

Unified Corridor Investment Study Preferred Scenario January 17, 2019

Already challenged by significant congestion along many of its primary travel routes, Santa Cruz County's population is forecast to grow approximately 10% to over 300,000¹ residents by 2035. Responding to transportation challenges within Santa Cruz County is exacerbated by land scarcity and use restrictions that make transportation improvements prohibitively costly in many locations. Recognizing the need to address both mounting existing transportation problems and future needs of Santa Cruz County, the Unified Corridor Investment Study (UCS) has been undertaken to consider transportation options between Santa Cruz and Watsonville along three of the most important north to south transportation routes in the County: Highway 1, Soquel/Freedom and the Rail Right-of-Way (ROW). The forecast year for the study is 2035.

A 2035 Preferred Scenario has been developed based on the results of the UCS and extensive public and stakeholder input. The preferred scenario is designed to promote the development of a sustainable transportation system that is reliable and efficient, to protect the natural environment, and to provide for economic vitality, and to improve access for all users. **Table 1** provides a graphical representation of the Preferred Scenario alongside the Unified Corridor Study Scenarios on which it is based.

The Preferred Scenario establishes a commitment from RTC to respond to a frequently expressed public desire that "people need a range of transportation options" with meaningful auto, transit, bike and pedestrian improvements that are integrated together as part of an overall transportation system. The Preferred Scenario emphasizes regional projects that include highway improvements, bus service enhancements, and public high capacity transit service along with significant bike and pedestrian improvements including a multi-use pedestrian and bicycle facility within the existing rail right-of-way (**Figure 1**).

Approximately 100,000 people per day will benefit directly from improvements to Highway 1, the most heavily traveled roadway in Santa Cruz County. South county residents who commute to north county for employment face congested conditions in the AM northbound peak period on a daily basis, often taking 2 to 3 or more times longer to get to work compared to off peak times. Even more congested, the southbound PM peak period commute home for south county residents from Santa Cruz to Watsonville can often take 3 or more times longer than during off peak times. The Preferred Scenario includes the six sets of auxiliary lanes and ramp metering between San Andreas Rd and Soquel Drive by 2035 to improve safety and traffic flow and will make room between the interchanges for the addition of High Occupancy Vehicle Lanes (also known as carpool lanes) in the future. Three of the six sets of auxiliary lanes are moving forward as directed by voters through Measure D. Following the addition of auxiliary lanes and ramp metering and beyond the 2035 timeframe of the UCS, the High Occupancy Vehicle (HOV) lanes would add a lane for carpools and transit, which requires widening all the interchanges to accommodate the additional lanes. Full implementation of HOV lanes on Highway 1 will require seeking a significant level of funding at a time when state and federal funding for highway capacity increasing projects is extremely limited and therefore will not likely be implemented until after 2035.

The existing and planned auxiliary lanes projects along Highway 1 included in the UCS preferred scenario offer an opportunity for bus on shoulder operations to deliver a faster transit travel time service during peak congested

¹ AMBAG 2018 Regional Growth Forecast

periods. A Feasibility Study was conducted by the Santa Cruz County Metropolitan Transit District (Metro) and partner agencies in Monterey County to provide the opportunities, constraints and a financial analysis for bus on shoulders along Highway 1. Metro and the RTC are working with Caltrans to develop an operating concept and to receive formal Caltrans approval and environmental clearance for the bus on shoulder operations.

The Preferred Scenario includes protection of the rail right-of-way for a high-capacity public transit service and facility. Transit on the rail right-of-way provides an equitable option for both south county and north county residents to avoid traffic congestion in commuting to work.

The UCS studied two potential high-capacity public transit service projects, passenger rail service and bus rapid transit in the rail corridor. Passenger rail service between Santa Cruz and Watsonville with local stops and an interregional connection at Pajaro Station is forecasted to serve approximately 3,500 people per day (approximately 7,000 boardings per day) with capital and operating costs estimated at \$325 million and \$15 million/per year, respectively. Bus Rapid Transit between Watsonville and Santa Cruz on the rail right-of-way with portions of route on parallel roadways including Highway 1 south of State Park Drive is forecasted to serve approximately 2,000 people per day (approximately 4,000 boardings per day) with operating and maintenance costs estimated at \$265 million and \$10.1 million /per year, respectively. Passenger Rail travel time was projected to be 41 minutes for peak hour travel between Santa Cruz and Watsonville, whereas BRT on the rail right-of-way with portions of the route on parallel roadways including Highway 1 south of State Park Drive is projected to have travel times of 63 -minutes for Bus Rapid Transit Express northbound in the am peak period and 53 minutes for Bus Rapid Transit Express southbound in the pm peak period. The ability to deliver an integrated countywide system that meets the needs will require additional funding that is yet to be completely identified. Funding availability for transit capital projects at the state level, particularly rail transit, is on an upward trend due to ability of transit to provide a new transportation option, equitable access for transportation disadvantaged, and ability to reduce greenhouse gas emissions. Implementation of transit service has the potential to leverage opportunities identified in the State Rail Plan as discussed below, if passenger rail options are pursued. Technologies for both rail and bus transit are evolving at a rapid pace, and the preferred alternative will provide flexibility in determining the most appropriate high-capacity public transit service for the rail corridor.

Establishing a connected multimodal system with two new main line transit routes between Watsonville and Santa Cruz via a high-capacity public transit service on the rail line and bus on shoulders on Highway 1 would provide for faster transit service on dedicated facilities separate from motor vehicles. Transit on Soquel/Freedom is envisioned to continue to provide for local service to the many origins and destinations on this route. Where feasible, transit signal priority and bypass lanes at intersections on Soquel/Freedom will be provided. Bus feeder routes will connect the main line transit routes to major origins and destinations in the county as well as other first and last mile solutions such as bike share and the multi-use trail on the rail right-of-way. A more detailed evaluation of the transit route structure which includes local bus transit connections to transit on the rail right-of-way would be undertaken during future studies. The preferred scenario helps protect the rail right-of-way for future potential high-capacity public transit service in part by keeping freight and excursion (non-commuter) passenger service on the rail line.

The trail in the rail right-of-way, along with buffered/protected bike lanes on Soquel/Freedom and bike connections via neighborhood routes, support an integrated walk/bike/transit network. The preferred scenario is consistent with a multi-use bicycle and pedestrian trail as envisioned in the Monterey Bay Sanctuary Scenic Trail

Network Master Plan² to not preclude future rail transit services. The multi-use trail on the rail right-of-way is forecasted to serve approximately 7,000 cyclists and another 3,500 pedestrians daily. In addition to transportation benefits, the trail will provide recreation benefits, and will add to the tourism attractiveness of the area. Bicycle ridership is forecasted to increase on the Soquel/Freedom corridor to as many as 4,500 cyclists per day with implementation of buffered/protected bike lanes. Bicycle access is expanded by bike connections that link neighborhoods to the trail. Bicycle and pedestrian improvements to intersections on Soquel/Freedom will also improve safety and access. Multiuse trails and buffered/protected bicycle lanes are examples of safe, comfortable, transportation infrastructure that promote greater physical activity. The act of walking or biking to school, work, or to other places that are a part of our daily routine improve our health and quality of life.

By promoting a full complement of transportation options, the Preferred Scenario will be best positioned to take advantage of the changing transportation landscape both in terms of new regional and state programs/plans and the rapidly evolving state of transportation technologies. As discussed above, the available funding programs from state and federal agencies are trending away from financing roadway capacity improvements that would likely encourage more people to drive single occupant vehicles and are increasingly favoring projects that provide enhancements to multimodal mobility (such as carpool, transit, bike and walk trips), safety, efficiency, and extending the life of existing facilities. Funding for highway, transit, and bike/walk projects are often available from different sources. By prioritizing a mix of projects and being “shovel ready” with environmental review and project design completed, Santa Cruz County can be in a much more competitive position to be awarded funding. Measure D is a valuable tool for Santa Cruz County to use those locally generated funds to compete more effectively for grants and funding programs, making each dollar generated worth much more. The projects in the preferred scenario are all good candidates for funding based on current trends.

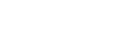
Emerging vehicle technologies will change mobility options in the future and may result in reductions in greenhouse gas emissions, but not necessarily vehicle miles traveled. The technologies will impact all modes of transportation including rail, bus, bicycle, and automobile. Prioritizing regional projects that will benefit from vehicle technology improvements such as Highway 1 and passenger rail service will allow Santa Cruz County to best take advantage of these new technologies. Automated vehicles on a dedicated regional facility can make much more impact than if mixed with other vehicles. The transportation industry is currently in a research mode to develop methodologies to forecast the impacts of emerging vehicle technologies and what they mean for future mobility options. Staying apprised of and anticipating these changes will be critical as projects step forward towards implementation.

² The Monterey Bay Sanctuary Trail Master Plan developed the planning work for the trail and entailed extensive outreach and engagement with stakeholders and community groups. A program-level Environmental Impact Report (EIR) was also prepared. All local jurisdictions through which the trail will traverse have also adopted the Master Plan.

Table 1: All Scenarios Comparison

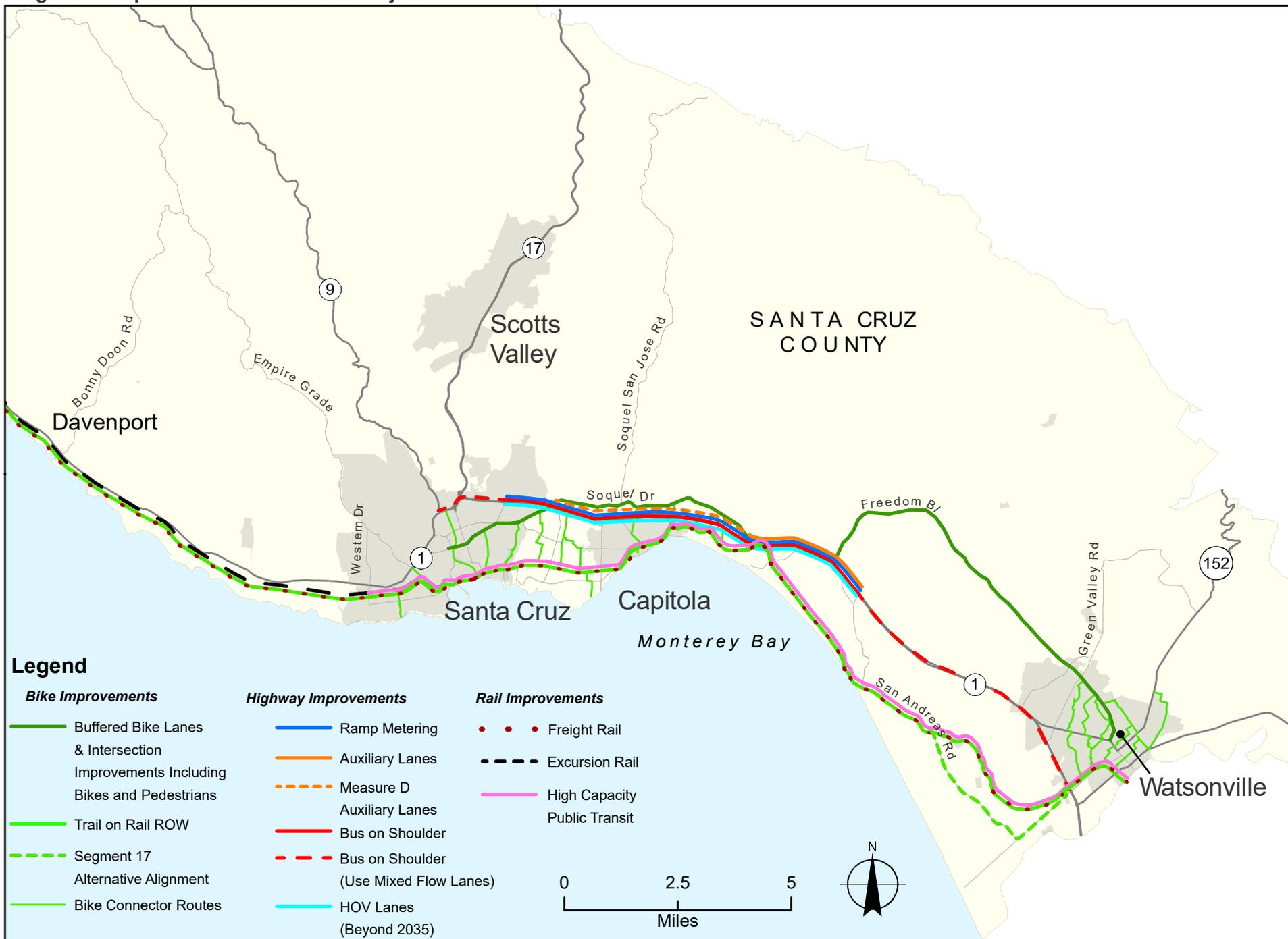
All Scenarios Comparison

Including Preferred Scenario

	2035 Preferred	Beyond 2035	Scenario A	Scenario B	Scenario C	Scenario E
Highway 1 Projects						
Buses on shoulders						
High occupancy vehicle lanes (HOV) and increased transit frequency		 	 			 
Auxiliary lanes to extend merging distance IN ADDITION TO MEASURE D						
Metering of on-ramps						
Additional lanes on bridge over San Lorenzo River						
Mission St intersection improvements						
Soquel Avenue/Drive and Freedom Blvd						
BRT lite (faster boarding, transit signal priority and queue jumps)						
Increased frequency of transit with express services						
Buffered/protected bike lanes						
Intersection improvements for auto						
Intersection improvements for bikes/pedestrians*	 	 	 	 	 	 
Rail Corridor						
Bike and pedestrian trail	 	 	 	 	 	 
High-capacity public transit service	 	 				
Local rail transit with interregional connections						
Bus rapid transit						
Freight service on rail					 <small>Only Watsonville</small>	
Overall Project Area/Connections between Routes						
Improved bike/pedestrian facilities throughout urban area closing gaps in network	These projects are evaluated in all scenarios.					
Additional transit connections						
Bike share, bike amenities, transit amenities, park and ride lots						
Multimodal transportation hubs						
Automated vehicles/connected vehicles						
Transportation Demand and System Management						
Employers and residences - incentive programs	These projects are evaluated in all scenarios.					
Education and enforcement - electric vehicle, motorist safety, and bike safety						

*Intersection improvements will include right turn pockets or bypass lanes for bus service and transit priority, if feasible.

Figure 1: Map of Preferred Scenario Projects



Legend

Bike Improvements

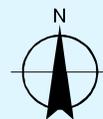
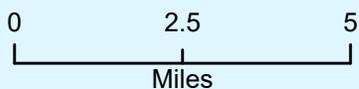
- Buffered Bike Lanes & Intersection Improvements Including Bikes and Pedestrians
- Trail on Rail ROW
- Segment 17 Alternative Alignment
- Bike Connector Routes

Highway Improvements

- Ramp Metering
- Auxiliary Lanes
- Measure D Auxiliary Lanes
- Bus on Shoulder
- Bus on Shoulder (Use Mixed Flow Lanes)
- HOV Lanes (Beyond 2035)

Rail Improvements

- Freight Rail
- Excursion Rail
- High Capacity Public Transit



Protect the Rail Right of Way

Rail corridors often have complex land ownership histories that lead to a delicate balance of conditions that allow the rail line to persist. One example is that portions of the Santa Cruz Branch Rail line are owned by private entities that have granted easement rights for rail services. If and when rail services were discontinued, the easements may revert back to the adjacent landowners by operation of law, or those land owners may have the right to terminate the railroad rights, fracturing the rail corridor and potentially making it impossible or very expensive to restore to a continuous corridor in the future.

Federal legislation was enacted in 1983 (the “National Trails Act”) to allow railbanking, a method by which freight rail lines proposed for abandonment can be preserved for future freight rail use while allowing for interim conversion to trail or other uses. Although railbanking is part of the federal abandonment process administered by the U. S. Surface Transportation Board (STB), if a line is railbanked, under the National Trails Act, the corridor is treated as if it had not been abandoned since rail service could be restored in the future. As a result, the integrity of the corridor can be maintained, and any reversions that could break it up into small pieces are prevented.

Some of the challenges with railbanking include:

- The STB has jurisdiction over freight railroad rate and service issues and rail restructuring transitions including mergers, line sales, line construction, and line abandonments. (The STB also has some limited jurisdiction over interstate passenger rail operations.)
- As part of the abandonment process, the STB provides procedures for petitioners, as well as for those who would like to purchase the line and assume the common carrier freight obligation to provide service over the line, and also procedures that allows for the acquisition of the right of way for railbanking and interim trail use if no one offers to acquire the line for continued freight rail use.
- If the STB allows for railbanking, the decision does not stop adjacent landowners who have provided easements for the rail corridor from suing the United States claiming that the trails represent a new use of their land which entitles them to compensation. The Federal Government has been sued numerous times and courts have ruled in favor of property claims of adjacent landowners depending on the nature and quality of title of the landowners. Neither the RTC nor the railroad operator SPP would be liable for damages to the adjacent landowners.
- The STB has the authority to require the rail line be reactivated for freight rail use at any time even if the line is railbanked and/or actively being used for a trail if there is a need to use the line for freight rail service.
- Some costs associated with converting the trail back to rail use could fall on the agency responsible for the trail depending on the terms of the interim trail use agreement that would be negotiated between the agency and the railroad.
- 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. Railbanking would likely not prevent the State from requesting repayment of the funds.
- The legislation was first enacted in 1983 to allow for railbanking. The RTC is unaware of any paved trails that have been converted back to rail once it has been railbanked.
- To develop a trail under the railbanking concept, the RTC or trail agency would need to look for alternative funding. Such funding may be more difficult to obtain than the funding for a trail

adjacent to the rail line, given the requirement for potential reactivation for rail service. Funding for a trail under the railbanking concept may require repayment if reactivation of the rail line were to occur.

As projects move into the implementation phase, it is critical that the RTC remain mindful of its obligations to maintain the rail right-of-way in accordance with the various land ownership agreements that are in effect to avoid loss of right-of-way that could jeopardize both future rail service and construction of a trail.

Next Steps

In recognition of the timing and availability of funding, project development requirements, and the desire, to the extent possible, to begin immediately addressing the communities’ transportation needs, the Preferred Scenario has been structured into Near Term (through 2027), Mid-Term (through 2035), and Long Term (beyond 2035) timeframes for delivery. **Table 2** provides preliminary detail regarding the timing and sequencing of projects in the Preferred Scenario. As shown, the Preferred Scenario begins advancing regional projects on all three routes immediately, with a focus on delivering sooner those projects that have a lower cost and/or those projects that are further along in their development.

Infrastructure projects similar in nature to the UCS projects have a typical schedule that can vary from 7-10 or more years. The focus should thus be on phasing of the UCS projects due to constructability and funding schedules, and to mitigate the impacts of construction on daily commutes.

Table 2 - Timeframe for Project Completion

	Time frame for Project Completion		
	Near Term (2027)	Mid Term (2035)	Long Term (Beyond 2035)
Highway 1 Projects			
buses on shoulders			
3 sets of auxiliary lanes - Soquel Dr to State Park Dr			
3 additional sets of auxiliary lanes - State Park Dr to San Andreas Rd			
metering of on-ramps			
interchange improvements and high occupancy vehicle lanes (HOV)			
Soquel Avenue/Drive and Freedom Blvd			
buffered/protected bike lanes			
intersection improvements for bikes/peds & transit priority if feasible			
Rail Right-of-Way			
bike and pedestrian trail			
Capitola trestle repair/replacement for rail/bike/walk ¹			
High-capacity public transit service			
freight and excursion train service on rail			

1-Results of a structures evaluation on the Capitola Trestle will be available in 2019. The result of the evaluation will inform the timing for repair/replacement of the Capitola Trestle.

Fulfillment of the Preferred Scenario consistent with Table 2 involves specific project considerations on each route, which include:

Highway 1 Improvements

- Continue to advance development of the three sets of auxiliary lanes between Soquel Avenue/Drive and State Park Drive as authorized by voters through the Measure D Expenditure Plan, which could be completed within the next 6-8 years.
- Utilize Measure D funds as matching funds to compete for and secure state and federal competitive grant funds for construction of these auxiliary lanes. This may enable some of the Measure D funds to be shifted to the additional three sets of auxiliary lane projects from State Park Drive to San Andreas Rd to be implemented by 2035.
- Integrate bus on shoulder with the construction of the auxiliary lanes in Measure D from Soquel Avenue/Drive to State Park Drive and in the longer term will include State Park Drive to San Andreas Road. When the HOV lanes are constructed in the long term beyond the study period, transit services could move to the HOV lanes.
- Increase transit frequency (express service) as part of the bus on shoulders project to provide short term faster transit options between Watsonville and Santa Cruz.
- Prioritize development of the additional 3 sets of auxiliary lanes between State Park Drive and San Andreas Drive once complete funding plans for the first three auxiliary lanes are finalized.
- Preparation for ramp metering such as on-ramp widening will occur where feasible with the delivery of the initial Highway 1 projects. Implement ramp metering when feasible to improve freeway flows and extend period of acceptable flow during the peak hours.
- The HOV lanes project is a long-term project that will require substantial improvements to the interchanges between Soquel Drive and San Andreas Rd and will likely occur beyond the study timeframe sometime after 2035.

Rail ROW

- Protect the Rail corridor for high-capacity public transit use and an adjacent bicycle and pedestrian facility, by maintaining the railway tracks and allowing freight and excursion (non-commuter) passenger service on the railway.
- Continue the development of the trail from along the rail right-of-way as presented in the Monterey Bay Sanctuary Scenic Trail (MBSST) Master Plan and EIR, which could be completed within the next 10 years.³ Prioritize funding and implementation of trail segments that are most competitive for grant programs, which will allow the fastest possible implementation of the trail.
- Continue to consider passenger rail service options on the rail right-of-way consistent with Prop 116⁴ requirements, with consideration of other high-capacity public transit options.
- Collaborate with the Santa Cruz Metropolitan Transit District to develop a proposal to evaluate transit alternatives on the Santa Cruz Branch Rail Line.

³ Final design of segments of this trail next to rail are in progress, construction of segment 7 is scheduled to begin in 2019.

⁴ There have been numerous decisions by the many commissioners at the RTC starting in the early 1990's to purchase the rail right-of-way using voter-approved Proposition 116 funds that were available for passenger rail projects in Santa Cruz County.

- Results of a structures evaluation on the Capitola Trestle will be available in 2019. The result of the evaluation will inform the timing for repair/replacement of the Capitola Trestle. Determine feasibility of designing a structure to replace the Capitola trestle that would accommodate both a trail and rail or other transit options.
- Support development of an integrated transit network, which includes a dedicated transit facility on the rail right-of-way that incorporates the latest technologies.

Soquel/Freedom

- Prioritize the construction of buffered/protected bike lanes along Soquel Drive and Freedom Boulevard. Many segments can be either protected or buffered indicated with striping to accommodate pedestrians and bicycles. Buffer widths will vary along the corridor. In urban settings with multiple driveways, protected bike lanes will be limited.
- Prioritize pedestrian and bicycle improvements to intersections and if feasible, the addition of right turn pockets or bypass lanes for bus service and transit priority.

Goals and Performance Measures

Based on the similarity of many aspects of the Preferred Scenario to other Scenarios evaluated in the UCS, an estimate of the Performance Measures for the Preferred Scenario was developed based on information previously included in the UCS Step 2 Analysis. **Table 3** provides the results of the Performance Measures analysis for the Preferred Scenario if passenger rail service as defined in the UCS is implemented. Using passenger service for quantifying the goals and performance measures is for comparison purposes only and is not a bias against any other potential high-capacity public transit alternative on the rail corridor.

Table 3 - Performance Measures Results for Preferred Scenario if Passenger Rail Service as defined in UCS is Implemented

Goals and Performance Measures	2015 Baseline	2035 Preferred	Beyond 2035
Safety			
Fatal, Injury and Property Damage Only Collisions	1110	865	965
Reliability and Efficiency			
AM Peak Period Countywide Mean Automobile Speed (mph)	40.5	39.4	40.6
AM Peak Hour Hwy 1 Mean Automobile Speed (San Andreas to Branciforte Overcrossing) ¹ (mph)	28.2	21	39
Peak Period AM Mean Transit Travel Time Watsonville to Santa Cruz (minutes)	70	Bus on Shoulders: 40 Rail Transit: 41	HOV Transit: 32 Rail Transit: 41
Peak Period Travel Time Reliability	Less Reliable	More Reliable	Most Reliable
Mode Share (% trip by car)	83.2%	79.4%	79.6%
Person Trips across N-S Screenline (41st Ave) 4-6PM	27,411	33,000	38,912
Economic Vitality			

Level of Public Investment - Capital Cost Estimate/Funding Potential	-	\$948 million/\$455 million	\$1.28 billion/TBD
Level of Public Investment - Annual Operations & Maintenance Cost Estimate/Funding Potential	-	\$35 million/\$26 million	\$40 million/TBD
Visitor Tax Revenue (\$1,000,000)	\$28.6	\$40.1	\$40.1
Other Economic Impacts	-	Moderate	Moderate
Cost Reductions Associated with Collisions (\$/year)	-	-\$77,500,000	-\$55,000,000
Environment and Health			
Automobile VMT (daily)	5,477,870	5,925,500	6,095,639
Environmentally Sensitive Areas (miles of impact)	-	40.6	40.7
Greenhouse Gas Emissions (CO2e metric tons/day) ²	2,617	1,899	1,928
Criteria Pollutants (metric tons/day)	27	6.15	6.23
Equitable Access			
Transit VMT (million miles per year)	3.33	5.03	5.23
Household Transportation Costs	24%	25%	25%
Benefits and Impacts to Transportation Disadvantaged Communities	-	24.4%	23.5%

1-Data from Hwy 1 Final Environmental Impact Report (<https://sccrtc.org/projects/streets-highways/hwy1corridor/environmental-documents/>)

2-Highly dependent on extent of electric vehicle use and other vehicle technology changes

The Preferred Scenario meets the specific goals of the UCS by:

- Increasing **Equity** by increasing transit vehicle miles, serving transportation disadvantaged populations and providing options that could provide some households with the option of decreasing the number of cars owned.
- Promoting **Economic Vitality** by increasing access to businesses and affecting business location decisions through highway improvements and improved bicycle and transit connections and by way of creating new access to businesses through local rail transit and trail investments on the rail right-of-way. Increases opportunities for increasing property values and rents by including projects that attract visitors and enable higher intensity development.
- Providing **Reliable and Efficient** transportation system by implementing improvements on Highway 1 and integrating bus and rail transit services to improve transit travel speeds and time and reliability and provide a range of transportation options.
- Advancing **Safety** by implementing projects that are documented to reduce the opportunities for collisions such as a multi-use trail and ramp metering.
- Further **Environment and Health** goals by offering more transit and safer bike and walk options. Operational improvements on the highway could reduce GHG emissions by reducing stop and go traffic. HOV lane implementation beyond 2035 could increase vehicle miles traveled (VMT) by redirecting traffic onto a faster highway (longer route but shorter time). A substantial increase in zero-emission vehicles on Santa Cruz County roadways by 2035 could negate any increase in

GHG emissions due to an increase in VMT. It is also possible that in the future, as gas taxes become ineffective as a source of transportation funding, a tax imposed on VMT will minimize increases in VMT.

Regional/State Rail Priorities

The 2018 California State Rail Plan identifies the Santa Cruz Branch Rail line as part of the state rail system with direct passenger service connectivity with Monterey. The Transportation Agency for Monterey County has studied passenger rail service along its portion of the corridor as well and has expressed interest in introducing passenger rail service in that county. Expansion of the passenger rail service studied as part of this report into one connected system with Monterey County rail transit would likely provide further increases to system ridership, would provide a broader regional benefit, and would in turn be more competitive for state and federal funding programs. Providing service in both counties under a single operator would reduce operating overhead cost, simplify fare structures and provide even more opportunity for future system expansion to other nearby communities and integration into the larger state rail system.

Continuing to consider Local Rail Transit with Regional Connections along the Santa Cruz Branch Line is an element of the Preferred Scenario. The proposed transit service, extending from Watsonville to approximately Natural Bridges Drive northwest of downtown Santa Cruz, is shown to have independent utility, generating approximately 7,000 passenger trips (3500 people/day) on a typical weekday in the horizon year of the Unified Corridor Study (2035). This service would connect with rail service at its southern terminus at Pajaro Junction, providing interregional transit access to nearby communities served by existing and proposed passenger rail service along the Union Pacific Railroad corridor. Existing service includes Amtrak Coast Starlight intercity passenger. Future service includes commuter rail under development between San Jose and Salinas and intercity rail service along the coast with planned implementation of a Coast Daylight service. Regional connectivity benefits ridership on local rail transit along the Santa Cruz Branch Line, albeit the analysis for this study has attempted to be conservative and not overstate these potential additional benefits in the ridership forecasts.

It is nevertheless relevant to point out that should interregional connections to the Santa Cruz Branch Line be enhanced to the extent other studies have proposed, ridership benefits would be significantly greater than assumed in this study. This is an area for more study.

The recently adopted California State Rail Plan, 2040, for instance, proposes a major expansion of intercity and regional passenger (and freight) rail services throughout California, including Santa Cruz County. The objective of the plan, prepared by Caltrans, is to expand the capacity, efficiency, and effectiveness of the state rail network to better accommodate the mobility needs of California's projected population of 47 million by 2040, reducing reliance on the private automobile and mitigating the congestion and emissions problems that follow from increasing auto vehicle miles of travel. The plan proposes a unified statewide rail network that (1) integrates passenger and freight rail, (2) connects passenger rail service to other modes, and (3) supports "smart" mobility goals established by the state legislature and local communities. While there are approximately 115,000 trips per day currently on intercity and regional rail services in the state, the target is 1.3 million by 2040. The required investment is considerable—an estimated \$40.8 billion for upgrading existing and constructing new services. Not just infrastructure improvements for high speed, intercity and regional rail are envisioned; more

frequent and higher speed services in existing rail corridors are planned. The operating improvements are intended to be delivered in the near term wherever practicable, from 2022 to 2027.

The figure below, excerpted from the State Rail Plan, shows intended improvements in northern California. In the vicinity of the Santa Cruz Branch Rail Line, higher frequencies on intercity and regional rail lines and infrastructure investments to support the increased service, faster train speeds, and intermodal connections are important elements of the plan. Continuous passenger rail service between Santa Cruz and Monterey is anticipated. While finding the funds to fully implement the State Rail Plan will be a challenge, the far-reaching vision is established. The service and speed improvements and enhanced intermodal connections are likely to receive priority, which is promising. Individuals in Santa Cruz County will greatly benefit from this interregional rail connection to the Bay Area, the rest of California and beyond.

