Santa Cruz County Regional Transportation Commission's

BICYCLE ADVISORY COMMITTEE

AGENDA

NOTE SPECIAL MEETING DATE:
Monday, September 18, 2017

6:00 pm to 8:30 pm

RTC Office
1523 Pacific Ave
Santa Cruz, CA 95060

COMMITTEE MEMBERSHIP

Member	Alternate	Representing
Grace Voss	Janneke Strause	District 1
David Casterson, Vice -Chair	Jim Cook	District 2
Peter Scott	Will Menchine	District 3
Kem Akol	Vacant	District 4
Rick Hyman	Vacant	District 5
Vacant	Vacant	City of Capitola
Amelia Conlen, Chair	Vacant	City of Santa Cruz
Vacant	Vacant	City of Scotts Valley
Murray Fontes	Vacant	City of Watsonville
Kira Ticus	Piet Canin	Ecology Action
Leo Jed	Jim Langley	Comm. Traffic Safety Coalition

The majority of the Committee constitutes a quorum for the transaction of business

1. Call to Order

2. Introductions

3. Announcements – RTC staff

4. Oral communications – members and public

The Committee will receive oral communications during this time on items not on today's agenda. Presentations must be within the jurisdiction of the Committee, and may be limited in time at the discretion of the Chair. Committee members will not take action or respond immediately to any Oral Communications presented, but may choose to follow up at a later time, either individually, or on a subsequent Committee agenda.

5. Additions or deletions to consent and regular agendas

CONSENT AGENDA

All items appearing on the consent agenda are considered to be minor or non-controversial and will be acted upon in one motion if no member of the Committee or public wishes an item be removed and discussed on the regular agenda. Members of the Committee may raise questions, seek clarification or add directions to Consent Agenda items without removing the item from the Consent Agenda as long as no other committee member objects to the change.

6. Approve draft minutes of the June 5, 2017 Bicycle Advisory Committee meeting (pages 4–7)

7. Accept Bicycle Advisory Committee roster (page 8)

8. Accept Highlights of September 7th, 2017 RTC, including 2018 Regional Transportation Improvement Program Call for Projects (pages 9-10)

9. Accept summary of Hazard Reports (pages 11-22)

10. Accept letter from the Bicycle Advisory Committee to the City of Santa Cruz in support of the Initial Study/Mitigated Negative Declaration for Segment 7 (Phase I) of the Rail Trail project (page 23)

11. Accept letter from the Bicycle Advisory Committee to the County of Santa Cruz regarding recommendations for hiring considerations for a new Traffic Engineer (page 24)

12. Accept the City of Santa Cruz's Street Smart Campaign Kickoff and Safety Tips (pages 25-29)

13. Approve the City of Santa Cruz's Article 8 FY 17/18 Transportation Development Act allocation claims for $32,000 for Bikeway Striping and Minor Improvements, and $2,000 for Bike Parking (pages 30-35)

14. Approve the City of Scotts Valley Transportation Development Act Claim in the amount of $93,963 for the Mt. Hermon/Scotts Valley Rd/Whispering Pines Intersection Improvement Project (pages 36-45)

REGULAR AGENDA

15. Unified Corridor Investment Study: Step 1 Draft Scenario Analysis Results – Presentation from Ginger Dykaar and Grace Blakeslee, Senior Transportation Planners (pages 46-106)

16. Vision Zero and "The Impact of Traffic Violence on Santa Cruz County" Report – Presentation from County Health Services Agency staff (pages 107-111)

17. Visualization Sustainable Transportation: Progress Report – Anais Schenk, Transportation Planner (pages 112-117)

18. Updates related to Committee functions

19. Adjourn

NEXT MEETING: The next Bicycle Committee meeting is scheduled for October 16, 2017 from 6:00pm to 8:30pm at the RTC office, 1523 Pacific Ave, Santa Cruz, CA.

HOW TO REACH US

Santa Cruz County Regional Transportation Commission
1523 Pacific Avenue, Santa Cruz, CA 95060
phone: (831) 460-3200 / fax (831) 460-3215
email: info@sccrtc.org / website: www.sccrtc.org

AGENDAS ONLINE

To receive email notification when the Bicycle Committee meeting agenda packets are posted on our website, please call (831) 460-3201 or email ccaletti@sccrtc.org to subscribe.

ACCOMMODATIONS FOR PEOPLE WITH DISABILITIES

The Santa Cruz County Regional Transportation Commission does not discriminate on the basis of disability and no person shall, by reason of a disability, be denied the benefits of its services, programs, or activities. This meeting location is an accessible facility. If you wish to attend this meeting and require special assistance in order to participate, please contact RTC staff at 460-3200 (CRS 800/735-2929) at least three working days in advance of this meeting to make arrangements. People with disabilities may request a copy of the agenda in an alternative format. As a courtesy to those person affected, Please attend the meeting smoke and scent-free.

SERVICIOS DE TRADUCCIÓN/TRANSLATION SERVICES

Si gusta estar presente o participar en esta junta de la Comisión Regional de Transporte del condado de Santa Cruz y necesita información o servicios de traducción al español por favor llame por lo menos con tres días laborables de anticipo al (831) 460-3200 para hacer los arreglos necesarios. (Spanish language translation is available on an as needed basis. Please make advance arrangements (at least three days in advance by calling (831) 460-3200.

TILE VI NOTICE

The RTC operates its programs and services without regard to race, color and national origin in accordance with Title VI of the Civil Rights Act. Any person believing to have been aggrieved by the RTC under Title VI may file a complaint with RTC by contacting the RTC at (831) 460-3212 or 1523 Pacific Avenue, Santa Cruz, CA, 95060 or online at www.sccrtc.org. A complaint may also be filed directly with the Federal Transit Administration to the Office of Civil Rights, Attention: Title VI Program Coordinator, East Building, 5th Floor-TCR, 1200 New Jersey Ave., SE, Washington, DC 20590.

S:\Bike\Committee\BC2017\BCJune2017\BCAgenda_June_2017.docx

Santa Cruz County Regional Transportation Commission's

BICYCLE ADVISORY COMMITTEE

Draft Minutes

Special Meeting
Monday, June 5, 2017
6:00 p.m. to 8:30 pm

RTC Office
1523 Pacific Ave
Santa Cruz, CA 95060

1. Call to Order: Chair Conlen called the meeting to order at 6:05 pm.

2. Introductions

Members Present:
Grace Voss, District 1
Peter Scott, District 3
Kem Akol, District 4
Amelia Conlen, City of Santa Cruz, Chair
Murray Fontes, City of Watsonville
Leo Jed, CTSC

Staff:
Cory Caletti, Sr Transportation Planner
Gingery Dykaar, Transportation Planner

Guests:
Stanley Sokolow, self/CFST
Gail McNulty, self/parent/SCCo Greenways
Steve Doindis, self/City of Capitola applicant
Lynn Lauridsen and Theresia Rogerson, County Health Services Agency

Unexcused Absences:
Kira Ticus, Ecology Action/Bike-to-Work
Piet Canin, Ecology Action/Bike to Work (Alt)

Excused Absences:
Janneke Strause, District 1 (Alt)
David Casterson, District 2, Vice-Chair
Jim Cook, District 2 (Alt.)
Will Menchine, District 3 (Alt.)
Rick Hyman, District 5
Jim Langley, CTSC (Alt.)

Vacancies:
District 4 – Alternate
District 5 – Alternate
City of Santa Cruz – Alternate
City of Scotts Valley – Voting and Alternate
City of Capitola – Voting and Alternate
City of Watsonville – Alternate

3. Announcements – Cory Caletti, staff to the Bicycle Advisory Committee, brought to members' attention the fact that the RTC's Rules and Regulations have been updated and Committee chairs are now able to serve two-year terms.

4. Oral communications – Chair Conlen reminded members to read packet materials so they

are able to engage in committee discussions in informed ways. Member Murray Fontes reported that the City of Watsonville was awarded a bronze level Bicycle Friendly Community award from the League of American Bicyclists. He acknowledged the great assistance the City of Watsonville received in filling out the application from staff at the Health Services Agency, Bike Santa Cruz County, United Way and other partners. Member Grace Voss announced that a number of Santa Cruz County residents are participating in a Climate Ride and have fundraised for efforts that support local bicycle advocacy efforts. Guest Bryan Largay, a San Lorenzo Valley resident, encouraged members to participate in the development of the Highway 9 Corridor Plan. Cory Caletti reported that the RTC held a public workshop in Felton recently and over 50 members of the community attended and provided input into needed transportation and safety improvements in the San Lorenzo Valley. She indicated that a survey will be released in the near future that she will forward. Guest Stanley Sokolow announced that he will be presenting at a "Visions on the Corridor" to be held on June 17th in Watsonville where he will discuss the potential for bus rapid transit on the rail corridor.

5. Additions or deletions to consent and regular agendas – A replacement page was provided for Item #16.

CONSENT AGENDA

A motion (Jed/Fontes) was made to approve the consent agenda. The motion passed unanimously with members Voss, Scott, Akol, Conlen, Fontes, and Jed voting in favor. No votes were cast in opposition.

6. Approved draft minutes of the April 10, 2017 Bicycle Advisory Committee meeting

7. Accept letter from the Bicycle Advisory Committee to the City of Santa Cruz Planning Commission regarding improved bicycle access as part of the 2424 Mission Street hotel reconstruction Project

8. Accepted letter from the Bicycle Advisory Committee to the California Natural Resources Agency in support of the City of Santa Cruz' Urban Greening Program grant application

9. Accepted letter from the Bicycle Advisory Committee to the City of Scotts Valley City Council regarding refinements to bicycle-friendly elements included in the Mount Hermon Road/Scotts Valley Drive/Whispering Pines Drive intersection project

10. Accepted notice of Caltrans' adoption of "Toward an Active California"' the final State Bicycle and Pedestrian Plan, and Executive Summary

11. Accepted summary of Hazard Reports

12. Accepted summary of 5-year Measure D allocations for the Active Transportation/MBSST/Rail Trail Category as approved by the RTC at the June 1, 2017 meeting

13. Accepted updated to the Commission's Rules and Regulations as approved by the RTC at the June 1, 2017 meeting and comment from Bicycle Committee member Rick Hyman

REGULAR AGENDA

14. Presentation of Certificates of Appreciation to former Bicycle Advisory Committee members Andy Ward, Daniel Kostelec and Lex Rau – Chair Conlen recognized the three departing members and presented Andy Ward, the only one of the three in attendance, with a framed Certificate of Appreciation for his long-standing service.

15. Overview of Traffic Safety Programs provided by the County of Santa Cruz Health Services Agency – Lynn Lauridsen and Theresia Rogerson, HSA staff, provided an overview of programs operated by HSA and the funding sources that sustain the programs. They thanked the RTC and the Committee for the ongoing TDA funding support.

16. Consideration of scenarios to be evaluated in the Unified Corridor Investment Study – Ginger Dykaar, Transportation Planner, summarized the staff report. Members and guests asked clarifying questions and provided feedback. Members noted that an explanation in the staff report on how the scenarios were developed would have assisted them in their understanding of the scenarios. Schematics depicting the combinations of projects would also have been helpful. Following the discussion, a motion (Jed/Akol) was made to recommend including self-driving cars in all scenarios. The motion failed with members Voss, Scott, Conlen, and Fontes voting against the motion and Akol voting in favor. Another motion was made (Jed/Akol) to recommend eliminating self-driving cars from all scenarios. The motion passed with members Scott, Conlen and Jed voting in favor and Akol and Fontes voting against. Grace Voss abstained. Another motion recommending refinements to Scenarios E and D failed with members Voss, Conlen and Jed voting in favor and Fontes, Akol, and Scott voting against. A final motion (Jed/Akol) to recommend that the dedicated bus lane included in Scenario D be revised to a dedicated lane for bus rapid transit and bikes passed unanimously with members Voss, Scott, Akol, Conlen, Fontes, and Jed voting in favor. No votes were cast in opposition.

17. Yacht Harbor Bicycle Circulation – Kem Akol reported that Claire Fliesler of the City of Santa Cruz presented the City's Active Transportation Plan at the recent Port Commission meeting. With respect to bicycle circulation issues, the Port Commission will engage with the public about possible improvements during development of the Segment 8/9 rail trail project that will extend from the San Lorenzo River walkway at the Boardwalk to 17th Ave. The Port Commission reported no notable problems related to bicycle circulation at this time. Given lack of time, Mr. Akol will bring a recommended action to a future meeting.

18. Updates related to Committee functions - None

19. Adjourned – 8:35 p.m.

NEXT MEETING: The next Bicycle Advisory Committee meeting is scheduled for August 14th, 2017, from 6:00 pm to 8:30 pm at the RTC office, 1523 Pacific Ave, Santa Cruz, CA.

Minutes respectfully prepared and submitted by:

Cory Caletti, Senior Transportation Planner

S:\Bike\Committee\BC2017\BCJune2017\BCMinutes_Draft_June-2017.docx

BICYCLE ADVISORY COMMITTEE ROSTER – SEPTEMBER, 2017

Representing	Member Name/Contact Info	Appointment Dates
District 1 - Voting Soquel, Live Oak, part of Capitola	Grace Voss 462-4884 gracevoss@sbcglobal.net	First Appointed: 2016 Term Expires: 3/19
Alternate	Janneke Strause director@bikesantacruzcounty.org 425-0665	First Appointed: 2017 Term Expires: 3/19
District 2 - Voting Aptos, Corralitos, part of Capitola, Nisene Marks, Freedom, PajDunes	David Casterson, Vice-Chair dbcasterson@gmail.com 588-2068	First Appointed: 2005 Term Expires: 3/18
Alternate	Jim Cook wookiv@comcast.net 345-4162	First Appointed: 12/13 Term Expires: 3/18
District 3 - Voting Big Basin, Davenport, Bonny Doon, City of Santa Cruz	Peter Scott drip@ucsc.edu 423-0796	First Appointed: 2007 Term Expires: 3/19
Alternate	William Menchine (Will) menchine@cruzio.com 426-3528	First Appointed: 4/02 Term Expires: 3/19
District 4 - Voting Watsonville, part of Corralitos	Kem Akol kemakol@msn.com 247-2944	First Appt: '93 (to Dist1) Term Expires: 3/18
Alternate	*Vacant*	*Term Expires: 3/18*
District 5 - Voting SL Valley, Summit, Scotts Valley, part of Santa Cruz	Rick Hyman bikerick@att.net	First Appointed: 1989 Term Expires: 3/19
Alternate	*Vacant*	*Term Expires: 3/19*
City of Capitola - Voting	*Vacant*	*Term Expires: 3/20*
Alternate	*Vacant*	*Term Expires: 3/20*
City of Santa Cruz - Voting	Amelia Conlen conlen.ameliawren@gmail.com	First Appointed: 5/13 Term Expires: 3/18
Alternate	*Vacant*	*Term Expires: 3/18*
City of Scotts Valley - Voting	*Vacant*	*Term Expires: 3/20*
Alternate	*Vacant*	*Term Expires: 3/20*
City of Watsonville - Voting	Murray Fontes murray.fontes@cityofwatsonville.org	First Appointed: 10/16 Term Expires: 3/19
Alternate	*Vacant*	*Term Expires: 3/19*
Bike To Work - *Voting*	Kira Ticus kticus@ecoact.org 426-5925	First Appointed: 2017 Term Expires: 3/19
Alternate	Piet Canin pcanin@ecoact.org 426-5925 ext. 127	First Appointed: 4/02 Term Expires: 3/19
Community Traffic Safety Coalition - Voting	Leo Jed leojed@gmail.com 425-2650	First Appointed: 3/09 Term Expires: 3/18
Alternate	Jim Langley moblie: 713-7702 jim@jimlangley.net 423-7248	First Appointed: 4/02 Term Expires: 3/18

All phone numbers have the (831) area code unless otherwise noted.

S:\Bike\Committee\BC2017\BCSept2017\Sept2017Roster.docx

Santa Cruz County Regional Transportation Commission
1523 Pacific Avenue, Santa Cruz, CA 95060
phone: (831) 460-3200 ~ fax: (831) 460-3215
email: info@sccrtc.org; website: www.sccrtc.org

CONTACTS: George Dondero, Executive Director
Karena Pushnik, Senior Planner/Public Information Coordinator

Santa Cruz County Regional Transportation Commission (RTC)
September 7, 2017 Meeting Highlights

Visualizing Sustainable Transportation
The Regional Transportation Commission received a presentation and update on the Visualizing Sustainable Transportation project. This project is funded by a Caltrans Transit Planning for Sustainable Communities grant. The main goal of this project is to develop tools that effectively communicate complex transportation and land use concepts with the public. The presentation included details of the upcoming use of "Owl" viewers in 4 locations in Santa Cruz County: Natural Bridges Drive at the railroad right-of-way, Soquel Drive & Chanticleer, 17th Avenue at the railroad right-of-way, and in Watsonville on Main Street.

2018 Regional Transportation Improvement Program (RTIP) Call for Projects
The Regional Transportation Commission will be issuing a consolidated 'call for projects' for approximately $22 million that is expected to be available from the region's formula shares of funds from the State Transportation Improvement Program (STIP), Surface Transportation Block Grant Program/Regional Surface Transportation Program Exchange (STBG/RSTPX) and new Senate Bill (SB1) State Transit Assistance (STA) and Local Partnership Program (LPP) funds. Eligible projects include a wide range of transportation projects, including local road, bicycle, pedestrian, highway, transit, paratransit and community transportation services, rail, and transportation demand management projects and programs. Applications are due on October 23, 2017. A public hearing will be held in December to take final actions to program funds.

Highway 1 Corridor Tiered Environmental Document-Status Report
The Regional Transportation Commission received a status report on Highway 1 Corridor Tiered Environmental Document. Signficant progress has been made in updating all technical reports and beginning work on drafting responses to the over 900 public comments received on the draft environmental documents. The project development team will be reviewing all updated information against the project's purpose and need with the goal of recommending a preferred project alternative in the next 2 months. This recommendation and supporting documentation will be then be brought to the RTC for review and recommendation to Caltrans and the Federal Highway Administration, lead agencies for compliance with state and federal environmental laws and requirements. The Draft Final Tiered Environmental Document is subject to a series of reviews to ensure it is defensible and is expected to be approved and published by late 2018/early 2019.

Upcoming RTC and Committee Meetings:

Please check the RTC website [www.sccrtc.org] or call 831-460-3200 to confirm. Agendas are posted to the website at least 3 days before the meeting.

Elderly & Disabled Advisory Committee
Tuesday, September 12, 2017, 1:30 p.m.
RTC Conference Room, 1523 Pacific Ave, Santa Cruz

Traffic Operations Systems Committee/Safe on 17
Wednesday, September 13, 2017 10:00 am
RTC Conference Room, 1523 Pacific Ave, Santa Cruz

Bicycle Advisory Committee
Monday, September 18, 2017, 6:00 p.m.
RTC Conference Room, 1523 Pacific Ave, Santa Cruz

Transportation Policy Workshop (TPW)
Thursday, September 21, 2017, 9:00 am
RTC Conference Room, 1523 Pacific Ave, Santa Cruz

Interagency Technical Advisory Committee
Thursday, September 21, 2017, 1:00 p.m. *(note – this is 30 minutes earlier than the typical start time)*
RTC Conference Room, 1523 Pacific Ave, Santa Cruz

Public input on transportation issues is welcomed and encouraged. For more information, visit the SCCRTC website at www.sccrtc.org or call 460-3200. Some Regional Transportation Commission meetings are televised countywide by Community TV of Santa Cruz. Consult www.communitytv.org or call 831-425-8848 for schedule and station information.

Date	First Name	Last Name	Contact Info	Location	Cross Street	City	Reported Hazards	Additional Comments	ForwardTo	Forwarded Date	Response
09/07/17	Pauline	Seales	paulineseales120@gmail.com	2906 Mission St	Burkett	Santa Cruz	Rough pavement or potholes, Debris on shoulder or bikeway, Bikeway not clearly marked	Section of sidewalk at 2906 Mission St This section is part of bike entry into PCS school .	Amelia Conlen	09/08/17	
09/06/17	Nicole	Lamore	nrglass86@gmail.com	Glenn E. Coolidge Memorial Bridge, Santa Cruz, CA 95062, USA	Murray/Harbor	Santa Cruz	Debris on shoulder or bikeway	Broken bottle in bike lane heading west across the Murray Harbor bridge	Amelia Conlen	09/06/17	Amelia stated on 9/6/2017 Thank you for this report. It has been forwarded to our street sweeping team for action.
08/23/17	David	Stihler	dstihler@gmail.com	1510 Soquel Ave	Paul Sweet Rd	Santa Cruz	Bikeway not clearly marked	The intersection is just in front of the Dominican Hospital and I am traveling on Soquel with a green light about ~14mph. I am traveling in the bike lane on Soquel and head across the intersection staying generally in the bike lane which disappears once the intersection starts. A car passes me on the left at perhaps 20-25mph and pulls directly in front of me in order to get on the onramp.	DPW	08/23/17	DPW on 8/23 stated...I have forward your service request to the maintenance yard

Date	First Name	Last Name	Contact Info	Location	Cross Street	City	Reported Hazards	Additional Comments	ForwardTo	Forwarded Date	Response
08/17/17	Brian	Boyce	brianboyce1@gmail.com	Thurber Ln	Bobwhite & Benson	Santa Cruz	Debris on shoulder or bikeway	Roadway tree debris along the north and southbound bike lanes on Thurber leading up to the school. Also, tree branches hanging too low along northbound side of bike lane and sidewalk from Bobwhite Lane to Benson Ave. We are hoping the street sweeper can clear all the tree debris up along the shoulder all the way up to the base of the hill on Thurber.	Christine Berge, DPW	08/18/17	8/21/2017 Christine Berge stated the service request has been forward to the maintenance yard.
07/31/17	Penelope	Kleinhans	penkle2004@mac.com	5000 Granite Creek Rd, Scotts Valley	North Navarra Drive	Scotts Valley	bikeway not clearly marked.	bike lane line has worn off; cars drive too close to bicycles at this intersection.	Scotts Valley Public Works	08/01/17	none
07/31/17	Penelope	Kleinhans	penkle2004@mac.com	6 Bean Creek Road	Scotts Valley Drive	Scotts Valley	Plant overgrowth or interference, Bikeway not clearly marked	the bike lane line has worn off; cars drive too close to bicycles at this intersection	Scotts Valley Public Works	08/01/17	none
07/28/17	Cindy	Pierce	cindygpierce@gmail.com	approx 220 7th Street	Carmel	Santa Cruz	Construction Billboard and		County of Santa	07/31/17	none

Date	First Name	Last Name	Contact Info	Location	Cross Street	City	Reported Hazards	Additional Comments	ForwardTo	Forwarded Date	Response
07/26/07	Mark	Drobac	markdrobac@gmail.com	Graham Hill Rd	Ocean	Santa Cruz	Plant overgrowth or interference, Debris on shoulder or bikeway, Bikeway not clearly marked	Brush growing from thehillside into the bike lane (nettles, etc.) and a lot of debris has slumped onto the asphalt over the winter. I pick up the trash/cigarette butts/needles along both sides every couple of months and shovel the dirt/sticks/eucalyptus pback onto the hillside but it has gotten away from me this year and wondered if y'all could help? There is @ an extra 20" of bike lane hidden at the lower end. The worst part is just as the road curves to the right and starts uphill at the Ocean Street Extension intersection. It's approximately 200 feet to my street. In a dreamy world there would be a brief island or divider of some kind at the bottom that would keep the Felton bound traffic from cutting into the gutter on the blind corner. It's really dangerous for bicycles and another reason I'm not wild about the shoveling detail. I've watched too many cars enter the gutter and swipe the greenery at 50mph while I was standing there, hidden.	Amelia Conlen	07/26/12	Amelia stated on 08/01/17 Thank you for this report and for your work clearing the roadway! I've checked in with our maintenance crews, and they are not able to clear debris at this time due to the construction happening out there now. I will check in with them in a few weeks to see if work is possible at that time. I will go out to inspect the site this week to look at the condition of the striping. Our crews have offered to install 'Share the Road' signs in this area, and I've asked them to proceed with that.
07/19/17	Anne	Berne	anneberne@gmail.com	Trestle Bridge close to Boardwalk	River St.	Santa Cruz	someone has spent two different days	About twenty feet from board walk side in middle of Trestle bridge	Amelia Conlen	07/20/17	Amelia stated on 7/20/17 that this has been

Date	First Name	Last Name	Contact Info	Location	Cross Street	City	Reported Hazards	Additional Comments	ForwardTo	Forwarded Date	Response
07/17/17	Robert	Murillo	rpm2sbake@aol.com	Charlie Rd. at both ends of the construction	Old Japanese Road	Los Gatos/Scotts Valley	Speedbumps installed during construction present hazard to downhill bicyclists. No reaction time after severe	the very least signage for the bump needs to be moved north up the grade by 100 feet (estimated) and be placed prior to the blind turn to provide reaction time.	County of Santa Cruz	07/18/17	
07/12/17	Eric	Tews	Erik.Tews@plantronics.com	130 W Cliff Dr, Santa Cruz	Bike Lane infront of Howard	Santa Cruz	Bikeway not clearly marked, No crosswalk	): the Bike Lane located infront of Howard Johnson's heading to	Amelia Conlen	07/12/17	Amelia stated 07/31/2017: My apologies for the
07/11/17	0	Porter	kj6sez@gmail.com	10510 CA-9	North of Ben Lomond	Ben Lomond	Drivers are running the red signal light controlling the one lane section of hiway 9	Oncoming Traffic in danger of head-on collision	CalTrans	07/11/17	

Date	First Name	Last Name	Contact Info	Location	Cross Street	City	Reported Hazards	Additional Comments	ForwardTo	Forwarded Date	Response
07/07/17	Mark	Massoud	mmassoud@ucsc.edu	Bay St	High St	Santa Cruz	Rider states there are many potholes and bumps at the base of the UCSC campus at Bay and High Street.	Rider almost fell off bike. Requests, could the road be maintained so that cyclists are safe.	Amelia Conlen	07/07/17	Amelia stated that the City of Santa Cruz maintains the Bay/High intersection and Bay Street, but the County maintains Coolidge Drive going into campus. I'll have our crews check out the City-maintained roadways in this area. And she requested SCCRTC forward this to the county. 07/10/17
07/07/17	Rick	Hyman	bikerick@att.net	900-998 CA-9, Santa Cruz, CA 95060, USA	Tannery Art Center driveway; River St-Hwy 9 and Encinal Street	Santa Cruz	Traffic signal does not turn green when cyclist is positioned over the loop detector.	Reported multiple times after which the sense has been adjusted and then light changes for cyclists and after awhile it no longer functions. A more permanent fix is requested.	CalTrans	07/07/17	

Date	First Name	Last Name	Contact Info	Location	Cross Street	City	Reported Hazards	Additional Comments	ForwardTo	Forwarded Date	Response
07/06/17	Harry	Baker	831-334-3432	River St	Madrone	Santa Cruz	Construction LED Panel is in blocking Bike Lane next to high speed automobile traffic. Sign is obscured by tree branch upon approach		Amelia Conlen	07/06/17	Staff has requested that the construction message board be removed, and it should be down this morning. Virginia called Mr. Baker to let him know of the outcome of his
06/28/17	Cindy	Pierce	cindygpierce@gmail.com	Bay St		Santa Cruz	Rough pavement or potholes	rider states Where Bay crosses Escalona is generally a scary spot. Bikes are hoping cars will curve to the left allowing bikes room to also take the curve. Right at this curve there is a rough spot in the bike lane, so bikers veer left to avoid the big bumps, which sends them into the car lane. The car lane at this bend is extremely wide. My suggestion is to Fix the rough spot, and make the bike lane wider which will give bikers more room for driver error	Amelia Conlen	06/29/17	from Amelia- forwarded it to our Street Maintenance crews to fill potholes in this location, and I'll take a look at the lane widths to see if extending the bike lane is an option 06/29/17

Date	First Name	Last Name	Contact Info	Location	Cross Street	City	Reported Hazards	Additional Comments	ForwardTo	Forwarded Date	Response
06/28/17	Cindy	Pierce	cindygpierce@gmail.com	Bay St	btwn King & Escalona	Santa Cruz	Debris on shoulder or bikeway	rider states dried out thistles are encroaching into the bike lane	Amelia Conlen	06/29/17	from Amelia- Maintaining vegetation is the responsibility of the adjacent property owner – I'll notify them of this issue. 06/29/17
06/28/17	Cindy	Pierce	cindygpierce@gmail.com	Bay St		Santa Cruz	Rough pavement or potholes	rider states the pavement is so rough that most bikes swerve	Amelia Conlen	06/29/17	from Amelia-I've forwarded it to our Street Maintenance
06/27/17	Connie	Wilson	camt@cruzio.com	Market St	btwn Branciforte Creek Bridge & Hwy 1	Santa Cruz	rough pavement or potholes, debris on shoulder	rider states there is alot of fine dirt along the shoulder and covering the white stripe It is dangerous for cyclists as the dirt is a hazard. I have swept below my house but it is a good stretch of road. the second hazard is a small bump along Water Street near Safeway just past Morrisey. it is hard to see and if one comes up to it going with any speed it could be a potential hazard	Amelia Conlen	06/28/17	from Amelia- forwarded to our Street Maintenance team for action 06/28/17

Date	First Name	Last Name	Contact Info	Location	Cross Street	City	Reported Hazards	Additional Comments	ForwardTo	Forwarded Date	Response
06/27/17	Mark	Nockleby	nockleby@nockl ebeast.net	Delaware St	beginning at Surfside street	Santa Cruz	Rider states that there are four blocks of parking lane on Delaware where it is not physically possible for cyclists to use them in those circumstances. There are 8' "bike lanes"		Amelia Conlen	(rider contacted Amelia directly cc'd Cory Caletti)	We are working on a revised striping plan for Delaware to address the bike lane crunch. I'll let you know when its complete and we're ready to restripe.
06/17/17	Mark	Diekhans	markd@kermod ei.com	Morrissey	Soquel	Santa Cruz	Rough pavement or potholes	Rider states intersection of Soquel Blvd and South	Amelia Conlen	06/28/17	from Amelia- forwarded to our Streets
06/22/17	Eliza	James	Elizaljames@gm ail.com	Thurber Ln	btwn Helen and Benson	Santa Cruz County	pavement cracks, plant overgrowth or interference, debris on shoulder or bike way, debris on sidewalk	rider states Broken glass, garbage,weeds, eucalyptus debris and across, poison oak. This Lane and sidewalk ian not adjacent to a residence	General Dept of Co of SC	06/22/17	From Christine - forwarded service request to the maintenance yard - 6/23/17
06/13/17	Sophia	Magnone	sophia.magnon e@gmail.com	17th	Capitola Rd	Santa Cruz County	rough pavement or potholes	rider states There is a very deep and sudden pothole at this spot,	General Dept of Co of SC	06/13/17	
06/12/17	Marty	Demare	marty@got.net	Mission St	Laurel St	Santa Cruz	traffic signal problem	rider states Turn lane sensor on Mission St. for a left onto Laurel northwest bound, does not trigger signal for bike waiting to turn	Amelia Conlen	06/12/17	From Amelia - this report has been forwarded to Caltrans for action - 06/14/17 - Caltrans has indicated that this signal is now working for bikes - 06/20/17

Date	First Name	Last Name	Contact Info	Location	Cross Street	City	Reported Hazards	Additional Comments	ForwardTo	Forwarded Date	Response
06/09/17	Nicole	Lamore	nrglass86@gmail.com	Capitola Rd		Santa Cruz County	debris on shoulder or bikeway, other	rider states there is a huge tree limb hanging in the bike lane on Capitola Road. Making it impossible to use. Bikes must go into car traffic to avoid it. It's in between Maciel Rd and 30th Ave. The sooner this is cleaned up the safer it will be	General Dept of Co of SC	06/12/17	

Date	First Name	Last Name	Contact Info	Location	Cross Street	City	Reported Hazards	Additional Comments	ForwardTo	Forwarded Date	Response
06/05/17	Greg	McPheeters	gmcpheeters@gmail.com	Laurel	Mission	Santa Cruz	traffic signal problem	Rider states Travelling towards downtown on Laurel, at Mission, on a bike, it is very difficult to hit the button for a crossing signal. I see the pickups in the street, but I suspect for kids or slower adults having access to a proper button would be preferred here, especially if it provided a longer signal for crossing. I assume this is Caltrans, not the City, but if the City/County has a way to submit a request to Caltrans to review the bike accommodation at this intersection, I think that would be beneficial to the community. Crosssing Mission is treacherous in most places, this would improve safety and comfort for cyclists here, which are often UCSC Students	Amelia Conlen	06/06/17	From Amelia - this report has been forwarded to Caltrans to see if they can add additional crosswalk buttons on the existing poles, on the side closest to the bike lane - 06/14/17

Date	First Name	Last Name	Contact Info	Location	Cross Street	City	Reported Hazards	Additional Comments	ForwardTo	Forwarded Date	Response
06/05/17	Greg	McPheeters	gmcpheeters@gmail.com	Soquel Ave		Santa Cruz	other	Rider states Soquel Ave, West bound at Front St. There is a bike lane that dead ends into a porkchop. I am not sure how such a configuration ever got approved, but it is definitely dangerous as it forces cyclists to merge into the vehicle lane at the last minute, with no warning for vehicle drivers to expect cyclists to be merging in. The ideal solution would probably involve moving the light pole, but maybe there is a shorter term fix that could be done with paint	Amelia Conlen	06/06/17	From Amelia - intersection is definitely on our radar and we are looking into options for a fix. At this point, it looks like the best option is to end the bike lane at the merge zone where the right turn lane starts, and direct cyclists to share the lane approaching the intersection. We considered a bike box, but that doesn't solve the problem when the light is green - 06/08/17
06/01/17	Dave	Wade	dmwade55@gmail.com	Bean Creek Rd		Scotts Valley	rough pavement or potholes, pavement cracks	Rider states pavement is VERY rough, particularly in northbound direction	Scotts Valley Public Works	06/01/17	
06/01/17	Dave	Wade	dmwade55@gmail.com	Green Hill Rd		Scotts Valley	rough pavement or potholes, pavement cracks	Rider states Cracks are big and bad enough to potentially catch a bike tire and cause a crash	Scotts Valley Public Works	06/01/17	

Date	First Name	Last Name	Contact Info	Location	Cross Street	City	Reported Hazards	Additional Comments	ForwardTo	Forwarded Date	Response
06/01/17	Phil	Boutelle	philboutelle@gmail.com	Bay Dr	btwn Escalona/Iowa/ Nobel	Santa Cruz	plant overgrowth or interference, debris on shoulder or bikeway	Rider states the plant overgrowth is choking off the bike lane, forcing bikes into the lanes of traffic. This is both uphill and downhill, but uphill side is more pronounced (both because of the plant infringement, and because the speed differential between cars and bikes on the uphill side is greater than the downhill). The plants are also now covering the 30 MPH speed limit sign on the uphill side	Amelia Conlen	06/01/17	From Amelia - this report has been forwarded to our Streets Maintenance team for action - 06/01/17
05/30/17	Dimitry	Sturve	dman904@gmail.com	Hwy 1		Santa Cruz County	plant overgrowth or interference	Rider states roadside plants are growing well into the shoulder/bike lane, including a few spots where they are over the fog line and into the vehicle lane	General Dept of Co of SC Carol Salas Jessica Brio	05/31/17	

SANTA CRUZ COUNTY REGIONAL TRANSPORTATION COMMISSION
1523 Pacific Ave., Santa Cruz, CA 95060-3911 • (831) 460-3200 FAX (831) 460-3215 EMAIL info@sccrtc.org

September 5, 2017

Nathan Nguyen
City of Santa Cruz Public Works Department
809 Center Street
Santa Cruz, CA 95060

RE: Comments on Segment 7 of the Rail Trail (Phase I) Initial Study/Mitigated Negative Declaration

Dear Mr. Nguyen:

I am writing on behalf of the Regional Transportation Commission's Bicycle Advisory Committee to offer the committee's support of the Initial Study/Mitigated Negative Declaration (IS/MND) for Segment 7 of the Rail Trail project (Phase I) from Natural Bridges Drive to the intersection of Bay/California Streets. The committee serves to assist in the development and maintenance of a complete, convenient and safe regional bicycle and pedestrian network and urges the City's adoption of the IS/MND. Expeditious implementation of the project will provide a critical car-free facility for bicyclists and pedestrians that will aide our community in achieving sustainable transportation and greenhouse gas emission reduction goals.

The RTC is the lead agency for overall implementation of the rail trail in the County and is the owner of the Santa Cruz Branch Rail Line. The RTC lead a multi-year planning process for the 32-mile rail corridor that resulted in adoption of a Master Plan and certification of a program-level Environmental Impact Report. As you know, the City of Santa Cruz also adopted the RTC's Master Plan as a guideline for implementation of projects within the City and as a show of endorsement and support. The RTC has allocated over $5M to Phase I and II of the Segment 7 project and has been proud to serve as the City of Santa Cruz's partner in the implementation stage.

The committee is pleased with design elements of the Phase I project and the many enhancements that the City included beyond the original project envisioned in the Master Plan. The IS/MND deserves the City's adoption as it is a thorough document which adequately addresses environmental impacts and proposes sound and solid mitigations.

The Committee thanks you for your consideration of this request. Please feel free to contact the RTC's Bicycle Program Manager and staff to the Bicycle Advisory Committee, Cory Caletti at (831) 460-3201 or by email at ccaletti@sccrtc.org, for this and any other committee related matters.

Sincerely,

David Casterson

David Casterson
Bicycle Advisory Committee Vice-Chair

cc: Santa Cruz County Regional Transportation Commission
Santa Cruz County Regional Transportation Commission's Bicycle Committee
City of Santa Cruz Public Works Assistant Director (CS)

SANTA CRUZ COUNTY REGIONAL TRANSPORTATION COMMISSION
1523 Pacific Ave., Santa Cruz, CA 95060-3911 • (831) 460-3200 FAX (831) 460-3215 EMAIL info@sccrtc.org

September 8, 2017

John Presleigh
County of Santa Cruz Public Works Department
701 Ocean Street, Room 410
Santa Cruz, CA 95060

RE: Hiring Considerations for New Traffic Engineer

Dear Mr. Presleigh,

On behalf of the Bicycle Advisory Committee of the Regional Transportation Commission, I am writing with a request regarding the hiring process for your new Traffic Engineer. As you review candidates and make your selection, we ask that you look for someone who has knowledge of the latest developments in bicycle infrastructure design. Ideally, your chosen candidate will have worked to implement these designs in another jurisdiction. Examples include Class IV protected bikeways, bicycle boxes, multi-use paths, and protected intersections.

According to a 2015 poll, 60% of Santa Cruz County residents would be interested in riding bikes more often if they had safe and protected bicycle infrastructure nearby. The benefits of encouraging trips by bike are tremendous; more bicycling can help reduce traffic impacts, improve air quality, and can help residents save money and stay healthy. But fear of traffic deters many people from bicycling, and these fears are not unfounded: our county is consistently ranked among the highest in the state for cyclist injuries and fatalities. The County has a tremendous opportunity to develop infrastructure that encourages bicycling and improves safety, and we ask that you consider these goals as you make your hiring decision.

The Committee thanks you for your consideration of this request. Please feel free to contact the RTC's Bicycle Program Manager and staff to the Bicycle Advisory Committee, Cory Caletti, at (831) 460-3201 or by email at ccaletti@sccrtc.org, for this and any other committee related matters.

Sincerely,

David Casterson

David Casterson
Bicycle Advisory Committee Vice-Chair

cc: Santa Cruz County Regional Transportation Commission
Santa Cruz County Regional Transportation Commission's Bicycle Committee

Street Smarts Kickoff

Street Smarts officially kicks off with a family-friendly celebration on Wednesday, Sept. 13, at Kaiser Permanente Arena, 3-6 p.m. Santa Cruz Warriors mascot Mav'Riks, UCSC's Sammy the Slug and California Highway Patrol's Chipmunk Chipper will lead young and old in activities that underscore safe rules of the road. There will be 15 booths with interactive games, free valet bike parking, bike safety rodeo and one free raffle ticket per person for prizes including Southwest round-trip air tickets, free car service, new bikes, walking shoes, reflective gear, and more.

The AT&T It Can Wait booth will showcase the effects of distracted driving though interactive simulators. Bike Santa Cruz County and Mav'Riks will teach bicycle hand signals. Sammy the Slug will pose for official Street Smarts photos with attendees while Chipmunk Chipper will help both drivers and non-drivers take a distracted driving pledge. Kids will experience the effects of impaired driving through remote control car games from Friday Night Live.

Our Santa Cruz Police Chief Andy Mills and officers offer kids a stationary "ride" on patrol motorcycle plus bike license and crossing guard info. The Community Traffic Safety Coalition/Vision Zero will demonstrate proper child passenger safety equipment and procedures. Ecology Action will host a bike safety obstacle course while Project Bike Trip/Bike Tech offers free bike safety check-ups. Santa Cruz Neighbors will collect input on neighborhood traffic issues and the Impact Teen Drivers booth offers probability wheels, video stories of lives lost and graduated driver's license info.

Our Santa Cruz Public Works Department and Go Santa Cruz campaign will be on hand to discuss latest projects. Performer Matt Meyer will entertain with amazing bike stunts. The Regional Transportation Commission will provide commuter info, bike maps and Coastal Rail Trail updates. AAA and Mothers Against Drunk Driving will provide traffic safety trivia games with prizes and info on their safety programs.

Mayor Cynthia Chase will lead a brief ceremony to recognize the many sponsors, donors and community partners who have joined forces in our City of Santa Cruz Street Smarts mission.

We are grateful to our generous donors who have supplied the many raffle prizes listed below for pedestrians, drivers and bicyclists.

Special thanks to Holiday Inn Express & Suites for donating accommodations for our keynote speaker!

Street Smarts

TRAFFIC SAFETY KICKOFF CELEBRATION SEPT 13

TERRIFIC RAFFLE PRIZES

FOR PEDESTRIANS, DRIVERS & BICYCLISTS!

1st Two Southwest Airlines round-trip tickets to any domestic destination

2nd Momentum Street Commuter Bike donated by Bicycle Trip (unisex, $410 value)

3rd Lloyd's Tire and Auto $400 gift certificate for auto service

4th Sockshop and Shoe Company $130 gift certificate for walking shoes

5th RoyalBaby Kids 18" Bike donated by Target (unisex)

- **6-10** (5) Santa Cruz Nissan $86 gift certificates for auto service
- **11** Cosco convertible infant/toddler car seat donated by AAA
- **12-14** (3) Bike Tune-ups donated by Cycle Works, $50 value
- **15-16** (2) Bike light sets from Target: Schwinn 300 LED Headlight & Bell Arella 100 Tail Light
- **17** Specialized child bike helmet donated by Spokesman Bicycles
- **18-20** (3) Specialized adult bike helmets donated by Spokesman Bicycles
- **21** Specialized youth bike helmet donated by Spokesman Bicycles
- **22** Cat & Jack Kid's Reflective Backpack donated by Target
- **23** Unisex Reflective Vest
- **24** Zefal bicycle mount iPhone holder donated by Cycle Works
- **25-26** (2) 4 passes to NCM Regal Cinema


Many thanks to our generous prize donors:
AAA
Bicycle Trip
Cycle Works
Lloyd's Tire & Auto Care
NCM Regal Cinema
Santa Cruz Nissan
Sockshop & Shoe Company
Southwest Airlines
Spokesman Bicycles
Target
Prize winners will be notified by 5 p.m. Thursday, Sept 14
CITY OF SANTA CRUZ
cityofsantacruz.com/StreetSmarts

Safety Tips

If you want to make Santa Cruz streets safer, the first step is to travel smart. We've put together some basic tips and guidance to help you make better decisions whether you're walking, riding or driving.

Walk This Way

Walking is a great form of exercise and a wonderful way to get around. Be sure to make safety a priority and you'll be able to enjoy the benefits of walking for many years to come.

- Always cross at an intersection and preferably in a marked crosswalk.
- Make eye contact with drivers to be sure you are seen.
- Look in front and behind, as well as both ways when crossing the street.
- Avoid wearing headphones or using your phone when crossing the street.
- Watch for traffic the entire time you are crossing a street.
- Be aware of turning vehicles.
- Do not cross in the middle of the street or between parked cars.
- Avoid walking in traffic where there are no sidewalks or crosswalks.
- If you have to walk on a road without sidewalks, walk facing traffic.
- Never walk behind a vehicle that is backing up.
- Wear bright colors or reflective clothing if walking at night. Consider carrying a flashlight.
- Don't start walking if you see a flashing DON'T WALK SIGNAL.
- Wait for the WALK signal to cross the street safely.
- Always hold your child's hand and never allow a child under 10 to cross the street alone.

Cycle Safely

When you're riding your bike, you get the great benefit of exercise and being outside. Follow these tips to ensure you stay safe on your ride:

- Wear a snug fitting helmet.
- Be sure to be seen by wearing bright colors and reflective clothing.
- Use lights and reflectors at night.
- Ride with traffic.
- Use bike lanes or ride near the right curb.
- Make your turns from the turn lanes.
- Obey traffic signs and signals.
- Use hand signals for turning or stopping.
- Respect the right of way of others.
- Be aware of cars and pedestrians.

Safe Driving Strategies

Smart driving decisions are a critical part of ensuring we have safer streets. And how you drive is a reflection of the respect you have for your community. By making more conscious and conscientious choices when you're behind the wheel, you can do your part for Street Smarts.

- Don't be a distracted driver.
- Do not text or talk on the phone.
- Adjust mirror, seats and other controls before driving off.
- Keep your attention focused on the road, not your passengers.
- Don't eat or drink while driving.
- Be courteous - slow down and allow others to merge.
- Always stop at stop signs.
- Respect the right of way of others, especially cyclists and pedestrians.
- Slow down when you see a yellow light.
- Always use your turn signals and check for bicyclists before turning.
- When you pass a cyclist, allow three feet of space between your car and the bike.
- Check for cyclists before you open your car door.
- Remember, you may encounter pedestrians anytime and anywhere.
- Reduce your speed and always watch for kids and pets in neighborhoods.
- Maintain a consistent speed and keep a buffer zone between your vehicle and other cars.
- Stop for pedestrians crossing the street.
- Don't assume pedestrians see you or that they will act predictably.
- Slow down and watch for children in school zones.

Share the Road Safety with Buses and Trucks

AGENDA: September 18, 2017

TO: Bicycle Advisory Committee

FROM: Cory Caletti, Senior Transportation Planner/Bicycle Program Manager

RE: City of Santa Cruz Article 8 Transportation Development Act Allocation Requests

---

RECOMMENDATION

Staff recommends that the Bicycle Advisory Committee recommends that the Regional Transportation Commission:

1) approve the City of Santa Cruz's Article 8 FY 17/18 Transportation Development Act allocation claims for $32,000 for Bikeway Striping and Minor Improvements, and $2,000 for Bike Parking; and

2) approve the reallocation of $14,449.66 previously apportioned to the San Lorenzo River Trestle Bike Connection to the Bikeway Striping and Minor Improvements fund.

BACKGROUND

Each year the Regional Transportation Commission allocates Article 8 Transportation Development Account (TDA) funds to local jurisdictions for bikeway and pedestrian projects. TDA funds allocated to a local jurisdiction may be rolled over from one fiscal year to the next. TDA claims with bicycle amenities must be reviewed by the Bicycle Advisory Committee and those with pedestrian components must be reviewed by Elderly & Disabled Transportation Advisory Committee prior to approval by the Regional Transportation Commission.

DISCUSSION

The City of Santa Cruz submitted a letter (Attachment 1) request for $32,000 in TDA funds for Bikeway Striping and Minor Improvements. Annual re-striping of the City's 30 miles of bikeways, maintenance and minor improvements in high use areas within the public right-of-way are supported with TDA funds. An additional request for $2,000 will fund annual improvement to bike parking facilities citywide. A TDA claim form (Attachment 2) was submitted, as per RTC requirements, for the two requests.

The City of Santa Cruz also requests reallocating $14,449.66 previously apportioned to the San Lorenzo River Trestle Bike Connection to the Bikeway Striping and Minor Improvements fund.

Staff recommends that the Bicycle Committee recommend that the Regional Transportation Commission approve the City of Santa Cruz's allocation and reapportionment requests. The projects are consistent with the City's Active Transportation Plan and the RTC's Regional Transportation Plan.

SUMMARY

The City of Santa Cruz is requesting a TDA Article 8 allocation for Bikeway Striping and Minor Improvements ($32,000) and for Bike Parking program ($2,000). The City also requests reallocating $14,449.66 previously apportioned to the San Lorenzo River Trestle Bike Connection to the Bikeway Striping and Minor Improvements fund. Staff recommends that the Bicycle Advisory Committee recommends that the Regional Transportation Commission approve the City of Santa Cruz's allocation requests.

Attachments:

1. City of Santa Cruz Article 8 TDA Allocation Request Letter for FY 17/18 and
2. TDA Claim Form for Bikeway Striping and Minor Improvements and the Bike Parking program.

S:\Bike\Committee\BC2017\BCSept2017\CityofSC_TDA_StaffReport_2017.docx

CITY OF SANTA CRUZ

PUBLIC WORKS DEPARTMENT
809 Center Street, Room 201, Santa Cruz, CA 95060 • 831 420-5160 • Fax: 831 420-5161

September 5, 2017

Mr. George Dondero
Santa Cruz County Regional Transportation Commission (RTC)
1523 Pacific Avenue
Santa Cruz, CA 95060

RE: City of Santa Cruz – FY 2017-18 TDA Article 8 Allocation and Reallocation Request

Dear Mr. Dondero:

Please accept this letter as a FY 2017-2018 TDA Article 8 allocation request for the following projects:

1. **Bikeway Striping and Minor Improvements ($32,000):** This project provides for the annual re-striping of the City's 30 miles of bikeways, maintenance of bikeways and minor bikeway improvements. This project is entirely supported with TDA funds.

2. **Bike Parking ($2,000):** This project provides for annual improvements to bike parking citywide. This project is entirely supported with TDA funds.

Additionally, the City requests **a reallocation of $14,449.66 previously apportioned to the SLR Trestle Bridge Connection to the Bikeway Striping and Minor Improvements.** The reallocation is necessary due to a TDA overpayment to the SLR Trestle Bridge Connection project as a result of receiving CDBG funding after the TDA funds reimbursements were claimed and received. Reallocating these funds to the Bikeway Striping and Minor Improvements project will correct the overpayment.

The City's remaining unallocated balance will be used to match grant applications, under-funded projects, and future bikeway striping and parking projects.

As with all City claims, the City will commit to maintain any facilities provided with these funds for 20 years and will prepare all necessary environmental review for these projects. All of the projects above are consistent with the City's Active Transportation Plan and the RTC's Regional Transportation Plan.

Please call me at 420-5422 if you have any questions or need additional information.

Sincerely,

Christophe J. Schneiter
Assistant Public Works Director/City Engineer

Attachments: Claim Forms
cc: Transportation Coordinator (AC)
Finance Department (CF)

P:\Public\Chriss\TDA\TDA Request 17-18. Ltr
File: 770-05.35\

Transportation Development Act (TDA) – Local Transportation Funds
CLAIM FORM
for Bike/Ped Projects

If you have any questions about this claim form or would like an electronic copy of the form, please contact the Santa Cruz County Regional Transportation Commission at 460-3200.

Project Information

1. Project Title: 1. Bikeway Striping and Minor Improvements
   2. Bike Parking

2. Implementing Agency: City of Santa Cruz

3. Sponsoring Agency (if different) – must be a TDA Eligible Claimant:

4. TDA funding requested this claim: 1. $32,000 2. $2,000

5. Fiscal Year (FY) for which funds are claimed: FY 2017/2018

6. General purpose for which the claim is made, identified by the article and section of the Act which authorizes such claims: ☒ **Article 8 Bicycle and/or Pedestrian Facility**

7. Contact Person/Project Manager: Chris Schneiter
   Telephone Number: 831-420-5422 E-mail: cschneiter@cityofsantacruz.com

   Secondary Contact (in event primary not available): James Burr
   Telephone Number: 831-420-5426 E-mail: jburr@cityofsantacruz.com

8. Project/Program Description/Scope (use additional pages, if needed, to provide details such as work elements/tasks): Annual restriping and resigning of the City's 30 plus miles of bikeways and minor bikeway improvements. Installing new or replacing bike parking in the public row.

9. Number of people to be served/anticipated number of users of project/program:
   Current bikeway and roadway users.

10. Project Location/Limits (attach a map and/or photos if available/applicable, include street names):
    Projects are citywide and as needed based on existing conditions and public requests.

11. Justification for the project. (Why is this project needed? Primary goal/purpose of the project; problem to be addressed; project benefits; importance to the community): Traffic safety and to encourage safe bike use. Improve bike access to adjacent property.

12. Consistency and relationship with the 2014 Regional Transportation Plan (RTP) – please reference Project or Policy: 2014 RTO Sustainability Policies pg 4-3.

13. Measures of performance, success or completion to be used to evaluate project/program:
    Traffic safety and public comments.

14. Impact(s) of project on other modes of travel, if any (ex. parking to be removed): NA

15. Project Cost/Budget, including other funding sources, and Schedule:

Capital Projects – OR ATTACH PROJECT BUDGET

Project Start Date: FY2017-18

	Planning	Environ-mental	Design/ Engineering	ROW	Construction	Other *	Contingency	Total
SCHEDULE (Month/Yr) Completion Date __/__					**FY 2017-18**			
Total Cost/Phase					**$32,000 $2,000**			**$32,000 $2,000**
$TDA Requested (this claim)					**$32,000 $2,000**			**$32,000 $2,000**
Prior TDA:					**$30,000**			
Source 3:								
Source 4:								

**Please describe what is included in "Other":*

16. Preferred Method and Schedule for TDA fund distribution, consistent with the RTC Rules and Regulations (a. 90% prior to completion/10% upon completion; or b. 100% after completion): 100% after completion.

17. TDA Eligibility:

	YES?/NO?
A. Has the project/program been approved by the claimant's governing body? Attach resolution to claim. (If "NO," provide the approximate date approval is anticipated.)	**Yes**
B. Has this project previously received TDA funding?	**Yes**
C. For capital projects, have provisions been made by the claimant to maintain the project or facility, or has the claimant arranged for such maintenance by another agency for the next 20 years?	**Yes**
D. Has the project already been reviewed by the RTC Bicycle Committee and/or Elderly/Disabled Transportation Advisory Committee? (If "NO," project will be reviewed prior to RTC approval).	**No**
E. For "bikeways," does the project meet Caltrans minimum safety design criteria pursuant to Chapter 1000 of the California Highway Design Manual? (Available on the internet via: http://www.dot.ca.gov).	**Yes**

Documentation to Include with Your Claim:

All Claims

X A letter of transmittal addressed to the SCCRTC Executive Director that attests to the accuracy of the claim and all its accompanying documentation.

X Resolution from the TDA Eligible Claimant indicating its role and responsibilities.

Previously submitted.

Article 8 Bicycle/Pedestrian Claims

X Evidence of environmental review for capital projects
Projects are exempt.

Local Agency Certification:

I certify that the information provided in this form is accurate and correct. I understand that if the required information has not been provided this form may be returned and the funding allocation may be delayed.

Signature _____ Title: Assistant Director Date: 9/5/17

This TDA Claim Form has been prepared in accordance with the SCCRTC's Rules and Regulations, and Caltrans TDA Guidebook (http://www.dot.ca.gov/hq/MassTrans/State-TDA.html).

\\10.10.10.11\shared\GRANTS\TDA\TDAClaimFormBikePed.doc

Agenda: September 18, 2017

To: Bicycle Advisory Committee

From: Cory Caletti, Bicycle Program Manager/Senior Transportation Planner

Re: City of Scotts Valley Article 8 Transportation Development Act Claim for the Mt. Hermon/Scotts Valley Rd/Whispering Pines Intersection Improvement Project

---

RECOMMENDATION

Staff recommends that the Bicycle Advisory Committee recommend that the Regional Transportation Commission approve the City of Scotts Valley's Transportation Development Act (TDA) claim for the Mt. Hermon/Scotts Valley Rd/Whispering Pines Intersection Improvement Project in the amount of $93,963.

BACKGROUND

Each year the Regional Transportation Commission allocates Article 8 Transportation Development Account (TDA) funds to local jurisdictions for bikeway and pedestrian projects. TDA funds allocated to a local jurisdiction may be rolled over from one fiscal year to the next. TDA claims with bicycle amenities must be reviewed by the Bicycle Advisory Committee and those with pedestrian components must be reviewed by Elderly & Disabled Transportation Advisory Committee prior to approval by the Regional Transportation Commission.

DISCUSSION

The City of Scotts Valley submitted a request for TDA funds for Mt. Hermon/Scotts Valley Rd/Whispering Pines Intersection Improvement Project in the amount of $93,963 (Attachment 1). The City of Scotts Valley's request includes funding for a crosswalk safety improvement project. Responsibility for reviewing and recommending approval for pedestrian projects lies with the Elderly & Disabled Transportation Advisory Committee; therefore, that claim was not included.

The Bicycle Advisory Committee has received numerous presentations on the Mt. Hermon/Scotts Valley Rd/Whispering Pines Intersection Improvement Project. As you may recall, improvements are intended to reduce conflicts between automobiles, bicyclists and pedestrians. The TDA funds will support development of the bicycle and pedestrian facilities portion of this project including:

- Installing bicycle loop detectors and bicycle boxes, restriping bike lanes with green lane treatments;
- Providing new crosswalk striping and installing pedestrian signal faces with countdown indicators and Accessible Pedestrian Signals (APS), which include pedestrian push buttons with audible and vibrating features, on all approaches on Mt. Hermon Road and Scotts Valley Drive and installing Rectangular Rapid Flashing Beacons (RRFB) for the southbound approach to enhance awareness of pedestrians crossing the free flow right turn lane; and,
- Reconstructing the curb return on the southeast corner to square up the intersection, slightly shortening crosswalks, installing larger pedestrian refuge areas within the existing traffic islands, new curb ramps at all four corners and flatter crosswalks to improve accessibility, and providing ADA compliant improvements and realigning and widening crosswalks to improve pedestrian crossing safety.

Staff recommends that the Bicycle Advisory Committee recommend that the Regional Transportation Commission approve the TDA Article 8 Claim for the City of Scotts Valley's Mt. Hermon/Scotts Valley Rd/Whispering Pines Intersection Improvement Project in the amount of $93,963.

SUMMARY

The City of Scotts Valley submitted a TDA Article 8 allocation request for Mt. Hermon/Scotts Valley Rd/Whispering Pines Intersection Improvement Project for improvements in the amount of $93,963 to reduce conflicts between automobiles, bicyclists and pedestrians. The TDA funds will support development of the bicycle and pedestrian facilities portion of this project.

Attachment:

1. Article 8 TDA Allocation Request Letter from the City of Scotts Valley
2. Claim form for the Mt. Hermon/Scotts Valley Rd/Whispering Pines Intersection Improvement

I:\E&DTAC\TDA\LOCAL JURISDICTIONS\2017\SVCITYTDARTC-OCT17.DOCX

CITY OF SCOTTS VALLEY

OFFICE OF PUBLIC WORKS
701 Lundy Lane • Scotts Valley • California • 95066
Phone (831) 438-5854 • Facsimile (831) 439-9748 • www.scottsvalley.org

August 21, 2017

George Dondero
Executive Director
Santa Cruz County Regional Transportation Commission
1523 Pacific Avenue
Santa Cruz, CA 95060

RE: CITY OF SCOTTS VALLEY TDA CLAIM - LETTER OF TRANSMITTAL

Mr. Dondero,

Attached please find the Transportation Development Act (TDA) – Local Transportation Funds Claim Form for the Scotts Valley Crosswalk Safety Improvement Project and the Mt. Hermon Road/Scotts Valley Drive/Whispering Pines Drive Intersection Operations Improvement Project.

Enclosed is the following:

- Crosswalk Safety Improvement Project
  - Claim Form
  - Project Location Map/Images
  - Resolution No. 1907.1
  - Payment Documentation

- Intersection Operations Improvement Project
  - Claim Form
  - Project Location Maps/Plan
  - Resolution No. 1933
  - Bid tabulation (highlighting bicycle and pedestrian components of the project)
  - CEQA Categorical Exemption Determination

I have personally examined the information submitted in this claim and all accompanying documentation. The information is accurate and complete.

If you have any questions or require additional information, please do not hesitate to contact me at (831) 438-5854.

Sincerely,

Scott Hamby
Public Works Director
shamby@scottsvalley.org

Transportation Development Act (TDA) – Local Transportation Funds
CLAIM FORM
for Bike/Ped Projects

If you have any questions about this claim form or would like an electronic copy of the form, please contact the Santa Cruz County Regional Transportation Commission at 460-3200.

Project Information

1. Project Title: **Mt. Hermon Road/Scotts Valley Drive/Whispering Pines Drive Intersection Operations Improvement Project**

2. Implementing Agency: **City of Scotts Valley**

3. Sponsoring Agency (if different) – must be a TDA Eligible Claimant:

4. TDA funding requested this claim: **$93,963**

5. Fiscal Year (FY) for which funds are claimed: **FY 2017/2018**

6. General purpose for which the claim is made, identified by the article and section of the Act which authorizes such claims: ☒ **Article 8 Bicycle and/or Pedestrian Facility**

7. Contact Person/Project Manager: **Scott Hamby**
   Telephone Number: **(831) 438-5854** E-mail: **shamby@scottsvalley.org**

   Secondary Contact (in event primary not available): **Jessica Kahn**
   Telephone Number: **(831) 438-5854** E-mail: **jkahn@scottsvalley.org**

8. Project/Program Description/Scope (use additional pages, if needed, to provide details such as work elements/tasks):

   The project calls for implementing the following improvements to the intersection of Mt. Hermon Road/Scotts Valley Drive/Whispering Pines Drive.

   - **Lengthening the westbound left-turn lane from Mt. Hermon Road to Whispering Pines Drive to provide adequate storage for projected queues.**
   - **Re-striping the northbound approach on Whispering Pines Drive to provide separate left-turn, through and right-turn lanes.**
   - **Modifying the signal to eliminate the split phasing and allow for protected left-turn phasing for the northbound Whispering Pines Drive and southbound Scotts Valley Drive approaches.**
   - **Installing bicycle loop detectors and provide new crosswalk striping on all approaches on Mt. Hermon Road and Scotts Valley Drive.**
   - **Restriping bike lanes with green lane treatments.**
   - **Installing bicycle boxes at all approaches.**
   - **Installing pedestrian signal faces with countdown indicators on all approaches on Mt. Hermon Road and Scotts Valley Drive.**
   - **Install Accessible Pedestrian Signals (APS) which include pedestrian push buttons with audible and vibrating features.**

- **Reconstructing the curb return on the southeast corner to square up the intersection, slightly shorten the crosswalks and provide ADA compliant improvements.**
- **Installing Rectangular Rapid Flashing Beacons (RRFB) for the southbound approach to enhance awareness of pedestrians crossing the free flow right turn lane.**
- **Replacing asphalt concrete pavement to repair rutted stopping zones.**
- **Installing asphalt micro seal, new striping and new pavement markers to increase visibility.**
- **Realigning and widening crosswalks to improve pedestrian crossing safety.**
- **Installing larger pedestrian refuge areas within the existing traffic islands.**
- **Relocating storm drain inlets to outside of the crosswalks.**
- **Installing new curb ramps at all four corners and flatter crosswalks to improve accessibility.**
- **Installing a new signal pole in a better location.**
- **Installing all new traffic signals, wiring and detection loops.**

9. Number of people to be served/anticipated number of users of project/program:
   ADT volumes MHR: 33,000 VPD and SVD: 16,500 VPD. This intersection is a significant route from the Whispering Pines neighborhood to Scotts Valley Middle School and many other parents drop off children to walk from this intersection to the Middle School. All streets on this intersection currently have bike lanes that are moderately traveled.

10. Project Location/Limits (attach a map and/or photos if available/applicable, include street names):
    Intersection of Mt. Hermon Road, Scotts Valley Drive, and Whispering Pines Drive. See map.

11. Justification for the project. (Why is this project needed? Primary goal/purpose of the project; problem to be addressed; project benefits; importance to the community):

    The intersection of Mt. Hermon Road/Scotts Valley Drive is a major intersection in the city of Scotts Valley. It serves the surrounding residential neighborhoods, as well as those from other regions. Motorists use this intersection to access commercial and employment centers, corporate buildings, law enforcement offices, urgent care medical clinics, shopping centers, small businesses and parks. Mt. Hermon Road is a major arterial road providing east-west access from Highway 17 to Highway 9 and San Lorenzo Valley. The Scotts Valley Drive Corridor is an important major arterial roadway in Scotts Valley. It provides the only north-south access between Mt. Hermon Road and north Scotts Valley/Highway 17.

    The project will double the length of the left turn lane from northbound Mt. Hermon Road to eastbound Whispering Pines Drive, modify existing signals, resynchronize intersection timing and improve pedestrian and bicycle safety with improvements to sidewalks, curb ramps, striping and pavement markings. The resulting improvements will provide more efficient use of the transportation system by reducing vehicle stops; especially during peak commute hours. These improvements are considered critical to provide a safe environment for motorists, bicyclists and pedestrians, school children and others in this heavily concentrated area of the city.

12. Consistency and relationship with the 2014 Regional Transportation Plan (RTP) – please reference Project or Policy:
    RTP Project Number: SV-27

13. Measures of performance, success or completion to be used to evaluate project/program:
    Increased LOS, Reduction of conflicts and risk between motorists, pedestrians, and bicyclists.

The project has been designed to meet local, state, and/or federal standards inclusive of for ADA path of travel, Accessible Pedestrian Signals (APS) and Rectangular Rapid Flashing Beacons (RRFB), and use green lane treatments and bicycle boxes.

14. Impact(s) of project on other modes of travel, if any (ex. parking to be removed):
No negative impacts, improved LOS as described above.

15. Project Cost/Budget, including other funding sources, and Schedule:

***Capital Projects* – Attached construction bid sheet highlights bicycle and pedestrian elements**

Project Start Date: September 2017

	Planning	Environ-mental	Design/ Engineering	ROW	Construction	Other *	Contingency	**Total**
SCHEDULE (Month/Yr) Completion Date __/__	**Completed**	**Exempt**	**Completed July 2017**	**N/A**	**September-November 2017**			**November 2017**
Total Cost/Phase			**$208,783**		**999,990**			**$1,208,773**
$TDA Requested (this claim)			**$0**		**$93,963**			**$93,963**
Prior TDA:			**$0**		**$0**			**$0**
Grant:			**$0**		**$346,000**			**$346,000**
Measure D:			**$0**		**$160,615**			**$160,615**
City Funds			**$208,783**		**$393,412**			**$602,195**

**Please describe what is included in "Other":*

16. Preferred Method and Schedule for TDA fund distribution, consistent with the RTC Rules and Regulations (a. 90% prior to completion/10% upon completion; or b. 100% after completion):
a. 90% prior to completion/10% upon completion

17. TDA Eligibility:

	YES?/NO?
A. Has the project/program been approved by the claimant's governing body? Attach resolution to claim. (If "NO," provide the approximate date approval is anticipated.)	**Yes**
B. Has this project previously received TDA funding?	**No**
C. For capital projects, have provisions been made by the claimant to maintain the project or facility, or has the claimant arranged for such maintenance by another agency for the next 20 years?	**Yes**
D. Has the project already been reviewed by the RTC Bicycle Committee and/or Elderly/Disabled Transportation Advisory Committee? (If "NO," project will be reviewed prior to RTC approval).	**Yes**
E. For "bikeways," does the project meet Caltrans minimum safety design criteria pursuant to Chapter 1000 of the California Highway Design Manual? (Available on the internet via: http://www.dot.ca.gov).	**Yes**

<u>Documentation to Include with Your Claim:</u>

All Claims

- ✓ **A letter of transmittal** addressed to the SCCRTC Executive Director that attests to the accuracy of the claim and all its accompanying documentation.
- ✓ **Resolution from the TDA Eligible Claimant** indicating its role and responsibilities.

Article 8 Bicycle/Pedestrian Claims

- ✓ Evidence of environmental review for capital projects

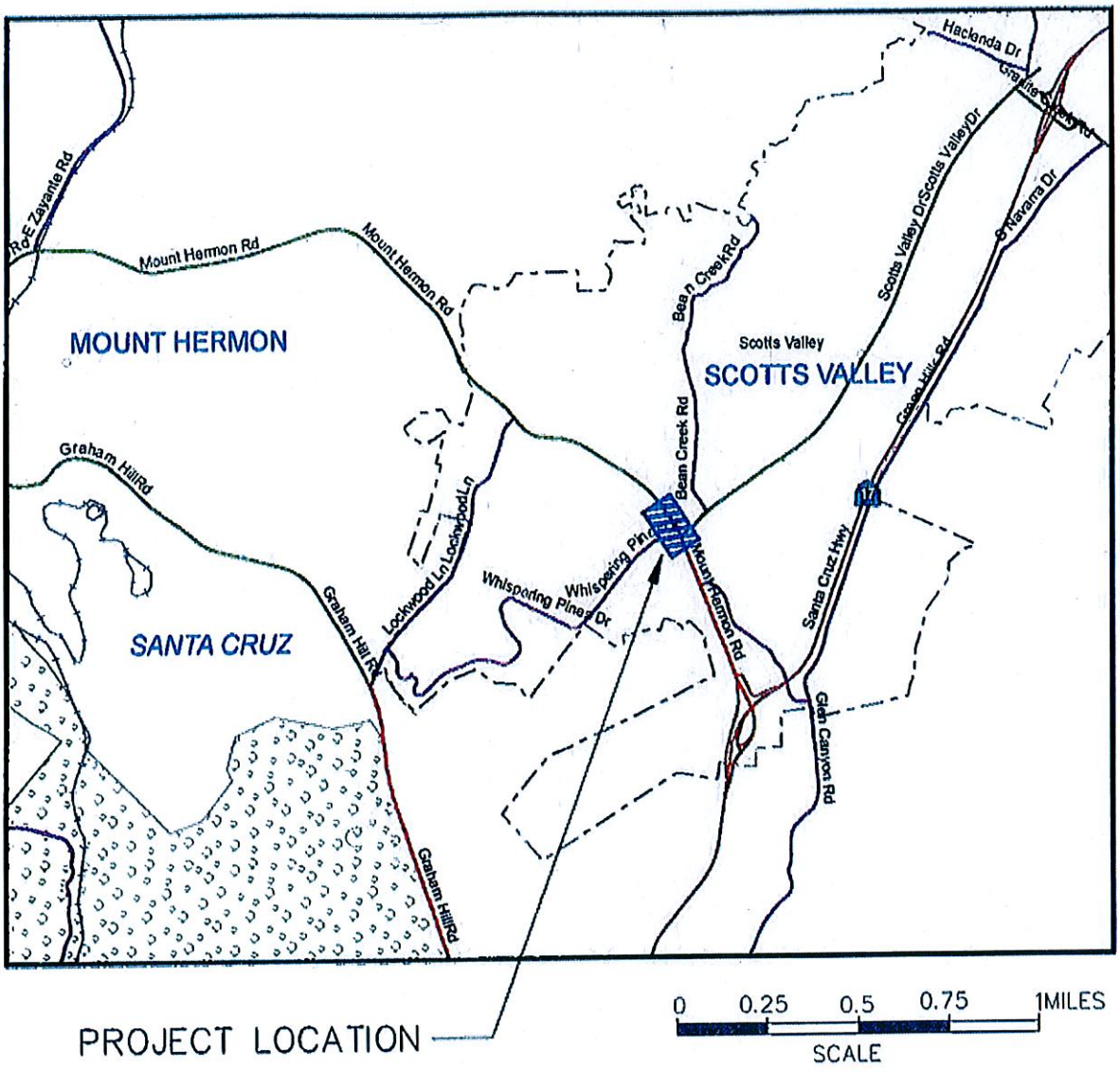
Local Agency Certification:

I certify that the information provided in this form is accurate and correct. I understand that if the required information has not been provided this form may be returned and the funding allocation may be delayed.

Signature _____ Title: **Public Works Director** Date: **August 21, 2017**

This TDA Claim Form has been prepared in accordance with the SCCRTC's Rules and Regulations, and Caltrans TDA Guidebook (http://www.dot.ca.gov/hq/MassTrans/State-TDA.html).

\\10.10.10.11\shared\GRANTS\TDA\TDAClaimFormBikePed.doc



PROJECT LOCATION MAP
ATTACHEMENT 1

PAVEMENT DELINEATION GENERAL NOTES

1. ALL STRIPING AND PAVEMENT MARKINGS SHALL BE INSTALLED IN ACCORDANCE WITH THE CALTRANS STANDARD SPECIFICATIONS AND STANDARD PLANS (2015) AND ALL APPLICABLE ERRATA, AND THE 2014 CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (LATEST REVISION OF THE 2014 CA MUTCD).

2. ALL CONSTRUCTION MATERIALS, PAINT, THERMOPLASTIC STRIPING, AND PAVEMENT MARKERS SHALL BE FURNISHED BY THE CONTRACTOR.

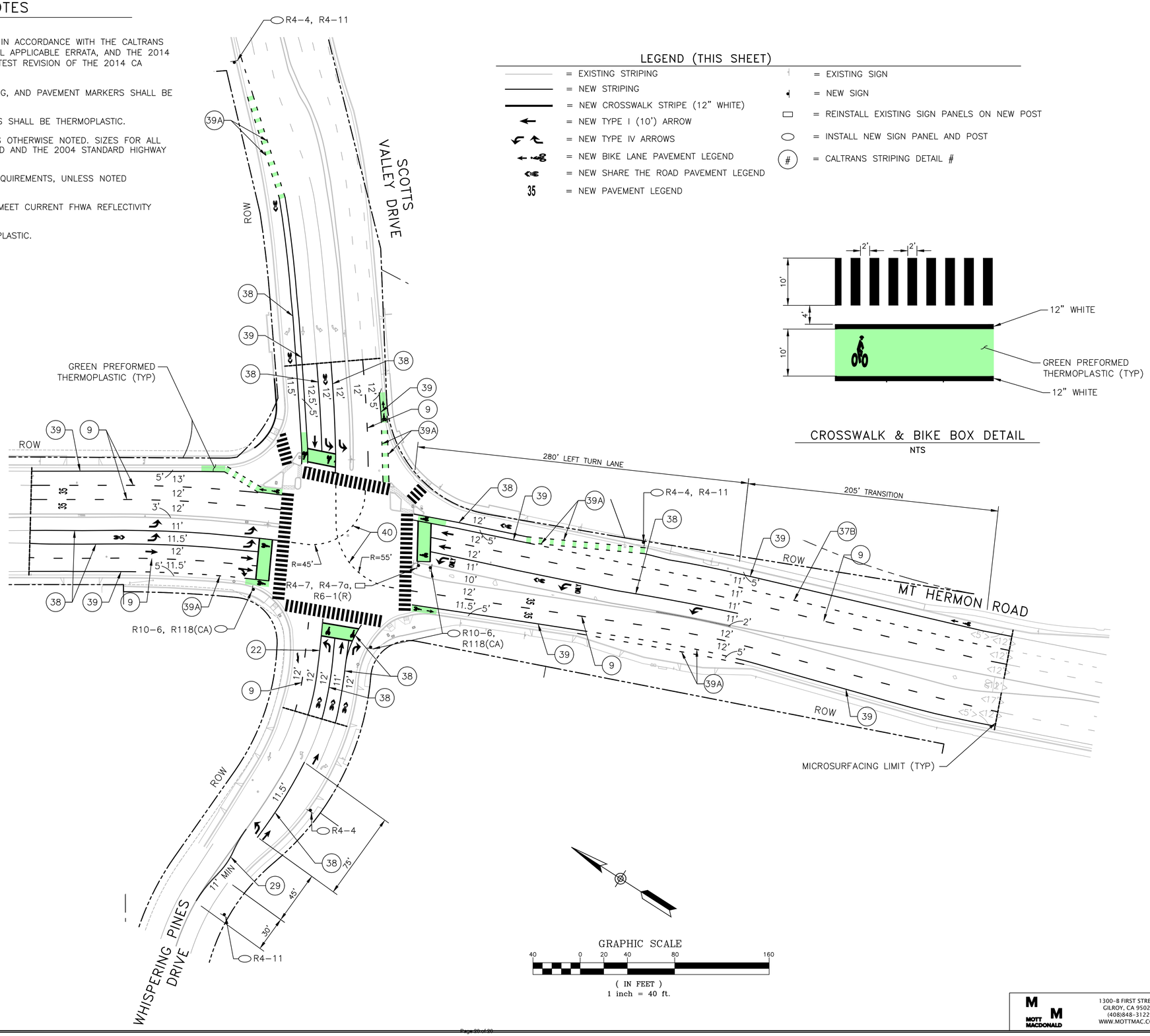
3. ALL NEW STRIPING, PAVEMENT LEGEND AND SYMBOL MARKINGS SHALL BE THERMOPLASTIC.

4. ALL SIGN CALL-OUTS ARE PER THE 2014 CA MUTCD, UNLESS OTHERWISE NOTED. SIZES FOR ALL NEW SIGNS SHALL BE STANDARD SIZES PER THE 2014 CA MUTCD AND THE 2004 STANDARD HIGHWAY SIGNS MANUAL, UNLESS OTHERWISE NOTED ON THE PLANS.

5. ALL NEW SIGNS SHALL BE STANDARD COLORS PER MUTCD REQUIREMENTS, UNLESS NOTED OTHERWISE.

6. ALL SIGNS SHALL BE A MINIMUM HIP STYLE III SHEETING TO MEET CURRENT FHWA REFLECTIVITY REQUIREMENTS.

7. ALL GREEN MARKINGS SHALL BE PREFORMED GREEN THERMOPLASTIC.



LEGEND (THIS SHEET)

- = EXISTING STRIPING
- = NEW STRIPING
- = NEW CROSSWALK STRIPE (12" WHITE)
- = NEW TYPE I (10') ARROW
- = NEW TYPE IV ARROWS
- = NEW BIKE LANE PAVEMENT LEGEND
- = NEW SHARE THE ROAD PAVEMENT LEGEND
- 35 = NEW PAVEMENT LEGEND
- = EXISTING SIGN
- = NEW SIGN
- = REINSTALL EXISTING SIGN PANELS ON NEW POST
- = INSTALL NEW SIGN PANEL AND POST
- (#) = CALTRANS STRIPING DETAIL #

CROSSWALK & BIKE BOX DETAIL

NTS

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)

1 inch = 40 ft.

REV.	DESCRIPTION	BY	DATE
1	BID SET	LT	5/5/2017

Mesiti-Miller Engineering, Inc.
CIVIL AND STRUCTURAL DESIGN
(831) 426-3166 | Santa Cruz | www.mme.com

REGISTERED PROFESSIONAL ENGINEER TODD REUTLED 63950 Exp. 3-30-18 CIVIL STATE OF CALIFORNIA

MT HERMON RD / SCOTTS VALLEY DR INTERSECTION IMPROVEMENTS

PREPARED AT THE REQUEST OF

CITY OF SCOTTS VALLEY
ONE CIVIC CENTER DRIVE
SCOTTS VALLEY, CA 95066

SIGNING AND STRIPING PLAN

DRAWN BY:	ET
CHECKED BY:	LT
JOB NUMBER:	366673

SHEET

PD-2

MOTT MACDONALD
1300-B FIRST STREET
GILROY, CA 95020
(408)848-3122
WWW.MOTTMAC.COM

Drawing: J:\2016\366673 - Mt Hermon Rd-Scotts Valley Dr\14.0 Drawings\14.2 Design\366673 D5.dwg
May 08, 2017, 11:00am

RESOLUTION NO. 1933

RESOLUTION OF THE CITY COUNCIL OF THE CITY OF SCOTTS VALLEY AUTHORIZING THE SUBMITTAL OF TRANSPORTATION DEVELOPMENT ACT ARTICLE 8 PROJECT ALLOCATION CLAIM FORM TO THE SANTA CRUZ COUNTY REGIONAL TRANSPORTATION COMMISSION

WHEREAS, the Santa Cruz County Regional Transportation Commission is the administrating agency of the Transportation Development Act (TDA) Article 8 funds; and,

WHEREAS, the City of Scotts Valley is allocated TDA funds every fiscal year through the Article 8 allocation claim process; and,

WHEREAS, the City of Scotts Valley has capital improvement projects related to bicycle and pedestrian facilities consistent with TDA Article 8.

NOW, THEREFORE, BE IT RESOLVED AND ORDERED that the City of Scotts Valley approves the filing of a TDA Article 8 claim to the Santa Cruz County Regional Transportation Commission for the Mount Hermon Road/Scotts Valley Drive/Whispering Pines Drive Intersection Operations Improvement Project in the amount stated on the attached claim form.

The above and foregoing resolution was duly and regularly adopted by the City Council of the City of Scotts Valley at a regular meeting held on the 16th day of August, 2017 by the following vote:

AYES: AGUILAR, DILLES, JOHNSON, LIND, REED

NOES: NONE

ABSENT: NONE

ABSTAIN: NONE

Approved: _____
Randy Johnson, Mayor

Attest: _____
Tracy A. Ferrara, City Clerk

AGENDA: September 18, 2017

TO: Bicycle Advisory Committee

FROM: Ginger Dykaar and Grace Blakeslee, Senior Transportation Planners

RE: Unified Corridor Investment Study - Step 1 Scenario Analysis Results - DRAFT

RECOMMENDATIONS

Staff recommends that the Bicycle Advisory Committee provide input on the draft Step 1 scenario results (Attachments 1 and 2).

BACKGROUND

The objective of the Unified Corridor Investment Study (UCS) is to identify multimodal transportation investments that provide the greatest benefit and most effective use of Highway 1, Soquel Avenue/Drive and Freedom Blvd, and the Santa Cruz Branch Rail Line. See the project area map in Attachment 3. Goals for the UCS focus on developing a sustainable transportation system which seeks to maximize benefits in terms of the natural environment, economic vitality and health and equity. At the May 4, 2017 meeting, the RTC approved the goals, criteria, performance measures (Attachment 4) and project list (Attachment 5). At the June 15, 2017 meeting the RTC approved the groups of projects or scenarios to be evaluated in the Step 1 analysis (Attachment 5). Input from the public, stakeholders, and RTC advisory committees have been solicited at key milestones of project development.

DISCUSSION

An analysis is in progress to determine how different scenarios or groups of transportation projects implemented by 2035 will advance the goals of the project. A two step scenario analysis is being performed. In Step 1, scenarios are being evaluated based on feasibility using an initial set of criteria which will allow some scenarios to be eliminated early on. Step 2 will be a more detailed evaluation of the remaining scenarios using performance measures and will result in a recommended preferred scenario or group of projects for implementation.

Step 1 Analysis

The scenarios being evaluated in the Step 1 analysis (Attachment 5) were designed to include all modes (auto, transit, bike, and walk) consistent with RTC sustainability policies to advance triple bottom line goals of environment, equity and economy. The scenarios present a range of potential future transportation networks that are well integrated and connect the three parallel routes. Projects

were grouped together to identify where the interaction between projects could produce a combined effect greater than what could be accomplished individually, adding value to each investment. The development of the scenarios considered input from the public, community organizations, stakeholders, RTC Advisory Committees, and the RTC.

The draft Step 1 analysis qualitatively evaluates projects and scenarios based on a set of feasibility criteria. The summary of the Step 1 analysis is in Attachment 1 with information on the methodology for how projects and scenarios were evaluated. The detailed evaluation of each of the projects is in Attachment 2.

RTC staff is requesting input from the Bike Committee on the following:

- Project descriptions
- Completeness of issues discussed for each project and criterion
- Rating per criterion for each project
- Overall rating per project
- Projects to recommend for evaluation in Step 2
- Scenarios to recommend for evaluation in Step 2

RTC staff will be soliciting input from all RTC advisory committees and stakeholders in September, 2017. Two public workshops will be held to solicit public input (see details in timeline below). The public workshops were scheduled for September 20 and 21 in Watsonville and Live Oak but will be rescheduled to a later date. RTC staff will be bringing the draft Step 1 scenario analysis results to the RTC in November, 2017 with a recommendation on scenarios to evaluate in the quantitative Step 2 analysis. **RTC staff recommends that the Bicycle Advisory Committee provide input on the draft Step 1 scenario results (Attachments 1 and 2).**

Timeline

September, 2017: Draft results of Step 1 scenario analysis brought to stakeholders, RTC advisory committees, and public workshops.

September, 2017: Survey released soliciting input on draft Step 1scenario analysis

October 2, 2017: Public Workshop will be held at the Watsonville Public Library, 275 Main Street from 6:00pm to 7:30pm. (Rescheduled from a date in September)

October 3, 2017: Public Workshop will be held at the Live Oak Elementary School, 1916 Capitola Rd in Live Oak from 6:00pm to 7:30pm. (Rescheduled from a date in September)

November 2, 2017: Results of draft Step 1 scenario analysis and recommendations for Step 2 brought to RTC for approval.

Fall 2018: Results of Step 2 scenario analysis and draft preferred scenario brought to stakeholders, RTC advisory committees, public and RTC.

Fall 2018: Develop draft project report.

December 2018: Final Unified Corridor Investment Study report and preferred scenario.

SUMMARY

The Unified Corridor Investment Study is in progress to identify multimodal transportation investments that optimize usage of Highway 1, Soquel Avenue/Drive and Freedom Blvd and the Santa Cruz Branch Rail Line while advancing sustainability goals. Input is being solicited from the public, stakeholders, and RTC advisory committees on the draft Step 1 scenario results. **RTC staff recommends that the Bike Committee provide input on the draft Step 1 scenario results (Attachment 1 and 2).**

Attachments:

1. Summary of Draft Step 1 Scenario Analysis Results
2. Project Evaluations by Criterion
3. Project Area Map
4. Goals, Criteria and Performance Measures
5. Step 1 Scenarios to be Evaluated

S:\UnifiedCorridorsStudy\StaffReports\AdvisoryCommittees\September2017\BikeComm\0-SR_UCS_Step1draft-Bike.docx

Attachment 1

Unified Corridor Investment Study

Step 1 Draft Scenario Analysis

The Unified Corridor Investment Study (UCS) will identify multimodal transportation investments that provide the greatest benefit and most effective use of Highway 1, Soquel Ave/Dr and Freedom Blvd, and the Santa Cruz Branch Rail Line to help meet the transportation needs of current and future generations. In investigating how these three parallel routes can work together most effectively, the UCS will provide an analysis of the transportation options for the rail corridor as required by Measure D.

A scenario analysis is being performed for comparing different groups of projects to assess how well they advance the goals of the project. The scenario analysis for the UCS is a two step analysis where Step 1 will evaluate the projects based on the following set of feasibility criteria.

Goal	Step 1 Criteria
Promote feasible solutions that address transportation challenges.	Community support and coordination/consistency with local, regional, state and federal plans
	Potential to address transportation challenges and advance environmental, economic and equity goals
	Compatibility with regulatory requirements
	Level of public investment
	Right of way and constructability constraints
	Technological feasibility

Table 1. Step 1 Criteria for Project Evaluation

The detailed evaluation of each project, based on these Step 1 criteria, is in Attachment 2. The projects were evaluated using a standard set of indicators that were developed for each criterion as well as a narrative providing an explanation of the opportunities and challenges that affect the feasibility of the project. Each project was given a rating for each criterion based on a five level rating system as shown in Table 2. An overall rating was also given for each project.

Ratings	***Rating Definition***
	Indicates a greater level of potential opportunities within the criteria
	Indicates more potential opportunities than challenges within the criteria
Neutral	Indicates a balance of opportunities and challenges within the criteria
	Indicates more potential challenges than opportunities within the criteria
	Indicates a greater level of potential challenges within the criteria

Table 2. Step 1 Project Rating System

The Step 1 scenario analysis aims to evaluate the feasibility of the various projects and scenarios in order to help direct the discussion on what projects will provide the greatest benefit. The main question that is posed in this step of the analysis is "Will this project help Santa Cruz County address its transportation challenges? For example, will it reduce congestion on Highway 1, will it help to meet the requirements for GHG emission reductions, will it improve safety and provide access for people who do not drive, etc."

If there is benefit from the project, are there other barriers that would make this project infeasible?

- Is there community support for the project?
- How much will it cost the residents of Santa Cruz County to implement this project?
- What are the right-of-way needs and will that delay the project significantly?
- Are there significant environmental impacts that will make the project less feasible?
- Are there regulatory requirements for this project that will be challenging to meet?

The Step 1 evaluation attempts to address these questions in order to determine project feasibility and if projects should be evaluated further in Step 2. A summary of the draft Step 1 results can be found below which provides the list of projects in each scenario along with the project ratings for each criterion. An acronym guide is provided on the last page of the attachment.

Scenario A

	Projects in Scenario A	Community support and coordination/ consistency with plans	Potential to address transportation challenges	Compatibility with regulatory requirements	Level of public investment	Right of way and constructability constraints	Technological feasibility	OVERALL RATING
Hwy 1	HOV lanes	👍	👍	👍	👎	👍	👍👍	👍
	Auxiliary lanes (State Park to Freedom)	👍👍	👍	👍	👍👍	👍	👍👍	👍👍
	Ramp Metering	👍	👍	👍👍	👍	👍	👍👍	👍
	San Lorenzo River Bridge widening	👍	👍	👍👍	👍	👍	👍👍	👍
	Mission St Intersection Improvements	👍👍	👍👍	👍	👍👍	👍	👍👍	👍👍
Soquel/ Freedom	BRT lite	👍	👍👍	👍👍	👍👍	👍	👍👍	👍👍
	Increased transit frequency	👍👍	N	👍👍	👍	👍👍	👍👍	👍
	auto intersection improvements	👍	👍	👍	👍	👍	👍👍	👍👍
Rail Corridor	Bike and pedestrian trail	👍👍	👍	👍👍	👍👍	👍👍	👍👍	👍👍

Scenario A includes major transportation investments for auto and transit on Highway 1, low cost auto and transit improvements on Soquel/Freedom and a bike and pedestrian trail solely on the rail ROW. The Highway 1 projects include construction of high occupancy vehicle lanes (and associated auxiliary lanes and ramp metering) for improvements to travel time, travel time reliability and safety for carpools, transit and single occupant vehicles on Santa Cruz County's primary transportation route. Scenario A includes operational improvements on Soquel/Freedom through implementation of bus priority strategies at intersections, increased transit frequency and intersection improvements for autos. The transit investments on Soquel/Freedom will improve transit travel time, improve access, support lower cost transportation options and benefit people who don't drive. The primary improvement for bicycles and pedestrians included in Scenario A is construction of a bike and pedestrian trail on the rail ROW, which has potential to improve safety and health and promote a shift from driving to bicycling and walking for short trips and in turn, reduce VMT and GHG emissions.

Scenario B

	Projects in Scenario B	Community support and coordination/ consistency with plans	Potential to address transportation challenges	Compatibility with regulatory requirements	Level of public investment	Right of way and constructability constraints	Technological feasibility	OVERALL RATING
Hwy 1	Bus on Shoulders	👍	👍	👍	👍👍	👍	👍👍	👍
	Ramp Metering	👍	👍	👍👍	👍	👍	👍👍	👍
	Mission St Intersection Improvements	👍👍	👍👍	👍	👍👍	👍	👍👍	👍👍
Soquel/ Freedom	BRT lite	👍	👍👍	👍👍	👍👍	👍	👍👍	👍👍
	Increased transit frequency	👍👍	N	👍👍	👍	👍👍	👍👍	👍
	Buffered/protected bike lanes	👍	👍👍	👍👍	👍👍	N	👍👍	👍👍
	Bike/pedestrian intersection improvements	👍	👍👍	👍👍	👍👍	👍	👍👍	👍👍
Rail Corridor	Bike and pedestrian trail	👍👍	👍	👍👍	👍👍	👍👍	👍👍	👍👍
	Rail transit	👍	👍	👍👍	👎	👍	👍👍	👍

Scenario B projects provide an expanded transit network by supporting transit improvements on each of the three routes. Projects include low cost transportation improvements for auto and transit on Highway 1, buffered/protected bike lanes and low cost transit improvements for Soquel/Freedom and significant increases in transit capacity with a major investment in rail transit on the rail ROW, along with a bike and pedestrian trail in the rail ROW. The Highway 1 bus on shoulders and ramp metering projects will provide some operational improvements for autos and transit including travel time and travel time reliability improvements. The feasibility of bus on shoulders is currently being investigated. The Soquel/Freedom projects will provide some improvement to transit travel time and reliability, increase transit frequency, and improve bicycle and pedestrian safety. A bike and pedestrian trail and rail transit on the rail ROW could improve access to jobs, education and services, increase the potential for shifting trips from auto to transit and biking and walking, improve safety, reduce VMT and GHG emissions, support lower cost transportation options and benefit people who don't drive. Rail transit from Watsonville to Santa Cruz also encourages more intensive and compact use of land surrounding stations and the potential for future regional transit connections to Monterey, the Bay Area and beyond. Together, the trail on the rail ROW and buffered bicycle lanes on Soquel provide significant safety improvements for bicyclists that will promote a shift from driving to bicycling and in turn, a reduction in VMT and GHG.

Scenario C

	Projects in Scenario C	Community support and coordination/ consistency with plans	Potential to address transportation challenges	Compatibility with regulatory requirements	Level of public investment	Right of way and constructability constraints	Technological feasibility	OVERALL RATING
Hwy 1	Auxiliary lanes (State Park to Freedom)	👍👍	👍	👍	👍👍	👍	👍👍	👍👍
Soquel/ Freedom	BRT lite	👍	👍👍	👍👍	👍👍	👍	👍👍	👍👍
	Increased transit frequency	👍👍	N	👍👍	👍	👍👍	👍👍	👍
	auto intersection improvements	👍	👍	👍	👍	👍	👍👍	👍
Rail Corridor	Bike and pedestrian trail	👍👍	👍	👍👍	👍👍	👍👍	👍👍	👍👍
	Bus rapid transit	👍	👍	N	N	👍	👍👍	👍

Scenario C offers a scenario with moderate auto improvements on Highway 1, transit and auto improvements on Soquel and major bus transit, bike and pedestrian improvements on the rail ROW. Construction of auxiliary lanes on Highway 1 between State Park Dr. and San Andreas Rd will improve traffic flow and safety for autos on Highway 1. Projects on Soquel/Freedom improve transit operations through implementation of bus priority strategies at intersections, an increase in transit frequency and improvements to intersections for autos. Bus rapid transit on the rail ROW is a major cost investment that significantly increases transit capacity. Bus rapid transit and a bike and pedestrian trail on the rail ROW could improve access to jobs, education and services, increase the potential for shifting trips from auto to transit and biking and walking, improve safety, reduce VMT and GHG emissions, support lower cost transportation options and benefit people who don't drive. Implementing bus rapid transit utilizing only the rail ROW north of Aptos and south of Natural Bridges Dr in the City of Santa Cruz would allow for trail and transit services between Aptos and Westside of Santa Cruz with only a bike and pedestrian trail south of Aptos and north of the City of Santa Cruz up to Davenport.

Scenario D

	Projects in Scenario D	Community support and coordination/ consistency with plans	Potential to address transportation challenges	Compatibility with regulatory requirements	Level of public investment	Right of way and constructability constraints	Technological feasibility	OVERALL RATING
Hwy 1	Rail Transit on Hwy 1	👎👎	N	N	👎👎	👎	👍👍	👎
	Automated Vehicles	👍	👍	👍	👍	👍	👍	👍
Soquel/ Freedom	Dedicated lane for BRT and bike	👎	N	👍👍	👍👍	👍	👍👍	N
Rail Corridor	Bike and pedestrian trail	👍👍	👍	👍👍	👍👍	👍👍	👍👍	👍👍

Scenario D significantly increases transit capacity in the corridor by implementing rail transit on the highway and replacing a general purpose lane on Soquel/Freedom with dedicated lanes for bus rapid transit shared with biking. The rail ROW is used solely for a bike and pedestrian trail. The rail transit investment along the highway would require a major cost investment with limited benefits and significant environmental impacts. The percentage of automated vehicles on the highway by 2035 would not create a significant increase in capacity or improvements to auto travel time although safety improvements will be likely. A dedicated lane for bus rapid transit and biking that would occupy a general purpose lane will likely have substantial traffic impacts with negative effects on auto travel time but would improve transit travel time and reliability significantly. A bicycle and pedestrian trail on the rail ROW has potential to improve safety and health and promote a shift from driving to bicycling and walking for short trips and in turn, reduce VMT and GHG emissions. Together, the trail on the rail ROW and the dedicated lanes for bus and bike on Soquel/Freedom provide significant safety improvements for bicyclists that will promote a shift from driving to bicycling and in turn, a reduction in VMT and GHG.

Scenario E

	Projects in Scenario E	Community support and coordination/ consistency with plans	Potential to address transportation challenges	Compatibility with regulatory requirements	Level of public investment	Right of way and constructability constraints	Technological feasibility	OVERALL RATING
Hwy 1	HOV lanes	👍	👍	👍	👎	👍	👍👍	👍
	Auxiliary lanes (State Park to Freedom)	👍👍	👍	👍	👍👍	👍	👍👍	👍👍
	Ramp Metering	👍	👍	👍👍	👍	👍	👍👍	👍
Soquel/ Freedom	Buffered/protected bike lanes	👍	👍👍	👍👍	👍👍	N	👍👍	👍👍
	Bike/pedestrian intersection improvements	👍	👍👍	👍👍	👍👍	👍	👍👍	👍👍
Rail Corridor	Bike and pedestrian trail	👍👍	👍	👍👍	👍👍	👍👍	👍👍	👍👍
	Rail transit	👍	👍	👍👍	👎	👍	👍👍	👍
	Freight Service	👍	👍	👍👍	👍	👍👍	👍👍	👍

Scenario E includes major transportation investments for auto and transit on Highway 1, buffered/protected bike lanes for Soquel/Freedom and significantly increases transit capacity with a major investment in rail transit, along with freight service and bike and pedestrian trail in the rail ROW. The construction of high occupancy vehicle lanes (and associated auxiliary lanes and ramp metering) is expected to provide improvements to travel time, travel time reliability and safety for carpools, transit and single occupant vehicles. Soquel/Freedom projects prioritize bicycle and pedestrian facilities for safety benefits through buffered/protected bicycle lanes. Trail and rail transit on the rail ROW could improve access to jobs, education and services, increase the potential for shifting trips from auto to transit and biking and walking, improve safety, reduce VMT and GHG emissions, support lower cost transportation options and benefit people who don't drive. Rail transit from Watsonville to Santa Cruz also encourages more intensive and compact use of land surrounding stations and the potential for future regional transit connections to Monterey, the Bay Area and beyond. Freight service on the rail line would provide an alternative option with less congestion for goods movement in Santa Cruz County and improve safety by reducing the number of trucks on Highway 1. Together, the trail on the rail ROW and buffered bicycle lanes on Soquel provide significant safety improvements for bicyclists that will promote a shift from driving to bicycling and in turn, a reduction in VMT and GHG.

Scenario F

	Projects in Scenario F	Community support and coordination/ consistency with plans	Potential to address transportation challenges	Compatibility with regulatory requirements	Level of public investment	Right of way and constructability constraints	Technological feasibility	OVERALL RATING
Hwy 1	Bus on shoulders	👍	👍	👍	👍👍	👍	👍👍	👍
	Ramp Metering	👍	👍	👍👍	👍	👍	👍👍	👍
Soquel/ Freedom	Dedicated lane for BRT and bike	👎	N	👍👍	👍👍	👍	👍👍	N
	Bike/pedestrian intersection improvements	👍	👍👍	👍👍	👍👍	👍	👍👍	👍👍
Rail Corridor	Bike and pedestrian trail	👍👍	👍	👍👍	👍👍	👍👍	👍👍	👍👍
	Rail transit	👍	👍	👍👍	👎	👍	👍👍	👍

Scenario F significantly increases transit capacity through the corridor by implementing bus on shoulders on the highway, converting a general purpose lane on Soquel/Freedom to dedicated lanes for bus rapid transit shared with biking, and with a major investment in rail transit and bike and pedestrian trail in the rail ROW. The Highway 1 bus on shoulders and ramp metering projects will provide some operational improvements for autos and transit including travel time and travel time reliability improvements. The feasibility of bus on shoulders is currently being investigated. A dedicated lane for bus rapid transit and biking on Soquel/Freedom that would occupy a general purpose lane will likely have substantial traffic impacts with negative effects on auto travel time but would improve transit travel time and reliability significantly. Trail and rail transit on the rail ROW could improve access to jobs, schools and services and supports lower cost transportation options and benefit people who don't drive. Rail transit from Watsonville to Santa Cruz also encourages more intensive and compact use of land surrounding stations and the potential for future regional transit connections to Monterey, the Bay Area and beyond. Together, the trail on the rail ROW and the dedicated lanes for bus and bike on Soquel/Freedom provide significant safety improvements for bicyclists that will promote a shift from driving to bicycling and in turn, a reduction in VMT and GHG.

Route	**Highway 1**
Project Title	Bus On Shoulder (BOS)
Project Description	A Bus on Shoulders Feasibility Study is currently underway to investigate the possibility of express bus service utilizing the shoulders on Highway 1 between Santa Cruz Metro Center and Watsonville Transit Center. Options being considered include use of either inside or outside shoulders and potential use of the existing/future (funded by Measure D) auxiliary lanes between Morrissey Blvd and State Park Dr (approximately 6 miles). The Bus on Shoulders Feasibility Study is scheduled to be finalized in spring 2018. Frequency of transit service on Highway 1 would remain the same as existing service but would utilize the shoulders/auxiliary lanes and therefore would require minor or no change in operating costs.
Overall Rating	
Summary	BOS is a potentially low cost option that could improve transit travel time and reliability. Decreases in travel time could increase transit ridership, reducing VMT and therefore greenhouse gas emissions. The available right-of-way along shoulders is being investigated in the BOS Feasibility Study.

Step 1 Criteria		Rating	**Evaluation**	**Narrative**
Community Support and Consistency with Applicable Plans	**Positives/ Neutral**		✓ Project specific planning effort (BOS Feasibility Study) ✓ Consistent with long range planning effort with public input (approved draft 2040 RTP project list)	▫ Monterey Salinas Transit/Metro/Caltrans District 5/CHP are working in cooperation on a feasibility study for bus on shoulders. The feasibility study is scheduled to be finalized in spring 2018. ▫ The approved draft project list for the 2040 Regional Transportation Plan (RTP) includes the bus on shoulders project. Partner agency, public and stakeholder input are solicited at key milestones of the RTP development.
	Negatives			
Addresses Transportation Challenges & Environmental, Economic, and Equity Goals	**Positives/ Neutral**		Economic ✓ Improves transit travel time ✓ Improves transit travel time reliability ✓ Improves access to jobs, education and services Environmental ✓ Mode shift to transit ✓ Reduces VMT and GHG Equity ✓ Improves access for people who do not drive ✓ Reduces household transportation costs	▫ Bus on shoulders has the potential to improve transit travel times and travel time reliability between Watsonville and Santa Cruz Metro Center providing improved access to jobs, education centers and services. ▫ Transit in the auxiliary lanes (with minimal time on shoulders) may still provide operational improvements but not as significant as transit travel on a dedicated shoulder. ▫ Faster and more reliable transit service could encourage people to shift from driving to transit, reducing VMT and GHG emissions. Transit improvements support lower cost transportation options which can reduce household transportation costs and benefit people who do not drive including youth, seniors, people with disabilities, low income, and minorities.
	Negatives		Economic × Increases auto travel time (on ramps) Environmental	▫ Highway shoulders have typically been used for emergency and traffic law enforcement. As required by legislation (AB 1746) emergency and traffic law enforcement use is still the priority for highway shoulders. ▫ Highway 1 ramp metering to benefit transit may have a negative effect on auto travel time as transit would be given priority over autos.

Step 1 Criteria		Rating	Evaluation	Narrative
			× Environmentally sensitive areas may be impacted × Traffic impacts (at highway ramps due to bus priority) Equity × Potential Safety conflicts (with emergency response vehicles, law enforcement and disabled vehicles)	
Compatible with Regulatory Requirements	**Positives/ Neutral**		✓Consistent with legislation (AB 1746, SB 375, SB 32) ✓Consistent with design standards (Caltrans) ✓Approvals required (Caltrans and CHP)	▫ AB 1746 provides the authority for Metro to use highway shoulders for bus-only traffic during congested periods with approval from Caltrans and CHP. ▫ Greenhouse gas reduction legislation (SB 375, SB 32) requires reductions in GHG from transportation in order to slow climate change.
	Negatives			
Level of Public Investment	**Positives/ Neutral**		✓ Minor new investment for capital costs may be required ✓ Minor new investment for operations required ✓ Existing funding sources could cover cost of operations ✓ Some funding sources (federal, state or local) may be available for capital costs	▫ Once the auxiliary lane projects between State Park Dr and Soquel that have been funded by Measure D have been constructed, the cost for BOS on the auxiliary lanes will be minimal. Minor amounts of paving may be required near the interchanges where bus will travel on shoulders. ▫ Frequency of transit service on Highway 1 would remain the same as existing service but would utilize the shoulders/auxiliary lanes, and therefore would require minor or no change in operating costs. Some new investment in buses and operations would be needed if transit service is expanded as a result of this project.
	Negatives			
Right-of-Way and Constructability Constraints	**Positives/ Neutral**		✓Minor amounts of right-of-way may need to be acquired	▫ Bus on shoulder transit services are expected to be accommodated primarily within existing Highway 1 right-of-way. Some additional right-of-way may need to be acquired for widening at ramps and widening of over and under-crossings.
	Negatives		× Construction challenges may require significant additional funds or alternative designs	▫ Limited shoulder width at a number of over-crossings and under-crossings along Highway 1 may make project infeasible in the near term due to cost required to widen these structures. Any widening necessary for BOS would be consistent with the Highway 1 Corridor Investment Program DEIR. The BOS Feasibility Study is scheduled to be final in spring 2018 which will provide information on feasibility and cost.
Technological Feasibility	**Positives/ Neutral**		✓Technologically feasible ✓Could accommodate future technologies	▫ BOS and any associated widening requirements are all technologically feasible. New technologies could be implemented to improve bus flow through ramp meters. Design could allow for implementation of self-driving buses in future.
	Negatives			

Route	**Highway 1**
Project Title	Additional lanes for high occupancy vehicles (HOV) and increased transit frequency
Project Description	The project would construct HOV lanes for a nine mile section between San Andreas Rd and Morrissey Blvd in both the north and southbound directions. Project includes construction of new HOV lanes, auxiliary lanes (in addition to those included in Measure D) and reconstruction of the interchanges and ramps, and over and under-crossings along this nine mile section. Interchange improvements include enhanced bicycle and pedestrian treatments. Express transit service in the HOV lanes is also considered here with 15 minute headways between Watsonville and Santa Cruz. Stops at Cabrillo and Capitola will be more limited.
Overall Rating	
Summary	Highway 1 is a principle transportation route for Santa Cruz County residents with traffic volumes as high as approximately 97,000 vehicles per day. Commuters, visitors, residents and businesses rely on Highway 1 for accessing their destinations. The HOV lanes project is a high cost capacity increasing project which would relieve congestion on Highway 1 and provide travel time improvements for transit, carpooling and single occupancy vehicle (SOV) motorists. Project would promote carpooling and transit use as a means to further increase transportation system capacity. Economic vitality of the region could be increased and access between north and south county improved. There could be potentially significant environmental impacts for all interchange improvements and over and under-crossings along this 9 mile stretch of Highway 1.

Step 1 Criteria		Rating	Evaluation	Narrative
Community Support and Consistency with Applicable Plans	**Positives/ Neutral**		✓ Project specific planning effort with public input (Hwy 1 Corridor Investment Program Draft EIR) ✓ Consistent with long range planning effort (2014 RTP) ✓ Multi-agency support (RTC, City of Capitola General Plan)	▫ The RTC is working in cooperation with Caltrans and FHWA on the draft Highway 1 Corridor Investment Program environmental review. The draft EIR has gone through the public comment period and responses to comments are being generated. ▫ The HOV Lane Project is included in the 2014 Regional Transportation Plan. Partner agency, public and stakeholder input are solicited at key milestones of the RTP development.
	Negatives		× May have some public opposition	▫ Concern has been expressed that increasing highway capacity will make traveling by automobile easier, increasing the number or length of trips people take, and thus will increase VMT and GHG emissions. Some members of the public are represented by advocacy groups that oppose improvements to Highway 1.
Addresses Transportation Challenges & Environmental, Economic, and Equity Goals	**Positives/ Neutral**		Economic ✓ Improves auto travel time ✓ Improves auto travel time reliability ✓ Improves transit travel time ✓ Improves transit travel time reliability ✓ Improves access to jobs, education and services	▫ Travel time for HOV, SOV and transit would be reduced, improving access to jobs, education centers and services and promoting business development and associated economic vitality for the region. Travel time improvements will also benefit emergency vehicles. Faster and more reliable transit travel times could increase transit ridership and HOV lane travel times could increase carpooling. HOV lanes would help to decrease the "cut-through" traffic on local streets by adding capacity to the highway. Auxiliary lanes improve traffic flow and safety of the highway by extending the merging area between off and on ramps.

Step 1 Criteria		Rating	Evaluation	Narrative
			✓ Potential to increase land use development, business activity, employment and tax revenues Environmental ✓ Mode shift to transit ✓ Mode shift to carpooling Equity ✓ Improves access for people who do not drive (transit) ✓ Improves safety	
	Negatives		Environmental × Environmentally sensitive areas may be impacted × Potential to increase GHG emissions	▫ The HOV lane project extending over a 9 mile section of highway with reconfiguration of the interchanges may impact environmentally sensitive areas. ▫ The goal of adding HOV lanes is to reduce congestion and increase the speed of travel. Increasing travel speeds and making it easier to travel can increase the number or length of trips but the extent of any induced demand would need to be evaluated. GHG could be increased if the number or length of trips is increased due to induced demand. Alternatively, GHG could be reduced if speeds are in the most optimal range (30-50 mph) for GHG emission reductions.
Compatible with Regulatory Requirements	**Positives/ Neutral**		✓ Standard permitting process ✓ Consistent with legislation (FAST Act)	▫ Permitting of any roadway project can be a time and resource intensive endeavor. Hwy 1 HOV lanes will be required to go through the standard permitting process although the large scale of the project, geography and natural resources potentially within the project area, may increase the amount of coordination needed with federal and state agencies may require significant effort to obtain the required permits. However, the length of the project (9 miles), geography and natural resources potentially in the area may increase the amount of coordination with federal and state agencies and increase the level of effort required to obtain the necessary permits. ▫ FAST Act legislation will require AMBAG to meet regional targets for safety and travel time reliability. Targets are currently being determined by the state for the MPOs and may need to be met in the next few years. HOV lanes can improve safety and travel time reliability to help meet regional targets.
	Negatives		× Design exceptions required	▫ Requests for design exceptions are anticipated on the HOV Lane project to avoid sensitive resources such as protected plant, animal and wetland habitat areas and to minimize impacts to residential, commercial and existing infrastructure.
Level of Public Investment	**Positives/ Neutral**		✓ Some funding sources may be available for capital costs (STIP, STBG, SB1 -LPP & CC, TIGER, trade corridor funds but unlikely) ✓ Minor new investment for operations required ✓ Existing funding sources could	▫ With the passage of Senate Bill 1 (SB 1) earlier this year, additional funds for transportation investments in Santa Cruz County will be available through both formula funding and grant programs. The congested corridors program, a grant program through SB 1 designed to provide funds for congested commute corridors could provide funds for Highway 1 HOV lanes, although it is unlikely at this time that Highway 1 will be competitive for these funds. STIP funds have been a source of funds for SCC over the years although even the STIP funds dropped within the last few years. STIP funds will be restored by SB 1 although they still may be lower than historic levels.

Step 1 Criteria		Rating	Evaluation	Narrative
			cover cost of operations (Caltrans SHOPP and maintenance budget)	▫ Opportunities arise from time to time from federal infrastructure investment programs, road user fees, and special grants to fund projects that are essentially "one-time" events. ▫ Currently, highway maintenance operation costs are paid for by the state. In future, Caltrans may require local agencies to cover costs of maintenance for projects that increase capacity.
	Negatives		× Major new investment for capital costs required × Few funding sources may be available for capital costs	▫ Cost to implement HOV lanes on Highway 1 is significant due to the interchange and crossing improvements that are needed to eliminate the constrictions that limit widening of the highway.
Right of Way and Constructability Constraints	**Positives/ Neutral**		✓ Can be built in phases	▫ Project can be implemented in phases with independent utility as funding becomes available. One of the several auxiliary lane projects that are needed to accommodate the additional HOV lane has already been built and three more are funded through Measure D.
	Negatives		× Moderate amounts of ROW will need to be acquired × Construction challenges may require significant additional funds or alternative design	▫ The project can generally be accomplished within the existing Caltrans highway right-of way, but some additional right-of-way acquisition will be required to expand some interchanges to accommodate HOV lanes. Geometrically challenged structures at interchanges and bridges may require additional funds or alternative designs.
Technological Feasibility	**Positives/ Neutral**		✓ Technologically feasible ✓ Could accommodate future technologies	▫ The HOV lanes project is feasible with current day technology. Technologies such as autonomous vehicles could be accommodated in future that may increase the capacity of the facility, safety and operational efficiencies such as fuel economies and emissions
	Negatives		x Planning for future technologies has not been initiated	▫ The effect of automated vehicles on the future transportation system is still unknown. Roadway capacity may increase as vehicles can travel more closely together but there will likely be increases in travel due to ease of taking more and longer trips. Regulations related to automated vehicles are still in their infancy. Larger MPOs are beginning to take steps to plan for future technologies. The smaller RTPAs such as RTC will be following their lead in planning for future technologies.

Route	**Highway 1**
Project Title	Auxiliary lanes to extend merging distance *(in addition to Measure D auxiliary lanes)*
Project Description	This project would construct auxiliary lanes along Highway 1 between interchanges from State Park Dr to San Andreas Rd. Auxiliary lanes between Morrissey and Soquel were completed in 2015. Measure D provides funds for 3 sets of auxiliary lanes between Soquel and 41st Ave, Bay-Porter and Park Ave, and Park to State Park Dr. This project would continue construction of auxiliary lanes between interchanges from State Park Dr. to San Andreas Rd. The project would require reconstruction of the two overcrossings of the Santa Cruz Branch Rail Line in Aptos, and widening of the Aptos Creek Bridge.
Overall Rating	
Summary	Moderate cost operational improvement to improve traffic flow and safety of the highway by extending the merging area between off and on ramps. Congestion may be slightly reduced, improving travel time and travel time reliability.

Step 1 Criteria		Rating	Evaluation	Narrative
Community Support and Consistency with Applicable Plans	**Positives/ Neutral**		✓ Project specific planning effort with public input (Highway 1 Corridor Investment Program and DEIR) ✓ Consistent with long range planning effort with public input (2014 RTP)	▫ The RTC is working in cooperation with Caltrans and FHWA on the draft Highway 1 Corridor Investment Program Environmental Documents. The draft EIR has gone through the public comment period and responses to comments are being generated. The auxiliary lane projects being considered here between State Park Dr and San Andreas are included in the Highway 1 Corridor Investment Program. Other auxiliary lane projects along Highway 1 (between Soquel and State Park Dr) have been supported by voters through passage of Measure D. ▫ Auxiliary lanes projects are included in the 2014 Regional Transportation Plan as stand-alone projects with independent utility. Partner agency, public and stakeholder input are solicited at key milestones of the RTP development.
	Negatives		× May have some public opposition	▫ Concern has been expressed that increasing highway capacity will make traveling by automobile easier, increasing the number or length of trips people take, and thus will increase VMT and GHG emissions. Some members of the public are represented by advocacy groups that oppose improvements to Highway 1.
Addresses Transportation Challenges & Environmental, Economic, and Equity Goals	**Positives/ Neutral**		Economic ✓ Improves auto travel time ✓ Improves auto travel time reliability Equity × Improves safety	▫ The auxiliary lanes projects could improve traffic flow and safety of the highway by extending the merging area between off and on ramps. Travel time benefits could be realized due to improvements in traffic flow and fewer traffic incidents.
	Negatives		× Environmentally sensitive areas may be impacted	▫ The auxiliary lane project extending a 3 mile section from State Park Dr to San Andreas Rd may impact environmentally sensitive areas.

Step 1 Criteria		Rating	Evaluation	Narrative
Compatible with Regulatory Requirements	**Positives/ Neutral**		✓ Consistent with legislation (FAST Act) ✓ Consistent with design standards (Caltrans) ✓ Standard permitting process	▫ Permitting of any roadway project can be a time and resource intensive endeavor. Auxiliary lanes will be required to go through the standard permitting process however the length of the project (5 miles), geography and natural resources potentially in the area, may increase the amount of coordination with federal and state agencies and increase the level of effort require to obtain the necessary permits. ▫ FAST Act legislation will require AMBAG to meet regional targets for safety and travel time reliability. Targets are currently being determined by the state for the MPOs and may need to be met in the next few years. Auxiliary lanes can improve safety and travel time reliability to help meet regional targets.
	Negatives			
Level of Public Investment	**Positives/ Neutral**		✓ Moderate new investment for capital costs required ✓ Some funding sources may be available for capital costs (STIP, STBG, SB1 -LPP & CC, TIGER, trade corridor funds but unlikely) ✓ Minor new investment for operations required ✓ Existing funding sources could cover cost of operations (Caltrans SHOPP and maintenance budget)	▫ A significant amount of funds are needed to implement auxiliary lanes on Highway 1. The cost of constructing auxiliary lanes between State Park and Rio Del Mar is greater due to the need to replace two rail road bridges in Aptos. With the passage of Senate Bill 1 (SB 1) earlier this year, additional funds for transportation investments in Santa Cruz County will be available through both formula funding and grant programs. The congested corridors program, a grant program through SB 1 designed to provide funds for congested commute corridors, could provide funds for Highway 1 auxiliary lanes, although it is uncertain at this time whether Highway 1 will be competitive for these funds. STIP and STBG funds have been a source of formula funds for SCC over the years although even the STIP funds dropped within the last few years. STIP funds will be restored by SB 1 although they still may be lower than historic levels. ▫ Opportunities arise from time to time from federal infrastructure investment programs, road user fees, and special grants to fund projects that are essentially “one-time” events. ▫ Currently, highway maintenance operation costs are paid for by the state. In future, Caltrans may require local agencies to cover costs of maintenance for projects that increase capacity.
	Negatives			
Right-of-Way and Constructability Constraints	**Positives/ Neutral**		✓ Can be built in phases ✓ Minor amounts of ROW may need to be acquired	▫ Project can be implemented in phases with independent utility as funding becomes available. One auxiliary lane project has already been built on Highway 1 and three more are funded through Measure D. This project would construct 3 more sets of auxiliary lanes phased over time. The project can generally be accomplished within the existing Caltrans highway right-of-way, but some additional right-of-way acquisition may be required to for under and over-crossings through this area.
	Negatives		× Design exceptions required	▫ Requests for design exceptions are anticipated on the Auxiliary Lane project to avoid sensitive resources such as protected plant, animal and wetland habitat areas and to minimize impacts to residential, commercial and existing infrastructure.
Technological Feasibility	**Positives/ Neutral**		✓ Technologically feasible ✓ Could accommodate future technologies	▫ The auxiliary lanes project is feasible with current day technology. Technologies such as autonomous vehicles could be accommodated in future.
	Negatives			

Route	**Highway 1**
Project Title	Ramp Metering
Project Description	Reconfiguration of on-ramps and local streets to allow for ramp metering and installation of ramp meters at interchanges between San Andreas Rd and Morrissey Blvd. Ramp metering will control entry onto the highway through use of meter lights during peak periods. The metering rate will be traffic responsive based on actual traffic conditions of the mainline flow in the vicinity of the ramp. Reconfiguration of on-ramps may require widening and/or lengthening of the on-ramps to allow room for queuing to limit backup onto local streets. Separate lanes for SOV and HOV would be installed with faster metering rates for HOV.
Overall Rating	
Summary	Highway 1 is a principle transportation route that serves Santa Cruz County residents with traffic volumes up to approximately 97,000 vehicles per day. Commuters, visitors, residents making local trips and businesses rely on Highway 1 for accessing their destinations. The economy of Santa Cruz County is dependent on a functioning transportation system where Highway 1 is the backbone. Ramp metering on Highway 1 has the potential to make significant near term operational efficiencies at a low project cost. Benefits from ramp metering include safety improvements from spacing vehicles as they merge onto highway and less stop and go traffic; improvements to travel time and travel time reliability; and reductions in GHG emissions. With the improved efficiencies of the highway, cut through traffic through the neighborhoods will be reduced. Ramp metering loses effectiveness when demand is significantly greater than capacity.

Step 1 Criteria		Rating	**Evaluation**	**Narrative**
Community Support and Consistency with Applicable Plans	**Positives/ Neutral**		✓Project specific planning effort with public input (Highway 1 Corridor Investment Program DEIR) ✓Consistent with long term planning effort (2014 RTP)	▫ The RTC is working in cooperation with Caltrans and FHWA on the draft Highway 1 Corridor Investment Program Environmental Documents. The Highway 1 Corridor Program includes ramp metering in both alternatives being evaluated. The draft EIR has gone through the public comment period and responses to comments are being generated. The ramp metering project being considered here between Morrissey Blvd and San Andreas Rd are included in the 2014 Regional Transportation Plan as a stand-alone project with independent utility.
	Negatives		× May have some public opposition	▫ Ramp metering could result in queue overflow on local streets impacting traffic but this could be limited with ramp design, detector placement and timing design. Motoring public and businesses could express opposition.
Addresses Transportation Challenges & Environmental, Economic, and Equity Goals	**Positives/ Neutral**		Economic ✓Improves auto travel time ✓Improves auto travel time reliability ✓Improves access to jobs, education and services ✓Potential to increase land use development, business activity, employment and tax revenues	▫ The ramp metering project could improve operational efficiencies by metering the flow of vehicles onto the highway during peak periods. Ramp metering has also been shown to increase capacity of the highway. Speeds will increase on the freeway and congestion will be reduced, decreasing travel time and improving travel time reliability. A short wait on the on-ramp allows motorists to increase their average freeway speed and shorten overall freeway travel times. Ramp metering loses effectiveness when demand is significantly greater than capacity. ▫ Greater operational efficiencies on the highway will relieve cut through traffic through the neighborhoods. ▫ Ramp metering has also been shown to improve safety by spacing the vehicles as they

Step 1 Criteria		Rating	Evaluation	Narrative
			Environmental ✓Potential to reduce GHG Equity ✓Improves safety	merge onto the highway and by reducing the stop and go traffic thereby reducing the number of collisions. ▫ Vehicles traveling at speeds between 30 to 50 mph emit fewer GHG emissions per mile than vehicles in stop and go traffic.
	Negatives		Environmental × Environmentally sensitive areas may be impacted × Traffic Impacts (on local streets)	▫ Widening of ramps where needed for queuing capacity may have an impact on environmentally sensitive areas ▫ Ramp metering could result in queue overflow on local streets impacting traffic but this could be managed with detector placement and timing design.
Compatible with Regulatory Requirements	**Positives/ Neutral**	👍👍	✓Consistent with legislation (FAST Act, SB 375, SB 32) ✓Consistent with design standards (Caltrans) ✓Standard permitting process	▫ FAST Act legislation requires AMBAG to meet regional targets for safety and travel time reliability. Targets are currently being determined by the state for the MPOs and may need to be met in the next few years. Ramp metering can improve both safety and travel time reliability. ▫ Greenhouse gas reduction legislation (SB 375, SB 32) requires reductions in GHG from transportation in order to slow climate change.
	Negatives			
Level of Public Investment	**Positives/ Neutral**	👍	✓Minor new investment for capital costs required ✓Minor new investment for operations required ✓Some funding sources may be available for capital costs (STIP, STBG, SB1 -LPP & CC, TIGER, trade corridor funds but unlikely) ✓Some funding sources may be available for operations (Caltrans SHOPP and maintenance budget)	▫ The level of investment needed for ramp metering still needs to be determined in detail based on how much effort will be needed to provide the queuing capacity on the on-ramps. The amount of investment may be relatively small compared to increase in operational efficiencies and the safety benefits. The 3 sets of auxiliary lane projects funded through Measure D could potentially include reconfiguration of on-ramps for ramp metering which would reduce the amount of additional funds needed for this project.
	Negatives			
Right-of-way and Constructability Constraints	**Positives/ Neutral**	👍	✓Some right-of-way may need to be acquired ✓Project is readily constructible	▫ Some additional right-of-way may need to be acquired for widening at ramps to accommodate queuing as shoulder widths may be limited.
	Negatives		× Design exceptions required	▫ Requests for design exceptions are anticipated on the ramp metering project to minimize impacts to residential, commercial and existing infrastructure.
Technological Feasibility	**Positives/ Neutral**	👍👍	✓Technologically feasible ✓Could accommodate future technologies	▫ Current technology exists for implementation that would allow the metering rate to be responsive to actual traffic conditions of the mainline flow in the vicinity of ramp. Additional technology also exists to determine the metering rate based on overall traffic conditions of highway and major arterials which will likely improve over time.
	Negatives			

Route	**Highway 1**
Project Title	Additional lanes on Highway 1 bridge over San Lorenzo River
Project Description	The project would widen the bridge at the San Lorenzo River overcrossing from 2 lanes in each direction to 3 lanes southbound and 4 lanes northbound to improve traffic flow through the Highway 1/9 intersection and bring the bridge up to seismic safety standards.
Overall Rating	
Summary	The project could help to improve traffic flow through the Hwy 1/9 intersection, one of the most utilized intersections in the county at a moderate cost. Safety improvements include increasing the distance for automobiles to merge on/off Highway 1 from Ocean Street and River Street/Highway 9. Bridge replacement would be completed to meet seismic safety standards and could also decrease environmental impacts by removing the center pier from the middle of the river channel.

Step 1 Criteria		Rating	Evaluation	Narrative
Community Support and Consistency with Applicable Plans	**Positives/ Neutral**		✓ Consistent with long range planning effort (2014 RTP) ✓ Consistent with other planning efforts (City of Santa Cruz CIP)	▫ Project is included in the 2014 RTP. Partner agency, public and stakeholder input are solicited at key milestones of the RTP development.
	Negatives			
Addresses Transportation Challenges & Environmental, Economic, and Equity Goals	**Positives/ Neutral**		Economic ✓ Improves auto travel time ✓ Improves auto travel time reliability ✓ Improves access to jobs, education and services ✓ Potential to increase land use development, business activity, employment and tax revenues Equity ✓ Improves safety	▫ The Highway 1 bridge over the San Lorenzo River is part of the bottleneck for automobiles accessing the west side of the City of Santa Cruz and the Harvey West business area. Widening San Lorenzo Bridge in coordination with the Highway 1/9 intersection improvements will improve traffic operations in this area. The degree to which travel time and reliability improve may not be significant. ▫ Safety will improve by increasing length of merge lanes northbound from Ocean St onto Highway 1 and southbound from River Street/Hwy 9 onto Highway 1.
	Negatives		Environmental × Environmentally sensitive areas may be impacted	▫ Widening the bridge over San Lorenzo River may impact the riverine habitat and associated species. Designs to reduce project impacts compared to existing impact are being considered.
Compatible with Regulatory Requirements	**Positives/ Neutral**		✓ Consistent with design standards ✓ Standard permitting process	▫ Project includes seismic retrofit of bridge as required by the Caltrans Seismic Retrofit Program. ▫ The San Lorenzo Bridge Widening will be required to go through the standard permitting process although the need for construction near the waterway may require significant effort to obtain the required permits.
	Negatives			

Step 1 Criteria		Rating	Evaluation	Narrative
Level of Public Investment	**Positives/ Neutral**		✓ Existing funding sources could cover cost of operations ✓ Moderate new investment for capital costs required	▫ Currently, highway maintenance operation costs are paid for by the state. In future, Caltrans may require local agencies to cover costs of maintenance for projects that increase capacity.
	Negatives		× Few funding sources may be available for capital costs (STIP, STBG, CC, Measure D – local)	▫ Few funding sources are available for capital costs of project.
Right-of-Way and Constructability Constraints	**Positives/ Neutral**		✓ Right of way is sufficient	
	Negatives		× Construction challenges may require significant additional funds or alternative design	▫ Alternative designs may be considered to reduce impacts on traffic during construction and impacts to environmentally sensitive areas.
Technological Feasibility	**Positives/ Neutral**		✓ Technologically feasible ✓ Could accommodate future technologies	
	Negatives			

Route	**Highway 1**
Project Title	Mission Street Intersection Improvements
Project Description	The project would improve intersections along Mission Street in Santa Cruz including modifying design and adding lanes at Hwy1/Mission/Chestnut/King intersection, widening at Mission and Bay, right turn lanes at Swift and Laurel, and installation of a traffic signal at Shaffer Rd. Intersection improvements are needed to reduce conflicts between autos, transit, bicyclists and pedestrians and to improve traffic flow.
Overall Rating	
Summary	Mission Street on the west side of Santa Cruz has many roles to perform. It functions as State Route 1 for through traffic connecting the north coast to the City of Santa Cruz and destinations to the south. It also serves as the "main street" for the City of Santa Cruz's upper and lower westside neighborhoods and is the primary automobile and transit route serving UCSC. The Mission Street intersection improvements will improve access for through traffic and local destinations, improve traffic operations and travel time reliability and improve safety for autos, bicyclists and pedestrians.

Step 1 Criteria		Rating	**Evaluation**	**Narrative**
Community Support and Consistency with Applicable Plans	**Positives/ Neutral**		✓ Consistent with long range planning effort (2014 RTP, City of SC General Plan and 2015-2017 CIP) ✓ Multi-agency support (City of SC, RTC)	▫ Intersection improvement projects on Mission Street are included in the 2014 RTP. Partner agency, public and stakeholder input are solicited at key milestones of the RTP development. ▫ Hwy 1/Mission/Chestnut/King and Mission/Bay projects are listed in the most recent City of Santa Cruz CIP. ▫ Improving safety for bicyclists on Mission Street was the focus of recent bicycle safety campaigns.
	Negatives			
Addresses Transportation Challenges & Environmental, Economic, and Equity Goals	**Positives/ Neutral**		Economic ✓ Improves auto travel time ✓ Improves auto travel time reliability ✓ Improves transit travel time ✓ Improves transit travel time reliability ✓ Improves access to jobs, education and services ✓ Potential to increase land use development, business activity, employment and tax revenues Equity ✓ Improves safety	▫ The intersection improvements will improve traffic flow on Mission Street to destinations on the westside of SC including UCSC, commercial areas and residences. Safety, travel time and travel time reliability for autos and transit will be improved. Commuters, businesses, residents making local trips, visitors and students will benefit from these improvements. ▫ Improvements for auto and transit must consider effects on bicyclists and pedestrians and their ability to navigate safely through intersections.
	Negatives			
Compatible with	**Positives/ Neutral**		✓ Consistent with design standards (Caltrans)	▫ FAST Act legislation requires AMBAG to meet regional targets for safety and travel time reliability. Targets are currently being determined by the state for the MPOs and may need

Step 1 Criteria		Rating	Evaluation	Narrative
Regulatory Requirements			✓ Consistent with legislation (FAST Act)	to be met in the next few years. Mission St. intersection improvements can improve both safety and travel time reliability.
	Negatives		X Design exceptions required	▫ Request for design exceptions are anticipated for intersection improvements on Mission St. to minimize impacts to residential, commercial and existing infrastructure.
Level of Public Investment	Positives/ Neutral		✓ Minor new investment for capital costs required ✓ No new investment for operational costs required ✓ Some funding may be available for capital costs (STIP, STBG, SB1 -LPP & CC, TIGER, trade corridor funds but unlikely)	▫ Funding may be available for these projects from a number of different sources including the traditional sources (STIP, STBG) and a couple of new sources of funds due to passage of SB 1 (LPP and CC). Operational costs would not likely need to be increased based on these intersection improvements.
	Negatives			
Right-of-Way and Constructability Constraints	Positives/ Neutral		✓ Minor amounts of ROW may need to be acquired	▫ Intersection improvements to accommodate all modes (auto, transit, biking and walking) will require some additional right-of-way.
	Negatives			
Technological Feasibility	Positives/ Neutral		✓ Technologically feasible	▫ Intersection improvements can be designed to accommodate future technologies.
	Negatives			

Route	**Highway 1**
Project Title	Provide rail transit along the Highway 1 alignment
Project Description	Rail transit service would travel primarily along Highway 1 between Santa Cruz and Watsonville. Rail transit service would be bidirectional and extend from Depot Park in Santa Cruz along Chestnut St to Highway 1 at Mission St, continue on Highway 1 until north of Beach St in Watsonville where rail transit service would continue on the Santa Cruz Branch Rail Line to Pajaro Station. Rail transit along Highway 1 would occur in the median in order to limit the number of points where the highway and rail cross. Portions of the rail transit service are expected to be elevated and other sections constructed in tunnels as a result of insufficient space in the median for bidirectional tracks and platforms, proximity of the project to the built environmental, and changes in grade along Highway 1. Station locations would include Depot Park, Emeline Ave, Soquel Ave, 41st Ave, Park Ave and downtown Watsonville.
Overall Rating	
Summary	Rail transit service on a combination of new rail transit facilities along Highway 1 and existing Santa Cruz Branch Line rail ROW and Roaring Camp ROW is a high cost capacity increasing improvement that would provide a new transit route along Santa Cruz County's most heavily traveled route connecting north and south county. Rail transit service along Highway 1 would improve transit travel time and transit travel time reliability and provide an alternative to congestion on Highway 1 and Soquel/Freedom. By improving travel time and travel time reliability, transit ridership could increase, reducing VMT and therefore greenhouse gas emissions. Rail transit increases options for those who do not drive including seniors, youth, people with disabilities, and low-income.

Step 1 Criteria		Rating	Evaluation	Narrative
Community Support and Consistency with Applicable Plans	**Positives/ Neutral**			
	Negatives		× Project is not included in any planning document.	▫ A rail transit service alignment along Highway 1 has not previously been investigated by the RTC and community input has not been solicited on project concepts. However, RTC policy supports consideration of passenger rail service.
Addresses Transportation Challenges & Environmental, Economic, and Equity Goals	**Positives/ Neutral**	Neutral	<u>Economic</u> ✓Improves transit travel time ✓Improves transit travel time reliability ✓ Improves access to jobs, education and services ✓ Potential to increase land use development, business activity, employment and tax revenues <u>Environmental</u> ✓Mode shift to transit ✓Improves safety ✓Reduces VMT and GHG <u>Equity</u>	▫ Rail transit service on Highway 1 between Watsonville and Santa Cruz has the potential to significantly improve transit travel times and travel time reliability between Santa Cruz and Watsonville by providing a separate continuous right of way dedicated to rail transit along Highway 1. This new direct transit connection between Watsonville and Santa Cruz will improve access to jobs, education centers and services and promote business development and associated economic vitality for the region. A new transit alternative to congested automobile travel on Highway 1 may increase ridership, encourage people to shift from driving to transit, reducing VMT and GHG emissions. ▫ Access to jobs, education and services may improve but may be limited. Rail ridership has been shown to correlate with the number of jobs within ¼ mile of rail stops (approximately a 5 minute walk) and the intensity of land use near the stations. Much of this ¼ mile distance (approximately 1/10 mile) is taken up by the highway/interchange structure limiting the amount of jobs that can be accessed within a 5 minute walk from the stations. The distance between rail stations along this rail line will also limit ridership. ▫ Access for people who do not drive (youth, seniors, people with disabilities, low income,

Step 1 Criteria		Rating	Evaluation	Narrative
			✓ Improves access for people who do not drive	minority) can be improved by a rail transit option.
	Negatives		× Environmentally sensitive areas may be impacted × Traffic impacts (near rail stations)	▫ A passenger rail project extending approximately 20 miles and requiring construction of new structures along the route may impact environmentally sensitive areas. Elevating or tunneling rail service would have more extensive environmental impacts. ▫ Traffic impacts near rail stations will be significant as station locations will be located in areas that are already congested during peak periods. Alternatively, rail along highway will not cross roadways at grade and thus will not have traffic or safety impacts at roadway intersections.
Compatible with Regulatory Requirements	Positives/ Neutral	Neutral	✓ Consistent with legislation (SB 375, SB 32) ✓ Consistent with design standards (Caltrans, CPUC, and rail operator)	▫ Greenhouse gas reduction legislation (SB 375, SB 32) requires reductions in GHG from transportation in order to slow climate change. Rail on Highway 1 could result in a significant mode shift to transit, thereby reducing VMT and GHG emissions.
	Negatives		× Complex permitting process	× Federal regulatory requirements for rail are challenging to meet
Level of Public Investment	Positives/ Neutral		✓ Some funding sources may be available for capital costs (FTA5309-New/Small Starts, TIGER, STIP, STBG, SB 1-LPP & CC, LCTOP, TIRCP, Section 130)	▫ Capital funds may be available from Federal Transit Agency New/Small Starts program and other federal, state and local sources.
	Negatives		× Major new investment for capital costs required × Major new investment for operations required × New funding source required for operations	▫ Significant expense related to construction, provision of stations and rail operations. Costs would include interchange improvements to make room for rail transit in the median. A rail transit system that includes elevated sections as well as tunneled sections would require a major cost investment.
Right of Way and Constructability Constraints	Positives/ Neutral			
	Negatives		✓ Moderate amounts of ROW may need to be acquired ✓ Construction challenges may require significant additional funds or alternative design	▫ The project can generally be accomplished within the existing Caltrans highway right-of way, but some additional right-of-way acquisition may be required to reconstruct interchanges to accommodate station stops. ▫ A design for rail transit along Highway 1 has not been initiated. An initial project design would need to consider right of way, terrain and station locations. Building new structures in locations where Highway 1 right of way is already constrained may present construction challenges. Interchanges would need to be reconstructed to remove column structures in median to allow for rail transit travel. Elevating or tunneling rail transit service along Highway 1 may be required due to geographical constraints and result in significant construction challenges.
Technological Feasibility	Positives/ Neutral		✓ Technologically feasible ✓ Could accommodate future technologies (battery electric	▫ Future technologies could provide battery electric multiple units for noise reduction and for reduced GHG.

Step 1 Criteria		Rating	Evaluation	Narrative
			multiple units)	
	Negatives			

Route	**Highway 1**
Project Title	Automated vehicles
Project Description	Automated vehicles (AVs) are defined by the ability of the vehicle to control a safety-critical function such as steering, throttle, or braking without direct driver input. Driver-assistance automation is already included in many vehicles where the driver is assisted with acceleration through adaptive cruise control, assisted parking and other features. Improvements in these technologies are rapidly advancing. There is much debate in the field about the timeline for implementation of fully automated vehicles. The need for regulatory agencies to address ethical questions on maneuvering around obstacles including other vehicles, bicyclists, pedestrians, and animals is an area of uncertainty that may delay introduction of fully automated vehicles onto our roadways even after the technology is readily available. Based on historic vehicle purchasing and turnover rates as well as the infancy of the regulatory decision making process for automated vehicles, market saturation of fully automated vehicles are estimated for around the years 2050 - 2060. It is assumed that by 2035, the horizon for this study, fully automated vehicles with human presence (auto and transit) will be operating on the roadways, but they will constitute less than 20 percent of the fleet vehicle mix. This assumption relies on a number of factors including the adoption of state regulatory guidance, the realization of cost efficiencies, and consumer acceptance. Roadway infrastructure to support automated vehicles will be minimal in 2035. Traffic signals will include technology for detecting the presence of vehicles at intersections and communicating some data, but will not fully replace present day loop-detectors. Additional infrastructure that may be implemented prior to 2035 would include devices to provide vehicles with safety information such as warnings about work zones, sharp curves, or other hazards. As fully automated vehicles become a larger portion of the fleet vehicle mix, smart infrastructure such as traffic signals with wifi communication to vehicles, pedestrians, and bicyclists will be required.
Overall Rating	
Summary	The effects of automated vehicles on future transportation systems are under much debate. This new technology has the ability to make vast improvements to safety, access and mobility or conversely, the potential to drastically increase traffic congestion and vehicle miles traveled. The effect of AV technology on the transportation system is dependent on the regulatory system that is developed and the ability of government agencies to implement equitable solutions that serve the community's mobility needs and simultaneously reduce vehicle miles traveled. The cost for automated vehicles is mostly taken on by the individual consumer as the public infrastructure needs for AV will be minimal by 2035. By 2035, automated vehicles, including transit, will likely still be mixed with conventional vehicles on all roadways. Improvements to travel time and travel time reliability for autos and transit will likely be slight as the increased density at which vehicles can operate only becomes significant when there is at least 40% AVs in the flow. More significant traffic flow benefits could be achieved once there is 75% or greater AVs in the flow which is unlikely prior to 2035. Safety benefits could be significant with AV technology, reducing the number of collisions on roadways which in turn reduces non-recurring congestion.

Step 1 Criteria		Rating	**Evaluation**	**Narrative**
Community Support and Consistency	**Positives/ Neutral**		✓Consistent with other planning efforts (Federal and State)	▫ The research, development and manufacturing of automated vehicle technology have increased substantially over the last decade. Efforts at the state and federal level to regulate manufacturing and use of AVs on roadways are challenged to keep pace with advancements in technology.

Step 1 Criteria		Rating	Evaluation	Narrative
with Applicable Plans				▫ Community support can be shown by individual purchasing of these vehicles.
	Negatives		× May have some public opposition	▫ Lower income individuals may not support government expenditures on infrastructure for AVs. Results from the UCS survey expressed significant concern from a number of survey responders that AVs are for the wealthy and they do not see benefit for themselves or the community.
Addresses Transportation Challenges & Environmental, Economic, and Equity Goals	Positives/ Neutral		Economic ✓Improves auto travel time ✓Improves auto travel time reliability ✓Improves transit travel time ✓Improves transit travel time reliability Environmental ✓Reduces GHG Equity ✓Improves safety	▫ Improvements to safety from level 5 automated vehicles (AV5s) can be realized through use of sensing technology to detect obstructions in vehicle path and respond efficiently. Concerns have been raised about reliance on programmed systems rather than human response but overall safety is considered one of the main benefits to AV5s. ▫ Improvements to travel time and reliability for both autos and transit may occur as simulations have found that a small percentage of HAVs among human-driven cars on a lane reduces congestion. An AV5 will not sit idle after the car in front has started moving improving the traffic flow. AV5s will also systematically adhere to a closer distance to the car in front in comparison to human-driven which significantly increases the density of vehicles. This improvement will become more significant as the number of AV5s increases and human-driven vehicles are decreased. Others debate that any significant improvements to increased capacity and thus travel time improvements will only be realized in lanes dedicated to HAVs as mixed flows will not show much improvement to roadway capacity. ▫ Once AV technology is advanced to the point where human presence is not required in vehicles, vehicle miles traveled and thus travel time will likely increase substantially as vehicles will be sent to run errands and take other trips without regard for costs of travel time on people. This assumption is not being made here as this will likely occur after 2035. ▫ AV5s in 2035 will likely be primarily electric vehicles and thus will reduce GHG. Improved driving efficiencies from fuel powered AV5s will also reduce GHG. ▫ Fully autonomous vehicles may be able to operate much earlier on a dedicated facility but limited land and resources will limit the feasibility of this occurring by 2035. Once the market is saturated with HAVs, transit HAVs could provide increased local mobility at a low cost, for which private vehicles may be forfeited but this occurrence is likely further in the future than 2035.
	Negatives		Economic × Increases household transportation costs	▫ The expense of purchasing AVs is greater than the average costs for automobiles and thus will increase household transportation costs. Many people may not be able to afford AVs prior to 2035.
Compatible with Regulatory Requirements	Positives/ Neutral		✓Consistent with legislation (FAST Act)	▫ FAST Act legislation requires AMBAG to meet regional targets for safety and travel time reliability. Targets are currently being determined by the state for the MPOs and may need to be met in the next few years. Automated vehicles can improve safety and potentially travel time reliability.
	Negatives		× Standards currently under development	▫ Federal and State regulations determining the new requirements for both auto manufacturers and roadway users may take a while to catch up with the advancements in AV technology.

Step 1 Criteria		Rating	Evaluation	Narrative
Level of Public Investment	Positives/ Neutral		✓Minor new investment for capital costs required ✓Minor new investment for operations required	▫ The amount of public infrastructure needed in the short term for vehicle-to-vehicle technology for AVs will be minimal since AVs can operate in mixed traffic on existing roadways shared with conventional vehicles. Vehicle-to-infrastructure technology would require more significant investments but will likely not be utilized on a large scale until there is market saturation of HAVs. Examples include curve speed warning to vehicles that speed is too high to safely negotiate the curve; pedestrian in crosswalk warning that alerts vehicles that a pedestrian is in a crosswalk; work zone warnings to alert vehicles that a work zone is approaching; and transit signal requests for extended green when approaching intersection.
	Negatives		× Unknown sources of funding for capital and operational costs	▫ Sources of funding for capital and operational costs for infrastructure technology associated with AVs are unknown at this time but will likely become available over time as more AVs are on the roadways.
Right of Way and Constructability Constraints	Positives/ Neutral		✓Right of way is sufficient	▫ The right of way is sufficient in the near term for AVs but if dedicated facilities are required for HAVs in future, ROW needs will be substantial particularly while there is a shift from conventional vehicles to AVs.
	Negatives			
Technological Feasibility	Positives/ Neutral		✓Emerging technology	▫ Automated vehicles are an emerging technology that is rapidly advancing. The debate for when and exactly how HAVs will affect the transportation system is ongoing with large differences in opinions. Despite these differences, it is clear that highly automated vehicles will become an integral part of the transportation system in the future.
	Negatives			

Route	**Soquel Ave/Dr and Freedom Blvd**
Project Title	Bus Rapid Transit lite (BRT lite)
Project Description	A branded bus rapid transit lite on Soquel Ave/Dr and Freedom Blvd would reconfigure intersections where feasible for transit queue jumps and transit signal priority to provide faster and more reliable service. Faster boarding could also be implemented through platform level boarding and electronic or off-board fare collection. Frequency of buses would remain same as existing service. Bus stops would be located to promote fast bus service and travel time, preferably at the downstream side of intersections.
Overall Rating	
Summary	BRT lite is a low cost operational improvement to improve transit travel time along Soquel Ave/Dr and Freedom Blvd, two of the main arterials through Santa Cruz County. By improving transit travel time and travel time reliability, transit ridership could increase, reducing VMT and therefore greenhouse gas emissions. BRT lite can be implemented incrementally as each intersection that is reconfigured for BRT lite can reduce transit travel times. As transit is prioritized, auto travel time may be increased.

Step 1 Criteria		Rating	**Evaluation**	**Narrative**
Community Support and Consistency with Applicable Plans	**Positives/ Neutral**		✓ Consistent with long range planning effort (2014 RTP) ✓ Agency support (Metro staff) ✓ Consistent with other planning efforts (2015 Sustainable Santa Cruz County, Santa Cruz Corridors Plan)	▫ This project is consistent with recent planning efforts focused on improving transportation options on Soquel Ave/Dr by the County and City of Santa Cruz and is listed in the 2014 Regional Transportation Plan.
	Negatives		× May have some public opposition	▫ Traffic impacts due to transit priority at intersections and moving on-street parking to alternate locations in some sections could be opposed by motoring public and some businesses. ▫ Members of the public, some represented by advocacy groups, oppose parking being relocated from Soquel Ave and have signature gathering efforts in progress.
Addresses Transportation Challenges & Environmental, Economic, and Equity Goals	**Positives/ Neutral**		Economic ✓ Improves transit travel time ✓ Improves transit travel time reliability ✓ Improves access to jobs, education and services Environmental ✓ Mode shift to transit ✓ Reduces VMT and GHG. Equity ✓ Improves access for people	▫ The reason for implementing bus rapid transit lite would be to decrease transit travel times and improve transit travel time reliability by allowing transit to have priority at intersections and decrease boarding times. Faster and more reliable transit travel times will promote increased ridership, reducing VMT and GHG emissions. Transit improvements support lower cost transportation options which can reduce household transportation costs and benefit people who don't drive including, but not limited to, youth, seniors, people with disabilities, low income, and minorities.

Step 1 Criteria		Rating	Evaluation	Narrative
			who do not drive ✓ Reduces household transportation costs	
	Negatives		Economic × Increases auto travel time Environmental × Traffic impacts (at intersections)	▫ Intersection improvements for transit may have a negative effect on auto travel time as autos will need to wait for transit to move through the intersection.
Compatible with Regulatory Requirements	Positives/ Neutral		✓ Consistent with legislation (SB 375, SB 32) ✓ Consistent with design standards (local transit standards)	▫ SB 375 and SB 32 require reductions in GHG emissions. Faster transit travel times could make transit a more convenient alternative to driving and encourage a shift from driving to transit.
	Negatives			
Level of Public Investment	Positives/ Neutral		✓ Minor new investment for capital costs required ✓ No new investment for operations costs required ✓ Some funding sources may be available for capital costs (FTA5309-New/Small Starts, TIGER, STIP, STBG, SB 1-LPP & CC, LCTOP, TIRCP)	▫ Capital costs include new traffic signals with transit signal priority, reconfiguration of the intersection for a transit queue jump lane and electronic board payment or boarding platforms. ▫ Existing transit services on Soquel Ave/Dr and Freedom Blvd would continue and benefit from faster travel times. No additional transit service is planned as part of the BRT lite project and thus no additional operational costs are required.
	Negatives			
Right-of-Way and Constructability Constraints	Positives/ Neutral		✓ Minor amounts of right of way may need to be acquired ✓ Project is readily constructible ✓ Could be built in phases	▫ BRT lite could be built in phases to work towards a continuous BRT lite system for the entire Soquel and Freedom route. Intersections with enough right of way could be reconfigured to incorporate transit priority initially. Intersections with limited right of way could be reconfigured over time as right of way is acquired.
	Negatives		× Parking may need to be moved	▫ On-street parking still exists along certain areas of Soquel Ave/Dr and Freedom Blvd. Utilizing the current right of way to prioritize transit may require moving parking to alternate locations.
Technological Feasibility	Positives/ Neutral		✓ Technologically feasible	▫ Transit signal priority, transit queue jumps and faster boarding strategies are common uses of technology applied as a means for improving transit travel times.
	Negatives			

Route	**Soquel Ave/Dr and Freedom Blvd**
Project Title	Dedicated Lanes for Bus Rapid Transit and Biking
Project Description	A branded bus rapid transit system on Soquel Ave/Dr and Freedom Blvd with dedicated lanes where feasible shared with biking. The dedicated lanes would occupy the existing right hand general purpose lane in segments where there are a minimum of 2 lanes in each direction. Intersections would be reconfigured for transit signal priority. Transit queue jumps would be provided where dedicated lanes are not feasible. Faster boarding would also be implemented through platform level boarding and electronic or off-board fare collection. Frequency of buses would be increased to 10 minute headways. Bus stops would be located to promote fast bus service and travel time, preferably at the downstream side of intersections.
Overall Rating	Neutral
Summary	BRT on dedicated lanes will significantly improve transit travel time along Soquel Ave/Dr and Freedom Blvd, two of the main arterials through Santa Cruz County. By improving travel time and travel time reliability, transit ridership could increase, reducing VMT and therefore greenhouse gas emissions. BRT can be implemented in phases with priority in sections with the greatest congestion. Shared bus-bike lanes provide basic bicycle access on transit-focused streets when no space is available for dedicated bikeways. Biking in a lane shared with BRT would create a safer biking facility and increase bicycle ridership as they generally travel at similar speeds and thus "leap frogging" is less likely. As transit and biking is prioritized, auto travel time will be increased.

Step 1 Criteria		Rating	**Evaluation**	**Narrative**
Community Support and Consistency with Applicable Plans	**Positives/ Neutral**		✓ Consistent with long range planning effort (2014 RTP) ✓ Agency support (Metro staff) ✓ Consistent with other planning efforts (2015 Sustainable Santa Cruz County, Santa Cruz Corridors Plan)	▫ This project is consistent with recent planning efforts focused on improving transportation options on Soquel Ave/Dr by the County and City of Santa Cruz and is listed in the 2014 Regional Transportation Plan.
	Negatives		× May have some public opposition	▫ Traffic impacts due to transit priority at intersections, reducing the existing two general purpose travel lanes to one travel lane and moving on-street parking to alternate locations in some sections could be opposed by motoring public and some businesses.
Addresses Transportation Challenges & Environmental, Economic, and Equity Goals	**Positives/ Neutral**	Neutral	<u>Economic</u> ✓ Improves transit travel time ✓ Improves transit travel time reliability ✓ Improves access to jobs, education and services <u>Environmental</u> ✓ Mode shift to transit ✓ Mode shift to biking ✓ Reduces VMT and GHG. <u>Equity</u> ✓ Improves access for people who do not drive	▫ The reason for implementing bus rapid transit is to decrease transit travel times and improve transit travel time reliability by allowing transit to travel unrestricted by auto traffic. Faster and more reliable transit travel times will promote increased ridership, reducing VMT and GHG emissions. Transit improvements support lower cost transportation options which can reduce household transportation costs and benefit people who don't drive including youth, seniors, people with disabilities, low income, and minorities. Access to jobs, education and services would be improved for transit riders but decreased for autos. ▫ A dedicated lane shared between buses and bikes would also provide a safer bicycling facility and promote increased bike ridership.

Step 1 Criteria		Rating	Evaluation	Narrative
			✓ Reduces household transportation costs	
	Negatives		Economic × Increases auto travel time Environmental × Traffic impacts	▫ Converting a general purpose lane to a dedicated lane for transit and biking will have significant traffic impacts and a substantial negative effect on auto travel time and travel time reliability.
Compatible with Regulatory Requirements	Positives/ Neutral		✓ Consistent with legislation (SB 375, SB 32, FAST Act) ✓ Consistent with design standards (local transit standards)	▫ SB 375 and SB 32 require reductions in GHG emissions. Faster transit travel times could make transit a more convenient alternative to driving and encourage a shift from driving to transit. Increased bicycle ridership will also contribute to reductions in VMT. ▫ FAST Act legislation will require AMBAG to meet regional targets for safety. Targets are currently being determined by the state for the MPOs and may need to be met in the next few years. A designated lane shared between buses and bicyclists can improve safety to help meet regional targets.
	Negatives			
Level of Public Investment	Positives/ Neutral		✓ Minor new investment for capital costs required ✓ Minor new investment for operational costs required ✓ Some funding sources may be available for capital costs (FTA5309-New/Small Starts, TIGER, STIP, STBG, SB 1-LPP & CC, LCTOP, TIRCP, ATP) ✓ Some funding sources may be available for operational cost (Fares, STA, TDA, LCTOP, TIRCP)	▫ Capital costs include new traffic signals with transit signal priority, reconfiguration of the intersection for a transit queue jump lane and electronic board payment or boarding platforms. Frequency of transit services on Soquel and Freedom would increase and benefit from faster travel times.
	Negatives			
Right-of-Way and Constructability Constraints	Positives/ Neutral		✓ Minor amounts of right-of-way may need to be acquired ✓ Project is readily constructible ✓ Could be built in phases	▫ BRT could be built incrementally over time to work towards a more complete BRT system. Roadway segments with 2 general purpose lanes in each direction in congested areas could be prioritized first for converting to BRT. Intersections with enough right-of-way could be reconfigured to incorporate transit priority initially.
	Negatives		× Parking may need to be moved	▫ On-street parking still exists along certain areas of Soquel Ave/Dr and Freedom Blvd. Utilizing the current right of way for dedicated lanes for transit and bicyclists may require moving parking to alternate locations.
Technological Feasibility	Positives/ Neutral		✓ Technologically feasible ✓ Could accommodate future technologies	▫ Dedicated transit lanes, transit signal priority, transit queue jumps and faster boarding strategies are common uses of technology as a means for improving transit travel times. Autonomous transit could utilize dedicated lanes in future.
	Negatives			

Route	**Soquel Ave/Dr and Freedom Blvd**
Project Title	Increased Transit Frequency with Express Service
Project Description	Increased bus frequency on Soquel Ave/Dr and Freedom Blvd to increase headways to every 10 minutes along Soquel Ave/Dr, every 10 minutes along Freedom Blvd within the City of Watsonville and every 15 minutes on Freedom Blvd in rural areas.
Overall Rating	
Summary	Increased frequency of transit service along Soquel Ave/Dr and Freedom Blvd is a minor cost operational improvement to increase transit ridership along two of the major arterials connecting Watsonville to City of Santa Cruz. Increased frequency of service has been shown to increase ridership although without reductions in transit travel time, the increase in ridership will not likely be significant. Increased transit frequency will improve access for people who do not drive including youth, seniors, people with disabilities, low income and minorities. An increase in ridership will reduce VMT and therefore greenhouse gas emissions.

Step 1 Criteria		Rating	Evaluation	Narrative
Community Support and Consistency with Applicable Plans	**Positives/ Neutral**		✓ Consistent with long range planning effort (2014 RTP) ✓ Agency support (Metro staff) ✓ Consistent with other planning efforts (2015 Sustainable Santa Cruz County, Santa Cruz Corridors Plan)	▫ Public expressed support for increases in transit service when Metro restructured service in 2016 due to budget shortfalls. ▫ Increasing transit frequency is included in the 2014 Regional Transportation Plan. Partner agency, public and stakeholder input are solicited at key milestones of the RTP development. ▫ This project is consistent with recent planning efforts focused on improving transportation options on Soquel Ave/Dr by the County and City of Santa Cruz.
	Negatives			
Addresses Transportation Challenges & Environmental, Economic, and Equity Goals	**Positives/ Neutral**	Neutral	Economic ✓ Improves access to jobs, education and services Environmental ✓ Mode shift to transit ✓ Reduces VMT and GHG. Equity ✓ Improves access for people who do not drive ✓ Reduces household transportation costs	▫ Increasing transit frequency makes it easier for people to take transit and thus will promote increased ridership, reducing VMT and GHG emissions. However, increasing frequency may attract few new riders if transit travel times are not also improved in congested areas. Transit improvements support lower cost transportation options which can reduce household transportation costs and benefit people who don't drive including youth, seniors, people with disabilities, low income, and minorities.
	Negatives			
Compatible with Regulatory Requirements	**Positives/ Neutral**		✓ Consistent with legislation (SB 375, SB 32)	▫ SB 375 and SB 32 require reductions in GHG emissions. More frequent transit service could encourage a shift from driving to transit.
	Negatives			

Step 1 Criteria		Rating	Evaluation	Narrative
Level of Public Investment	Positives/ Neutral		✓ Minor new investment for capital costs required ✓ Minor new investment for operations costs required ✓ Some funding sources may be available for capital costs (STIP, STBG, LCTOP)	▫ Capital costs include new buses to support more frequent service. Capital costs could be funded from a number of sources including STIP, STBG and LCTOP).
	Negatives		× Few funding sources may be available for operational costs (Fares, STA, TDA, LCTOP, TIRCP)	▫ Operational costs could be funded from a number of sources including Fares, STA, TDA, LCTOP, and TIRCP although recent budget cuts reduced the level of transit service in 2016.
Right-of-Way and Constructability Constraints	Positives/ Neutral		✓ Right of way is sufficient ✓ Project is readily implemented ✓ Could be implemented in phases	▫ There are no ROW or constructability constraints for this project.
	Negatives			
Technological Feasibility	Positives/ Neutral		✓ Technologically feasible ✓ Could accommodate future technologies	▫ Autonomous vehicles could be accommodated in future.
	Negatives			

Route	Soquel Ave/Dr and Freedom Blvd
Project Title	Buffered/protected bike lanes
Project Description	Bike lanes currently exist along much of Soquel Ave/Dr and Freedom Blvd. Where feasible, this project would widen the bicycle lanes to 5 feet and provide a 1-2 feet buffer zone next to the lanes with either striping or a physical barrier to clearly mark the area for bicycle travel. Bike boxes can be provided at signalized intersections where shared lanes are required.
Overall Rating	
Summary	Buffered/protected bike lanes are a low cost solution to improve safety for bicyclists if the right-of-way is available. The added width of the bicycle lanes with the additional buffer from high volume and high speed traffic would likely increase bicycle ridership as people feel more comfortable with the increased spacing from fast moving traffic. The right-of-way on Soquel and Freedom is limited and thus the feasibility to reconfigure the roadway design to accommodate buffered/protected bike lanes still needs to be determined. If right-of-way needs are substantial, environmentally sensitive areas may be impacted and permits may be required.

Step 1 Criteria		Rating	Evaluation	Narrative
Community Support and Consistency with Applicable Plans	Positives/ Neutral		✓ Consistent with other planning efforts (2015 Sustainable Santa Cruz County) ✓ Consistent with long range planning effort (2014 RTP)	▫ There is considerable support for bicycle facilities throughout Santa Cruz County, especially protected ones. RTC policy supports safe multimodal transportation options especially for the most vulnerable users.
	Negatives		× May have some public opposition	▫ Right-of-way may be a challenge to accommodate the motor vehicle general purpose lanes and the additional width required for a protected bicycle lane. Parking may need to be moved to alternate locations to accommodate improved bicycle facilities. ▫ Members of the public, some represented by advocacy groups, oppose parking being relocated from Soquel Ave and have signature gathering efforts in progress. ▫ Some members of the public may oppose buffered bike lanes if there are impacts to auto travel.
Addresses Transportation Challenges & Environmental, Economic, and Equity Goals	Positives/ Neutral		Economic × Improves access to jobs, education and services × Potential to decrease individual and community health care costs Environment × Mode shift to biking × Reduces VMT and GHG Equity × Improves health × Improves safety × Improves access for people	▫ A buffered/protected bike lane on Soquel Ave/Dr and Freedom Blvd will provide a more comfortable and safer facility for bicyclists. This in turn encourages people to shift from driving to biking, reducing VMT and GHG emissions. Additional benefits include increased physical activity (resulting in decreased health care costs) and improved access using active transportation, which can reduce transportation costs, and benefit people who don't drive including youth, some seniors, and low income individuals.

Step 1 Criteria		Rating	Evaluation	Narrative
			who do not drive × Reduces household transportation costs	
	Negatives		Environmental × Traffic Impacts	▫ Traffic may be impacted by reducing the width of the general purpose lanes slightly to accommodate the wider bicycle facilities. ▫ Moving parking to alternate locations to accommodate a wider bicycling facility may impact nearby businesses ▫ If right-of way is required, environmentally sensitive areas may be impacted including agricultural lands and soil characterization and remediation may be required
Compatible with Regulatory Requirements	Positives/ Neutral		✓ Consistent with legislation (SB 375, SB 32, FAST Act) ✓ Consistent with design standards (Caltrans standards, NACTO and AASHTO guidelines)	▫ SB 375 and SB 32 require reductions in GHG emissions. A comfortable and safer active transportation facility could encourage people to shift from driving to biking, reducing VMT and GHG emissions. ▫ The buffered/protected bike lanes can be designed to Caltrans standards and AASHTO best practices. The new tools available within the regulatory context encourage this application. ▫ FAST Act legislation will require AMBAG to meet regional targets for safety. Targets are currently being determined by the state for the MPOs and may need to be met in the next few years. Protected bike lanes can improve safety to help meet regional targets.
	Negatives			
Level of Public Investment	Positives/ Neutral		✓ Minor new investment for capital costs required ✓ Minor new investment for operational costs required ✓ Several funding sources may be available for capital costs (ATP, Measure D LJ allocation, SRTS) ✓ Some funding sources may be available for operating costs (STIP, STBG, Measure D -local, ATP, HUTA)	▫ Funding may be available for capital costs through several sources including ATP, Measure D allocation to local jurisdictions, HUTA, SRTS, STIP and STBG. If right-of-way needs are substantial, cost for project will escalate.
	Negatives			
Right-of-Way and Constructability Constraints	Positives/ Neutral	Neutral	✓ Minor amounts of right-of-way may need to be acquired ✓ Could be built in phases ✓ Project is readily constructible	▫ Additional right-of-way may be needed to accommodate a fully protected bike lane. Project could be built incrementally since there are significant benefits as incremental improvements are made. ▫ If right-of-way needs are substantial, cost for project will escalate, environmentally sensitive areas may be impacted and associated permits may be required
	Negatives		× Parking may need to be moved	▫ On-street parking still exists along segments of Soquel Ave/Dr and Freedom Blvd. Utilizing the current right-of-way to include a wider bicycling facility may require moving parking to alternate locations.
Technological Feasibility	Positives/ Neutral		✓ Technologically feasible	▫ Buffered/protected bicycle facilities are currently technologically feasible and are becoming more and more common throughout the country.

Step 1 Criteria		Rating	Evaluation	Narrative
	Negatives			

Route	**Soquel Ave/Dr and Freedom Blvd**
Project Title	Intersection Improvements for autos
Project Description	The project would improve intersections along Soquel Ave/Dr and Freedom Blvd for auto travel. Improvements include modifying design and adding turn lanes in numerous locations including Soquel/Morrissey/Poplar and Soquel/Frederick in the City of SC and Soquel/41st, Soquel/Bay-Porter, and Soquel/Robertson in the county. Intersection improvements along Freedom Blvd in the City of Watsonville include Freedom/Green Valley, Freedom/Airport and Freedom/Buena Vista. Widening of Soquel between Branciforte and Morrissey is also being considered here.
Overall Rating	
Summary	The intersection improvements are a low cost option that will improve traffic operations, travel time and reliability, safety, and access to local destinations.

Step 1 Criteria		Rating	**Evaluation**	**Narrative**
Community Support and Consistency with Applicable Plans	**Positives/ Neutral**		✓ Consistent with long range planning effort (2014 RTP, City of SC General Plan, County of SC General Plan, Watsonville General Plan) ✓ Multi-agency support (City of Santa Cruz, County of Santa Cruz, Watsonville, RTC)	▫ Numerous intersection improvement projects on Soquel and Freedom are included in the 2014 RTP. These projects are consistent with local planning goals and policies.
	Negatives			
Addresses Transportation Challenges & Environmental, Economic, and Equity Goals	**Positives/ Neutral**		<u>Economic</u> ✓ Improves auto travel time ✓ Improves auto travel time reliability ✓ Improves transit travel time ✓ Improves transit travel time reliability ✓ Improves access to jobs, education and services ✓ Potential to increase land use development, business activity, employment and visitor tax revenues <u>Equity</u> ✓ Improves safety	▫ The intersection improvements will improve traffic flow on Soquel Ave/Dr and Freedom Blvd improving safety, travel time and travel time reliability to destinations all along the route. Commuters, commerce, and emergency vehicles will benefit from these improvements.
	Negatives			
Compatible with	**Positives/ Neutral**		✓ Consistent with design standards (Caltrans)	▫ FAST Act legislation will require AMBAG to meet regional targets for safety and travel time reliability. Targets are currently being determined by the state for the MPOs and may need

Step 1 Criteria		Rating	Evaluation	Narrative
Regulatory Requirements			✓Standard permitting process ✓Consistent with legislation (FAST Act)	to be met in the next few years. Auto intersection improvements can improve safety and travel time reliability for motorists to help meet regional targets.
	Negatives			
Level of Public Investment	Positives/ Neutral		✓Minor new investment for capital costs required ✓No new investment for operational costs required ✓Some funding may be available for capital costs (STIP, STBG, Measure D -local, HUTA)	▫ Funding may be available for capital costs through a number of sources including the Measure D allocation to local jurisdictions, HUTA, STIP and STBG.
	Negatives			
Right-of-Way and Constructability Constraints	Positives/ Neutral		✓Minor amounts of ROW may need to be acquired ✓Project is readily constructible	▫ Intersection improvements to add turn lanes may need additional ROW.
	Negatives			
Technological Feasibility	Positives/ Neutral		✓Technologically feasible	▫ Improvements are technologically feasible
	Negatives			

Route	**Soquel Ave/Dr and Freedom Blvd**
Project Title	Bike and Pedestrian Intersection Improvements
Project Description	Project would improve intersections for bicyclists and pedestrians along Soquel Ave/Dr and Freedom Blvd using a variety of best practices including bike boxes, green lane treatments, bulb outs, islands, and bicycle and pedestrian priority at intersections.
Overall Rating	
Summary	Bicycle and pedestrian improvements at intersections are a low cost solution to improve safety for the most vulnerable transportation users. Safety improvements at intersections are the most critical as the majority of collisions occur at intersections. As safety for bicyclists and pedestrians is improved, people become more comfortable with choosing walking or biking as a way to access their destinations.

Step 1 Criteria		Rating	**Evaluation**	**Narrative**
Community Support and Consistency with Applicable Plans	**Positives/ Neutral**		✓ Consistent with other planning efforts (2015 Sustainable Santa Cruz County) ✓ Consistent with long range planning effort (2014 RTP)	▫ There is considerable support for bicycle facilities throughout Santa Cruz County, especially improvements that promote safety of bicyclists and pedestrians. RTC policy supports safe multimodal transportation options especially for the most vulnerable users.
	Negatives			
Addresses Transportation Challenges & Environmental, Economic, and Equity Goals	**Positives/ Neutral**		Economic ✓ Improves job and education access ✓ Decreases individual and community health care costs Environment ✓ Mode shift to biking ✓ Mode shift to walking ✓ Reduces VMT and GHG Equity ✓ Improves access for people who do not drive ✓ Reduces household transportation costs ✓ Improves safety ✓ Improves health	▫ Intersection improvements for bicyclists and pedestrians on Soquel Ave/Dr and Freedom Blvd will have the ability to greatly improve safety and help to shift people from driving to biking and walking. This in turn reduces VMT and GHG emissions. Additional benefits include decreased health care costs; improved active transportation access for youth, some seniors and people who do not drive a car; and a reduction in transportation costs.
	Negatives		Environmental × Traffic Impacts	▫ Traffic may be impacted by reconfiguring intersections to accommodate bicycle and pedestrian safety improvements.
Compatible with	**Positives/ Neutral**		✓ Consistent with legislation (SB 375, SB 32) ✓ Consistent with design	▫ SB 375 and SB 32 require reductions in GHG emissions. Intersection improvements for bicyclists and pedestrians on Soquel Ave/Dr and Freedom Blvd would help reduce GHG by providing safer active transportation facilities.

Regulatory Requirements			standards (Caltrans standards, NACTO and AASHTO guidelines) ✓ No additional permits required	▫ Bike and pedestrian intersection improvements will follow design standards or best practices although some treatments for bicycles and pedestrians at intersections are newer to the county, though many neighboring regions employ them extensively.
	Negatives			
Level of Public Investment	**Positives/ Neutral**		✓ Minor new investment for capital costs required ✓ Minor new investment for operational costs required ✓ Several funding sources may be available for capital costs (STIP, STBG, Measure D -local, ATP, HUTA, SRTS) ✓ Some funding sources may be available for operating costs (Measure D-local, HUTA, general funds)	▫ Funding may be available for capital costs through a number of sources including the ATP, Measure D allocation to local jurisdictions, HUTA, SRTS, STIP and STBG.
	Negatives			
Right of Way and Constructability Constraints	**Positives/ Neutral**		✓ Minor amounts of right of way may need to be acquired ✓ Could be built incrementally ✓ Project is readily constructible	▫ Additional right of way may be needed to accommodate intersection improvements. Project could be built incrementally since there are significant benefits as incrementally improvements are made.
	Negatives			
Technological Feasibility	**Positives/ Neutral**		✓ Technologically feasible ✓ Could accommodate future technologies	▫ Bicycle and pedestrian intersection improvements are currently technologically feasible and are becoming more and more common throughout the country.
	Negatives			

Route	**Rail Right-of-Way (ROW)**
Project Title	Bike and Pedestrian Trail
Project Description	A bicycling and pedestrian trail along the rail right-of-way will span the 32-mile distance from Davenport on the north coast to Watsonville in south county. The trail will serve transportation, recreation and interpretive uses for walkers, joggers, bicyclists, people with mobility impairments, and families. The trail will pass within 1 mile of half of the County's population and will provide access to 44 schools and 92 parks including several beaches along the Monterey Bay. The width of the trail will vary depending on right-of-way and slope constraints but will range from 12 feet to 16 feet wide or wider for trail with transit and could be wider if a "trail-only" option is implemented. Connectivity to origins and destinations within the two-mile wide unified corridor will be provided via the existing and planned bike and pedestrian network infrastructure.
Overall Rating	
Summary	A biking and walking trail along the rail corridor, separated from motor vehicle traffic, will provide a new, safe, and more comfortable active transportation facility which could encourage people to shift from driving to biking and walking. Benefits include safety and health improvements, greenhouse gas emission reductions, and economic benefits from a trail facility that will attract both residents and visitors. A trail will improve access for people who do not drive including youth, low income, and minorities as well as some seniors and people with disabilities. A bike and pedestrian trail could be combined with rail or bus transit on the rail right-of-way or the trail could be the only facility in the rail right-of-way. Walking and biking are typically travel options for shorter trips but if combined with transit can extend travel distances significantly.

Step 1 Criteria		Rating	**Evaluation**	**Narrative**
Community Support and Consistency with Applicable Plans	**Positives/ Neutral**		✓ RTC policy ✓ Project specific planning effort with public input (Monterey Bay Sanctuary Scenic Trail Master Plan (MBSST)) ✓ Project specific planning effort (Completing the California Coastal Trail) ✓ Consistent with long range planning effort (2014 RTP) ✓ Environmental Impact Report completed (MBSST EIR) ✓ Multi-agency support (Cities of Santa Cruz, Capitola and Watsonville; County of Santa Cruz; Coastal Conservancy) ✓ Supported by voters through passage of Measure D	▫ Voters approved Measure D in November 2016 which allocates funds for trail within the rail right-of-way. <u>Trail with Rail</u> ▫ The Monterey Bay Sanctuary Scenic Trail (MBSST) Master Plan establishes the alignment and a set of design standards for a bike and pedestrian trail within the rail right-of-way alongside the existing railroad track. The MBSST Master Plan went through a 3 year comprehensive and inclusive public and stakeholder outreach process and was adopted by the RTC in November 2013 and a revision in February 2014. Each of the local jurisdictions that the trail passes through (Cities of Watsonville, Santa Cruz, Capitola and Santa Cruz County) also adopted the MBSST Master Plan. A policy that was adopted in the Master Plan states "Develop trails in such a way so that future rail transit services along the corridor are not precluded." <u>Trail Only</u> ▫ Members of the public, some represented by advocacy groups, support a trail only option and have campaigns and/or signature gathering efforts in progress.
	Negatives		× May have some public	▫ Some farmers in the vicinity of Harkins Slough are concerned about the impacts of a trail on

Step 1 Criteria		Rating	Evaluation	Narrative
			opposition	crop production. Restrictions on spraying of crops to times when people are not in the vicinity, fecal matter from pets, farm equipment restrictions over the trail and other issues have raised concerns. Trail with Rail ▫ Farmers on north coast oppose trail if trail is not located in rail bed. Trail-Only or Trail with BRT ▫ Trail-only and trail with BRT options have not gone through a comprehensive public process. If the community decides to use the rail right-of-way only for a trail or for trail with BRT, it would require a new planning effort to solicit public input and more fully assess impacts and costs.
Addresses Transportation Challenges & Environmental, Economic, and Equity Goals	**Positives/ Neutral**		Economic ✓ Improves access to jobs, education and services ✓ Decreases individual and community health care costs ✓ Potential to increase property values ✓ Recreational asset with potential to increase business activity and visitor tax revenues Environmental ✓ Mode shift to biking ✓ Mode shift to walking ✓ Reduces VMT and GHG Equity ✓ Improves health ✓ Improves safety ✓ Improves access for people who do not drive ✓ Reduces household transportation costs	▫ A trail separated from motor vehicles will provide a more comfortable and safer facility for people to ride bicycles and walk. This in turn encourages people to shift from driving to biking and walking for transportation, reducing VMT and GHG emissions. Additional benefits include increased physical activity (resulting in decreased health care costs) and increased visitor revenues associated with recreation on the trail. Properties along a trail separated from automobiles have been shown in other communities to increase in value. A trail on the rail right-of-way will provide new access to a low cost transportation option for shorter trips, which can reduce transportation costs and benefit people who don't drive including, youth, seniors, people with disabilities, low income, and minorities. Trail with Rail or Trail with BRT ▫ If trail use is combined with transit, the new facility will support longer trips for communities of south county who work in the Santa Cruz area.
	Negatives		Economic × Potential agricultural impacts Environmental × Environmentally sensitive areas may be impacted × Soil sampling, testing and/or remediation of contaminated soils may be needed	▫ Increased rail corridor use may impact agricultural lands that have been encroaching on the ROW. ▫ The trail may impact environmentally sensitive areas that have been found along the rail corridor as part of the MBSST EIR. ▫ Soil contaminants have been found along the rail corridor. Soil along rail corridor may need to be assessed for contaminants and possibly remediated. Construction of a paved surface over the bare soil could serve as the remediation for some of the contaminants. Trail with Rail or Trail with BRT

Step 1 Criteria		Rating	Evaluation	Narrative
			× Traffic impacts (at roadway crossings) Equity × Potential conflicts between modes (BRT and trail users- fencing could reduce conflicts; people riding bikes and people walking - separation could reduce the potential conflicts).	▫ A trail alongside transit in the rail corridor will provide numerous opportunities for separating biking and walking. If trail is not separated by use, potential safety conflicts could occur between bicyclists and pedestrians. ▫ More vegetation would likely need to be removed to accommodate a trail next to transit. ▫ Fencing between trail and rail is included in the MBSST trail design to reduce conflicts and utilize best practices for safety. Fencing may be recommended between trail and BRT for reducing conflicts and best practices for safety. Fencing between trail and transit may limit access to some destinations along the rail ROW. Trail Only ▫ A trail-only option could allow for separation of bicyclists and pedestrians along a greater portion of the rail line. The rail bridges and other constrained locations with elevation changes may not allow separation. ▫ Fencing would not be needed for a trail only option. Less vegetation would need to be removed for trail-only option and may be able to avoid environmentally sensitive areas.
Compatible with Regulatory Requirements	**Positives/ Neutral**		✓ Consistent with legislation (SB 908, SB 375, SB 32, FAST Act) ✓ Consistent with state law (Trail and Rail -Proposition 116) ✓ Consistent with design standards (Caltrans, AASHTO, MUTCD) ✓ Standard permitting process	▫ Senate Bill 908 requires the State Coastal Conservancy to complete a plan to develop the California Coastal Trail. The entire MBSST project and trail along the rail right-of-way will serve as the California Coastal Trail through Santa Cruz County, as agreed to by the California Coastal Commission and the California Coastal Conservancy. ▫ SB 375 and SB 32 require reductions in GHG emissions. A comfortable and safer active transportation facility could encourage people to shift from driving to biking and walking, reducing VMT and GHG emissions. ▫ FAST Act legislation will require AMBAG to meet regional targets for safety. Targets are currently being determined by the state for the MPOs and may need to be met in the next few years. A bike and pedestrian trail separated from auto traffic can improve safety to help meet regional targets. ▫ Any trail that is designed for the rail corridor can be designed to meet trail design standards. Trail with Rail ▫ The Santa Cruz Branch Rail Line was purchased using Proposition 116 funds which were allocated for passenger rail capital projects. Trail with rail would meet these requirements.
	Negatives		× Not consistent with state law (Trail Only and Trail with BRT - Proposition 116)	Trail Only or Trail with BRT ▫ If rail right-of-way will not be used for passenger rail service, at least $11 million and possibly up to $25 million or more in funds will need to be returned to CTC because Proposition 116 requirements will not be met and the project will not be consistent with the funding application for purchase and rehabilitation of right-of-way.
Level of Public Investment	**Positives/ Neutral**		✓ Some funding already allocated for capital costs (Measure D – all Trail options) ✓ Some funding already allocated for capital costs (FLAP, ATP, Land Trust – Trail	Trail with Rail ▫ Funding that has been acquired from FLAP, ATP and Land Trust for capital costs assumes the trail alongside rail tracks. Trail Only ▫ Constructing the trail-only option could potentially require less capital costs than trail with

Step 1 Criteria		Rating	Evaluation	Narrative
			with Rail) ✓ Some funding sources may be available for capital costs (Measure D, ATP, STIP, STBG, FLAP, HSIP) ✓ Some funding already allocated for maintenance costs (Measure D) ✓ Some funding sources may be available for maintenance costs (HUTA, general funds) ✓ Minor new investment for maintenance required ✓ Moderate new investment for capital costs required	transit due to ability to use current rail bridges.
	Negatives		× Potential to lose funds (FLAP, ATP, Land Trust – Trail Only or Trail with BRT) × Additional funds/time needed (to revise current direction – Trail Only and Trail with BRT)	Trail Only or Trail with BRT ▫ If rail right-of-way will not be used for passenger rail service, at least $11 million and possibly up to $25 million or more in funds will need to be returned to CTC because Proposition 116 requirements are not met and the project will not be consistent with the funding application for purchase and rehabilitation of right-of-way. ▫ Funds currently allocated for trail from FLAP and ATP will not meet deadline for use of funds and thus will likely be lost. ▫ Costs and time to revise current direction are unknown (additional costs include new public outreach process, negotiations with CTC and Iowa Pacific, applying for abandonment of rail to Surface Transportation Board, soil contaminants assessment and mitigation, legal fees)
Right-of-way and Constructability Constraints	**Positives/ Neutral**		✓ ROW is sufficient (for Trail Only) ✓ Minor amounts of ROW may need to be acquired (trail with transit) ✓ Can be constructed in phases	▫ Project can be implemented in phases with independent utility as funding becomes available. ▫ Trail widths for the rail ROW as designed in the MBSST are paved widths of 8 to 12 feet wide or wider if right-of-way exists with 2 foot shoulders on either side. Trail with Transit (Rail or BRT) ▫ The ROW for trail with transit will accommodate a trail with many segments that can accommodate bike and pedestrian separation, especially where higher volumes may be expected. ▫ Additional ROW may be needed for stations and rail sidings. In some locations where the rail right-of-way is constrained, the bicycle and pedestrian route could be routed to on street facilities.
	Negatives		× Construction challenges may require additional funds or alternative design	Trail with Rail or Trail with BRT ▫ Trail with transit will require more retaining walls than a trail only option. Alternative alignments to on-street facilities may be required if expense of additional bridges to accommodate bike and pedestrian movement is too high.

Step 1 Criteria		Rating	Evaluation	Narrative
Technological Feasibility	**Positives/ Neutral**		✓ Technologically feasible ✓ Could accommodate future technologies	▫ Construction of trail is technologically feasible. ▫ Present and future pedal assist technologies could potentially be accommodated based on speed limitations.
	Negatives			

Route	**Rail Right-of-Way**
Project Title	Local rail transit with inter-regional connections
Project Description	Rail transit along the rail right-of-way would provide passenger rail transit service between the Westside of Santa Cruz and downtown Watsonville with service to approximately 10 stations along the corridor. Service would run on a frequency of every 30 minutes during the weekdays in each direction. Additional sidings will be needed to accommodate passing of trains due to single set of tracks. Recreational rail service would also be provided between the Westside of Santa Cruz and Davenport seasonally on weekends and holidays.
Overall Rating	
Summary	Rail transit would increase transportation choices, provide an alternative to congestion, and has the potential to shift people from driving to taking transit, thereby reducing vehicle miles traveled (VMT) and greenhouse gas emissions. Rail transit increases options for seniors, youth, people with disabilities, low-income, and those who cannot or do not drive. Rail transit can improve transit travel time and travel time reliability. Rail transit can carry many bicycles to help increase the range for bicyclists and encourage greater bicycle use for longer trips in combination with transit. Rail transit also encourages more intensive and compact use of land surrounding stations (transit oriented development) making more efficient use of limited land, ensuring greater levels of open space and helping to reduce automobile traffic, environmental impacts and GHG emissions.

Step 1 Criteria		Rating	Evaluation	Narrative
Community Support and Consistency with Applicable Plans	**Positives/ Neutral**		✓ Project specific planning effort with public input (Rail Transit Feasibility Study) ✓ Consistent with RTC policy (MBSST, policy 1.2.4) ✓ Consistent with long range planning effort (2014 RTP) ✓ Consistent with other planning efforts (MBSST Master Plan, 2013 California State Rail Plan) ✓ Advocacy groups in support of project	▫ The current RTC policy is for a trail to be developed along the rail corridor so that future rail transit is not precluded. Rail transit along the Santa Cruz Branch Rail Line could provide not only local transit but also interregional connections through Pajaro Station to Gilroy to connect to the high speed rail line that is currently being developed as well as the planned extension of Capitol Corridor service to Salinas and planned extension of the Coast Daylight to run between Los Angeles and San Francisco along the coast. ▫ Members of the public, some represented by advocacy groups, support rail with trail and have campaigns and/or signature gathering efforts in progress.
	Negatives		× May have some public opposition	▫ Horn noise from trains as required at roadway crossings has raised concerns. Horn noise could be mitigated with adequate crossing improvements and approval by the Federal Railroad Administration (FRA.) ▫ Members of the public, some represented by advocacy groups, support a trail only option and have campaigns and/or signature gathering efforts in progress.
Addresses Transportation Challenges &	**Positives/ Neutral**		Economic ✓ Improves transit travel time ✓ Improves transit travel time reliability	▫ Rail transit on the rail corridor could provide another option for how Santa Cruz County residents and visitors travel through the county. It could improve access to jobs and education centers by providing an alternative to congested roadways and provide a faster transit connection between Santa Cruz and Watsonville. Rail transit could increase the

Step 1 Criteria		Rating	Evaluation	Narrative
Environmental, Economic, and Equity Goals			✓ Improves access to jobs, education and services ✓ Potential to increase land use development, business activity, employment and tax revenues ✓ Recreational asset with potential to increase visitor tax revenues and benefit businesses (north coast section) Environmental ✓ Mode shift to transit ✓ Reduces VMT and GHG Equity ✓ Improves access for people who do not drive ✓ Reduces household transportation costs	transit mode share which will reduce VMT and GHG emissions. Transit oriented developments will likely occur along the rail corridor that will help to reduce VMT. ▫ Recreational rail transit on the north coast could be used by residents and visitors to access the newly acquired San Vicente Redwoods and Cotini Coast Dairies National Monument as well as provide economic vitality to the town of Davenport. ▫ Rail transit also encourages more intensive and compact use of land surrounding stations making more efficient use of limited land, ensuring greater levels of open space and helping to reduce automobile traffic, environmental impacts and GHG emissions. ▫ Transit improvements support lower cost transportation options which can reduce household transportation costs and benefit people who don't drive including youth, seniors, people with disabilities, low income, and minorities.
	Negatives		Environmental × Environmentally sensitive areas may be impacted (biological, cultural, aesthetic - noise) × Soil sampling, testing and/or remediation of contaminated soil may be needed × Traffic impacts at roadway crossings × Less adaptable to flooding from climate change Equity × Potential for conflicts between modes (rail with bikes and pedestrians and with autos at intersections)	▫ Increased rail service along the rail corridor could impact environmentally sensitive areas. Noise from horns could impact neighborhoods but quiet zones could be pursued that would reduce this impact. ▫ Any change in use of rail corridor will require characterization and possibly remediation of any soil contaminants. ▫ There may be increased safety conflicts between rail transit and autos at intersections and between rail transit and bikers/pedestrians on corridor that reduce comfort. Fencing can be constructed to minimize these safety concerns. There are greater opportunities to eliminate crossing conflicts at railroad rights-of-way than at roadways by making improvements that prevent automobiles, bicyclist and pedestrians from entering the railroad right-of-way when trains are coming. Fencing between trail and transit may limit access through neighborhoods. ▫ Rail right-of-way crosses areas that may be impacted by flooding due to climate change such as Harkins Slough area in south county. Rail is less adaptable to flooding from climate change as trains cannot readily shift onto alternate roadways where and when necessary due to temporary or permanent flooding on rail corridor. Railbed may need to be raised in areas that could be affected by climate change.
Compatible with Regulatory Requirements	**Positives/ Neutral**		✓ Consistent with legislation (Proposition 116, SB 375, SB 32) ✓ Consistent with design standards (CPUC) ✓ Standard permitting process	▫ The Santa Cruz Branch Rail Line was purchased using Proposition 116 funds which were allocated for passenger rail capital projects. Rail transit on the rail corridor would meet Prop 116 requirements. ▫ Rail transit is consistent with requirements of SB 375 and SB 32 to reduce greenhouse gas emissions.

Step 1 Criteria		Rating	Evaluation	Narrative
	Negatives			
Level of Public Investment	Positives/ Neutral		✓ Some funding sources may be available for capital costs (FTA5309-New/Small Starts, TIGER, STIP, STBG, SB 1-LPP & CC, LCTOP, TIRCP, Prop 1A)	▫ Capital funds may be available from Federal Transit Agency New/Small Starts program and other federal, state and local sources as identified in the Rail Transit Feasibility Study. ▫ New capital funding for both inter-city and commuter rail was created by the state in passage of SB-1.
	Negatives		× Major new investment for capital costs required × Major new investment for operations required × New funding source required for operations	▫ Capital and operational costs may be costly and funding sources are limited. A tax measure would likely be needed to cover operational costs.
Right-of-way and Constructability Constraints	Positives/ Neutral		✓ Minor amounts of ROW may need to be acquired	▫ The existing ROW can accommodate a rail way track alongside a trail. ROW requirements for the rail line are 17 feet in width or 8.5 ft in both directions from the centerline of the tracks. ▫ Additional ROW may be needed for sidings for the trains to pass and for some station locations. The number and locations of sidings will depend on the desired rail transit service frequency. ▫ Tracks may need to be laid for some sidings
	Negatives			
Technological Feasibility	Positives/ Neutral		✓ Technologically feasible ✓ Could accommodate future technologies (battery electric multiple units)	▫ Future technologies could provide battery electric multiple units for noise reduction and for reduced GHG emissions.
	Negatives			

Route	**Rail Right-of-Way**
Project Title	Bus rapid transit (BRT)
Project Description	Two-directional bus rapid transit between Watsonville Transit Center and Natural Bridges Dr on Westside of Santa Cruz would utilize a combination of the rail right-of-way, Highway 1, and local streets. Buses would travel on Highway 1 between Watsonville Transit Center and State Park Drive, utilize the rail ROW for two-directional travel between State Park Dr and Natural Bridges Dr. Connections to Capitola Transit Center, Santa Cruz Metro Center, UCSC, Cabrillo College and other locations could be made using local streets. The best available information on the rail right-of-way shows that for the majority of the distance between State Park Dr and Natural Bridges Dr, the ROW is greater than 50 feet wide which could accommodate two lanes of BRT (24 feet plus 4 feet for buffer zones) and trail. There are a limited number of sections/bridges with right-of-way width under 50 ft that could be addressed by alternate alignments on parallel streets; design solutions such as transit signals in short sections that hold one direction of travel while transit in other lane travels through; or acquisition of a minor amount of ROW. These sections include between 49th Ave and 30th Ave in Live Oak (Brommer St. could be used for alternate alignment), between Seabright Ave and California Ave, along Poplar Ave in Mar Vista and a few other shorter sections. Bridges in some locations could potentially be shared between buses and bikes/pedestrians using signals. Frequency of travel would be approximately every 15 minutes during peak periods. Local bus service between Capitola/Live Oak and Santa Cruz could also be enhanced by bus rapid transit utilizing the rail ROW. Electric buses could be utilized and buses would be prioritized at roadway crossings. Rail right-of-way south of State Park Drive and north of Natural Bridges Dr would be used solely for trail. One exception could be rail with trail from Lee Rd to Pajaro Station to continue freight service to Watsonville.
Overall Rating	
Summary	Bus rapid transit on a combination of the rail ROW, Highway 1 and local streets is a moderate cost capacity increasing improvement that would provide a new transit route connecting north and south county, improve transit travel time and transit travel time reliability and provide an alternative to congestion on Highway 1 and Soquel Ave/Dr. By improving travel time and travel time reliability, transit ridership could increase, reducing VMT and therefore greenhouse gas emissions. Electric vehicles would further reduce GHG emissions and reduce noise impacts along the rail right-of-way. BRT increases options for those who do not drive including seniors, youth, people with disabilities, low-income and minorities. BRT on rail right-of-way could require a shift from current RTC policy to not preclude rail transit.

Step 1 Criteria		Rating	Evaluation	Narrative
Community Support and Consistency with Applicable Plans	**Positives/ Neutral**		✓ Consistent with long range planning effort (2014 RTP) ✓ Consistent with other planning efforts (1999 MTIS) ✓ Agency support (Metro staff)	▫ Bus rapid transit for Santa Cruz County without a specified location is included in the 2014 RTP ▫ The 1999 MTIS study recommended two lane bus way between Westside Santa Cruz and Aptos next to the tracks. The 1999 MTIS report was not limited by current understanding of ROW. ▫ Residents adjacent to the rail corridor may be more supportive of bus on right-of-way as it may be a quieter option (no noise from train horns, less noise from rubber wheels and electric motor).
	Negatives		× May have some public opposition	▫ BRT on the rail corridor has not gone through a comprehensive public process. If rail corridor was used for BRT and trail, it would require a new planning effort to solicit public input. ▫ Members of the public, some represented by advocacy groups, support a trail only option and have campaigns and/or signature gathering efforts in progress.
Addresses Transportation Challenges & Environmental, Economic, and Equity Goals	**Positives/ Neutral**		Economic ✓ Improves transit travel time ✓ Improves transit travel time reliability ✓ Improves access to jobs, education and services ✓ Potential to increase land use development, business activity, employment and tax revenues Environmental ✓ Mode shift to transit ✓ Reduces VMT and GHG Equity ✓ Improves access for people who do not drive ✓ Reduces household transportation costs	▫ Bus rapid transit on the rail corridor will provide a new transit route connecting north and south Santa Cruz County. A new transit connection with competitive travel times could improve access to jobs, education centers and services by providing an alternative to congested roadways. Faster transit travel times could also make transit more convenient and encourage people to shift from driving to transit, reducing VMT and GHG emissions. Utilizing electric buses could decrease GHG emissions further. BRT would allow more flexibility in route and network structure than rail transit service on the rail ROW with potential to have greater ridership. ▫ The potential to encourage more intensive land use development as a result of investment in bus rapid transit is less than rail transit service due to the limited capacity of BRT when compared to rail transit, and the potential for bus rapid transit routes to change, unless bus rapid transit is seen as a precursor to rail transit. ▫ Transit improvements support lower cost transportation options which can reduce household transportation costs and benefit people who don't drive including youth, seniors, people with disabilities, low income, and minorities.
	Negatives		Environmental × Environmentally sensitive areas may be impacted × Soil sampling, testing and/or remediation of contaminated soil may be needed × Traffic impacts (at roadway crossings) Equity × Potential for conflicts between	▫ Improvements to support BRT on the rail right-of-way may impact environmentally sensitive areas but less so when compared to impacts of rail transit service on the rail ROW from Santa Cruz to Watsonville. This is attributed to the fact that BRT would only utilize about nine miles of the 32-mile rail right-of-way and would not utilize the rail ROW in the vicinity of the sloughs to the west of Watsonville. ▫ Noise impact from bus rapid transit will likely be less than rail due to horns not being required for BRT at intersections. ▫ Soil contaminants have been found along the rail ROW. Soil along rail ROW may need to be assessed for contaminants and possibly remediated. Construction of a paved surface over the bare soil could serve as the remediation for some of the contaminants. ▫ There may be conflicts between BRT and autos at intersections and between BRT and trail

Step 1 Criteria		Rating	Evaluation	Narrative
			modes (buses with bikes and pedestrians and with autos at intersections)	on rail ROW. Fencing may be recommended between BRT and trail for safety best practices. Fencing between trail and transit may limit access through neighborhoods.
Compatible with Regulatory Requirements	**Positives/ Neutral**	Neutral	✓ Consistent with legislation (SB 375, SB 32) ✓ Consistent with design standards (AASHTO, local transit standards) ✓ Standard permitting process	▫ BRT is consistent with requirements of SB 375 and SB 32 to reduce greenhouse gas emissions. ▫ BRT would be designed to follow design standards and best practices.
	Negatives		× Not consistent with regulations (Proposition 116)	▫ The Santa Cruz Branch Rail Line was purchased using Proposition 116 funds which were allocated for passenger rail capital projects. If rail right-of-way will not be used for passenger rail service, at least $11 million and possibly up to $25 million or more in funds will need to be returned to CTC because Proposition 116 requirements will not be met and the project will not be consistent with the funding application for purchase and rehabilitation of right-of-way. ▫ It is unknown what the requirements would be if the rail line was railbanked for rail in future with BRT and trail constructed in the near term.
Level of Public Investment	**Positives/ Neutral**	Neutral	✓ Some funding sources may be available for capital costs (FTA5309-New/Small Starts, TIGER, STIP, STBG, SB 1-LPP & CC, LCTOP, TIRCP, Section 130) ✓ Some funding sources may be available for operating costs (Fares, new sales tax for transit, STA, TDA, LCTOP, TIRCP) ✓ Moderate new investment for capital costs required ✓ Moderate new investment for operations required	▫ Capital funds may be available from federal, state and local sources. BRT is a typical starter project for a light rail or heavy passenger rail project. FTA funding will support this approach. Funds available from SB 1 may also be available for this project. ▫ Could be operated by existing operator (Metro)
	Negatives		× Potential to lose funds	▫ If rail right-of-way will not be used for passenger rail service, at least $11 million and possibly up to $25 million or more in funds will need to be returned to CTC because Proposition 116 requirements will not be met and the project will not be consistent with the funding application for purchase and rehabilitation of right-of-way. A new planning effort would be needed to solicit public input. Funds currently allocated for trail from FLAP and ATP may not meet deadline for use of funds and thus may be lost. ▫ Costs and time to revise current direction are unknown (additional costs include new public outreach process, negotiations with CTC and Iowa Pacific, applying for abandonment of rail to Surface Transportation Board, hazardous material assessment and mitigation, legal fees).
Right-of-way and	**Positives/ Neutral**		✓ Minor amounts of right-of-way may need to be acquired (along	▫ The existing ROW could potentially accommodate two lanes for bus movement alongside a trail for the majority of the length between State Park Dr and Seabright Ave. ROW

Step 1 Criteria		Rating	Evaluation	Narrative
Constructability Constraints			some constrained sections and at station stops) ✓ Could be built in phases ✓ Project is readily constructible	requirements for two-directional BRT are approximately 24 ft plus 2 feet buffer zones on either side. ▫ Additional ROW may be needed along constrained sections and for some station stop locations.
	Negatives			
Technological Feasibility	Positives/ Neutral		✓ Technologically feasible ✓ Could accommodate future technologies (autonomous and evolving electric buses)	▫ Electric buses along the rail right-of-way are currently feasible and will likely become even more efficient in future. New technologies could be implemented to improve bus flow at rail ROW and roadway intersection crossings. BRT on dedicated lanes along the rail corridor could allow for implementation of self-driving buses sooner than they could be implemented in traffic mixed with conventional vehicles.
	Negatives			

Route	**Rail Right-of-Way**
Project Title	Freight service on the rail line
Project Description	Freight service on the rail line between Davenport and Pajaro Station, with connection to the Harvey West industrial area and Felton via the Big Trees line, as needed primarily during nighttime to not conflict with weekday and weekend passenger rail schedules.
Overall Rating	
Summary	Freight service is a moderate cost option that has been occurring on the rail line for nearly 140 years although currently not many businesses are utilizing this service. Rail freight provides an alternative option for goods movement as opposed to travel on a congested highway, reduces GHG emissions, and can increase safety by reducing the number of trucks on the highway. Noise impacts from freight can be challenging for residents in the vicinity of the rail corridor especially if freight occurs during night time to avoid a passenger rail schedule.

Step 1 Criteria		Rating	Evaluation	Narrative
Community Support and Consistency with Applicable Plans	**Positives/ Neutral**		✓ RTC policy ✓ Consistent with long range planning effort (2014 RTP) ✓ Supported by voters through passage of Measure D	▫ Freight service on the rail line has been more or less active since its inception. Freight service is the current RTC policy and is included in the agreement with the rail operator, Iowa Pacific. Upgrades to the rail line for freight service are included in the 2014 RTP. Voters approved Measure D in November 2016 which allocates funds for rail corridor infrastructure preservation.
	Negatives		× May have some public opposition	▫ Horn noise from trains as required at roadway crossings has raised concerns. ▫ Members of the public, some represented by advocacy groups, support a trail only option and have campaigns and/or signature gathering efforts in progress.
Addresses Transportation Challenges & Environmental, Economic, and Equity Goals	**Positives/ Neutral**		Economic ✓ Alternative option for goods movement to/from businesses Environmental ✓ Reduces GHG Equity ✓ Improves safety (by removing trucks off roadways)	▫ Freight service on the rail line would provide an alternative option for goods movement in SCC with less congestion and reduce the number of trucks on Highway 1, improving safety. Rail freight uses significantly less fuel and thus reduces GHG emissions. ▫ Environmental impact assessment is not required since freight service has been ongoing for decades and there has not been a change in use.
	Negatives			
Compatible with Regulatory Requirements	**Positives/ Neutral**		✓ Consistent with legislation (SB 32) ✓ Consistent with design standards ✓ No additional permits required	▫ Rail freight is consistent with SB 32 to reduce GHG emissions.
	Negatives			
Level of Public Investment	**Positives/ Neutral**		✓ Moderate new investment for capital costs required	▫ Rail freight due to increased weight of loads, may require a greater level of bridge repair and maintenance if passenger rail service is not also provided. Measure D provides some

Step 1 Criteria		Rating	Evaluation	Narrative
			✓ Some funding sources may be available for capital costs (Trade corridor grants, TIGER, leases, operator funds, Section 130/crossing, RRIF) ✓ Minor new investment for operations required ✓ Some funding sources may be available for operations (Measure D, leases, operator funds/fees)	funds for maintenance costs of tracks for good movements of the rail line. Private businesses who utilize rail corridor for freight can pay for use providing funds for rail operations.
	Negatives			
Right-of-way and Constructability Constraints	**Positives/ Neutral**		✓ ROW is sufficient ✓ Project is readily constructible	▫ The existing ROW is sufficient for freight service and can accommodate a rail way track alongside a trail. ROW requirements for the rail line are 17 feet in width or 8.5 ft in both directions from the centerline of the tracks on straight track and up to 20 feet or 10 feet in both directions from the centerline of the tracks at curves. ▫ Additional ROW may be needed for sidings for trains to pass if freight service increases significantly. ▫ Freight has been operational since inception of rail service and thus only maintenance of tracks is required.
	Negatives			
Technological Feasibility	**Positives/ Neutral**		✓ Technologically feasible ✓ Could accommodate future technologies (autonomous trains for goods movement)	▫ Future technologies for improved goods movement could be accommodated.
	Negatives			

Acronym Guide

AASHTO: American Association of State Highway and Transportation Officials
ATP: Active Transportation Program
ATP: Active Transportation Program
BRT: Bus rapid transit
CIP: Capital Improvement Program
CPUC: California Public Utilities Company
CTC: California Transportation Commission
EIR: Environmental Impact Report
FLAP: Federal Lands Access Program
FTA: Federal Transit Administration
GHG: Greenhouse gas
HOV: High Occupancy Vehicle
HSIP: Highway Safety Improvement Program
HUTA: Highway User's Tax Account
LCTOP: Local Carbon Transit Operations Program
LJ: Local jurisdiction
MBSST: Monterey Bay Sanctuary Scenic Trail
MTIS: Major Transportation Investment Study
MUTCD: Manual on Uniform Traffic Control Devices
ROW: Right of way
RTC: Regional Transportation Commission
RTP Regional Transportation Plan
SB1 - CC: Senate Bill 1 - Congested Corridors
SB1 - LPP: Senate Bill 1 - Local Partnership Plannning
SC: City of Santa Cruz
SCC: Santa Cruz County
SHOPP: State Highway Operation and Protection Program
SOV: Single occupancy vehicle
SRTS Safe Routes to Schools
STA: State Transportation Agency
STBG: Surface Transportation Block Grant
STIP: State Transportation Improvement Program
STIP: State Transportation Improvement Program
TDA: Transportation Development Act
TIGER: Transportation Investment Generating Economic Recovery
TIRCP: Transit and Intercity Rail Capital Program
UCSC: University of California Santa Cruz
VMT: Vehicle miles traveled

ATTACHMENT 3

Unified Corridor Investment Study

Highway 1, Soquel Ave/Drive & Freedom Blvd, and the Santa Cruz Branch Rail Line

Goals, Criteria and Performance Measures

The goals, criteria and performance measures below support a vision for an integrated, multimodal transportation network based on a triple bottom line approach that maximizes the environmental, economic and equity benefits.

Goal	Step 1 Criteria
Promote feasible solutions that address transportation challeges.	Community support and coordination/consistency with local, regional, state and federal plans
	Potential to address transportation challenges and advance environmental, economic and equity goals
	Compatibility with regulatory requirements
	Level of public investment
	Right of way and constructability constraints
	Technological feasibility

Goals	Step 2 Performance Measures
Safer transportation for all modes	Injury and fatal collisions by mode
Reliable and efficient transportation choices that serve the most people and facilitate the transport of goods	Peak period mean automobile travel time
	Peak period mean transit travel time
	Peak period travel time reliability
	Mode share
	Person trips across N-S screenline
Develop a well-integrated transportation system that supports economic vitality	Level of public investment
	Visitor tax revenues
	Cost associated with fatalities and injuries
Minimize environmental concerns and reduce adverse health impacts	Automobile vehicle miles traveled
	Environmentally sensitive areas
	Criteria pollutants
	Greenhouse gas emissions
Accessible and equitable transportation system that is responsive to the needs of all users	Transit Vehicle Miles Traveled
	Household transportation costs
	Benefits and impacts to transportation disadvantaged communities

ATTACHMENT 5

Unified Corridor Investment Study - Step 1 Scenarios for Analysis

	Scenario A	Scenario B	Scenario C	Scenario D	Scenario E	Scenario F	No Build
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							
rail transit on Hwy 1 between Santa Cruz and Watsonville							
self driving cars							
Soquel Avenue/Drive and Freedom Blvd							
bus rapid transit lite (faster boarding, transit signal priority and queue jumps)							
dedicated lane for bus rapid transit and bikes							
parking moved from Soquel Avenue/Drive to improve bike and transit options							
increased frequency of transit with express services							
buffered/protected bike lanes							
intersection improvements for auto							
intersection improvements for bikes/pedestrians							
Rail Corridor							
multiuse trail (bike and pedestrian)							
bike trail separate from pedestrian trail							
local rail transit with interregional connections							
bus rapid transit							
freight service on rail							
Overall Project Area/Connections between Routes							
improved bike/pedestrian facilities throughout urban area closing gaps in network	These projects will be evaluated in all scenarios.						
additional transit connections							
bike share, bike amenities, transit amenities, park and ride lots							
multimodal transportation hubs							
Transportation Demand and System Management							
employers and residences - incentive programs	These projects will be evaluated in all scenarios.						
education and enforcement - electric vehicle, motorist safety, and bike safety							

AGENDA: September 18, 2017

TO: Bicycle Advisory Committee

FROM: Cory Caletti, Senior Transportation Planner

RE: Vision Zero Report: Impact of Traffic Violence on Santa Cruz County

---

RECOMMENDATIONS

Staff recommends that the Bicycle Advisory Committee receive a presentation from Santa Cruz County Health Services Agency (HSA) staff on the Vision Zero initiative; and

---

BACKGROUND

Along with the Community Traffic Safety Coalition (CTSC), Santa Cruz County Health Services Agency (HSA) staff prepared a report titled "The Impact of Traffic Violence on Santa Cruz County" (Attachment 1). This report was officially released at CTSC's Vision Zero Forum on June 29th, 2017 at Simpkins Swim Center where stakeholders and community members were in attendance.

DISCUSSION

Santa Cruz County Health Services Agency (HSA) staff will present the "The Impact of Traffic Violence on Santa Cruz County" report at this meeting. The report documents twenty-four traffic-related deaths that have been reported countywide in the twelve month period from May 2016 to May 2017. This is a significant spike from the five-year average of 13 traffic deaths per year. The report is a first step in introducing the Vision Zero initiative to Santa Cruz County, inviting communities to make the prevention of traffic deaths and injuries a top priority. The report and additional information is online at: www.sctrafficsafety.org/VisionZero.

SUMMARY

The Bicycle Advisory Committee will receive a presentation on the Vision Zero initiative at this meeting.

Attachment: "The Impact of Traffic Violence on Santa Cruz County" report

s:\bike\committee\bc2017\bcsept2017\visionzero-sr.docx

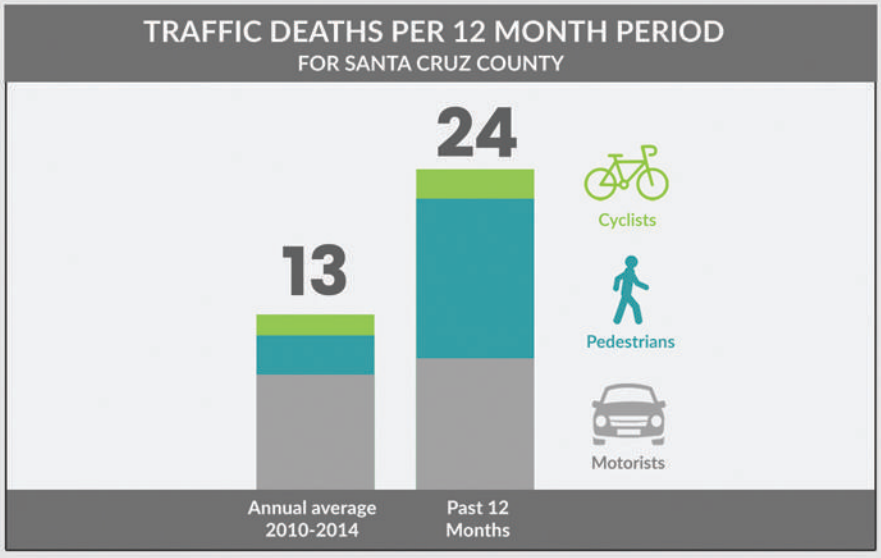
THE IMPACT OF TRAFFIC VIOLENCE ON SANTA CRUZ COUNTY

Prepared by the
Community Traffic Safety Coalition
June 2017

Every 3 days, one pedestrian, cyclist, or motorist is severely injured in our county.

Many of our friends, neighbors, and loved ones have been impacted by traffic violence. From 2010-2014, an average of 13 people died on our roads each year and another 120 experienced life-altering injuries,[1] costing the County $500 million in expenses and quality of life annually.[2]

In 2015 and 2016, the U.S. saw the biggest spikes in traffic deaths in 50 years[3]—a tragic trend that continues here in Santa Cruz County, where a review of local media uncovers a staggering 24 deaths in the past 12 months:



It doesn't have to be this way.

Now is the time for Santa Cruz County to join the cities around the country and the world in creating **Vision Zero policies,** laying out plans to eliminate all traffic deaths and serious injuries.

SANTA CRUZ COUNTY REPORT CARD

Compared to all CA counties, **we rank among the worst** for these types of collisions:

- **INJURIES & FATALITIES** among bicyclists.
- **INJURIES & FATALITIES** among pedestrians under the age of 15
- **HIT & RUN** collisions

Source: OTS Rankings, 2014

Report made possible with funding from CA Office of Traffic Safety and the Santa Cruz County Regional Transportation Commission

Sources: [1] 2010-2014 CHP SWITRS; [2] 2010 NHTSA; [3] 2017 NSC

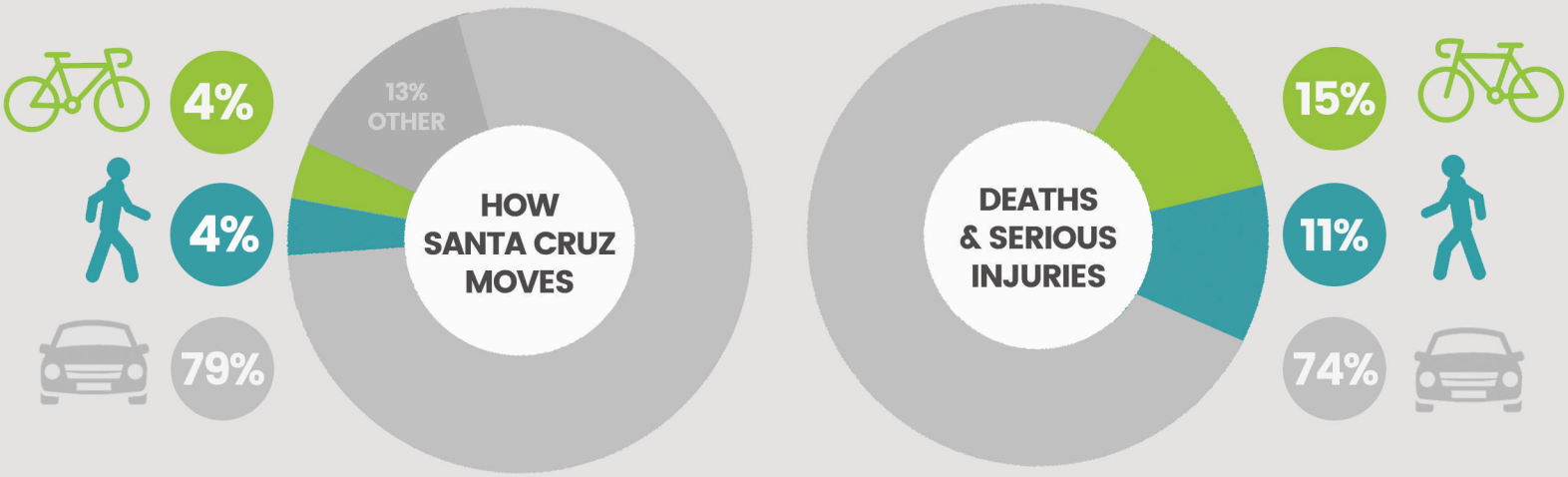
54%

of all fatal or serious injury crashes occur on **6% of our streets.**

More than half of these streets are in low income neighborhoods.

Sources: 2011-2015 American Community Survey via CDPH, 2010-2014 CHP SWITRS

SANTA CRUZ COUNTY TRAVEL MODE VS. TRAFFIC DEATHS AND SERIOUS INJURIES



Sources: 2011-2015 American Community Survey via CDPH, 2010-2014 CHP SWITRS

Most roads that we use today were designed with one thing in mind: getting motorists from Point A to Point B. While it is true that 79% of people in our community commute by car, the 8% who bike or walk experience 26% of the deaths and severe injuries that occur on our roadways. All road users in Santa Cruz County have the right to be safe using the transportation network we all depend on everyday—whether driving, biking, walking, or using public transit.

~~ACCIDENTS~~ CRASHES! ON THE RISE IN SANTA CRUZ COUNTY

Traffic collisions are NOT random incidents that we have no control over. By using the words "crash" or "collision" rather than "accident", we acknowledge that traffic deaths and severe injuries are preventable.

> *"It's time we stop viewing deaths on our roadways as acceptable, by-products of a modern transportation system. These are not "accidents" but preventable events that can be eliminated by designing a system and promoting a culture that makes safety the number one priority."*

Supervisor Bruce McPherson
County of Santa Cruz Board of Supervisors

> *He was riding his bike, wearing a helmet, following the rules of the road, and the driver just didn't see him. Now he's in the hospital with broken bones and a partially collapsed lung. My family is lucky; just like that I could have become a widow at 45, left to raise two kids alone on one salary.*
>
> – Wife of Santa Cruz County crash survivor

WHAT CAUSES CRASHES IN SANTA CRUZ COUNTY?

33% UNSAFE SPEED

30% IMPROPER TURNING & RIGHT OF WAY VIOLATIONS

11% DRUGS & ALCOHOL

Source: 2010-2014 CHP SWITRS Primary Collision Factors

VISION ZERO
NO MORE TRAFFIC DEATHS

Vision Zero saves lives.

In New York City, one of 28 Vision Zero cities in the U.S., traffic deaths fell by 15% in three years following the launch of their Vision Zero initiative.

What is Vision Zero?

Vision Zero is a world-wide strategy to end all traffic deaths and serious injuries and make safety the number one priority.

What does it take to be a Vision Zero community?

The first step is for a city council or county board of supervisors to make a public commitment to preventing all roadway deaths and life-altering injuries.

Stakeholders from public works, transportation, law enforcement and public health prioritize safety when making decisions about policies, funding, roadway design, and community programs.

To learn more visit:
visionzeronetwork.org

Logo provided courtesy of the San Francisco Vision Zero Coalition

DEATH DUE TO SPEED

A pedestrian is **four times more likely to die** when hit at 45 MPH than at 25 MPH.

Source: AAA Foundation for Traffic Safety

fewer than 1 in 5 die

2 in 5 die

3 in 5 die

People will make mistakes and poor choices; Vision Zero says those mistakes don't have to cost lives. Working together, we can eliminate deaths and serious injuries on our streets. The Community Traffic Safety Coalition of Santa Cruz County and its community partners are committed to promoting multifaceted traffic safety policies and strategies guided by the 6 E's, a framework developed by the Safe Routes to School movement.

ENCOURAGEMENT

Promoting a culture that recognizes drivers, cyclists, and pedestrians as road users who all share the responsibility for safety.

EDUCATION

Equipping people with knowledge, skills, and confidence to use the roads safely and respectfully.

ENFORCEMENT

Ensuring that all road users understand and follow traffic laws and regulations.

EVALUATION

Using data to measure progress and plan for future success.

ENGINEERING

Designing and building a transportation system that creates safe, convenient, and comfortable places to drive, bike, and walk.

EQUITY

Prioritizing safety and access for communities who are most impacted by traffic violence.

JOIN US TO SAVE LIVES!

The Community Traffic Safety Coalition (a program of the Santa Cruz County Health Services Agency's Public Health Department) promotes safe, accessible, and equitable transportation. We offer technical assistance to local jurisdictions and other community partners and can help develop Vision Zero policies and strategies, provide local data, identify funding sources, and conduct program evaluation. If you are interested in pursuing Vision Zero in your Santa Cruz County community, please contact us.

Public Health
Prevent. Promote. Protect.
Santa Cruz County

COMMUNITY TRAFFIC SAFETY COALITION

CTSC@santacruzcounty.us

www.sctrafficsafety.org

www.facebook.com/sctrafficsafety

831-454-4312

AGENDA: September 19, 2017

TO: Bicycle Advisory Committee

FROM: Anais Schenk, Transportation Planner

RE: Visualizing Sustainable Transportation Progress Report

RECOMMENDATIONS

Staff recommends that the Bicycle Advisory Committee receive a report on the Visualizing Sustainable Transportation in Santa Cruz County project.

BACKGROUND

Originally titled "Sustainable Transportation Prioritization Plan," the Visualizing Sustainable Transportation in Santa Cruz County project (Visualization project) is funded through a Caltrans Transit Planning for Sustainable Communities grant. The project's objectives include an emphasis on public engagement through the use of innovative visual mechanisms to create a deeper understanding of sustainable transportation options that meet the state's goal of expanded accessibility and multimodal options.

The project is coordinated with other RTC projects through incorporation of transportation improvements under consideration in the long range Regional Transportation Plan (RTP) and Unified Corridors Investment Study (UCS) using technologically advanced and effective techniques to engage the community. The final product will be a toolkit for public engagement that includes a review of these methods as well as a final plan that documents lessons learned and current public understanding of sustainable transportation systems in Santa Cruz County. The toolkit will be available for others throughout the state.

DISCUSSION

The Visualization project began with interviews of stakeholders, partner agencies, RTC staff and location-based interest groups, as well as research by the consultant. Focus groups and a design charette were then held to ensure a well-rounded and representative discussion. They included city and county planners, representatives of local businesses, community non-profits and schools. The focus groups provided a forum for dialogue about how to best promote and help the community envision a more robust sustainable transportation system in Santa Cruz County. The charrette included a hands-on mapping exercise and discussion of specific improvements that would represent a sustainable transportation system. The findings from the focus group and charrette informed the placement, components, and details for the visual

simulations along with plans and projects currently under development or consideration by the cities and County.

Visualization Tools

One of the main goals of the Visualization project is to develop tools that effectively communicate complex transportation and land use concepts with the public. The primary technology chosen for this is a tool called an "Owl" viewer. It was developed in the Bay Area by a firm called Owlized. The viewer looks similar to the binocular units at scenic lookouts, but functions much differently. Looking into the viewer, the participant sees a photo-realistic three dimensional representation of proposed sustainable transportation improvements. This virtual reality technology will be used at four locations around the County: the County of Santa Cruz on Soquel Drive at Chanticleer Avenue, the City of Santa Cruz on Natural Bridges Drive at the railroad right-of-way, the County of Santa Cruz on 17th Avenue at the railroad right-of-way, and in the City of Watsonville on Walker Street at Beach Street (see map included as Attachment 1). All the Owls are at locations with transit and sidewalk access. The viewers will be installed in such a way that access and egress will be maintained. Each visual will also be available through a "pocket owl" link for smart phones or other devices (see example images included as Attachment 2).

Participants will be able to provide feedback about the short and long term sustainable transportation and land use visualizations via a short survey which will be administered by the Owl and will be available on the RTC website. Contact information will be provided as part of the survey for the user to submit questions, comments or concerns not captured by the survey.

The Owls will be deployed in two phases. The Soquel Drive and Natural Bridges Drive Owl viewers are planned to be installed in October. The second phase will occur in early spring 2018 after daylight savings time goes into effect and will include the Live Oak and Watsonville locations. The second phase is staggered to take advantage of the time of year when people are more likely to be outdoors and active. Each Owl will be up for approximately six weeks during which time staff will be conducting outreach to draw visitors to the viewers. Methods for raising awareness of the installations will include pop-up events, Instagram, Facebook and other social media posts, presentations to community groups and wayfinding from nearby points of interest.

Relationship to Other RTC Projects

The Visualization project will support other projects underway at the RTC and partner agencies by providing realistic demonstrations to raise public awareness of potential transportation options for advancing sustainable transportation goals. The land use changes demonstrated by each Owl are reflective of current County and City visioning exercises and/or approved plans that have undergone extensive community input. The visuals are intended to engage the community in a dialogue about what could be viable in the future, rather than reflect any definitive

conclusions from other concurrent RTC projects such as the Unified Corridor Investment Study (UCS) or Regional Transportation Plan. Time and budget constraints for the Visualization project do not allow all scenarios that are being evaluated in the UCS to be demonstrated through the Owl viewers.

SUMMARY

The Visualization project will provide an educational experience and feedback opportunity for participants by demonstrating what terms such as "sustainable transportation," "transit oriented development" and "infill development" could look like within the context of Santa Cruz County. Information, materials and lessons learned from the project will be summarized in an outreach toolkit and plan which will be used for future community engagement.

Attachments:

1. Map of Owl Locations
2. Example Images From Other Owl Projects

S:\Outreach\Viz\0. Project Management\Staff Reports\Visualizing Sustainable Transportation Progress Report Bike Committee.docx

MAP OF OWL LOCATIONS

SAMPLE IMAGES OF OWL

Images of Owl Kiosks

Images of Pocket Owls