work related to Stage Gate 2. This approach allows the EAC’s expertise and lived experience to influence the direction of in-progress work, as opposed to only including the EAC during a formal stage gate review.

This report is primarily intended to serve as evidence for the stage gate statement on equity. It can also serve as evidence for the other three stage gate statements:

- **Development and Evaluation:** Demonstrates how EAC input has been considered and reflected in the business case framework, interpretation of results, and concept development process.
- **Engagement and Outreach:** Shows that EAC members have been “engaged stakeholders...[that have] directly shaped the development and recommendation of project(s) for advancement.”
- **Readiness:** Establishes that the EAC has successfully served as an important partner in program development and has informed the development of future work scope, demonstrating that the group is prepared to support work related to Stage Gate 3 and that the Link21 Team has scoped for continued equity work.

3.3. Topics of Focus for the EAC

To allow the EAC to play a substantial and tangible role in shaping work related to Stage Gate 2, the Link21 Team needed to carefully collaborate with the EAC to determine meeting topics. The steps to set EAC topics were to:

1. Identify work that will serve as key evidence during Stage Gate 2. The Stage Gate Team collaborated with leaders across the Link21 Team to identify what deliverables would be evidence for stage gate reviewers.
2. Assess whether work related to stage gate key evidence is suitable to bring to the EAC. This included the consideration of factors like:
 - a. Is the topic within the scope of the EAC, as defined in the *EAC Project Charter*?
 - b. Is the topic technically suitable for individuals that may not have academic or professional experience in the subject?
 - i. *Example:* A topic on complex mathematical components of the travel demand model would likely not be accessible to people without a modeling background.
 - c. Is input on the topic from a group of people from different places and identities valuable, or should engagement on the topic be focused on a particular subset of the population?
 - i. *Example:* Input about how a particular geographic community should be considered is better suited for targeted public engagement in that area.

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- d. Has the EAC expressed a collective interest in discussing the topic?
3. Consider the timing of bringing topics to the EAC for input with an emphasis on making sure there is sufficient time to incorporate EAC input before the work needs to be advanced.

Consideration of these questions led to including the topics in **Table 3-1** in EAC meeting agendas. Topics are listed in order of when they were first brought to the EAC for feedback. Additional details about these topics and the input sought is in [Chapter 4](#).

Other topics were brought to the EAC, but for informational purposes rather than to influence Stage Gate 2 work. The first two EAC meetings, both in February, focused on informational presentations and materials on Link21's background to give members context that could inform input on upcoming subjects. The November meeting included an agenda item on fares that did not have a direct connection to Stage Gate 2 work.

Table 3-1. Major Topics Brought to the EAC for Stage Gate 2-related Input

TOPICS	INPUT SOUGHT
Environmental constraints and opportunities (ECO)	<ul style="list-style-type: none"> • Are there additional constraints or opportunities that we should consider? • What are the most important constraints or opportunities to consider and why? • Do you suggest any other ways, or information sources, to identify constraints and opportunities in Link21 planning?
Evaluating equity in the business case	<ul style="list-style-type: none"> • Ways to create a metric that equitably measures access to jobs? • Ways to create a metric that equitably measures access to regional community resources? • What indicators are most important for understanding whether a concept promotes equitable outcomes? • What are your reflections about the importance of incremental benefits and significant benefits for priority populations?
Anti-displacement approach	<ul style="list-style-type: none"> • What does displacement mean to you? • What are your concerns related to Link21 and displacement? • What policies and programs have worked to keep community members in place? • What should Link21 do to assess and reduce potential cultural displacement? • How can Link21 support anti-displacement strategies implemented by non-government organizations?
Initial concept development and evaluation insights	<ul style="list-style-type: none"> • Reflections on the six Round 1 concepts • Reflections on the potential equity benefits of BART and Regional Rail concepts
Preliminary Purpose and Need	<ul style="list-style-type: none"> • Refinements to the draft Preliminary Purpose and Need

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TOPICS	INPUT SOUGHT
Draft EAC key input themes	<ul style="list-style-type: none"> • Do you feel the draft list of key input themes captures the most prominent priorities raised by EAC members? • Do you think there are other themes that should be included?

3.4. How EAC Input Can Influence Stage Gate 2 Work

Since the EAC’s first meeting in February 2023, the group has been an important partner in shaping Link21 work. Related to Stage Gate 2, the EAC influenced work by:

- Providing input that shaped evaluation methodologies. In some cases, the EAC’s input also reaffirmed approaches already drafted by the Link21 Team.
 - *Example:* An EAC member advocated for the explicit consideration of jobs that require late night and early morning commutes. The opportunity jobs metric added to the Business Case emphasized these jobs better than the overall access to jobs metric did. Refer to [Section 4.3.4](#) for more details.
- Expressing priorities that relate to the possibilities associated with each service type (BART or Regional Rail) for the Crossing Project.
 - *Example:* Multiple EAC members identified creating service that directly improves travel for people outside the Bay Area as a priority. Regional Rail is best positioned to provide direct service benefits to places like Sacramento and Stockton, due to its geographic reach.

These examples show how a particular piece of detailed input could influence Link21 work. Other times, EAC members offered more general input. Themes from this general input were also incorporated into Link21 when possible. For example, across multiple meetings and communications, numerous EAC members stressed the importance of displacement to them. This contributed to the Link21 Team’s emphasis on developing more advanced ways to assess the potential displacement impacts of concepts.

EAC members can also raise an “equity flag” to the Link21 Team. This is a formal way to request the Link21 Team re-examine a specific proposal, deliverable, or process due to a serious concern the EAC member has about how that work could demonstrably cause significant harm to communities that have been marginalized. No equity flags directly related to the work of the Link21 Team have been raised to date.

3.4.1. Limitations to EAC Input

To give the EAC the opportunity to maximize their influence on Link21, the Link21 Team tries to outline constraints about how and what type of input can most directly shape work. This is balanced with providing an open and accessible space for EAC members

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to discuss. As a result, some pieces of input are more difficult or infeasible to incorporate into Link21 work for reasons including:

- Acting on input may be technically infeasible.
 - *Example:* An EAC member could advocate for a level of precision for modeling indirect displacement that is not possible with the current tools.
- Input may conflict with learnings from other engagement efforts. While the EAC is a valuable forum for lived experience to permeate Link21 work, EAC members may have thoughts that run counter to broader community sentiments. The Link21 Team always needs to consider EAC input alongside findings from other engagement work that has more individual touchpoints with community members.
 - *Example:* An EAC member may think a site is a good candidate for a potential station, but others in the community may feel the existing resources need to be preserved.
- Input may be given on items that are outside of the Link21 scope or outside of the EAC's scope as defined in the *EAC Project Charter*.
 - *Example:* An EAC member raised an equity flag over a 2023 BART service change. Since current schedules are not within Link21's purview and this scheduled change did not impact the Link21 Team's work on future service possibilities, the concern could not be directly addressed in Link21 work.
- Input may be given on items that were approved during the Stage Gate 1 review and approval.
 - *Example:* An EAC member could comment on the goals and objectives that were already approved by the BART and CCJPA Boards.

Even when the above constraints emerge, the Link21 Team endeavors to find ways to incorporate the sentiment behind the EAC's input into Stage Gate 2 work. For example, when the equity flag was raised over BART's 2023 service schedule, the Link21 Team considered the broader point that late night service to airports is important for equity. Understanding the relevance of this to equity in BART's current operations, the Link21 Team also provided the EAC member with resources and recommendations for bringing this concern to parts of BART that could consider it in the near term.

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4. EAC Input and Influence on Link21 Work

This chapter summarizes input received from the EAC across meetings, office hours, and other communications and how that input was accounted for in Link21 work. Since many topics were discussed across multiple meetings, the chapter is arranged by work stream and not by meeting.

In some cases, input resulted in a tangible adjustment to Link21 work. Other input reinforced existing approaches taken by the Link21 Team or will help guide work beyond Stage Gate 2.

4.1. Environmental Constraints and Opportunities

4.1.1. Background

The EAC was introduced to the Link21 Team's environmental process, including the *Environmental Constraints and Opportunities Report* (ECO Report), at its second meeting on February 28, 2023. As the EAC is a strategic equity advisory body, input was sought on the strategy for the ECO Report rather than on discrete constraints or opportunities. The Link21 Team posed the following prompts to the EAC:

- Are there additional constraints or opportunities that we should consider?
- What are the most important constraints or opportunities to consider and why?
- Do you suggest any other ways, or information sources, to identify constraints and opportunities in Link21 planning?

Due to time constraints, there was not time for the EAC to comment on the above prompts during the February 2023 meeting. To give the EAC the ability to provide input on this item, the Link21 Team offered an office hours session on the ECO Report on March 28, 2023, and added an agenda item for discussion on the ECO Report to the April 18, 2023, EAC Meeting agenda. The Link21 Team also encouraged EAC members to provide thoughts through a survey distributed via email. The full ECO Report was shared with the EAC via email, and members were encouraged to provide comments on individual constraints and opportunities via the tool provided on the Link21 website.

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4.1.2. Input Received and Link21 Responses

Input: There is a planned Veterans Affairs (VA) hospital on the West End of the City of Alameda. Having a rail connection to there would help people accessing VA hospital services. Public transit is vital for people with disabilities who cannot drive to their appointments.

Link21 Response: Planned medical facilities were not a part of the ECO Report. The VA facility is planned to include an outpatient clinic, a Veteran’s Service Center (not a full hospital), and a National Cemetery Columbarium. In response to this input, during concept development, the Link21 Team considered the possibility of either directly serving the VA facility via rail or providing access to the facility via a shuttle from a rail station as an environmental opportunity.

An Alameda station would be studied further with either technology. The potential to provide access to the future VA facilities will be considered in this work.

Input: Trains should run using clean technology.

Link21 Response: State of California guidelines call for all new railcars to be electric by 2035, which is before Link21’s expected completion. As a result, the Link21 Team already planned for electric operations in the Crossing Project, and this is assumed in the ECO work.

This comment reaffirmed Link21’s objectives to reduce greenhouse gas emissions and improve safety, health, and air quality.

Input: The built environment is a key constraint.

Link21 Response: The ECO Report includes constraints and opportunities associated with the built environment, including cultural resources, community resources, land use, utilities, existing transportation infrastructure, and others. Although this comment did not necessitate adding new types of constraints, it highlighted the built environment as a key constraint from the EAC’s perspective. The Link21 Team continued to consider built environment constraints and opportunities during concept development leading to Stage Gate 2. As Link21 advances past Stage Gate 2, built environment factors will be analyzed in more depth.

Input: There is an opportunity to provide better access to education, such as universities and community colleges, through transit. For example, University of California (UC), Berkeley students commute from all over the Bay Area. Expanded campus-to-campus transit is also an opportunity. Many students at big universities in San Jose, Davis, Berkeley, and San Francisco rely on options like BART and Caltrain.

Link21 Response: Colleges and universities are already included in the ECO Report. Additionally, the business case includes post-secondary schools in the access to regional community resources metric.

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This comment highlighted that the potential to better serve educational institutions is a type of opportunity important to the EAC. Both the BART and Regional Rail Representative Concepts would create more connections to and between colleges. Compared to BART service, Regional Rail service in the Crossing Project could create new transbay rail access to and from more post-secondary educational institutions throughout the Megaregion. Regional Rail has the potential to create new one-seat campus-to-campus transit trips, such as between Stanford and UC Berkeley, UC Davis and UC San Francisco, and the College of Alameda and Santa Clara University. New direct connections between colleges would be more geographically limited with the BART Representative Concept, which would provide service between schools on the existing BART system and schools in the Alameda, downtown Oakland, Mission Bay, and South of Market areas. The Link21 Team will continue to consider opportunities related to serving educational institutions in post-Stage Gate 2 work.

Input: Link21 should focus on urban areas and suburbs, not just rural areas. Urban areas face disproportionate transportation equity in terms of services, times, and hours.

Link21 Response: The *ECO Report* covers current and potential rail corridors throughout the 21-county Megaregion. In addition to covering some rural areas, these corridors included many urban and suburban areas and encompassed most of the inner Bay Area.

Beyond the *ECO Report*, Link21's concept development work focused geographically on portions of Alameda, Contra Costa, San Francisco, and San Mateo counties that are densely populated. Regional Rail or BART service through the Crossing Project would allow for more Urban | Metro rail service in these dense parts of the Bay Area. Although Regional Rail service from the Crossing Project could extend to places like Sacramento and Stockton, this intercity service would still support megaregional travel between urban centers.

Input: Link21 should leverage capacity on existing tracks.

Link21 Response: Existing rail right-of-way is included as an opportunity in the *ECO Report*, and maximizing the utility of existing infrastructure is a focus of Link21's concept development work. Although this comment did not necessitate adding new types of opportunities to the report from this comment, it highlighted that using existing infrastructure, where feasible, is a key opportunity from the EAC's perspective. The Link21 Team will continue to consider opportunities related to using existing infrastructure in concept development work.

For BART, some new tracks would need to be created to link a new crossing with the rest of the system. For Regional Rail, most of the existing rail lines (except for Caltrain) are owned by private freight rail operators; therefore, use of the rail lines and right-of-way requires agreements with those companies. Creation of new tracks could also be necessary to create desired service frequencies. The Link21 Team is studying how improvements to existing infrastructure could improve operations in shared



freight/passenger corridors using existing tracks, which could limit right-of-way needs. Further coordination will occur with right-of-way owners if Regional Rail is recommended and advanced at Stage Gate 2.

4.2. Business Case Approach

4.2.1. Background

The EAC was introduced to Link21's business case process at its inaugural meeting on February 14, 2023. This was expanded upon at the second EAC meeting on February 28, 2023. After the second EAC meeting, the Link21 Team provided a voluntary office hours session for discussion about the business case on March 21, 2023. The emphasis for these business case touchpoints was to create a common understanding about what the business case is and what work had already happened, rather than to seek input on current work. Although the EAC was not responding to specific prompts about the business case approach, the Link21 Team considered comments from members as work developed.

4.2.2. Input Received and Incorporated

Input: Are there smaller projects that could be done in different parts of the Megaregion in support of larger Link21 goals? How would those be evaluated in the business case?

Link21 Response: Work that is not related to improving transbay passenger rail travel (e.g., improving connections between Stockton and Merced) is outside of the scope of Link21. However, the Link21 Team is measuring benefits to the full Megaregion. In addition, Link21's business case assumes Link21 builds on a future "Baseline" transportation network that includes projects from each metropolitan planning organization's regional transportation plan (e.g., *Plan Bay Area 2050*), and Link21 is being planned to leverage these other investments. Improvements in transbay travel will likely have positive effects on other areas and types of travel.

The business case evaluation identifies projects that could be leveraged by Link21, but it does not make a judgement on whether BART or Regional Rail perform better in leveraging other investments. Stakeholders could have different opinions of what type of leveraging is most important. One stakeholder may feel Link21's leveraging of a particular project is most important, while another may prioritize the number of projects that Link21 could leverage.

This comment expresses a viewpoint that Link21 is most effective as part of an improved and integrated network. It reflects the importance of continued collaboration with agency partners. As far as the location of leveraged projects, compared to a BART Crossing Project, a Regional Rail Crossing Project could offer the potential to directly leverage more transportation projects occurring beyond the Transbay Corridor, such as

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improvements at the Sacramento Valley Station, a new Carquinez rail crossing, and other improvements called for by the *California State Rail Plan*.

Input: How is parking considered in the business case? How stations are built can influence how land values are impacted. There should not be big parking lots; transit partners should get people to stations.

Link21 Response: For travel demand modeling purposes, high-level parking assumptions were made based on existing and expected parking supply. These assumptions impact model results and thus business case metrics. Detailed decisions around parking supply at new or upgraded stations will be made in future phases of work, and the topic will likely be discussed at an EAC meeting in the future.

As Link21 services will be more frequent than existing rail services in the region, BART Station Access Typologies (i.e., groupings of stations based on how prevalent cars are as a mode of access) were used to develop assumptions for the purposes of analysis of the number of parking spaces at stations, rather than making different parking assumptions for different technologies (given that technology should not directly affect the number of parking spaces). The number of parking spaces was averaged by typology, and new/rebuilt stations were assigned a station typology and subsequently assigned the average number of parking spaces for that typology.

Input: The initial analysis showed Regional Rail concepts provided a higher percentage of benefits to priority populations, but BART is more affordable than services like Caltrain or Capitol Corridor. Does Link21's evaluation account for the demographics or average income of riders for each type of rail?

Link21 Response: Initial analysis showed BART concepts delivering less than proportional benefits (31%) to priority populations, while 51% of Regional Rail benefits went to priority populations. The introduction of more advanced modeling tools in subsequent analysis clarified that both BART and Regional Rail provide greater than proportional benefits to priority populations, with a slightly higher percentage of new rail trips coming from priority populations residents with Regional Rail (41% to 39%).

In alignment with MTC's *Plan Bay Area 2050*, the Link21 Team's evaluation assumes the fares for same distance trips on Regional Rail and BART within the Bay Area would be the same. For portions of Regional Rail trips occurring outside the Bay Area, the current operator's fares are used (with inflation). Although today's Regional Rail ridership skews high income and white compared to BART's ridership, ridership demographics would likely look similar between the two with the implementation of a Regional Rail metro service with a fare system like BART's.

Link21's analysis tool allowed for the disaggregation of metrics by income. For the evaluated Regional Rail concept, almost 56% of new rail trips would be taken by people with household income under \$60,000 annually, compared to almost 57% of new trips for the evaluated BART concept. By contrast, less than one-third of megaregional households earn under \$60,000 annually.

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Having an equitable fare system is key to realizing the projected equity benefits of Link21. Recognizing this, the Link21 Team has added additional language about fares to the Preliminary Purpose and Need. Engagement with partner agencies to establish an equitable fare system by the time Link21 is implemented will be a focus post-Stage Gate 2.

Input: When will there be projections for the cost of implementing Link21?

Link21 Response: This comment flagged the importance of capital cost as a component of equity. At the level of analysis for Stage Gate 2, cost information is very high level.

Post-Stage Gate 2, the Link21 Team will study options in more detail. The EAC will be an important partner in interpreting the equity benefits and considerations associated with options, including how cost and project benefits align.

4.3. Evaluating Equity in the Business Case

4.3.1. Background: Overall

Input on the business case was a major topic for discussion at the April 18, 2023, EAC meeting with a focus on three items:

1. Developing an access to jobs metric that reflects equity considerations.
2. Developing an access to regional community resources metric that reflects equity considerations.
3. Understanding what equity indicators are most instructive for assessing how equitable the outcomes of a concept could be.

EAC members also provided overall comment on the equity metrics.

4.3.2. Input Received and Link21 Responses: Overall

Input: The City of Sacramento uses an equity metric system with five criteria — provide access, improve safety, equitably invest, improve air quality and climate, and maintain transportation systems. What metrics and indicators does Link21 use?

Link21 Response: Link21's business case has many metrics, including ones that address access, safety, air quality, climate change, and system maintenance. Several of these metrics are considered for their impact on priority populations and are included in the business case equity evaluation. These criteria are also reflected in the Link21 goals and objectives. In addition, many of these criteria factor into Link21's priority populations definition. These metrics were determined in partnership with communities, including through co-creation work. From this feedback, the Link21 Team understood

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that the business case is considering some of the factors that are key in the City of Sacramento's equity work, which shows alignment with megaregional practices.

Input: Low-income individuals within two miles of stations should be given priority for equity purposes.

Link21 Response: Priority populations are located throughout the Megaregion, not just in proximity to potential stations. In upcoming stages of work, there will be increased clarity about the geographic extents of the Crossing Project. As this information is available, the Link21 Team plans to adjust its equity work, including focusing on communities near stations.

Input: The initial business case results show the Alameda station benefits as low. That may be due to the low amount of housing there now, but there are plans to construct additional low-income housing in the area. Low-income residents around the College of Alameda and Alameda Point are underserved by AC Transit, so providing rail service would be important for equity.

Link21 Response: The modest projected new ridership also may be because some current commuters travel to Fruitvale to use BART. An Alameda station would change their point of access to transit, rather than creating a new trip.

The Link21 Team is coordinating with the City of Alameda to understand land use plans in the area. Planned housing included in MTC's *Plan Bay Area 2050* is a part of the Link21 Team's analysis. Options for an Alameda station and alignments will be studied further after Stage Gate 2.

Input: It can be hard to identify communities to prioritize for equity based on factors like income and car ownership. Can environmentally related factors like vehicle miles traveled (VMT), level of service, and carbon dioxide emissions be considered?

Link21 Response: The Link21 Team considered all three factors for equity metrics, as follows:

- **VMT:** Cited by communities in co-creation as a desirable outcome, but adding VMT as a priority populations metric would put the burden of reducing driving on priority populations. Especially as many lower-income and people of color are displaced to suburbs, measuring VMT by census tract could be detrimental to those communities. Instead, Link21 will measure overall VMT and consider whether concepts appear to have the potential to reduce VMT around priority populations.
- **Carbon dioxide emissions:** Same answer as VMT.
- **Level of service:** This is no longer an environmental impact under California Environmental Quality Act regulations. Still, in service planning for concepts, the Link21 Team sought to provide increased transit level of service to areas with higher concentrations of priority populations.

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Additionally, Link21's priority populations definition includes 26 different types of burdens that extend far beyond income and vehicle ownership. The Link21 Team will continue to consider these factors when the priority populations definition is updated for use in the post-Stage Gate 2 analysis.

Input: How did the Link21 Team define the metrics? Was it internally or with the community? How diverse was the staff?

Link21 Response: The equity metrics were developed in partnership with the community through a co-creation process. There was a strong emphasis on working with communities that historically have been excluded from influencing early planning work for infrastructure projects. Over 2,000 community members were a part of shaping the business case approach to equity, including metrics, through co-creation Rounds 1 and 2 and a representative survey of low-income individuals and people of color. The metrics are iterative and will be updated based on input (such as the access to jobs metrics being updated based on EAC input for Round 2), as well as the geographic extent and nature of the options being evaluated, such as station locations, levels of service, etc.

In response to this feedback, the Link21 Team also conducted an internal staff survey to understand its demographic composition. Racially and ethnically, the Link21 Team closely resembles the Megaregion with two exceptions — the Link21 Team has a higher representation of White individuals and a lower representation of Hispanic/Latino individuals. Understanding this potential gap in lived experience, the Link21 Team will be deliberate about engaging with the Hispanic/Latino community.

Input: People with disabilities are a vulnerable population that should be included in the priority populations definition.

Link21 Response: The Link21 priority populations definition was developed to identify the census tracts experiencing the highest levels of burden that keep communities that have historically been marginalized from having equal access to opportunity. As a result, most demographic characteristics, including people with disabilities, were not included as metrics. Recognizing the importance of the disability community in equity work, the Link21 Team conducted a demographic analysis when creating the priority populations methodology to ensure people with disabilities were reflected in the identified census tracts. Analysis using the most recently available census data on disability shows:

- There is a significant correlation (strong Pearson coefficient) between the presence of people with disabilities and the priority populations index score, which is a key determiner in whether a tract is a priority population. This means that, on average, as the percentage of people with a disability in a census tract rises, the tract's priority populations index score goes up, making it more likely to be a priority population.

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- Megaregionally, priority populations tracts have a 45% greater proportion of people with disabilities than tracts that are not priority populations.

Priority populations are just one analytical tool used for equity on Link21. It has limitations, including its geographic nature. Link21 aims to comprehensively consider the needs of people with disabilities, regardless of whether they live in a priority populations tract. Efforts to do this have included co-creation with disability communities to understand their needs and goals for rail travel. The Link21 Team will update the priority populations definition for post-Stage Gate 2 analysis, and including disability will be a top priority for this update.

4.3.3. Background: Equity-Centered Access to Jobs

At the EAC Meeting on April 18, 2023, the EAC was introduced to the metrics used to assess equity in Round 1 of the business case evaluation. Included in this was a metric for access to jobs, disaggregated by priority populations and the whole population. The Link21 Team found that measuring overall access to jobs was not necessarily instructive for understanding whether a concept would equitably increase access to jobs, as it did not distinguish whether the newly reachable jobs would be attainable or desirable for groups like priority populations.

The Link21 Team introduced those limitations to the EAC and posed the following discussion prompts:

- How would you define a desirable job?
- How would you define an attainable job?
- What industries do you think provide desirable or attainable jobs?
- Are there other things we need to think about when it comes to access to jobs?

EAC members had the opportunity to comment on these prompts during the meeting, at an office hours session on April 25, 2023, and through an emailed survey.

4.3.4. Input Received and Incorporated: Equity-centered Access to Jobs

Input: Jobs that require commuting outside of the morning peak hours are important to consider for equity. Better transit options are particularly important for people who work at places like airports and restaurants and need to commute at night.

Link21 Response: The Link21 Team added a metric for access to opportunity jobs — jobs that generally are accessible to people without a college degree, pay a living wage, and provide the opportunity to advance. Using the Census Public Use Microdata Sample, the Link21 Team analyzed the time of departure to work for individuals without



a bachelor's degree who earn more than the median wage (criteria that serve as a proxy for people working opportunity jobs).

Findings included:

- Fifty seven percent of individuals without a bachelor's degree earning more than the median wage leave for work outside of the 7 am to 10 am peak hours. In comparison, only 30% of above median wage workers with a bachelor's degree leave for work outside of 7 am to 10 am.
- Individuals without a bachelor's degree earning more than median wage are 3.28 times more likely than their counterparts with bachelor's degrees to leave for work between 12 am and 6 am.

The business case also includes a metric for extended transbay service hours. This metric qualitatively assesses the ability of the BART and Regional Rail concepts to accommodate longer service hours and additional off-peak service with corresponding changes to operations and right-of-way maintenance practices. It focuses on the hours of 7 pm to 6 am. Analysis indicates that both Regional Rail and BART offer the opportunity to provide extended rail service hours. Whether operators provide additional hours of service is dependent on agency policy.

Finally, Link21's modeling assessed whether new rail trips would be taken in the morning peak, midday, afternoon peak, evening, or early morning. Results project that over 39% of new rail trips would be taken outside of the peak periods for the evaluated Regional Rail concept, compared to just under 33% of new rail trips with the evaluated BART concept. The Regional Rail concept also resulted in over 4,000 new rail trips in the early morning hours, while the evaluated BART concept did not yield net new trips in this time period.

Input: Service and blue-collar workers face large barriers to using transit because of level of service and fare costs. Transfers can be particularly harmful to these groups because they increase the fare cost.

Link21 Response: Both the Regional Rail and BART concepts offer the potential to create many new one seat rides. The evaluated Regional Rail concept would enable over 27% more new direct journeys than the evaluated BART concept (370 new one-seat-ride station pairs for Regional Rail, compared to 290 for BART).

Although Regional Rail fares tend to be higher than BART fares today, Link21 analysis assumes that intra-Bay Area Regional Rail fares would be the same as BART in the future (which is consistent with MTC's *Plan Bay Area 2050*). Coordination with partner agencies on fare reform post-Stage Gate 2 will be important for realizing the equity benefits of Regional Rail.

Link21 will also increase the amount of rail transbay service, providing service and blue-collar workers with improved frequency. The conceptual Regional Rail service plan includes 16 transbay trains per peak hour per direction (i.e., a train every 3.75 minutes,

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on average), with the potential to grow to 24 with additional improvements. This is significantly more frequent service than Regional Rail operators provide today. In some Regional Rail corridors, peak frequency is one train per hour today. The BART conceptual service plan includes 24 trains per peak hour, with the potential to grow to 30 with additional improvements. This would roughly double existing BART transbay service.

Input: For transit to provide equitable access to jobs, it needs to be safe for late night workers.

Link21 Response: The importance of safety was prominently raised in other engagement forums. The Link21 Team added more language about safety to the Preliminary Purpose and Need to reflect the importance of safety to a successful project.

Though approaches to issues like policing are made at an agency-wide level, the Link21 Team will consider how safety can be advanced through its decisions. As station planning and design starts in the next stage of work, the Link21 Team will consider what features could improve rider safety.

Input: For young people, access to jobs with low barriers of entry, like retail and food service, is important. Students may also be interested in professional development opportunities. Because of student schedules, good service in the middle of the day is important for reaching work.

Link21 Response: For Stage Gate 2 analysis, service plans for BART and Regional Rail concepts assume robust service in the midday period, which would support the ability of students to commute via transit. Analysis assumes 16 BART trains per hour or 10 Regional Rail trains per hour in the new crossing in the off-peak period. For BART, that would double total transbay off-peak frequency (evaluation assumed 16 trains per hour through the existing tube). For Regional Rail, that is a train every six minutes, which is more service than is offered currently in the morning or evening peak period on either side of the bay.

Entry level jobs are better captured in the access to opportunity jobs metric that was added to the business case evaluation, in part based on EAC feedback. The evaluated BART and Regional Rail concepts increase access to opportunity jobs for priority populations by similar amounts. The Regional Rail concept offers a slightly larger increase within a 60-minute travel time, while the BART concept offers a slightly larger increase within a 90-minute travel time.

Input: The metric measures access to jobs within 60, 90, and 120 minutes by rail. Does that assume trains are running on time? Delays make trips longer and disincentivize people from using transit.

Link21 Response: At the time of the EAC presentation on the access to jobs metrics, the metric was defined by generalized journey times, which accounts for how long it



feels to make a trip by rail. This metric includes a time penalty for factors like transfers and wait times, but it assumes that trains are running on time.

Both BART and Regional Rail concepts are designed to achieve high-levels of on-time performance. There are business case metrics that assess the ability to provide reliable on-time service and recover quickly from any incidents. Analysis shows the Regional Rail concept would deliver major improvements to the reliability of passenger operations in the East Bay, by improving issues like the mixed passenger and freight traffic and street running operations through areas like Jack London Square. The BART Representative Concept would add substantial complexity to the system, but it could be designed to achieve similar reliability to today.

Input: What does Link21 do to support bidirectional travel?

Link21 Response: The access to jobs metric measures how many jobs are newly accessible anywhere in the Megaregion because of Link21. Each concept's service plan assumes that it will provide the same level of service in both directions at a given time of day.

4.3.5. Background: Equity-centered Access to Important Regional Community Resources Metric

At the EAC Meeting on April 18, 2023, the EAC was introduced to the metrics used to assess equity in Round 1 of the business case evaluation. Included in this was a metric for access to important regional community resources, which included city halls, Department of Motor Vehicle locations, court houses, hospitals, dialysis clinics, urgent care facilities, parks larger than 100 acres, and post-secondary schools (including technical/trade schools).

The Link21 Team indicated this metric was important for equity, as many people, especially from communities that have been marginalized, rely on transit for more than getting to work. The Link21 Team noted that post offices, primary care clinics, small parks, daycares, primary schools, secondary schools, and grocery stores were all considered for inclusion in the first version of this metric. Those destinations were not included because they were not regional destinations that required travel outside of a neighborhood, data were not available, or the number of destinations prevented the model from working well.

The Link21 Team introduced those limitations to the EAC and posed the following discussion prompts:

- Are there other regional community resources to add?
- What do you think it means to have “access” to important community resources?
- Should the types of destinations in this metric be measured separately?



EAC members had the opportunity to comment on these prompts during the meeting, at an office hours session on April 25, 2023, and through an emailed survey.

4.3.6. Input Received and Incorporated: Equity-centered Access to Important Regional Community Resources Metric

Input: Correctional facilities (e.g., prisons, jails) are important places for both families and workers.

Link21 Response: Jobs at correctional facilities are already represented in the access to jobs metric. While correctional facilities were considered for inclusion in the regional community resources metric, they were not included because they have historically been built in underdeveloped areas creating unique rail access challenges that would be difficult to address at a megaregional level. The Link21 Team could consider proximity to individual correctional facilities as part of the options analysis after Stage Gate 2.

Input: Popular tourist attractions like Golden Gate Fields are important destinations.

Link21 Response: The access to important regional community resources metric is intended to reflect how well Link21 provides access to destinations beyond work that are important for many people to reach daily. Tourist destinations do not fit into this category. That said, the business case analysis identified major destinations/trip generators throughout the Megaregion that include tourist destinations, such as Golden Gate Fields. The jobs associated with these locations are already reflected in the access to jobs metrics.

Input: Many seemingly local CBOs have become regional destinations due to displacement. There are not always needed resources in the places that people are displaced to, so they must travel to their prior neighborhood to receive those services.

Link21 Response: The Link21 Team was unable to determine an objective and comprehensive database of CBOs that are becoming regional destinations due to displacement. While this means CBOs cannot be formally integrated into the metric, the Link21 Team understands that providing access to resources like CBOs supports more equitable outcomes. During more detailed area planning, the Link21 Team will consider how access to prominent local CBOs could be improved through Link21.

Input: Primary care clinics should be reconsidered, even though they were previously tested but not included. They are just as valuable as other health facilities included in the metric, as they perform many necessary features.

Link21 Response: The high number of primary care clinics made it difficult to extract insights when it was included in a draft version of the metric.

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While primary care clinics could not be reinserted due to their high volume, the Link21 Team will consider ways to provide better access to these types of health facilities, including assessing extended hours and improved frequency in off-peak periods, which is when many people need to travel to appointments.

4.3.7. Background: Equity Indicators

At the EAC Meeting on April 18, 2023, the EAC was introduced to the indicators used to assess equity in the business case evaluation. The two indicators presented were the total amount of concept benefits to priority populations and the share of concept benefits to priority populations.

The Link21 Team posed the following discussion prompts to the EAC:

- Which of these indicators do you feel is more important for evaluating equity?
- What do you think is a good way to measure the level of equitable outcomes of Link21?

EAC members had the opportunity to comment on these prompts during the meeting, at an office hours session on April 25, 2023, and through an emailed survey.

At the meeting on January 16, 2024, the EAC considered a more specific question about equity benefits for priority populations. Members were asked to reflect on the importance of “incremental benefits” and “significant benefits” to priority populations.

Incremental benefits were defined as relatively small individual benefits that would primarily go to a relatively large number of people, most of whom are existing rail riders. Examples provided of increment benefits were a current rail rider taking a train a few more times a month, or a regular rail commuter reducing their travel time by a couple of minutes.

Significant benefits were defined as relatively large benefits that would primarily go to a relatively small number of people, most of whom are unserved or underserved by rail currently. Examples provided of significant benefits were using the train daily (when there was no access before) or reducing travel time by 20 minutes.

4.3.8. Input Received and Incorporated: Equity Indicators

Input: Everyone has a connection to priority populations, so there are many different interests. Once concepts are decided on, will there be an open discussion in which priority populations are considered equally and have their concerns addressed before a final decision is made?

Link21 Response: Yes, as work advances the Link21 Team will continuously work with communities, especially priority populations near potential stations and infrastructure, to

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understand their needs and concerns. Input from these community partners will be a key factor in shaping future decisions.

Input: For priority populations to truly be a “priority,” they need to be at the forefront of decision-making and receiving benefits. Just looking at the total benefit would not be consistent with priority populations being a priority.

Link21 Response: This comment emphasizes the need for the proportion of benefits to priority populations to be considered as the primary metric, with the total benefits accruing to priority populations as a secondary metric. This proportionality assesses whether the distribution of benefits is fair or equal. In initial business case evaluations, Regional Rail concepts showed more than 40% of benefits going to priority populations. In the initial analysis, BART concepts showed below 32.4% (the percentage of the population who live in priority populations tracts) of benefits going to priority populations. Understanding the importance of the percentage of benefits to priority populations, the Link21 Team assessed how the service plan for BART concepts could be adjusted to increase the portion of priority populations benefits.

Subsequent evaluation showed a more comparable proportion of benefits going to priority populations from Regional Rail (41%) and BART (39%). This suggested that both technologies could yield significant benefits to priority populations.

Input: In addition to considering how benefits are distributed to priority populations compared to the rest of the population, there also needs to be attention on how benefits are distributed among different priority populations.

Link21 Response: In the initial evaluation, many of the Regional Rail concept priority population benefits were in the Richmond area, but BART benefits spread to priority populations in different parts of the existing BART network. By adding additional service to Millbrae in the conceptual service plans, the Link21 Team was able to create more geographically balanced priority populations benefits for Regional Rail, primarily in priority populations on the San Francisco Peninsula and in the East Bay between Richmond and Coliseum. Some Regional Rail benefits also extend past Richmond on the Sacramento corridor.

Evaluation also found that new rail trips from the BART concept tend to come from established rail markets, while new rail trips from the Regional Rail concept tend to come from less developed rail markets.

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Input: Incremental benefits are broad, and as a result, do not center a particular group. That means that intended beneficiaries, like priority populations, may have a limited benefit or may not end up benefitting. On the other hand, significant benefits result in positive outcomes for the targeted group and the whole population. For example, many disability provisions were enacted to specifically meet the needs of individuals with disabilities. Improvements like curb ramps, though, have proven to have large benefits to other groups, like pedestrians and bike riders, too.

Link21 Response: Evaluation found that the analyzed BART Representative Concept provided a high volume of total benefits, but most of those benefits were small, additive ones on an individual basis. In addition, those benefits fell largely to individuals within the existing BART system. The evaluated Regional Rail Representative Concept showed the ability to provide significant benefits to individuals in underserved markets who lack good access to rail, making a transformative impact on their mobility choices.

Although some of the most significant benefits associated with Regional Rail (e.g., expanded access to rail, large travel times savings) accrue to a comparatively small number of people, many others would benefit from a Regional Rail Crossing Project. For example, Regional Rail would complement the existing BART system by providing redundancy and reducing potential future crowding on BART. A Regional Rail Crossing Project would also facilitate and leverage many potential future standard gauge rail investments throughout Northern California, which could widen the number of beneficiaries in the long-term.

Input: Incremental benefits often lack the influence to make a tangible difference in people's lives. Since they do not rethink the existing system and can be piecemeal, they can fail to create even the intended incremental benefit. Creating significant benefits, instead of incremental ones, can have a transformative impact on people.

Link21 Response: Much of the evaluated benefits of the BART Representative Concept came from improving frequency. Since BART already operates frequent rail service, the benefits for this are small on a per individual basis. The evaluated Regional Rail Representative Concept offers significant benefits, though serving a lower number of total riders. The evaluated Regional Rail concept would give 64,000 more residents access to Urban | Metro service within a half-mile, compared to 22,000 more residents with the BART concept. It would also reduce travel times between key destinations by 10 minutes or more for megaregional and intra-Bay Area trips.

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4.4. Anti-Displacement

4.4.1. Background

Numerous EAC members stated they had professional or lived experience with displacement in their applications. In accordance with this, the Link21 Team made anti-displacement work a priority for EAC engagement. The EAC was first introduced to Link21's anti-displacement work in the meeting on February 28, 2023. During the business case overview, the Link21 Team presented on how anti-displacement was being assessed in the Round 1 evaluation.

The first agenda topic dedicated to anti-displacement was at the meeting on June 20, 2023. At that meeting, a panel of Link21 staff discussed the relationship between transit and displacement and the program approach to anti-displacement. Background slides were shared with the EAC beforehand.

EAC members were encouraged to comment and ask questions. EAC members also responded to the questions:

- What does displacement mean to you?
- What are your concerns related to Link21 and displacement?

Additional questions posed to the EAC at the conclusion of the panel were:

- In your experience, what types of policies and programs have worked to keep community members in place? What has not worked?
- What should Link21 do to assess and reduce potential cultural displacement?
- How can Link21 support anti-displacement strategies implemented by non-government organizations?

EAC members were invited to continue the anti-displacement conversation at an office hours session on July 25, 2023, and they were sent a post-meeting survey that provided space to respond to the above questions in writing.

Due to the EAC's strong interest in anti-displacement, the Link21 Team hosted special office hours on September 5 and 12, 2023, for EAC members to shape the group's continued role in anti-displacement work. At those office hours, attendees identified what subsets of anti-displacement they were most interested in focusing on.

Contributions at these office hours led to an October 17, 2023, meeting topic to create an EAC Anti-Displacement Focus Statement. In that meeting, EAC members discussed the facets of anti-displacement they were most interested in discussing. The group voted to approve the following statement: "For anti-displacement, the EAC will explore topics including, but not limited to, transit-oriented development and race and ethnicity." At the November meeting, the EAC discussed options for forming a subgroup, like a working group or subcommittee, on anti-displacement.

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4.4.2. Input Received and Incorporated

Input: Displacement risk should be considered in program evaluation.

Link21 Response: The business case includes metrics related to displacement risk that have become progressively more detailed. The displacement assessment for this stage of work shows that both BART and Regional Rail carry displacement risk, particularly around new stations. The risk of indirect displacement was assessed as higher for Regional Rail primarily due to the relatively fewer *existing* anti-displacement policies in the areas included in the Regional Rail Representative Concept. More comprehensive anti-displacement policies tend to be in effect in the areas BART currently serves.

To address the risk, the Link21 Team is developing an Anti-displacement Toolkit. This toolkit will be used in coordination with local communities and land use jurisdictions to further assess indirect displacement risk and identify effective anti-displacement policies to be adopted, which could lower the potential for indirect displacement. A Regional Rail Crossing Project could be the impetus for adopting new anti-displacement policies, making it a potential opportunity to advance anti-displacement work in locations with fewer existing protections.

The Regional Rail concept carries a higher risk of direct displacement, primarily because of assumptions made about the amount of right-of-way and number of grade separations needed. The BART concept assumed less overall infrastructure, most of which would be underground. Since targeted coordination has not begun with the host railroad Union Pacific Railroad (UPRR), the Link21 Team conservatively assumed in the Regional Rail Representative Concept that work would require widening the existing right-of-way throughout the East Bay extents. The Link21 Team has identified that additional improvements to existing infrastructure, such as upgraded signaling, may allow for better leveraging of current rail alignments. That could reduce the amount of right-of-way necessary for Regional Rail, in turn reducing the direct displacement risk. Assessing these possibilities further would be a priority in the stage of work.

Input: Race and ethnicity are important factors for displacement risk and anti-displacement strategies.

Link21 Response: In the October EAC meeting, the Link21 Team gave the EAC an opportunity to create and approve a Focus Statement that identified facets of displacement it wanted to explore more deeply. Race/ethnicity was one of the factors included in the approved Focus Statement. In alignment with this, the January 2024 EAC meeting included a special conversation with a community leader that focused on race/ethnicity in anti-displacement work. EAC input will also inform future rounds of business case metrics related to displacement risk.

Input: In addition to considering displacement risk, anti-displacement strategies should also be a part of Link21 work.

Link21 Response: Link21 is developing an Anti-displacement Toolkit with recommended anti-displacement strategies that will be a resource to the program and local

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communities. EAC input related to discrete anti-displacement strategies will be considered in the development of the toolkit.

Input: Affordable housing is an important anti-displacement strategy.

Link21 Response: The displacement risk metrics in the business case consider the amount of existing and planned affordable housing in station areas. Initial evaluation suggests that there are not substantial differences in the amount of existing and planned affordable housing near the evaluated BART and Regional Rail concepts. The Anti-displacement Toolkit will include affordable housing as a recommended anti-displacement strategy.

Input: Link21 should consider disparate impacts to certain populations when evaluating displacement risk and anti-displacement strategies.

Link21 Response: The EAC has expressed the importance of considering how certain populations that face additional systemic barriers, including but not limited to, low-income households, seniors, youth, people with disabilities, and people with limited English proficiency are disproportionately at risk of displacement and how anti-displacement strategies can be designed to address that risk. The displacement risk metrics in the business case consider the presence of low-income households in station areas, and the Link21 Team is exploring ways to include anti-displacement strategies in the Anti-displacement Toolkit that are targeted to these populations.

Input: Engagement with local community members and other government agency partners is important for identifying and implementing successful anti-displacement strategies.

Link21 Response: The implementation of specific anti-displacement strategies will be designed and carried out in collaboration with local jurisdictions and the community. The Link21 Team believes that community engagement will be an important component of the anti-displacement program.

Input: Is Link21's approach to anti-displacement focused on preventing people from being displaced or supporting people who have already been displaced?

Link21 Response: Link21 is considering strategies to prevent people from being displaced, support people who were previously displaced (e.g., with improved transportation options), and assist previously displaced people who desire to return to their former communities. The Anti-displacement Toolkit will likely focus on preventing new displacement, but the program is interested in exploring what it can do to support people who have been previously displaced.

Regional Rail service in the crossing could support better connections to the Transbay Corridor for people that have been displaced to other parts of the Megaregion, like the Sacramento area, Stockton, Solano County, and Western Contra Costa.

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4.5. Preliminary Purpose and Need

4.5.1. Background

The Link21 Team presented its Preliminary Purpose and Need to the EAC at the meeting on August 22, 2023. EAC input on the following questions was sought:

- Can this need be addressed through the project?
- Do you agree that this is a need?
- Are we missing key areas?
- Can we be more specific?

In addition to the meeting, EAC members had the opportunity to provide further input on the Preliminary Purpose and Need at an office hours session on September 19, 2023, and through a post-meeting survey.

The Preliminary Purpose and Need that will be provided during Stage Gate 2 reviews has been directly shaped by the EAC, as detailed in the following section.

4.5.2. Input Received and Incorporated

Input: A connected network is an equity strategy, and agency boards should recognize that.

Link21 Response: The “connect the Megaregion’s passenger rail network” purpose best reflects this sentiment. The Link21 Team will continue to prioritize planning for an integrated rail system, including making transfers easier regardless of which technology advances. A Regional Rail Crossing Project supports a connected network, as it creates the potential for multiple rail operators to run more unified service. Although better timed connections with Regional Rail could be part of a BART Crossing Project, unifying Regional Rail operations would be more difficult without transbay Regional Rail service.

Input: There should be a unified fare instrument that works on any transit system. Relying solely on credit cards excludes people without one.

Link21 Response: Language acknowledging the challenges of “differing fare instruments” was added to the preliminary need for “insufficient passenger rail connectivity.” “Unify fare structures” also was added to the preliminary purpose for “connect the Megaregion’s passenger rail network.”

Understanding that fares were an important consideration for the EAC, the Link21 Team also added a November 2023 meeting agenda item to discuss how fares are being considered in Link21 and the broader context of fare integration work. When coordinating with other agencies on fare integration, the Link21 Team will emphasize the need to make the system usable for individuals without bank accounts.

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**Input: Safety on transit at all hours is essential.**

Link21 Response: “Personal safety concerns” were added to the preliminary need for “insufficient passenger rail connectivity.” Safety was already included in the preliminary need for “existing passenger rail systems and operations insufficiently address mobility needs of communities that have been marginalized.”

Input: How is Link21 defining “accessibility”? That definition should encompass disability access, as many BART stations have a single point of failure for people requiring elevators. There also needs to be accessible wayfinding.

Link21 Response: The Link21 Team understands that having a system that is convenient to use for individuals with disabilities is a key component of an accessible system. In response to this input, the language for the preliminary need “insufficient passenger rail connectivity” was adjusted to acknowledge the challenges that individuals with disabilities face in using transit.

Station planning and design will begin after Stage Gate 2. Addressing considerations, like points of station access and wayfinding, will begin then.

Input: Redundancy in case of system issues is important. Disruptions also need to be better communicated to riders.

Link21 Response: This reaffirmed the redundancy portion of the Preliminary Purpose and Need as important for equity. The issues caused by a lack of redundancy can be particularly impactful to communities that have been marginalized, as they are less likely to be able to pivot to other transportation modes (e.g., using a personal car, calling a taxi). Evaluation shows that the Regional Rail concept performs better in improving expected recovery time from incidents, while the BART concept performs better at providing redundancy in case of closures to the existing Transbay Tube.

As work advances, the Link21 Team will consider whether new station design features could support better communication of service disruptions to riders.

Input: Cities need to create more affordable housing so that not as many people need to travel far for work and other needs. Though it is almost outside Link21’s scope, transit-oriented development, affordable housing, solutions to mental health, and drug treatment are important considerations.

Link21 Response: The Link21 Team understands that connecting transit improvements with equitable transit-oriented development is a key to making communities that have been marginalized beneficiaries of infrastructure improvements and to reducing potential displacement. This is addressed in the preliminary purpose for “expand access to improved and affordable passenger rail service.” Through continuing work with the EAC and other stakeholders, the Link21 Team will seek to advance work around affordable housing.

Concerns around mental health and drugs are reflected in the safety language in the Preliminary Purpose and Need, though these need to be addressed through



systemwide safety initiatives. Priorities like this could also be included in a community benefits program.

Input: Transit agencies need to work with cities to create safer intersections for pedestrians around stations.

Link21 Response: The need for better pedestrian conditions around stations is reflected in the expanded language around accessibility and safety. Partnership with local jurisdictions on station area planning will begin in future stages of work. The Link21 Team will emphasize creating safe pedestrian conditions in that coordination.

Input: Police presence does not increase safety for all communities. Increased maintenance and cleanliness can improve feelings of safety.

Link21 Response: Link21's work is not leading any of BART or CCJPA's agencywide approaches to policing. Post-Stage Gate 2, the Link21 Team will consider how factors like station design (e.g., creating an easily cleanable station) could contribute to increased perceptions of safety.

4.6. Concepts and Service

4.6.1. Background

The Link21 Team has engaged the EAC multiple times about concepts, including service planning and evaluation insights, during 2023. There were dedicated concept and service topics at the following meetings:

- February 14, 2023: Example concepts
- February 28, 2023: Six concepts
- June 20, 2023: Concept development update, service considerations, and key business case evaluation insights on the six concepts
- October 17, 2023: Concept trade-offs and benefits

Office hours sessions associated with the February, June, and October meetings were also offered to EAC members. Post-meeting surveys provided another avenue for EAC members to provide feedback on the concepts.

Throughout 2023, the Link21 Team sought general reflections from EAC members about the concepts. As the initial analyses became available, the Link21 Team also asked EAC members for thoughts on what trade-offs and benefits they felt were meaningful from an equity perspective.

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4.6.2. Input Received and Incorporated

Markets

Input: Has Link21 considered going into Woodland (Yolo County)?

Link21 Response: Link21's [market analysis](#) showed unmet transbay travel potential is not high to and from Woodland. Consistent with the [California State Rail Plan](#), which calls for integrated bus service between the Davis Regional Rail station and Woodland, the Link21 Team will work with Sacramento area partners to discuss improved connections between stations and other destinations in future stages of work. If Regional Rail is recommended at Stage Gate 2, an integrated bus service would create a more convenient connection between Woodland and the Bay Area.

Input: Link21 should consider providing service to and transit-oriented development at Golden Gate Fields.

Link21 Response: Initial Link21 market analysis work suggested that Albany, where Golden Gate Fields is located, would be best served through enhanced local transit connections from the Berkeley Amtrak station. The Link21 Team again considered Albany during concept development work but determined that implementing a station through Link21 did not meet the goals and objectives.

Input: There should be better transportation options for Vallejo residents facing traffic challenges.

Link21 Response: Direct service to Vallejo is dependent on a new Carquinez Strait rail crossing, which is a separate project from Link21. CCJPA conducted a *New Carquinez Crossing Study* in 2022 that examined options for a new Carquinez Strait rail crossing that would facilitate future service expansion between Sacramento and the Bay Area. The existing Benicia-Martinez lift bridge is a significant source of train delays, as it frequently opens for marine traffic, which has priority.

In November 2022, CCJPA advanced a feasibility analysis for two options: a new rail bridge crossing adjacent to the Interstate 80 (I-80) bridge crossing or a new rail bridge crossing (two alignments being studied) to replace the existing Benicia-Martinez lift bridge. A new rail bridge adjacent to I-80 would bring train service to Vallejo. Further study would be necessary to understand the impact of discontinuing Capitol Corridor service at Martinez (San Joaquins would still serve Martinez) and the community impacts of having rail infrastructure in Vallejo. Work on these Carquinez Strait rail bridge options is ongoing.

The Link21 Team will stay engaged with CCJPA staff about this work and incorporate findings into Link21 analyses. A new Carquinez crossing to Vallejo could complement a Link21 Regional Rail Crossing Project, potentially allowing for future transbay service to and from Vallejo.

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Input: Regional Rail used to stop in Crockett. Commuters from Sonoma and Napa were able to use the Carquinez Bridge to reach the Crockett station. Would those potential riders be lost if they had to drive further to Hercules?

Link21 Response: A Crockett station is not being studied for Link21, but a Hercules station was included in the Regional Rail concepts evaluated in the first half of 2023. This Hercules station is planned to be implemented by the City of Hercules through a separate, nearer-term project and served by Capitol Corridor trains. This future Hercules station would create a closer link to the rail network for North Bay residents than the existing Martinez or Richmond stations.

Through a separate project, a new Carquinez Strait rail bridge is being considered by CCJPA staff, and one option being considered includes a route that parallels I-80 and serves Vallejo. If this option is advanced by CCJPA and a Regional Rail Crossing Project is advanced for Link21, it could provide commuters from Sonoma and Napa with closer access to transbay rail services. The Link21 Team will stay engaged with CCJPA staff about this work and incorporate findings into Link21 analyses.

Input: How does Link21 address commute needs outside of the Oakland-San Francisco area? How does Link21 relate to the State Rail Plan?

Link21 Response: Although the infrastructure work for Link21 concepts is concentrated in portions of the Bay Area close to the Oakland-San Francisco Transbay Corridor, service benefits from Link21 would be realized beyond the Bay Area along existing rail corridors. With Regional Rail operating in the crossing, Link21 could enable new direct train service between places like Sacramento and Stockton and the Bay Area. Link21 would also improve and add transfer stations between BART and Regional Rail. Facilitating easier transfers between the two systems will benefit travelers commuting between the Bay Area and megaregional locations.

A second transbay passenger rail crossing that accommodates Regional Rail is a key component of the [California State Rail Plan](#), which states “future rail service in the Bay Area is highly dependent on a second Transbay crossing managed and led through the Link21 Program. The zero emission⁸ and integrated rail corridor between the San Francisco Peninsula and Sacramento identified in the Vision would not be possible without a second bay crossing.”

Link21’s *Megaregion Program Report* includes more information about how Link21 fits in with the *California State Rail Plan* and other projects.

⁸ Note: State mandates call for a transition to zero emission trains independent of and prior to Link21’s completion.



Input: What is the potential for a San Antonio station? The impacts would be better without parking, since there would be less land required.

Link21 Response: Analysis indicates that a San Antonio BART station is not required infrastructure to implement a new crossing, but a San Antonio station was included in a sensitivity test to assess whether it could support Link21's goals and objectives. The sensitivity test found that the station could result in additional new rail trips, but the large majority of those new rail trips were projected to be within the East Bay. Since transbay travel is the focus of Link21, additional examination into the cost effectiveness of a San Antonio station and stakeholder engagement may be necessary to understand whether it should be considered in Link21 work. A San Antonio station could also be created through a separate project from Link21.

In the business case evaluation for Stage Gate 2, station parking assumptions for the purpose of analysis were developed using only BART's Station Access Typologies. These typologies are informed by BART's Station Access Design Hierarchy, which prioritizes walking, bicycling, and transit as modes of access to stations. San Antonio was assigned the same typology as Fruitvale — urban with parking/balanced intermodal. Actual estimates for parking would come at a more advanced stage if a San Antonio station continues to be analyzed.

Input: There are many people in places like Sacramento and Roseville that have already been displaced from the inner Bay Area. Improving megaregional transit is important to serve them.

Link21 Response: This comment highlights that there is an equity benefit to creating new direct service possibilities between the Bay Area and neighboring subregions like the Sacramento Area. Regional Rail service in the crossing could allow for direct connections between places like Sacramento, Roseville, and San Francisco. With BART service in the new crossing, those megaregional trips would require a transfer.

Input: Is Link21 considering infill stations in the East Bay? An equity issue with the existing BART system is that it passes through but does not serve some neighborhoods. To advance equity, new stations serving priority populations must also have sufficient levels of service.

Link21 Response: Both BART and Regional Rail concepts consider the potential for infill stations. Based on transportation needs, initial community engagement, and potential service benefits, the potential options identified for BART infill stations were limited compared to the possibilities identified for Regional Rail. Station possibilities will be studied further after Stage Gate 2.

Input: Do the stations in Alameda factor into the potential equity benefits? Does housing built before Link21's implementation factor into analysis?

Link21 Response: All features of a concept, including stations in Alameda, are factored into the equity benefits calculation. MTC projections for new housing are also a part of the analysis. There are several priority populations areas in the vicinity of potential

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Alameda stations. From this comment, the Link21 Team understands that serving Alameda could offer equity benefits. Both BART and Regional Rail concepts include possibilities for service to Alameda.

Input: Mission Bay is a gentrified neighborhood, so it does not seem like a station there would serve priority populations. For the BART concept, it could be better to serve the Salesforce Transit Center directly and have people connected to Mission Bay by the T light rail line.

Link21 Response: Though there has been displacement in the Mission Bay area, part of the equity benefit from serving Mission Bay comes from providing access from priority populations to jobs and resources in Mission Bay. Having to transfer at the Salesforce Transit Center would make trips more difficult for these travelers. Since serving Mission Bay projected to have higher equity benefits in the initial business case evaluation, that was included in subsequent BART concepts.

Input: Mission Bay is continuously growing. Serving it should be a top priority since there is so much housing development happening there, in Dogpatch, and in Bayview.

Link21 Response: Since serving Mission Bay was projected to have higher equity benefits in the initial business case evaluation, it was included in subsequent BART concepts. The San Francisco County Transportation Authority, in coordination with other local agencies, is also planning the Pennsylvania Avenue Extension, which would place passenger rail lines underground in the Mission Bay area. Depending on the alternative chosen, the Pennsylvania Avenue Extension could result in relocating the existing 22nd Street Station to Mission Bay. A Regional Rail Crossing Project could leverage the benefits of the San Francisco County Transportation Authority's Pennsylvania Avenue Extension work to create direct transbay rail service to and from Mission Bay.

Input: Serving destinations south of downtown San Francisco, like Bayview, Millbrae, and the San Francisco International Airport is important.

Link21 Response: Recognizing the equity benefits of serving communities south of the Salesforce Transit Center, the Link21 Team evaluated additional service frequency to Millbrae within the Regional Rail concept and assessed the benefits of a new station in Bayview within a sensitivity test. If Regional Rail is recommended at Stage Gate 2, the Link21 Team will further study options to improve service south of the Salesforce Transit Center. The initial focus of post Stage Gate 2 work would be determining the most cost-effective ways to improve service on the Peninsula and identifying the associated risks.

In addition, Caltrain, the San Francisco County Transportation Authority, and San Francisco Municipal Transportation Agency have studied reintroducing a Regional Rail station in Bayview. A Bayview station could be considered independent of Link21 work.

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Regional Rail could offer the opportunity to serve areas south of downtown San Francisco, like Bayview, Millbrae, and other parts of the Peninsula. Although BART serves Millbrae today, a BART alignment would also not provide the possibility to improve rail service in the Bayview. While Regional Rail does not directly serve the San Francisco International Airport, it would provide a fast and frequent transfer at Millbrae.

Service

Input: How can EAC members advocate for BART and CCJPA to work together to make up for the decrease in daily Capitol Corridor round trips since COVID, specifically the 5:45 am train that was important for commuters?

Link21 Response: This comment was not directly related to Link21 work, as it pertained to current schedules and operations. However, it highlighted the importance of frequent and early morning service as considerations in the business case. The business case evaluation found that both BART and Regional Rail concepts have the potential to create extended service hours, in conjunction with other policy and operational changes. Continued work on Regional Rail service for the Crossing Project would include the identification of opportunities to secure dedicated passenger tracks. This would provide operators like CCJPA with more flexibility to schedule additional trains. Dedicated passenger tracks are part of the *California State Rail Plan's* vision for improving passenger rail travel in California.

Input: There need to be better transfers at places like Millbrae so people with disabilities can reliably connect between services.

Link21 Response: Regional Rail has the potential to introduce a larger number of new one-seat ride possibilities than BART. By reducing the number of transfers needed for many trips, a Regional Rail Crossing Project could eliminate many of the system pinch points that make travel difficult today, especially for people with disabilities.

Some trips would still require a transfer though, regardless of the crossing technology. As station design work advances after Stage Gate 2, the Link21 Team will include facilitating simple transfers as a key desired feature. Coordination with disability stakeholders will be important to determining how to design simple transfers.

Input: Has Link21 assessed whether it can work with host railroads on the necessary changes for a Regional Rail concept? Could frequent service (every 15-minutes or better) really be offered?

Link21 Response: On the Peninsula, Caltrain owns its right-of-way, which is primarily used by passenger rail between San Jose and San Francisco. Caltrain is planning for initial 10-minute frequencies with their electrified service. UPRR owns much of the Regional Rail infrastructure in the East Bay today, and this contributes to the lower frequencies of operations like Capitol Corridor. A new agreement with UPRR and/or additional infrastructure on both sides of the bay would be needed to increase frequencies further.

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The Regional Rail concept calls for a dedicated passenger rail crossing, which would be capable of 2.5-minute headways (frequencies) but would likely start with 3.75-minute headways (since additional infrastructure is needed in the network for higher frequencies). Where Regional Rail would operate in freight-owned rail corridors, the Link21 Team will continue to study opportunities for upgrades to existing infrastructure and the creation of additional tracks. Collectively, these investments would address the constraints of the shared East Bay passenger/freight corridor to allow for fast and frequent transbay Regional Rail service. The conceptual service plan for Regional Rail includes six-minute headways from Richmond and 10-minute headways from Coliseum.

Separate from Link21, CCJPA also is studying the possible replacement of the rail bridge that crosses the Carquinez Strait, as the existing Benicia-Martinez Bridge is a major constraint to service frequency. Replacement of the existing lift bridge, in addition to a Regional Rail Crossing Project, would be necessary to achieve the *California State Rail Plan's* vision of 30-minute or better frequencies between the Sacramento area and the Bay Area.

This comment highlighted that the EAC recognizes the complexity of partnerships with freight rail and that it could introduce deliverability risks for Regional Rail service in the new crossing. This is identified as a risk to manage, and additional effort will go toward coordination with UPRR if Regional Rail is recommended at Stage Gate 2. The Link21 Team is seeking federal funds to support coordination with UPRR.

Input: For a BART concept, would all lines be able to use the new crossing?

Link21 Response: Yes, service for the BART concept would route trains from each East Bay BART line through both crossings. From existing BART lines serving San Francisco and the Peninsula, riders would need to transfer to access the new crossing. From this comment, the Link21 Team understood that providing access to the Crossing Project from multiple parts of the East Bay was important to the EAC. Correspondingly, the conceptual Regional Rail service plans would provide transbay service from the Coliseum, Richmond, Sacramento, Stockton, and stations in between. Maintaining some level of transbay service to different portions of the East Bay will remain a service priority in post-Stage Gate 2 work.

Input: There needs to be good service on Sundays and holidays for people who need to commute. Frequency is especially important for workers.

Link21 Response: At this stage of program development, no decisions are being made about exact service plans. Both BART and Regional Rail concepts could offer similar potential for more frequent weekend and holiday service.

Input: Would Regional Rail service be comparable to BART service frequencies?

Link21 Response: The Regional Rail concept includes 16 trains per peak hour, and the BART concepts assumes 24 trains a peak hour through the new crossing. A Regional Rail crossing itself could accommodate 24 trains an hour, but the infrastructure at the Salesforce Transit Center and on both sides of the bay cannot currently accommodate

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this many trains. Similarly, a BART concept could offer up to 30 trains per hour with other infrastructure improvements.

The Link21 Team will study whether additional improvements could be cost-effectively and equitably made to increase the number of transbay trains possible per hour with Regional Rail. At 16 trains per peak hour, the Regional Rail concept would generate more frequent Regional Rail service (a train every 3.75 minutes) than current operations. For comparison, peak per hour service at Caltrain's San Francisco (4th and King) station is four trains per hour in each direction. Regional Rail thus offers substantial improvements upon existing and otherwise planned service frequencies.

Input: What is the potential for expanded service hours on BART and Regional Rail? 24-hour service is important. With a second crossing, could maintenance be scheduled so that there could always be service through at least one crossing?

Link21 Response: Both technologies offer the potential for extended service hours. Extended hours are not currently possible on BART, because system maintenance is performed during the late night/early morning hours and cannot be performed while the trains are running. With a second rail crossing, maintenance could be scheduled to keep at least one crossing operating overnight. This type of overnight operation could work with either crossing technology.

Exactly what those service hours could be, and what the service plan would look like, will be partially determined by other policy decisions, and it will require more detailed analysis than has been done to date. BART currently uses early morning hours to perform critical maintenance on parts of the system beyond the Transbay Tube. So even if maintenance times were offset for the two crossings, trains may not be able to serve the full network during the overnight period. Bus service, for example, might be required on branch lines at times when overnight maintenance is being performed on those lines. Either technology would face similar challenges in developing an extended hours train schedule.

Exact service and maintenance decisions will be made later in Link21's development. Expanded service hours will continue to be an important consideration moving forward, and any new information about the potential to operate across more hours of the day will factor into ongoing work.

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Input: As long as it does not cause an undue burden to riders from places like Alameda or Bayview, it should be fine for concepts to add a few minutes to commutes in an effort to serve more places. Introducing limited stop service⁹ could help offset those longer times.

Link21 Response: Regional Rail concepts offer potential to serve more new places by creating new stations and making more origin-destination pairings possible. After the Stage Gate 2 decision, the Link21 Team will study the tradeoffs of offering service to more stations. Caltrain, a Regional Rail operator, currently operates local, limited stop, and express services. BART, which is primarily a two-track system, does not operate this type of service. Offering limited stop BART service would likely require creating third and fourth tracks or passing tracks throughout the system, which would be cost prohibitive and sometimes infeasible due to space constraints, community impacts, or environmental effects.

Service planning for Regional Rail assumes some limited stop service, although actual decisions about service and schedules will not be determined until later stages of Link21. The Link21 Team will work with agency partners and the public after Stage Gate 2 to better understand how this type of service can meet diverse travel needs and what the impacts to communities would be of new stopping patterns.

Input: There needs to be work with local governments on first/last-mile connections to rail stations.

Link21 Response: Connecting transit is essential for an equitable rail network. Since there are no exact station locations determined yet, the Link21 Team is unable to initiate concrete collaboration with other agencies about first/last-mile connections. This will be a priority when work is advanced enough.

4.7. Fares

4.7.1. Background

Across multiple agenda topics during 2023, EAC members voiced questions, concerns, and insights into how fares should be considered in Link21 work. In recognition of this, the Link21 Team arranged an agenda item on fares for the November 28th meeting. In this item, staff from BART, CCJPA, and Link21 presented on:

- Current BART fares and the Clipper system
- Current Capitol Corridor fares and California Integrated Travel Project
- Fares assumptions in Link21 work

⁹ Limited stop service refers to operations that do not stop at each station. For example, Caltrain's limited five trains to serve the 22nd Street and Millbrae stations but not the stations in between (Bayshore, South San Francisco, and San Bruno).



Much of the EAC feedback around fares concerned current fare prices and payment options, which are outside of the purview of Link21. EAC input on fares that the Link21 Team could consider in work is provided in the next subsection.

4.7.2. Input Received and Incorporated

Input: Regional Rail fares are higher than BART fares, which creates equity concerns.

Link21 Response: In *Plan Bay Area 2050*, MTC included a distance-based fare structure that is the same across all operators. This fare structure would mean that a trip between Richmond and Coliseum, whether on BART or Capitol Corridor, would cost the same amount. MTC also included 50% discounts for low-income riders in *Plan Bay Area 2050*. This fare structure is used in Link21's analysis for portions of trips within the Bay Area. With this adjusted approach to fares, the business case evaluation found that there was only about a one percentage point difference in ridership from individuals with a household income of under \$60,000 a year between the BART and Regional Rail concepts.

Exact fares will be determined later in Link21's development once the service operator is determined. The Link21 Team will stay engaged on fare discussions to promote a fare structure that allows for the realization of projected benefits to lower-income riders.

Input: Service should be branded clearly so that riders understand fares and transfers.

Link21 Response: The Link21 Team intends to create an integrated rail system that is easy to use, which includes creating improved transfer points and clarity around fares. Based on this input and the EAC's thoughts on the Preliminary Purpose and Need, fares and transfers were added to the Preliminary Purpose and Need.

Input: It is important to have a unified fare system that works across operators. Features like discounts for transfers and monthly passes could also support fare equity.

Link21 Response: Consistent with MTC's *Plan Bay Area 2050*, the Link21 Team assumes a common fare structure across BART and Regional Rail. Unified fares, discounts, and passes will need to be negotiated with a coalition of other agencies. The Link21 Team will engage in these conversations to advocate for a fare structure that would allow for the realization of equity benefits.

Input: There needs to be a way for people without credit cards or bank accounts to purchase a ticket.

Link21 Response: Through MTC's work updating the Clipper system and the state's work on the California Integrated Travel Program, multiple agencies are studying the future of fares in California. The Link21 Team will coordinate with these efforts and advocate for solutions that allow unbanked individuals to easily ride.

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5. EAC Development and Moving Forward

Over the course of 2023, the Link21 Team has evolved its approach to working with the EAC to allow the group to better contribute to program development. Originally, the only planned EAC events were 2-hour and 30-minute meetings every other month. However, internal conversations and communications with EAC members following the first two meetings highlighted the need to create additional spaces for further conversation. With 18 members in the group, some EAC members found it difficult to ask questions and provide robust input during the bimonthly meetings.

In response to this, the Link21 Team started hosting office hours in the weeks after the meetings. Since the second EAC meeting on February 28, 2023, the Link21 Team has offered office hour sessions following each meeting. Office hour sessions are one hour long and staffed by Link21 subject matter experts, facilitators, and notetakers. EAC member attendance is voluntary, and the number of attendees varies per session. Office hours have proven to be a fruitful space for EAC members to provide input. As there are fewer attendees, the sessions can be more conversational, and EAC members can contribute a higher volume of feedback than would be feasible in a full EAC meeting.

EAC members also identified that the first few meetings were information heavy and did not leave sufficient space for conversation. As a result, the Link21 Team put additional effort into meeting planning to create more concise materials. More planning went into developing facilitation styles and activities that bolstered opportunities for EAC members to provide input. The Link21 Team also solicited continuous feedback from EAC members on meeting format throughout the year with post-meeting surveys.

As the year progressed, numerous EAC members showed a deep interest in helping shape Link21's anti-displacement work. Some EAC members felt that existing meetings, office hours, and surveys would not provide enough time to focus more on anti-displacement given the need to talk about other topics as well. EAC members identified a subcommittee or working group as a potential solution. In response to this, the Link21 Team updated the *EAC Project Bylaws* to describe the process for creating these bodies. The EAC now has an Anti-displacement Working Group.

Throughout the year, the Link21 Team has shown a willingness to constantly evolve its partnership with the EAC in ways that allow members to play a large role in shaping program work. This has helped EAC members build capacity and confidence, which has resulted in more robust and impactful input.

With the necessary assumed level of effort and bylaws in place to support future development like subcommittees, the Link21 Team is prepared to further develop its work with the EAC after Stage Gate 2.

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6. Conclusion

6.1. EAC Input and Stage Gate

The EAC is a valuable partner in shaping Link21 work. Since convened in early 2023, the group has made significant contributions to Link21 technical work. EAC members also contributed insights about what service characteristics could support an equitable Preliminary Project. Common input included:

- A relatively high proportion of benefits to priority populations is important.
- Expanded service hours are necessary, especially to serve workers who commute late at night or early in the morning.
- New stations should be considered to serve communities that are impacted by rail but do not have a station nearby.
- Link21 should serve communities beyond the Transbay Corridor and throughout the Megaregion.
- Improving service frequency is important.

Evaluation work demonstrates the ability of a BART Crossing Project and a Regional Rail Crossing Project to provide some of these desired service attributes and benefits.

6.1.1. Priority Population Benefits

The service enabled by either technology creates substantial benefits for priority populations. Just over 32% of the Megaregion's population lives in priority populations census tracts, but the evaluated BART and Regional Rail Representative Concepts would result in about 40% of benefits accruing to priority populations residents. Whereas the BART concept benefits a higher number of riders (mostly in developed rail markets) incrementally, the Regional Rail concept offers significant and transformative benefits to a relatively smaller number of riders (many in areas without good access to rail).

6.1.2. Expanded Service Hours

Initial analysis also suggests that a BART Crossing Project or Regional Rail Crossing Project could enable expanded service hours. Service may be able to be organized so that at least one of the current and future crossings are always operating. Exact service schedules will be determined at a later point, once an operator(s) is determined, and will be dependent on larger policy around maintenance practices and other factors.

6.1.3. New Stations

There are opportunities to expand access to rail, including developing new stations, with both BART and Regional Rail. These possibilities will need to be studied more in post-

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Stage Gate 2 work. Some of those potential stations may also be able to be implemented through separate projects.

6.1.4. Megaregional Connections

Compared to a BART Crossing Project, a Regional Rail Crossing Project offers the opportunity to provide transbay rail service more directly to and from locations throughout the Megaregion. It could leverage numerous ongoing and future investments in the rail network called for by regional transportation plans and the *California State Rail Plan*.

6.1.5. Service Frequency

Both a BART Crossing Project and Regional Rail Crossing Project could provide the potential to improve service frequency. Notably, the conceptual service plan for BART would decrease peak period headway on the Blue, Green, and Red lines from 10 minutes to 5 minutes. The Regional Rail conceptual service plan would offer greater relative improvements to frequency. Caltrain plans to initially operate four trains per peak hour per direction with electrification, and Capitol Corridor operates about one train per direction in peak hours. Conceptual service planning for Regional Rail includes 16 transbay trains per peak hour per direction, with the potential to grow to 24 trains if additional improvements are made to alleviate capacity constraints on both sides of the bay.

6.2. EAC Input and Upcoming Work

The EAC also raised important concerns and considerations about how Link21 could impact communities. These included:

- Efforts to reduce and prevent displacement need to be taken from the start of planning.
- Affordable fares and convenient fare structures, including coordination across operators, are necessary for an equitable system.
- Riders need to feel safe in stations and on trains.
- The system must be physically accessible to all potential riders.
- There need to be robust connecting transit options.

As work progresses, the Link21 Team will stay engaged with the EAC about these topics and others. The work that the Link21 Team has done throughout 2023 and early 2024 to improve strategies for implementing the EAC and create additional ways for the EAC to provide input will allow the EAC to remain an important part of shaping equitable Link21 work. Some preliminary next steps for these important topics are listed in the following sections.

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6.2.1. Displacement

The Link21 Team has both conducted initial work and planned future work to study and address displacement risks. Initial assessments of the direct and indirect displacement potential of both BART and Regional Rail concepts were included in the business case evaluation. In this high-level exercise, Regional Rail showed a greater potential for displacement. The finding was primarily due to cautious planning assumptions included in the Regional Rail Representative Concept. For example, the Regional Rail Representative Concept assumes a new dedicated right-of-way between Emeryville and Richmond, while the BART Representative Concept has more geographically constrained right-of-way assumptions. Subject to further design work and negotiations with UPRR, there are potential options that involve Link21 services sharing tracks with UPRR that could deliver a better outcome overall. This would decrease the amount of right-of-way necessary to deliver Regional Rail service, in turn substantially reducing direct displacement risk. Link21 is seeking federal funds to support this work and coordination with the host railroad UPRR.

Although there is indirect displacement risk associated with Regional Rail (as well as BART), a Regional Rail Crossing Project also would present the opportunity to advance anti-displacement work. The introduction of a transformative investment like a Link21 Regional Rail station could serve as the impetus for the adoption of stronger anti-displacement policies in jurisdictions that currently lack them. The Link21 Team, using its Anti-displacement Toolkit, will coordinate with land use jurisdictions and the public to support the introduction of beneficial policies.

The Link21 Team has also partnered with the EAC to explore more dedicated ways for members to be involved in shaping anti-displacement work through working groups or subcommittees.

6.2.2. Fares

Some EAC members expressed concerns over the ability of Regional Rail to deliver equity benefits given the higher fares on Regional Rail today. Link21's modeling is built on MTC's *Plan Bay Area 2050* assumptions that fares within the Bay Area will be distance-based and uniform across operators. This type of policy would make Regional Rail a more affordable option. The business case evaluation shows that under this type of fare system, projected ridership by income level is similar for BART and Regional Rail. Fares will not be a differentiating factor in identifying a recommended service type for the Crossing Project.

Understanding that affordable fares and a convenient fare system are critical for equity, the Link21 Team will advocate for the realization of this type of fare system as work advances. If Regional Rail advances at Stage Gate 2, it could serve as an opportunity to realize a more equitable fare system. Capitol Corridor's existing fare system is based on its current operation as solely an intercity rail service. Introducing Urban | Metro service

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and greater connectivity with other Bay Area transit would provide the impetus to implement a fare system that is more affordable and integrated with other operators.

6.2.3. Safety

Many aspects of personal safety on transit similarly require agency-wide actions and go beyond the purview of Link21. The Link21 Team will consider ways safety could be improved through design (e.g., how stations are laid out) and remain engaged with larger discussions around safety to promote the issues raised by the EAC.

6.2.4. Physical Accessibility

Designing a system that can be used easily by all people is essential for equity. People with disabilities face challenges using rail today, many of which stem from station design features. The Link21 Team has not started station design yet, but regardless of the train technology advanced for the Crossing Project, the system must be designed with consideration of the needs of people with disabilities. More effort will begin after Stage Gate 2 to plan and design Crossing Project stations. The needs of people with disabilities will be a key part of defining station design criteria. The Link21 Team will work with disability stakeholders to build out these criteria.

6.2.5. Connecting Transit

Efficient connections between the Crossing Project and other transit operations are critical for realizing the potential benefits of Link21. The Link21 Team is in frequent coordination with other transportation planning agencies and operators. Regardless of the technology advanced at Stage Gate 2, creating integrated transit hubs will be a priority. Once there is more detail on station locations, the Link21 Team will begin more concrete discussions with local bus and rail operators.

6.3. Stage Gate 2 Evidence

Demonstration of the EAC's input on Stage Gate 2-related work will serve as evidence in support of the forthcoming Stage Gate 2 equity statement. Considered alongside other evidence like the reports on the business case evaluation and other engagement, this report demonstrates how equity has been considered across Link21 work.

This report also details how EAC contributions are reflected in the technical approaches taken in the business case evaluation and concept development process, which will support the Stage Gate 2 statement on development and evaluation. Documentation of the involvement of the EAC and its role in shaping the draft Stage Gate 2 staff recommendation will also serve as evidence for the Engagement and Outreach Team's Stage Gate 2 statement. Lastly, the EAC's contributions to future scope considerations and its continued growth as an advisory body will support the Stage Gate 2 readiness statement.

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