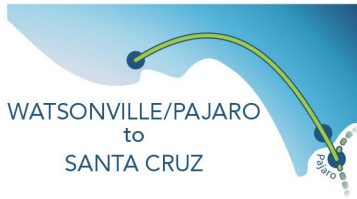


TRANSIT CORRIDOR ALTERNATIVES ANALYSIS



FREQUENTLY ASKED QUESTIONS

UPDATED APRIL 2020

HOW WERE THE FOUR ALTERNATIVES CHOSEN BASED ON THE SCREENING RESULTS?

The initial screening identified seven alternatives that ranked at the top based on an equal weighting for each of the metrics. Weighting of the various metrics was considered with higher weighting for costs, ridership, travel time, safety, access, active transportation and visual/noise/vibration impacts although this did not provide different results. Of these seven alternatives, the four in bold are being recommended to move forward for a detailed performance analysis.

- **Commuter Rail/Electric Multiple Unit**
- **Light Rail/ Electric Multiple Unit**
- Light Rail/Diesel Multiple Unit
- **Arterial & Right of Way Bus Rapid Transit (BRT)**
- Intercity Rail
- **Autonomous Road “Train” (on pavement with rubber tires)**
- Tram/Trolley/Streetcar

The following logic was used to identify four out of the seven alternatives moving into a Quantitative Performance Measure Analysis:

- ❖ Clean and green/sustainable alternatives will be considered for the TCAA planning process and thus, fossil fuel options have been eliminated.
- ❖ Commuter Rail/EMU has similar benefits to Intercity Rail but is better suited to frequent, all-day service with multiple stations.
- ❖ Tram/Trolley/Streetcar alternatives implemented in many urban areas typically run on city roadways shared with private vehicles rather than dedicated corridors similar to the Santa Cruz Branch Line. In addition, this alternative typically runs at a slower speed and provides less transit capacity than other alternatives. The Light Rail/EMU alternative could accommodate “streetcar” style vehicles as long as the speeds and capacity meet the definition of this alternative.

WHAT IS MEANT BY “COMMUTER RAIL/ELECTRIC MULTIPLE UNIT” AND “LIGHT RAIL/ELECTRIC MULTIPLE UNIT”?

There are many types of rail transit that are operational today and many more variations that are being designed for the future to incorporate new technologies. The definitions



for the transit alternatives that are proposed for moving forward were made more specific to provide clarity on what was being evaluated in the Phase 2 quantitative analysis for the Santa Cruz Branch Rail Line. The definitions are provided here for your reference.

Light Rail/Electric Multiple Unit

Passenger rail service operating on fixed rails with single or multiple individually-propelled cars typically providing an urban or interurban service with a lighter volume ridership capacity compared to commuter rail. Operations on a single track with sidings allows for two-way travel.

Typical Characteristics:

- Vehicle speeds capable of 30 to 60 mph maximum
- Vehicle can operate with freight in shared-use corridors only if temporally separated
- Centralized Traffic Control or similar signal system only as light rail is temporally separated from freight operations
- Frequency of peak period service
 - 10 – 30-minute headways
- Level or non-level platform boarding
- Propulsion type
 - Electric – Overhead, hydrogen fuel cell, battery

Commuter Rail/Electric Multiple Unit

Passenger rail service operating on fixed rails with multiple individually-propelled cars typically providing an interurban or regional service. Commuter rail typically has a higher volume ridership capacity and relatively longer distance between stops compared to light rail. Operations on a single track with sidings allows for two-way travel.

Typical Characteristics:

- Vehicle speeds capable of 30-60 mph maximum
- Vehicles can comingle with freight in shared-use corridors
- Centralized Traffic Control (CTC) and Positive Train Control (PTC) is required
- Frequency of peak period service
 - 20-30-minute headways
- Level or non-level platform boarding
- Propulsion type
 - Electric – Overhead, hydrogen fuel cell, battery

WHAT ROUTE WILL THE BUS RAPID TRANSIT OPERATIONS (BRT) TAKE BETWEEN WATSONVILLE/PAJARO AND SANTA CRUZ SINCE BRT CAN TRAVEL BOTH ON THE SANTA CRUZ BRANCH LINE AS WELL AS OTHER ROADWAYS?

One of the advantages of a bus rapid transit system is that BRT can travel in dedicated lanes in the rail right-of-way as well as use the roadway network. In the Unified Corridor Study, the route that was assumed for BRT traveled from the Watsonville Transit Center



along Highway 1 to State Park Drive and then onto the rail right-of-way between State Park Drive and Shaffer Road. If BRT moves forward as one of the alternatives to evaluate in Phase 2 of the TCAA, the route(s) that the BRT will travel will be determined in the Phase 2 quantitative evaluation in order to determine the BRT system that would best serve the residents of Santa Cruz County.

WHAT ROUTE WILL THE AUTONOMOUS ROAD “TRAIN” TAKE BETWEEN WATSONVILLE/PAJARO AND SANTA CRUZ?

Autonomous Road “Train” will be limited to the rail right-of-way for the length of the rail right-of-way except for the Watsonville area. Within Watsonville, since the autonomous road “train” is not compatible with freight on the rail right-of-way, an alternative for the Watsonville area will be considered in the Phase 2 quantitative analysis.

WHAT REFERENCE WAS USED TO DETERMINE “ENERGY USAGE” FOR THE VARIOUS TRANSIT ALTERNATIVES?

Updated Comparison of Energy Use & CO2 Emissions from Different Transportation Modes, April 2014, MJ Bradley & Associates,
<https://www.buses.org/assets/images/uploads/general/Report%20-%20Energy%20Use%20and%20Emissions.pdf>

WHAT NATIONAL REFERENCE WAS USED TO DETERMINE THE SCREENING METRICS FOR OPERATIONAL COSTS AND SAFETY?

2018 National Transit Summaries and Trends, National Transit Database, Office of Budget and Policy, U.S. Department of Transportation, Federal Transit Administration, December 2019, https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/ntd/data-product/134401/2018-ntst_1.pdf

WHY WAS THE MONTEREY BAY SANCTUARY SCENIC TRAIL (MBSST) MASTER PLAN NOT INCLUDED AS A PLAN FOR EVALUATING THE TRANSIT ALTERNATIVES “CONSISTENCY WITH OTHER PLANNING EFFORTS”?

The MBSST Master Plan will be added as a plan for evaluating the “consistency with other planning efforts” metrics. Adding this plan does not change the outcome of the analysis.

WHAT DO THE CAPITAL COSTS FOR THE ALTERNATIVES CONSIDER?

The screening level capital costs considered costs per mile developed in the Unified Corridor Investment Study; a National Study from Reconnecting America – “Transit Technologies Worksheet”; as well as other sources for costs. Costs include the infrastructure needed to support the alternative in the rail right-of-way for the various alternatives. The screening level capital costs did not include any additional costs for purchase of rail right-of-way. More detailed analysis of costs will be performed in the Phase 2 quantitative evaluation.



WILL BUS RAPID TRANSIT HAVE MORE SPACE FOR BICYCLES THAN A LOCAL BUS AND WILL IT ALLOW FOR LEVEL BOARDING?

Bus Rapid Transit (BRT) is assumed to use larger 60-foot buses which have more interior space that could be allocated onboard for bicycles. It was also assumed that with BRT, stations on the dedicated transit right-of-way would have level boarding. A local bus was assumed to use standard 40-foot buses and on-street (non-level) boarding and the current limit of 3 bikes on the outside rack.

WHY ARE THE ALTERNATIVES THAT TRAVEL OFF THE CORRIDOR CONSIDERED LESS RELIABLE?

Transit alternatives that travel off the transit corridor would be subject to traveling in traffic mixed with autos. During peak periods, traffic congestion will make these alternatives ability to keep on schedule less reliable.

WHAT WAS CONSIDERED IN ESTIMATING THE SCREENING LEVEL RIDERSHIP?

The factors that were evaluated in the screening level ridership for the various transit alternatives were the hourly capacity, the speed, and the number of station stops along the transit corridor between Watsonville/Pajaro and Santa Cruz. A more detailed analysis of ridership will be performed in the Phase 2 quantitative evaluation that will consider origins and destinations for residents of Santa Cruz County.

WHAT ARE THE ASSUMPTIONS FOR FUTURE LAND USE CHANGES IN THE TCAA ALONG THE SANTA CRUZ BRANCH LINE?

This Phase 1 initial analysis evaluated only the relative likelihood to attract increased development near stations. Consultations with the Cities of Santa Cruz, Capitola, and Watsonville, and the County of Santa Cruz will be conducted during Phase 2 to evaluate the potential for increased density based on their general plans and potential future rezoning that would affect transit ridership along the Santa Cruz Branch Line.

WILL THE TIMEFRAME FOR IMPLEMENTATION OF THE VARIOUS ALTERNATIVES BE EVALUATED?

Timeframe for implementation was not evaluated in the Phase 1 screening but will be evaluated in the Phase 2 quantitative analysis for the alternatives that move forward onto the short list.

WHAT PROPULSION TECHNOLOGIES ARE BEING CONSIDERED?

The alternatives that are being recommended to move forward to Phase 2 analysis are zero-emissions alternatives. There is no recommendation in Phase 1 between overhead catenary, battery-electric, or hydrogen fuel cell options but costs for these technologies will be considered in Phase 2.



WHAT IS THE RISK OF NOT IMPLEMENTING A RAIL TRANSIT ALTERNATIVE ON THE RAIL LINE?

Implementing a non-rail transit alternative on the rail line will require petitioning the Surface Transportation Board for abandonment of freight rail. As part of the abandonment, the petitioner can seek to railbank. Railbanking is a method by which freight rail lines proposed for abandonment can be preserved for future freight rail use, which would allow a different interim use of the land. Railroad rights-of-way often contain easements that could revert the land back to adjacent landowners if rail service is abandoned. However, if a line is railbanked, the corridor is protected for future freight rail use. As a result, the integrity of the corridor is maintained, and any reversions that could break it up into small pieces are prevented.

Points to consider if deciding whether to railbank include the following:

- Railbanking does not stop adjacent landowners who have provided easements for the rail from suing the United States for compensation.
- The Surface Transportation Board has the authority to require the rail line be converted to freight rail use at any time even if the line is railbanked.
- Converting back to rail after implementing another transit alternative would be costly.
- Funds from the California Transportation Commission from Proposition 116 and the State Transportation Improvement Program (STIP) Public Transportation Account (PTA) are tied to rail service. According to the funding agreement with the state, the funding is subject to repayment requirements if there is no rail service on the rail line.

UPDATED FEBRUARY 2020

WHAT IS THE TRANSIT CORRIDOR ALTERNATIVES ANALYSIS?

The Transit Corridor Alternatives Analysis (TCAA) will evaluate public transit investment options that provide an integrated transit network for Santa Cruz County utilizing all or part of the length of the rail right-of-way as a dedicated transit facility. A performance-based planning approach based on a triple bottom line sustainability framework will be utilized to assess various public transit options for the rail right-of-way. Transit alternatives will be compared to define a Locally-Preferred Alternative that offers the greatest benefit to Santa Cruz County in terms of equity, environment, and economy. Proposed future intercounty and interregional connections to Monterey, Gilroy, and the San Francisco Bay Area and beyond will be considered.

HOW IS THE TCAA DIFFERENT FROM PREVIOUS STUDIES?

The Santa Cruz County Regional Transportation Commission (RTC) completed the Rail Transit Feasibility Study in late 2015 to analyze a range of passenger rail transit service along the Santa Cruz Branch Rail Line (SCBRL), which roughly parallels Highway 1 and the coast along Santa Cruz County. The study was initiated to answer questions regarding how rail transit, in particular, could further transportation goals for Santa Cruz



County, provide travel options that enhance communities, the environment, and support economic vitality. Key findings of the Rail Transit Feasibility Study include:

- Technical analysis and evaluation of seven sample service scenarios
- Ridership estimates ranging from 5,000 to 7,000 daily for Watsonville/Pajaro to Santa Cruz service scenario
- Watsonville/Pajaro to Santa Cruz travel times approximately 43 minutes
- Increased transportation choices, alternative to congestion, and potentially reduced sprawl and preserved farmland

In addition, the Unified Corridor Investment Study (UCS) was initiated in 2017 by RTC and completed in January 2019. RTC developed the UCS to evaluate multimodal transportation improvements in three parallel routes in Santa Cruz County, Highway 1, Soquel Avenue/Soquel Drive/Freedom Boulevard, and the Santa Cruz Branch Rail Line. One of the outcomes of that study was to protect the SCBRL for high-capacity public transit adjacent to a bicycle and pedestrian trail.

WHO IS RESPONSIBLE FOR THE PROJECT?

The Santa Cruz County Regional Transportation Commission (RTC), in partnership with the Santa Cruz Metropolitan Transit District (METRO), is responsible for the TCAA that was initiated in late 2019 as the next phase of planning for a transit corridor along the existing rail right-of-way.

WHAT IS THE PURPOSE OF THE PROJECT?

The TCAA will identify use of all or part of the rail right-of-way, between Pajaro Station in Monterey County and Shaffer Road in westside Santa Cruz, as a dedicated transit facility, adjacent to the Monterey Bay Sanctuary Scenic Trail (MBSST) that is under development. During the analysis, transit alternatives will be compared to define a viable project that will provide the greatest benefit to Santa Cruz County residents, businesses and traveling visitors.

HOW IS THE TCAA PLANNING EFFORT BEING FUNDED?

The TCAA is being funded by multiple sources including the Moving Santa Cruz County Forward Measure D Program and a grant from the Caltrans, Division of Rail & Mass Transit.

HOW WOULD A FUTURE HIGH-CAPACITY TRANSIT SYSTEM BE FUNDED?

As part of the TCAA, RTC and METRO are evaluating a variety of federal, state and local funding sources and strategies to support implementation of the Locally-Preferred Alternative. A full listing of potential funding sources is currently being documented and evaluated for the TCAA. A Business Plan for implementation of the Locally-Preferred Alternative will be developed as part of the TCAA that includes governance options, operating plan, marketing strategy as well as the financial plan.



WHAT LEVEL OF ENVIRONMENTAL DOCUMENTATION IS ANTICIPATED ON THE TCAA?

The TCAA phase will utilize a triple-bottom line performance-based planning process to assess and understand corridor needs and identify a locally-preferred scenario. Environmental review will not take place during this project phase. The TCAA will provide a reasonably narrow project definition of the preferred transit project for future environmental review, based on the work performed in this planning study. RTC will consider environmental review of the preferred alternative after completion of the TCAA.

HOW WILL ALTERNATIVES BE NARROWED DOWN TO A LOCALLY-PREFERRED ALTERNATIVE?

During the TCAA planning process, project goals, screening criteria and performance measures will be established to screen and then evaluate the performance of each potential alternative quantitatively. Potential transit alternatives will consider mode types such as rail, bus and other innovative services. Potential connector services will also be evaluated. The analysis will identify potential infrastructure, vehicle type and right-of-way needs as well as other potential transit features.

Agency partners, local and regional stakeholders and the general public will have the opportunity to provide valuable input on the alternatives and evaluation criteria to aid in narrowing down to a feasible transit solution. The ultimate goal of the TCAA is to identify one locally-preferred transit alternative that meets the needs of the diverse community for which it will serve.

HOW WILL THE ALTERNATIVES BE COMPARED? The alternatives that are screened down to the short list of alternatives will be compared to a future where no transit project is built on the rail line (future no build) as well as to the other alternatives being evaluated. The future no build analysis will be used to assess and compare the potential performance benefits of the future build alternatives.

WHAT ARE THE TRANSIT CORRIDOR BENEFITS?

The TCAA will be evaluating the benefits of the various alternatives, but the key highlights of the alternatives analysis include:

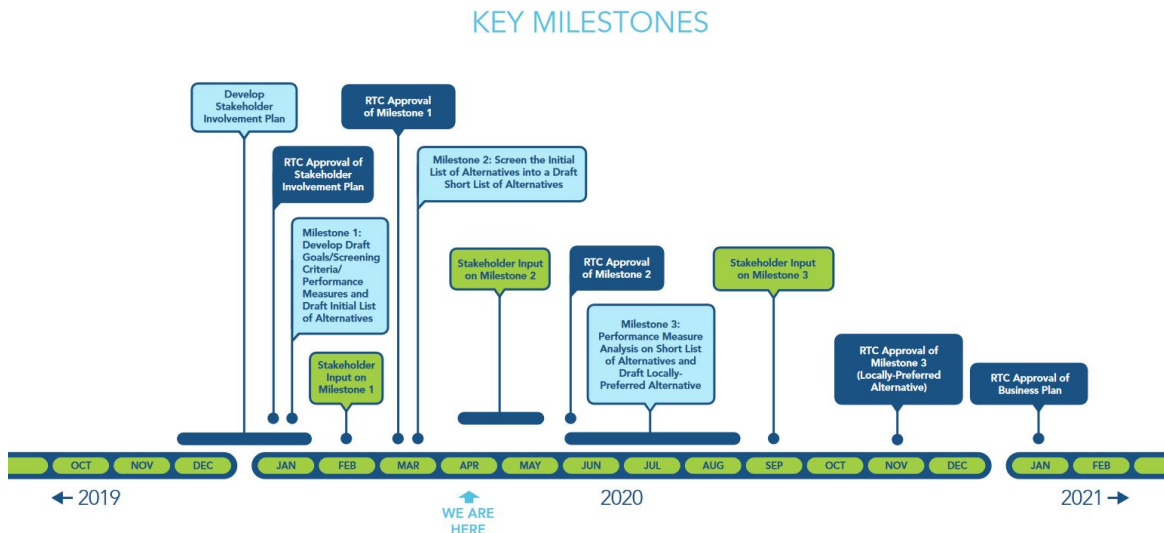
- Rail right-of-way is within one mile of half of the county's population and can provide access to 44 schools and 92 parks
- Involves the community, partner agencies, RTC and METRO in the decision-making process to identify a locally-preferred transit alternative and next steps
- Utilizes a performance-based planning approach with a triple bottom line framework of equity, environment and economy
- Develops a strategic business plan for the selected alternative, including a cash flow analysis of environmental clearance, right-of-way, design, construction, operations and maintenance
- Rail Network Integration Study funded by Caltrans will be performed as part of the Alternatives Analysis to assess how the locally-preferred transit alternative on



the rail right-of-way would connect at Pajaro to the larger statewide rail and transit system.

WHAT IS THE PROJECT SCHEDULE?

The TCAA kicked off in late 2019 with development of a Communications and Stakeholder Involvement Plan that was approved by RTC in mid-January 2020. Over the next year, there will be three key technical milestones where RTC and METRO will proactively seek stakeholder input during the TCAA process.



HOW CAN I STAY INFORMED?

RTC and METRO are committed to engaging with the public and regional stakeholders throughout the TCAA process. The outreach program will include multiple opportunities to share information, listen and address concerns, as well as seek valuable input to help identify a locally-preferred transit alternative to serve and connect our communities.

Stay informed at sccrtc.org/transitcorridora and subscribe for email updates at sccrtc.org/about/esubscriptions. New information will be distributed electronically through the website, social media and email blasts along with in-person distribution at meetings.

For additional project information, contact Ginger Dykaar, RTC Senior Transportation Planner, at transitcorridora@sccrtc.org or (831) 460-3200. Stay connected with RTC on Facebook and Instagram @sccrtc and Twitter @santacruzrtc.

