

May 5, 2026

SOLANO-NAPA North Bay Passenger Rail Feasibility Study

*Napa Valley Transportation Authority
Community Advisory Committee*

Introductions



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Agenda and Today's Objective

- **Objective:** Discuss the Solano-Napa North Bay Passenger Rail Feasibility Study
- **Agenda:**
 - Project Background and Market Analysis
 - Service Concepts Evaluated and Supporting Analysis
 - Project Next Steps



Project Background

Study Objectives



Evaluate the feasibility of passenger rail service between Napa, Vallejo and Suisun/Fairfield



Assess existing infrastructure, market demand, and service plans to identify potential service plans



Integrate proposed service concepts with the California State Rail Plan and regional transportation strategies



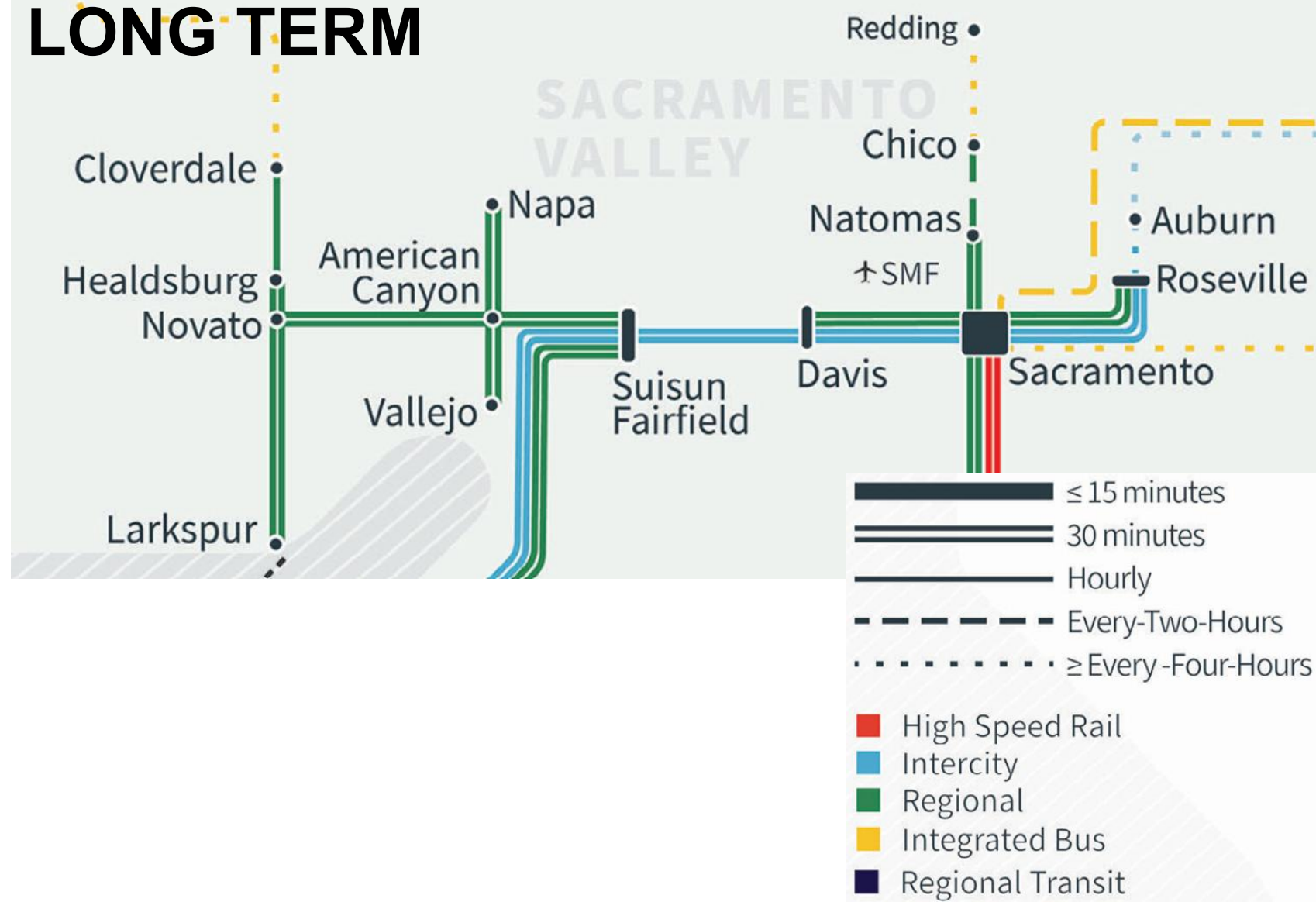
Analyze potential benefits and challenges for local communities, governance models, and funding opportunities



2024 State Rail Plan

- The 2024 California State Rail Plan outlines the long-term vision for rail in the study area
- The vision outlines connecting, half-hourly service throughout the region

LONG TERM



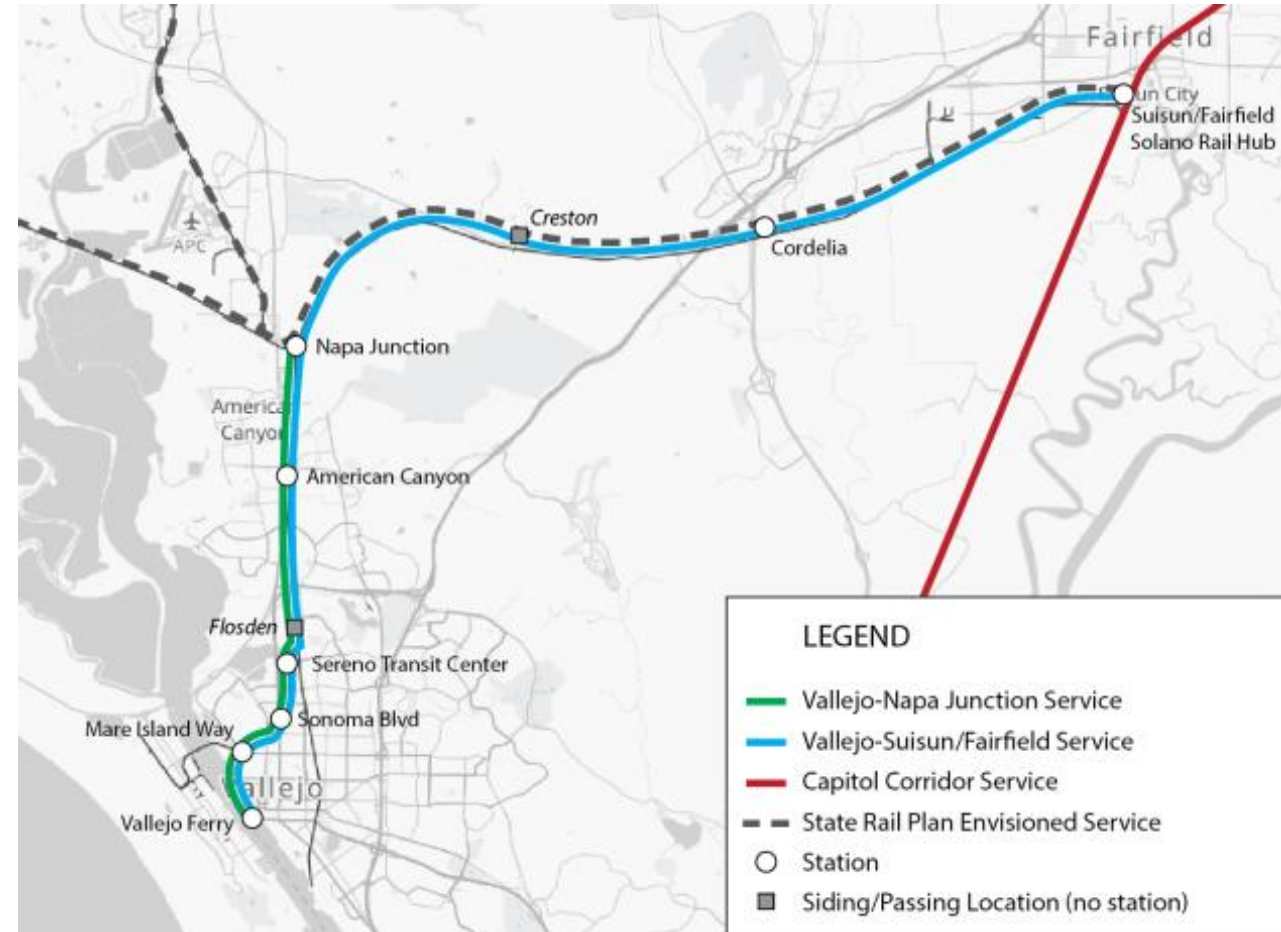
Vallejo Passenger Rail Study, 2019

Service frequencies

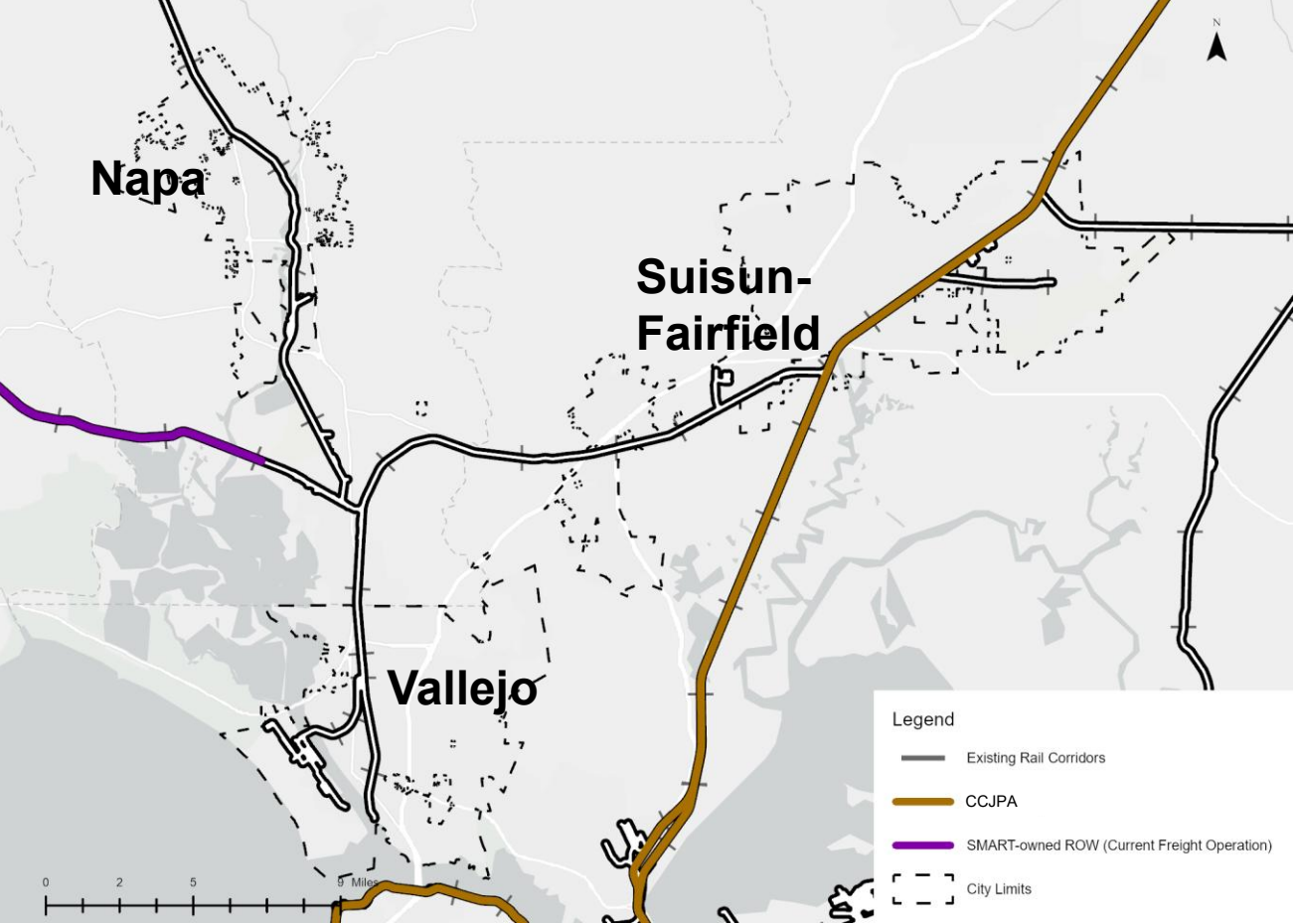
- 30 minutes to 15 minutes
(dependent on passenger
demand)

Estimated one-way travel time

- 40 min

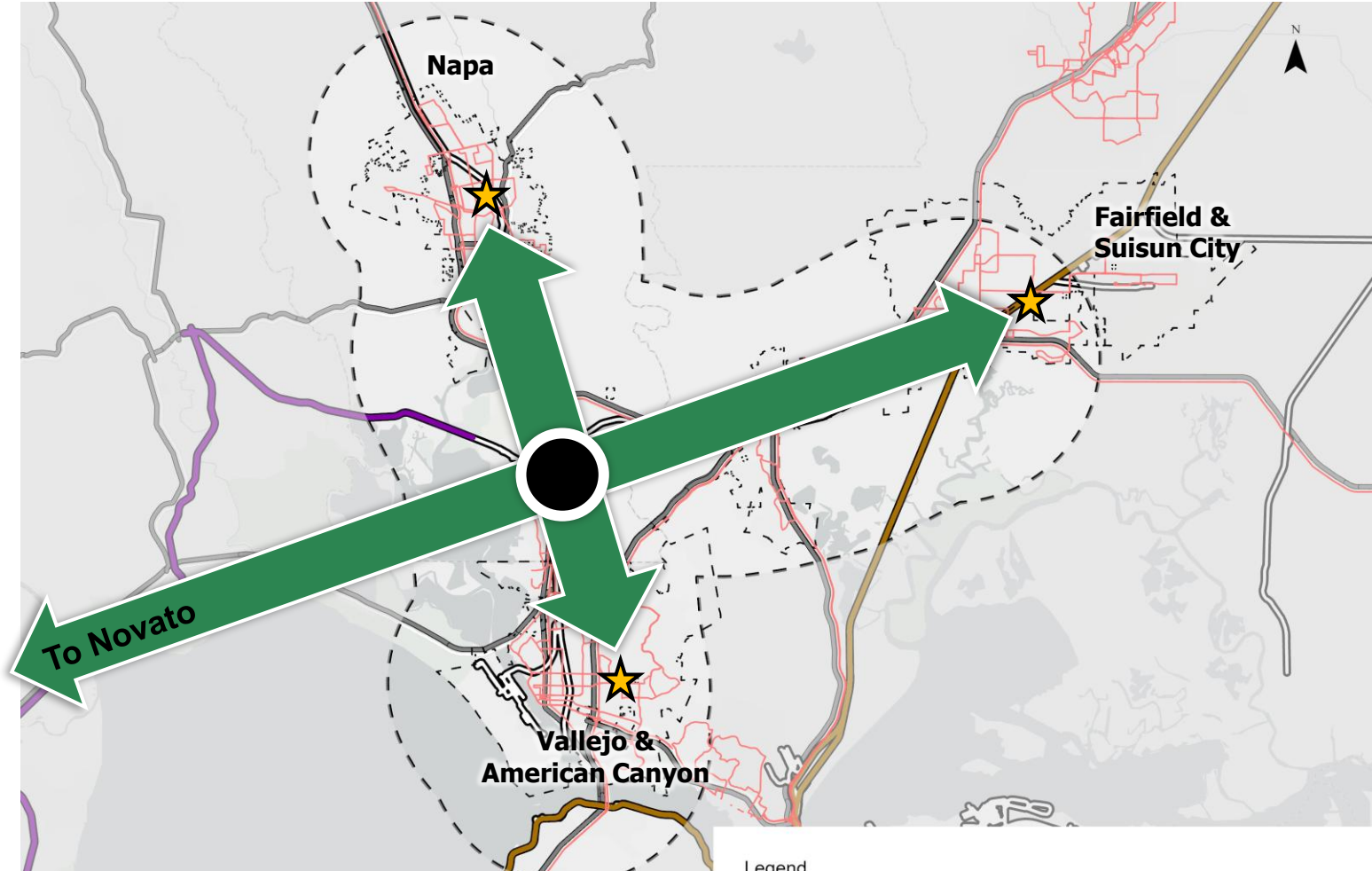


Study Area





State Rail Plan in the Study Area

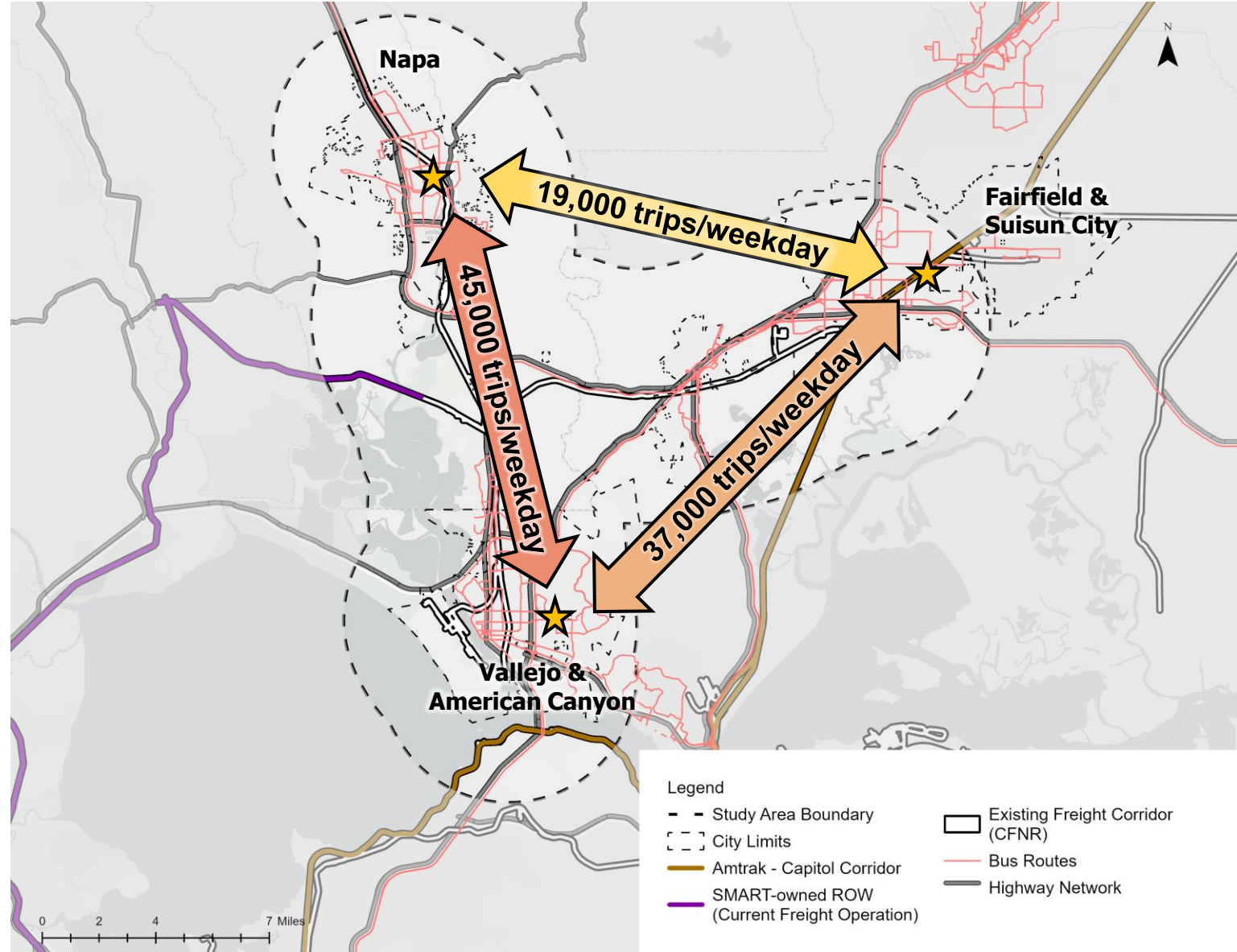


East/West Corridor assumed to be independent. Transfer at Novato and at Suisun/Fairfield.



Market Analysis

Greatest concentration of trip flows between Napa and Vallejo/American Canyon





Work Completed

Service Concept Considerations



Routing – how does the train move through the Study Area?

If not a one-seat-ride, evaluating transfer prioritization and time required for transfers



Speed – how much travel time is required to connect the Study Area?



Frequency – how often do trains arrive at each station?

Concepts 1 and 2

Concept 1 (Existing Track)

- Only supports slow speeds (<30 mph)
- Lacks appropriate signalization systems to support passenger service
- Capital cost associated with necessary track improvements and station construction

Concept 2 (Class IV Track Upgrades)

- Significant track infrastructure investments may be required to support speeds up to 79 mph
 - May include:
 - Rail replacement
 - Ballast/subgrade improvements
 - Track geometry changes
- Signalization systems will require significant upgrades to support safe passenger services (Positive Train Control)

Concept 1 and 2 Layout

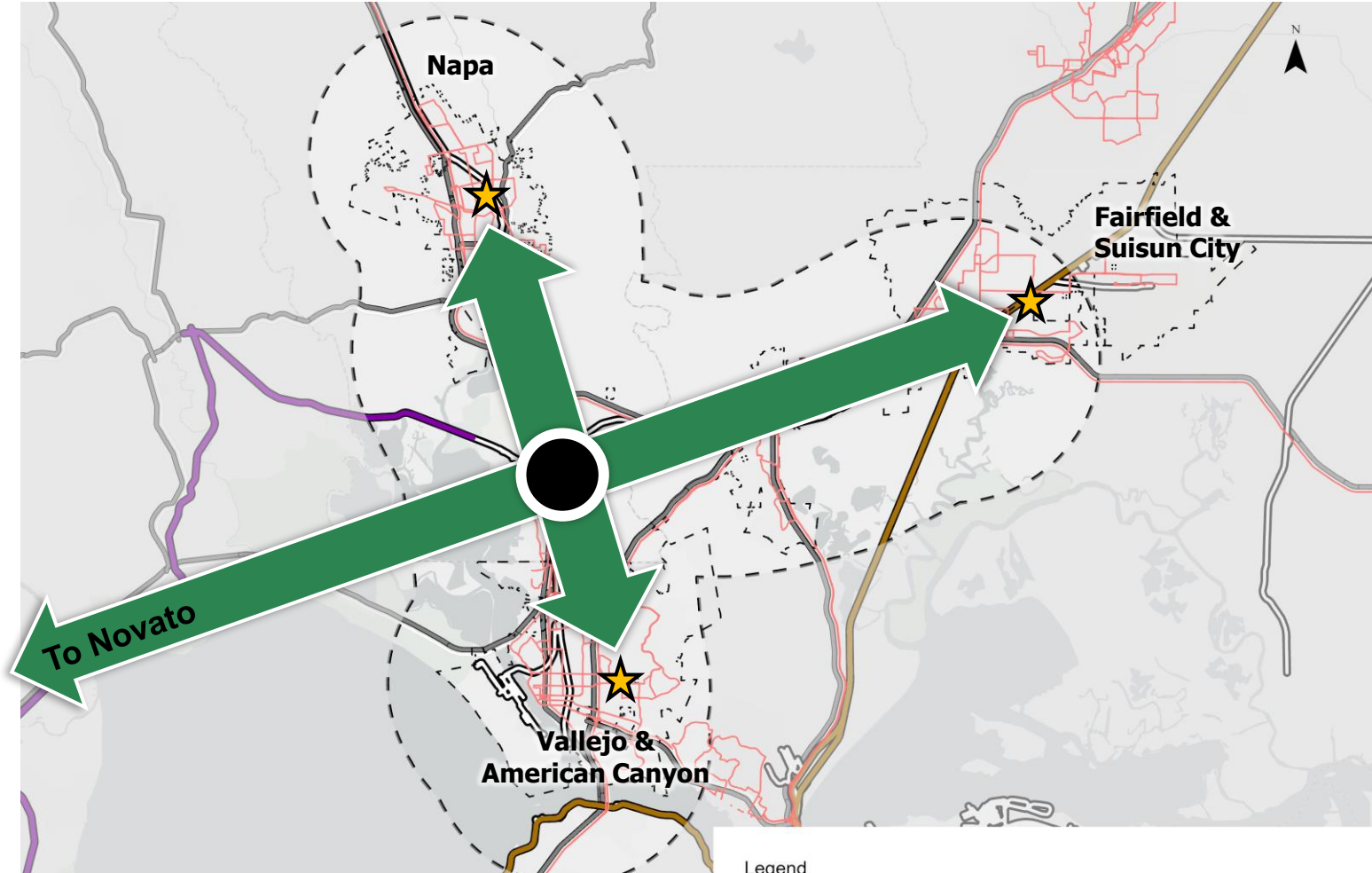
State-Rail Plan Service Pattern

Direct connection between:

- Napa and Vallejo

Transfer required (*in this service layout*) at Napa Junction for:

- Vallejo to Suisun
- Napa to Suisun



East/West Corridor assumed to be independent. Transfer at Novato and at Suisun/Fairfield.

Travel Times with Class IV Track Upgrades

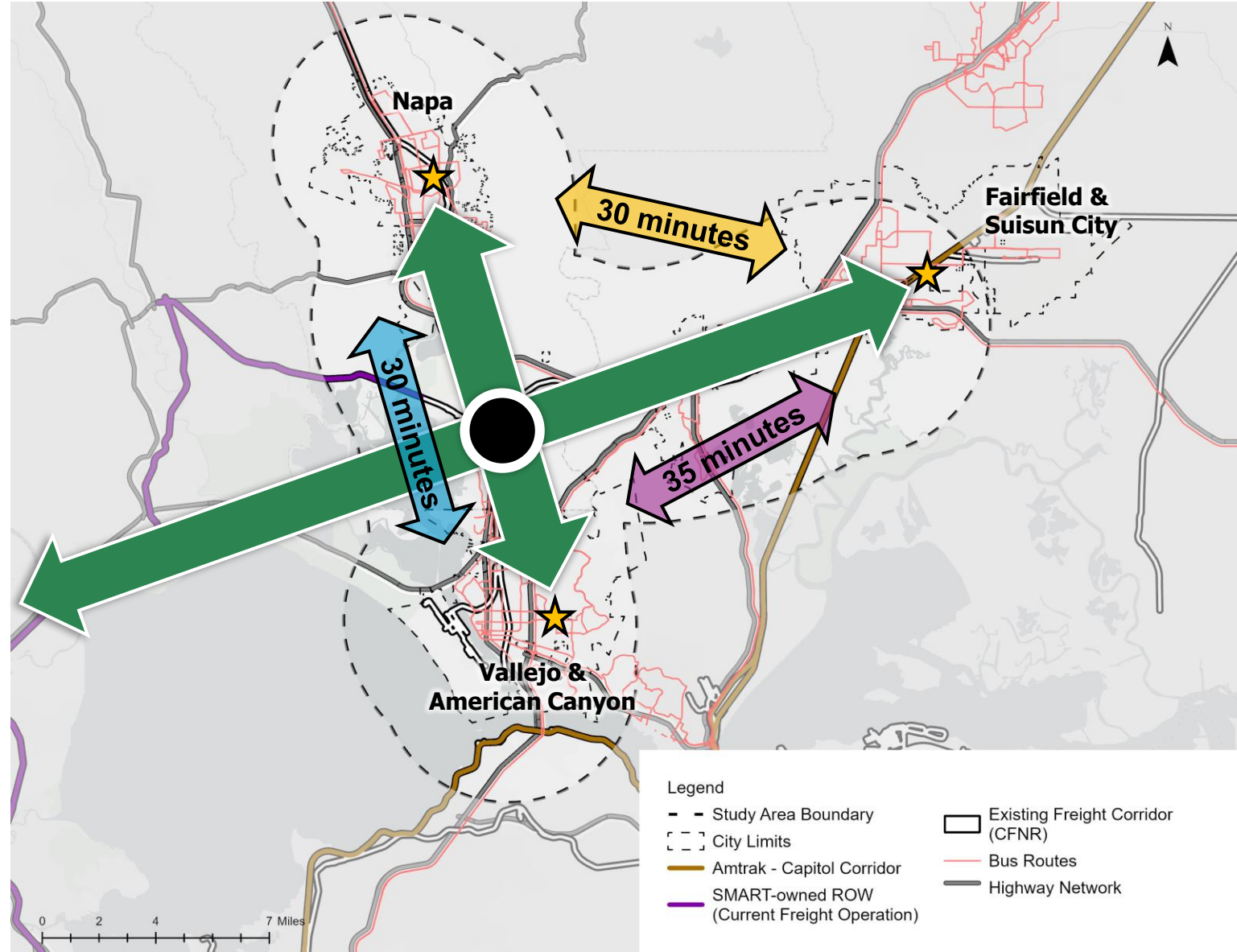
State-Rail Plan Service Pattern

Direct connection between:

- Napa and Vallejo

Transfer time included at
Napa Junction for:

- Vallejo to Suisun
- Napa to Suisun



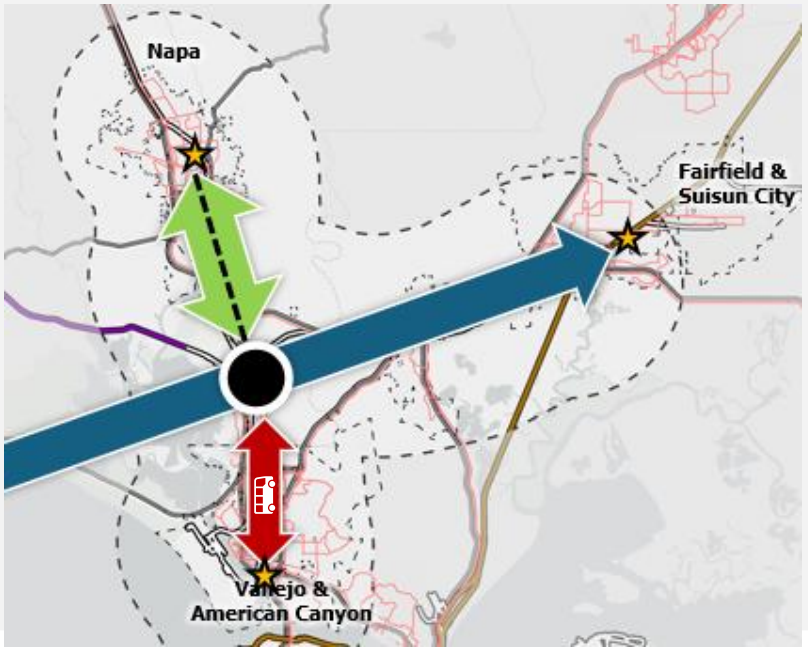
Service Summary

Concept	Track Infrastructure Status	Frequency	Miles of Additional Double Track	Corridor Run Time	Travel Time: Napa to Suisun-Fairfield*	Travel Time: Vallejo to Suisun-Fairfield*
1	No track upgrades	Every 60 min.	~5 mi.	Napa – Vallejo: 1 hr, 3 min Novato – Suisun: 1 hr, 2 min	1 hour	57 minutes
2	Class IV track upgrades	Every 60 min.	~2.5 mi.	Napa – Vallejo: 30 min Novato – Suisun: 44 min	30 minutes	35 minutes

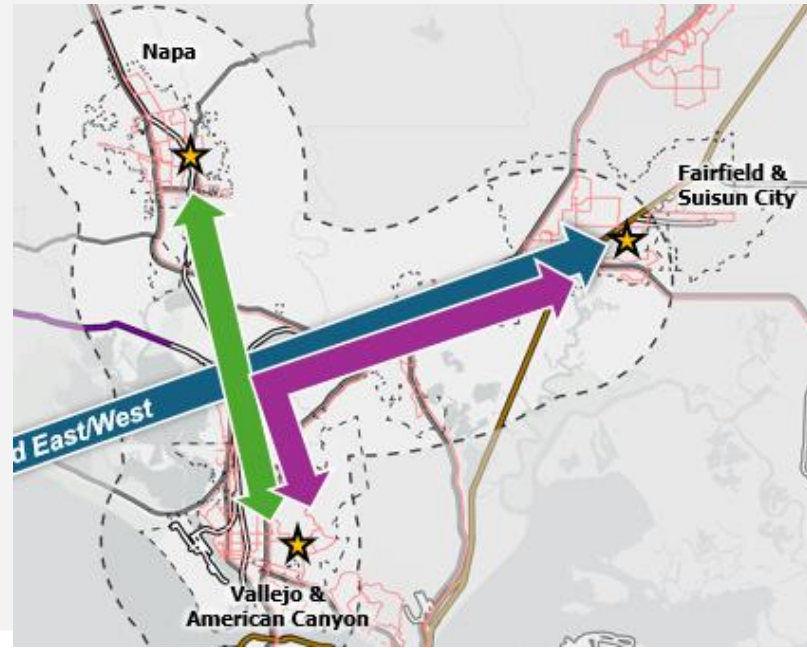
*Note: Assumptions subject to change as station locations continue to be assessed in upcoming studies.
* Estimated travel times includes transfer time at Napa Jct.*

Additional Options Considered

1. Plan for Vallejo to Napa Junction to be served with Enhanced Bus



2. New Service Pattern, varying from State Rail Plan



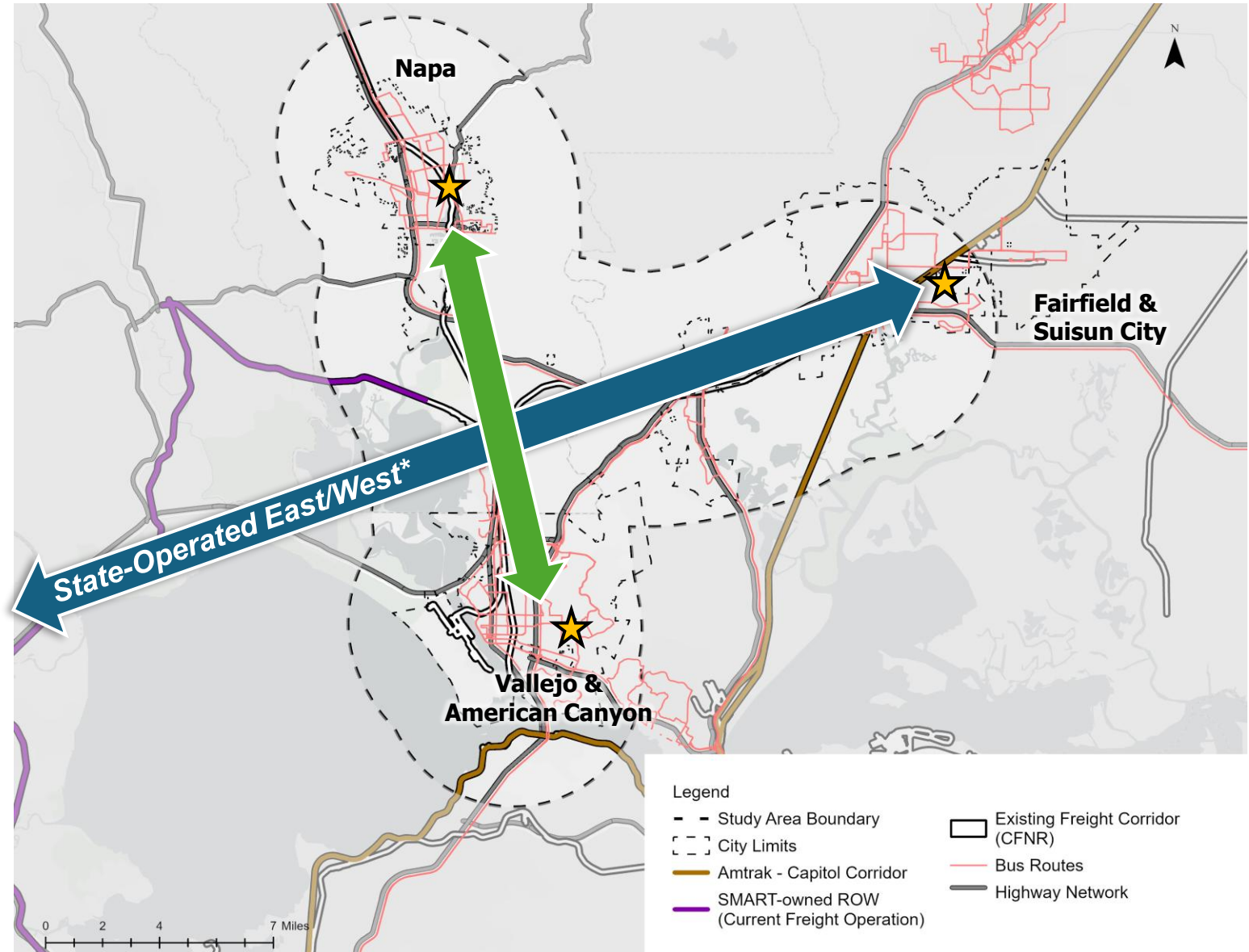


Service Concept Recommendation

Scenario 2

Class IV track upgrades on the North/South Corridor

Hourly frequency, timed “pulse” transfers to state-supported East/West



Rail Transit Overview

Light Rail



Separation needed

Heavy Rail



Not suitable for corridor

Commuter Rail – Zero Emissions



Emerging technology

Commuter Rail - Diesel



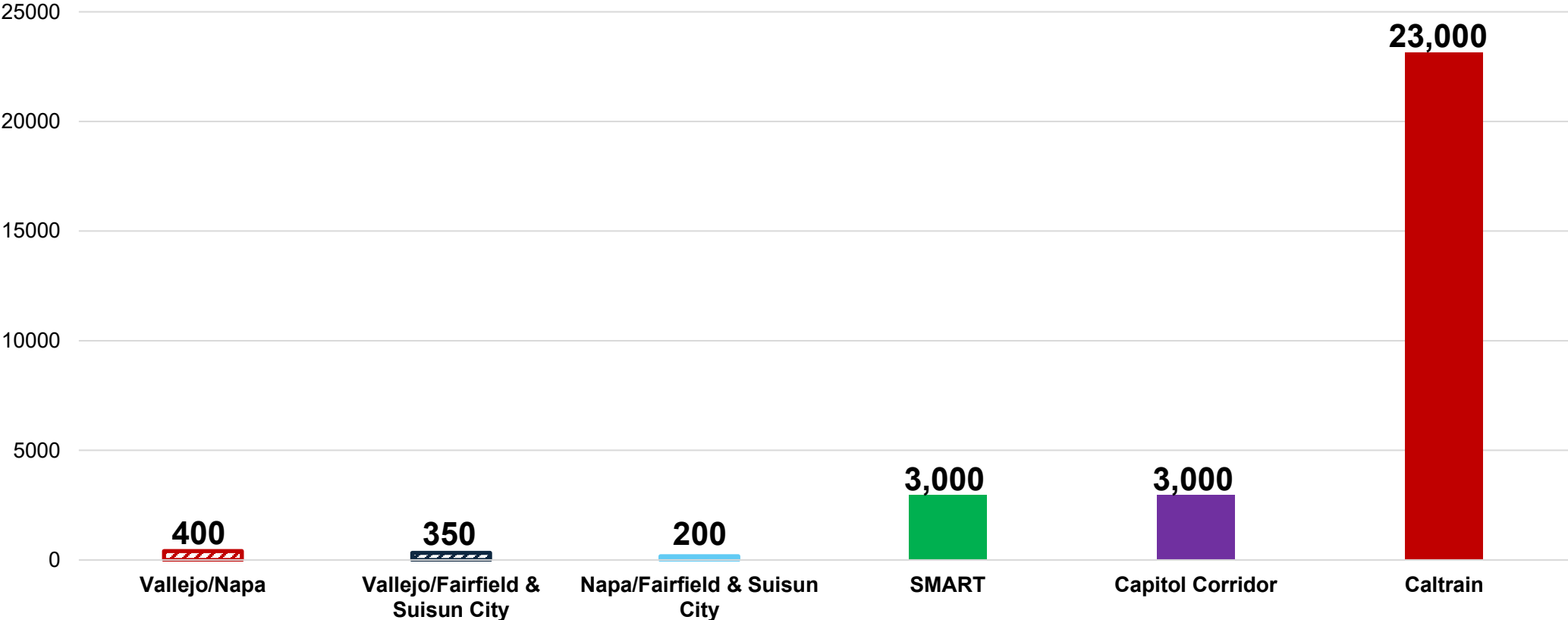
Shares existing freight rail

Governance Requirements for New Passenger Rail Service

- 1 Legal authority to plan, build, and operate a cross-county passenger rail service on their own
- 2 Power to fund, finance, and acquire property that would be necessary to build and operate a passenger rail service
- 3 Institutional capacity for rail planning, delivery and operations

Estimated Daily Rail Transit Capture

Estimated Weekday Average Daily Ridership vs Peer Systems



Ridership data from Fall of 2024
Estimated numbers using Capitol Corridor transit capture (1%) shown



Project Next Steps

Project Next Steps

Fall 2025

Finalize Rail
Operations
Concept Selection



Spring 2026

Advance Service Concept

Vehicle Assessment

Governance Assessment



Summer 2026

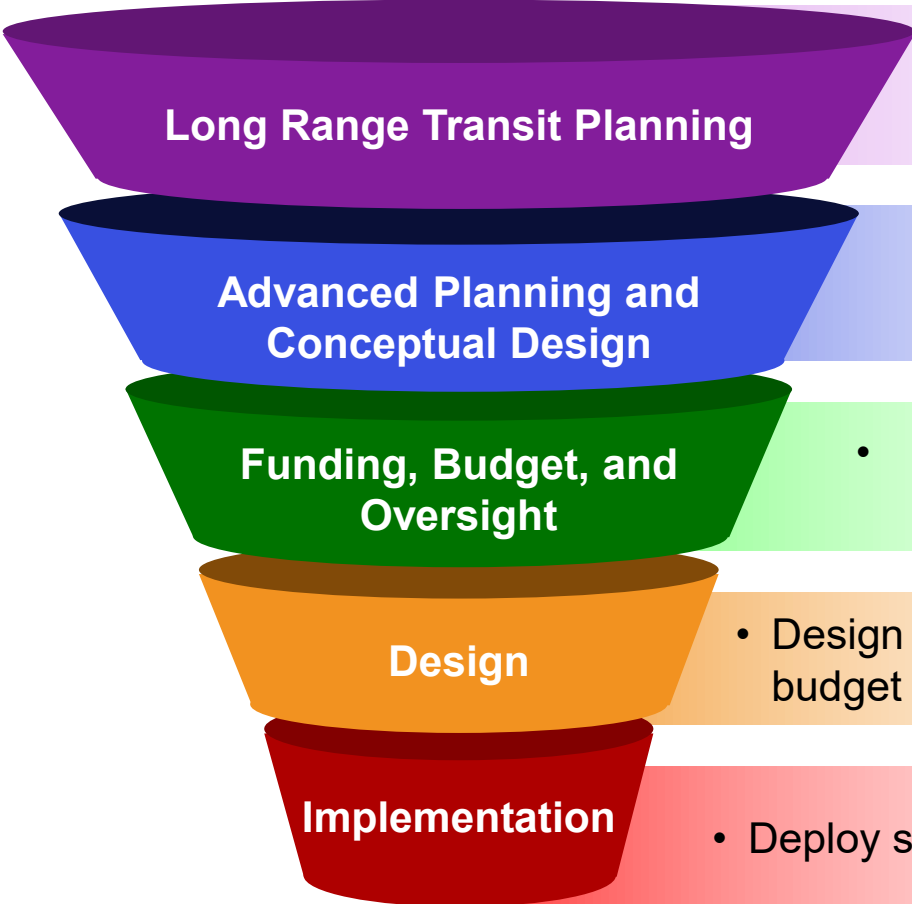
Finalize Service Concept

Community Benefits/Impacts

ROM Costs

Corridor Next Steps

We Are Here



Long Range Transit Planning

- Identify long-term goals and priorities, **expand transit travel market**

Advanced Planning and Conceptual Design

- Identify locally preferred alternative, initiate environmental analysis

Funding, Budget, and Oversight

- Budget for identified project(s)

Design

- Design project(s) using allocated budget

Implementation

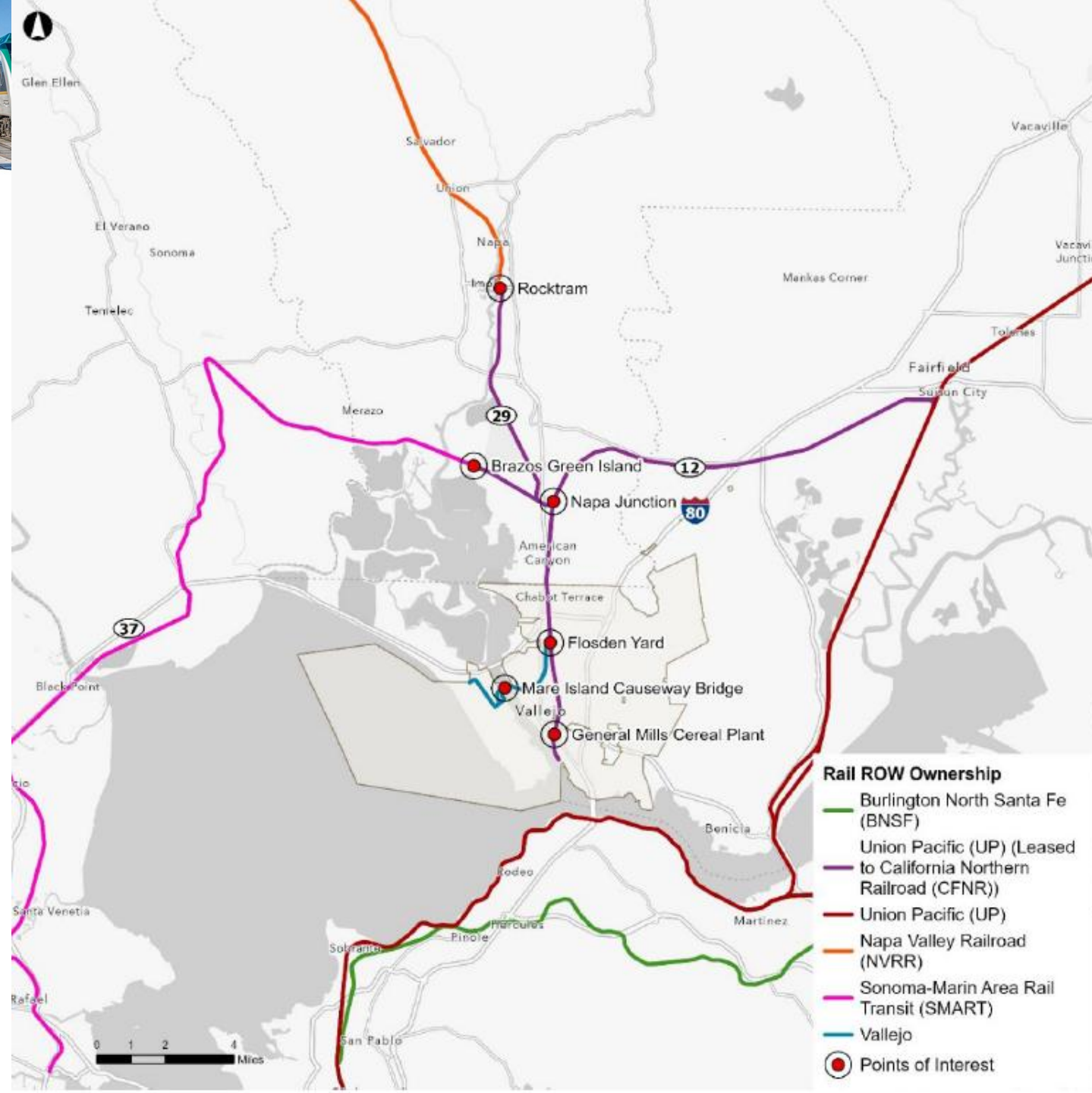
- Deploy service



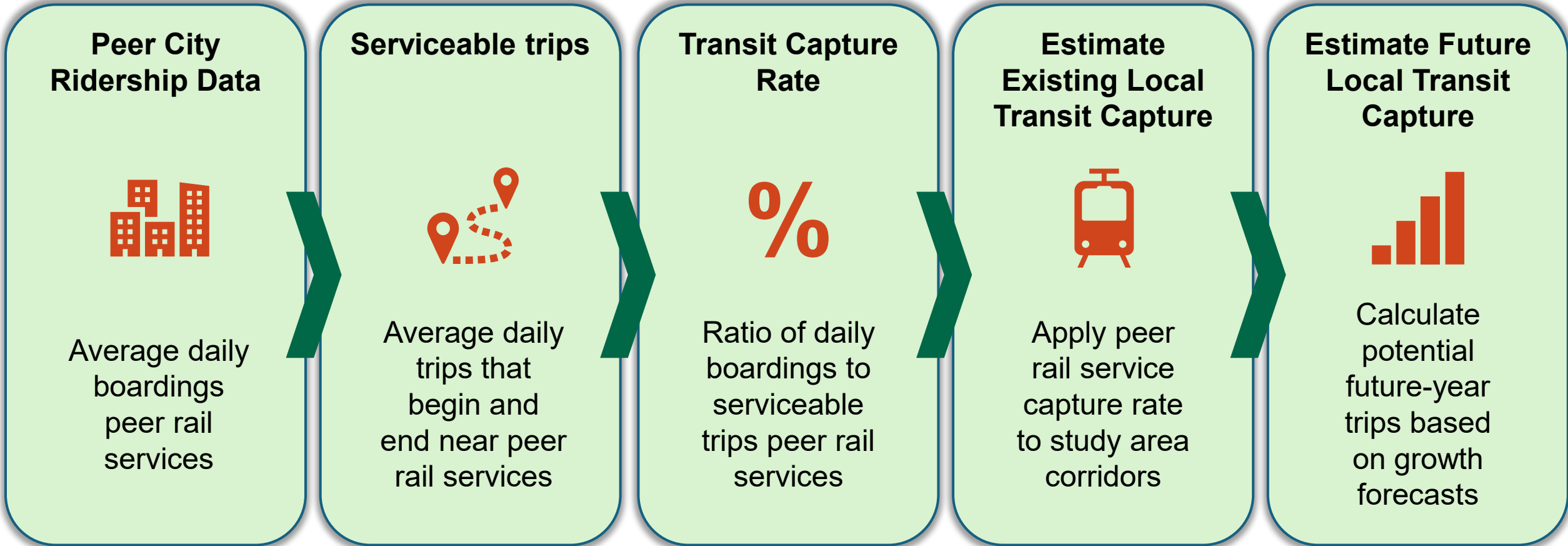
Extra Slides



Rail Ownership



Addressable Market Analysis Methodology



**Peer City
Ridership Data**



Average daily boardings peer rail services

Serviceable trips



Average daily trips that begin and end near peer rail services

Transit Capture Rate



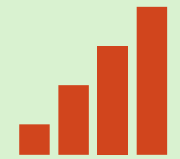
Ratio of daily boardings to serviceable trips peer rail services

Estimate Existing Local Transit Capture



Apply peer rail service capture rate to study area corridors

Estimate Future Local Transit Capture

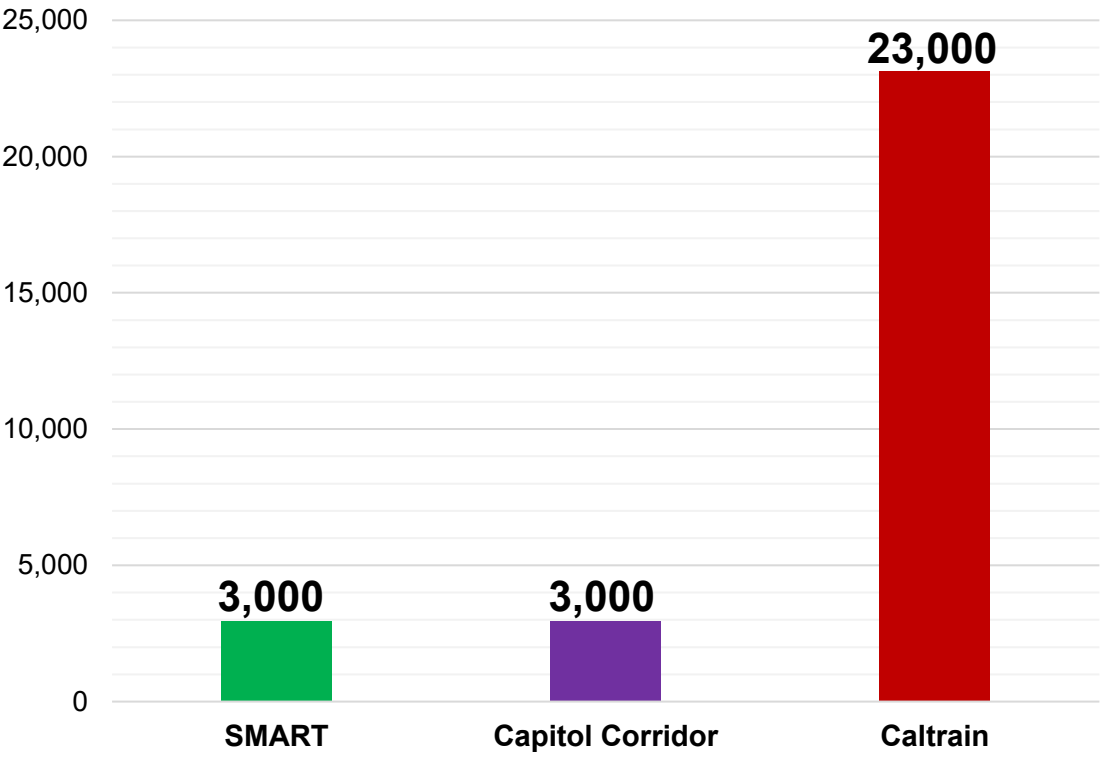


Calculate potential future-year trips based on growth forecasts



Peer Rail Service Ridership

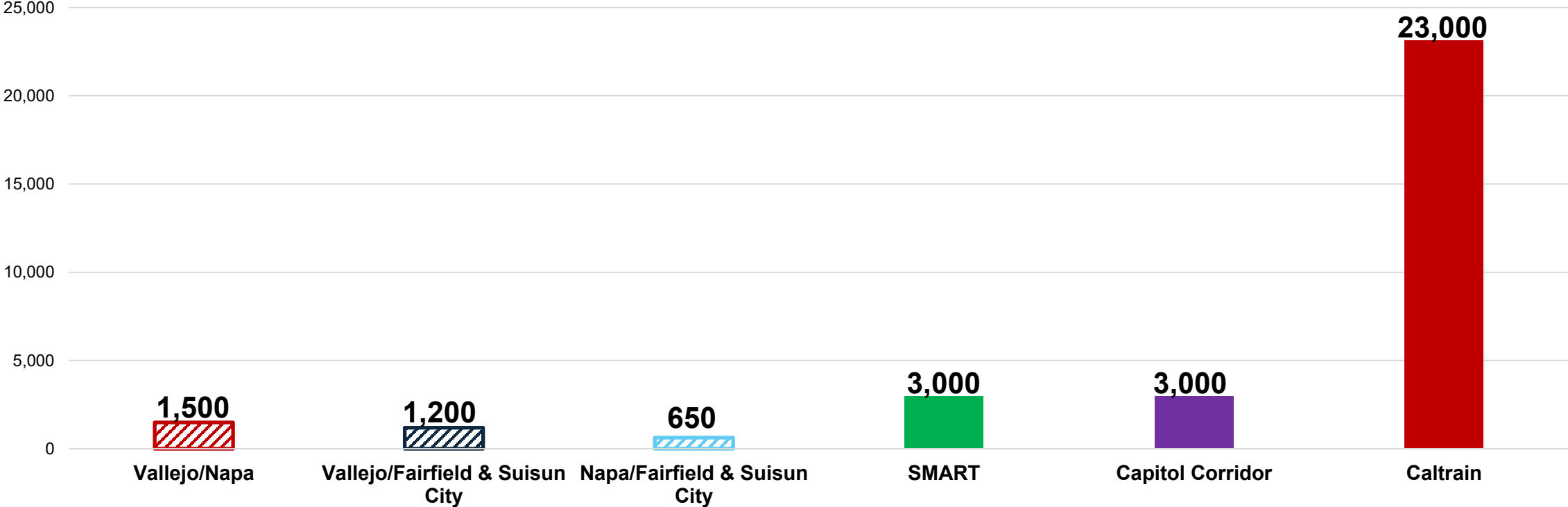
Weekday Average Daily Ridership
(Spring 2024)



- Transit capture of trips along corridors:
 - SMART: 1.5%
 - Capitol Corridor: 1%
 - Caltrain: 3.5%

Estimated Daily Rail Transit Capture

Estimated Daily Weekday Transit Capture vs Peer Systems Weekday
Average Ridership



*Estimated daily transit volumes with Caltrain's transit capture (3.5%) shown



Daily Transit Capture From Peers (Reference)

	Caltrain Capture (3%)	SMART Capture (1.5%)	Capitol Corridor Capture (1%)
Vallejo/Napa	630	270	171
Vallejo/Fairfield & Suisun City	1193	511	324
Napa/Fairfield & Suisun City	1491	639	405

Governance Assessment Components

Assessing potential governance and operating models by evaluating:



Legal Authority

- How was the entity created?
- What is the structure of the entity?



Revenue and Funding

- What are the revenue sources available?
- What ability does the entity have to collect and spend funds?



Capacity

- What is the governing body of the entity?
- What staff capacity does the entity have?
- What does the entity contract out?



Scope

- What is the jurisdiction of the entity?
- What is the operating environment of the entity's services?

Operating Entity Types



Joint Powers Authority

A body made up of two or more public agencies allowing member agencies to jointly exercise shared powers



State-Chartered Entity

A public agency created by state legislation to act as a unit of state government



Special Purpose District

A unit of local government formed to provide a specific service within defined geographic area



Private Corporation

A private, profit-driven entity with no affiliation to any unit of government

Summary

- **Vehicle speed/performance is very similar in corridor context**
- There are a variety of other factors to consider when choosing equipment:
 - capital investments
 - track ownership
 - boarding heights
 - station locations, etc.
 - *Future studies will evaluate these factors*
- State and federal emissions policy
 - No U.S. regulation currently mandates zero-emission passenger locomotives



Types of Rail Agreements

The type of agreement an operator uses is a decision between cost and control.

	Shared Use	Corridor Acquisition	Corridor Construction
Advantages	<ul style="list-style-type: none"> ✓ Lower capital costs associated with construction because infrastructure is already in place ✓ Maintenance is shared between freight and passenger operators 	<ul style="list-style-type: none"> ✓ Lower capital costs associated with construction because infrastructure is already in place ✓ Total service and equipment flexibility without having to negotiate with ROW owner 	<ul style="list-style-type: none"> ✓ Total autonomy in corridor design, alignment, and service as stated in operator goals
Disadvantages	<ul style="list-style-type: none"> ✗ Passenger service likely to be more constrained by existing freight operations and interests ✗ Constrained to existing corridor alignment 	<ul style="list-style-type: none"> ✗ Increased maintenance and infrastructure costs to passenger operator ✗ Constrained to existing corridor alignment 	<ul style="list-style-type: none"> ✗ Highest capital cost ✗ ROW acquisition and environmental clearance processes are lengthy and expensive