



Date: October 26, 2016
 Current Meeting: November 3, 2016
 Board Meeting: November 3, 2016

BOARD MEMORANDUM

TO: Santa Clara Valley Transportation Authority
 Board of Directors

THROUGH: General Manager, Nuria I. Fernandez

FROM: Interim Director - Planning & Program Development, Carolyn M. Gonot

SUBJECT: Countywide Bike Plan Prioritization Criteria

APPROVED ACCEPTED ADOPTED AMENDED DEFERRED REVIEWED
 Santa Clara Valley Transportation Authority
 Board of Directors

BY: 

DATE: 11/3/16

Policy-Related Action: No

Government Code Section 84308 Applies: No

ACTION ITEM

RECOMMENDATION:

Adopt the Countywide Bicycle Plan Prioritization Criteria.

BACKGROUND:

As the Congestion Management Agency for Santa Clara County, VTA is responsible for countywide transportation planning efforts including bicycle planning. The VTA Board of Directors adopted the Santa Clara Countywide Bicycle Plan (CBP) in 2008. The CBP guides the development of major bikeways by identifying Cross County Bicycle Corridors (CCBC) and other projects of countywide or intercity significance. For reference, a map of the 2008 CCBC network is provided in Attachment A. In September 2015, VTA started the process of updating the CBP.

The CBP scope of work and schedule were presented to VTA Advisory Committees in November 2015, and the VTA Bicycle and Pedestrian Advisory Committee (BPAC) received a comprehensive update on the plan's progress at its June 2016 meeting. In addition to these formal updates, regular updates are to the BPAC as part of the monthly staff report, and meetings with Member Agency staff have been conducted to discuss proposed modifications to the CCBC network.

DISCUSSION:

As part of the CBP update, VTA is proposing criteria for identifying CCBC segments and other spot locations of high value for bicyclists. Once high value areas are identified, VTA will identify potential infrastructure and operational improvements that can improve bicycling in these areas, including important, high-value gap closures.

Proposed Prioritization Framework

Under the proposed prioritization framework the following criteria will score high:

1. Safety - CCBC segments that have a history of collisions or areas with high Level of Traffic Stress
2. Projected bicycle ridership numbers - CCBC segments that have high projected ridership
3. Transit access - CCBC segments that provide first/last mile access to major transit stops
4. Employment and school access - CCBC segments that serve work and school commutes
5. Equity - CCBC segments that serve Communities of Concern
6. Destinations - CCBC segments that serve many destinations (schools, retail, parks, etc.)
7. Community support - CCBC segments that are supported by public outreach

Details of the proposed prioritization criteria are described in Attachment B.

Methodology for Combining Scores

For each criterion, the project team will develop a map showing how the criterion varies across the CCBC network. Scores for each criterion will then be weighted based on the percentages provided in Attachment B, and added together to produce a composite map (score) that shows areas of high to low priority. Figure 1 provides a conceptual illustration of this process. The resulting composite map will be used to identify CCBC segments or spot locations that are of high value to bicyclists.

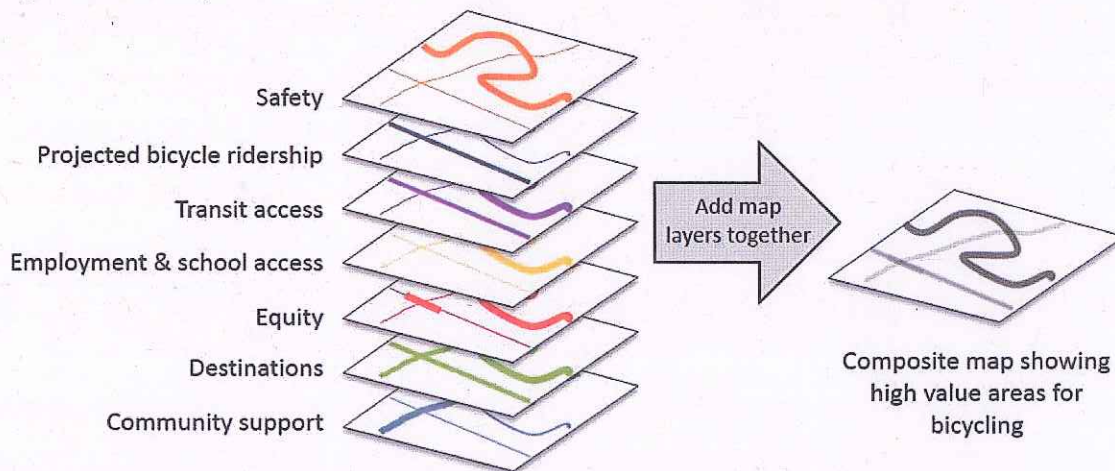


Figure 1: Conceptual illustration of how prioritization criteria will be mapped and combined

VTA Travel Demand Model

Criteria two through five rely on outputs from VTA's travel demand model. The model inputs include demographics, origins, destinations, the time it takes to complete a trip, and characteristics of the transportation network (including the bicycle network). These inputs are used to predict how many trips people will make, where they will travel, what mode they will

use to travel, and what specific route they will take.

Using the Analysis to Identify High Priority Projects

Using the results of the prioritization process, VTA will identify several locations that provide high value for bicyclists and need improvement. Locations could consist of an entire CCBC, a portion of a CCBC or spot improvements along a CCBC, or locations where a new bicycle and pedestrian bridge or freeway interchange improvement is needed. AS part of this process, VTA will identify high-value gap closure projects.

NEXT STEPS:

The results of the prioritization will be brought back to VTA committees. VTA will use the results to identify high value locations along the CCBC network, and develop conceptual improvement plans for five to seven of these high value locations. Proposed high-value projects will be shared with committees and Member Agency staff in early 2017.

FISCAL IMPACT:

There is no fiscal impact to VTA of adopting the Countywide Bicycle Plan Prioritization Criteria.

ADVISORY COMMITTEE DISCUSSION / RECOMMENDATION

The Bicycle and Pedestrian Advisory Committee (BPAC) received this item at its October 12, 2016 meeting and unanimously recommended approval of the staff recommendation to the VTA Board of Directors, subject to addressing the following comments: 1) recognize the importance of closing gaps in the bicycle network; 2) recognize the importance of destinations that are not located within Metropolitan Transportation Commission's designated Communities of Concern but serve people with disabilities and low-income persons (e.g. medical centers, high density housing targeting disabled or low income communities, retail and employment areas); and 3) use a scale for scoring criteria when possible, rather than a binary yes-no designation. The Board report has been modified to address these comments.

The BPAC had the following additional comments: 1) asked for clarification on the method the VTA travel model uses to predict bicycle mode split, as well as data sources used; 2) noted that 60% of the weighting is based on the VTA travel model and requested VTA keep close track of how well the travel model predicts bicycling behavior as county conditions change; 3) asked for clarification about the Level of Traffic Stress designation; 4) asked if the model assumes Bus Rapid Transit on El Camino Real is in operation in ten years; 5) asked if VTA was requesting input from Caltrans and the County Roads and Airports, and VTA staff noted that they are through VTA's Technical Advisory Committee review; 6) suggested that VTA could compare model outputs from 2016 to projections of 2026 to identify high-value gap closure projects; 7) suggested VTA define how different scales of retail will be measured (e.g. large retail centers such as Valley Fair Mall versus small retail such as those along El Camino Real); and 8) suggested VTA develop a scoring rubric to better define equity and destinations criteria.

The Technical Advisory Committee (TAC) received this item at its October 13, 2016 meeting

and unanimously recommended approval of the staff recommendation to the VTA Board of Directors, with a request that the results of the prioritization come back to the TAC for review prior to developing proposed improvement plans. TAC members had the following comments: 1) asked if major transit stops include Caltrain, and staff replied they will; 2) suggested criteria consider young bicyclists; 3) asked for clarification of Level of Traffic Stress analysis; 4) asked if the VTA travel model included local streets that cross over major barriers, in addition to arterials and collector roads; and 5) asked if the model considers trails parallel to expressways separate facilities or combines them with expressways, and staff replied that parallel trails are separate facilities in the model.

The Policy Advisory Committee (PAC) received this item at its October 13, 2016 meeting and recommended approval of the staff recommendation to the VTA Board of Directors, with the following modifications: 1) expand the employment criterion to include school-based trips and 2) reformat the board report so that safety criteria are shown first. The board report has been modified to reflect these comments. Member Vaidhyanathan of Cupertino voted against the recommendation.

PAC members had the following additional comments: 1) Member Vaidhyanathan requested that the weighting for community support be increased from 5 percent, with a suggestion that the points be taken from potential ridership; 2) asked how the criteria relate to funding sources; 3) asked what steps VTA staff have taken to coordinate with local city bicycle planning efforts; 4) expressed support for the first-mile, last-mile criterion; 5) asked what data would be used for the public input criterion; 6) asked how the VTA travel model estimates projected bicycle ridership; 7) asked about accuracy of bicycle projections, and suggested that VTA establish a process to reevaluate the model results in three to five years to determine how well it is working, and compare past projections to current conditions; 8) noted that “people vote with their feet/bikes” and projected ridership could be a proxy for community support; 9) supported the projected bicycle ridership criterion, noting that it is important to build projects that result in noticeable increases in bicycle ridership; 10) suggested that the weighting for projected bicycle ridership may be too low; 11) Member Kniss of Palo Alto noted that 50 percent of high school students in Palo Alto bicycle to school, and supported the addition of a school criterion; and 12) asked how VTA coordinated with local Bicycle and Pedestrian Advisory Committees. A discussion followed regarding increased weighting for the community support criterion, and ways to incorporate school access into the prioritization criteria.

STANDING COMMITTEE DISCUSSION / RECOMMENDATION

The Congestion Management Program and Planning Committee (CMPP) received this item at its October 20, 2016 meeting and unanimously recommended approval of the staff recommendation to the VTA Board of Directors. CMPP members had the following comments: 1) asked how the VTA Countywide Bicycle Plan would interface with local bicycle planning and staff responded that VTA staff are coordinating with Member Agencies to ensure the countywide and local plans support each other, with the VTA plan focusing on connections of countywide significance; 2) suggested that school connections-particularly for elementary and middle schools-may be a local priority rather than a countywide priority; 3) asked if the 2026 model would assume Bus Rapid Transit (BRT) on El Camino Real and VTA staff replied that while the 2040 model assumes

BRT on El Camino Real, planning staff would need to decide if it should be included in the 2026 model or not; 4) asked when the results would be available for review and staff replied that prioritization results would be available early 2017; 5) suggested providing a map or diagram to better illustrate the prioritization; 6) discussed the importance of first-last mile connections.

Prepared by: Lauren Ledbetter
Memo No. 5763

ATTACHMENTS:

- Attachment A- 2008 CCBC Network (PDF)
- Attachment B - Criterion Updated (DOCX)

Figure 3-2 Cross County Bicycle Corridors - Northeast County

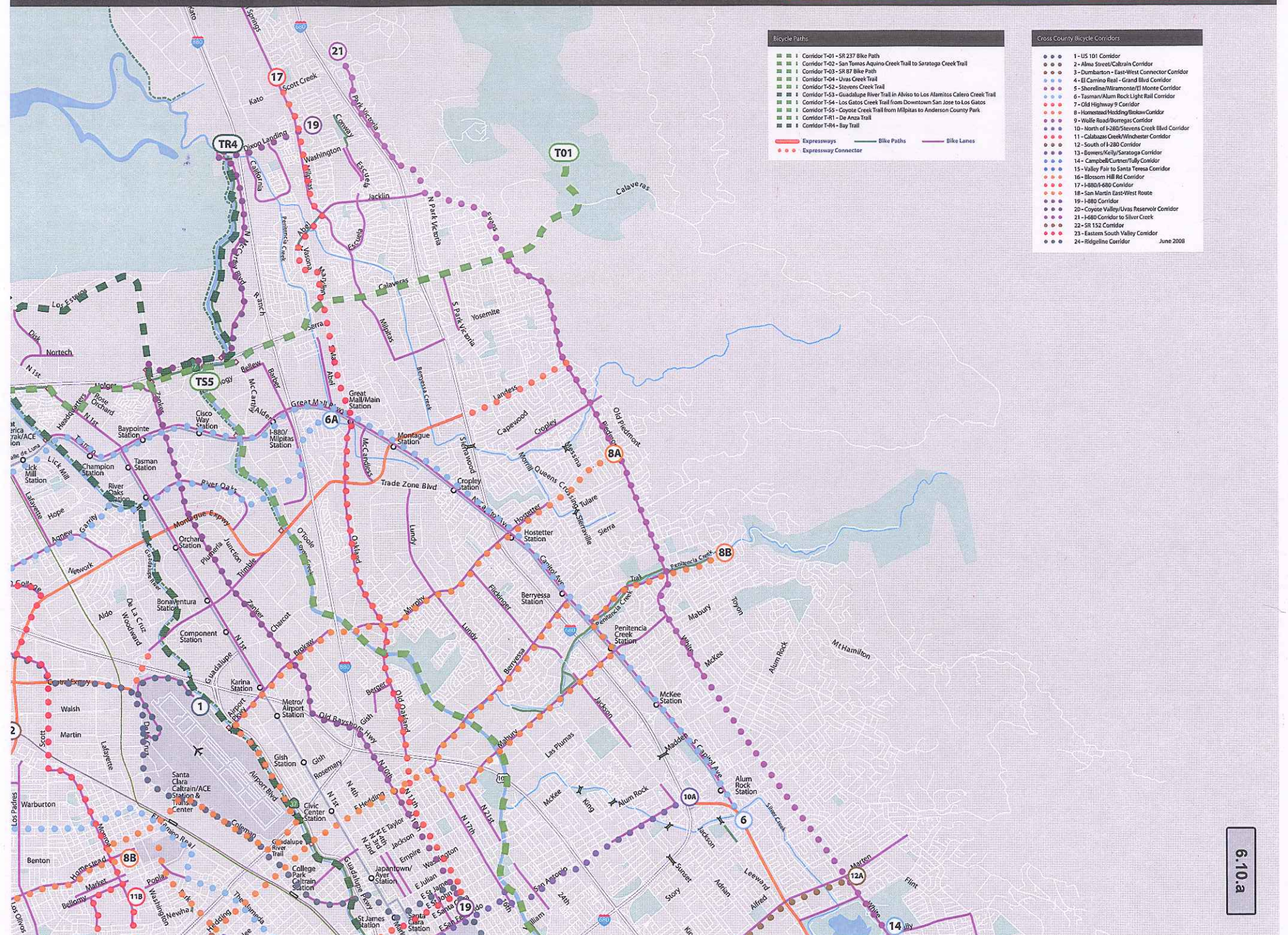


Figure 3-2 Cross County Bicycle Corridors - Northwest County

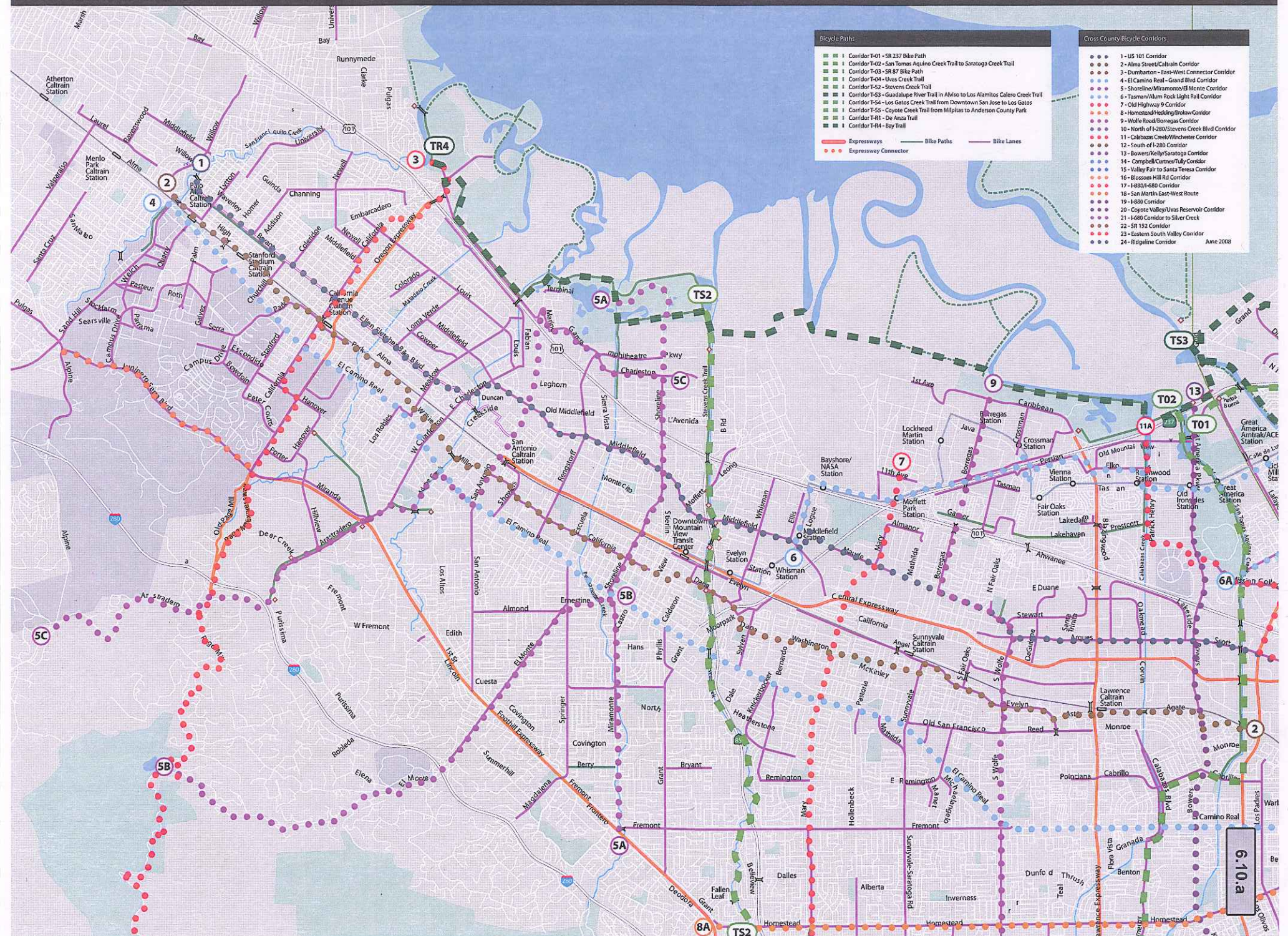


Figure 3-2 Cross County Bicycle Corridors - Southeast County

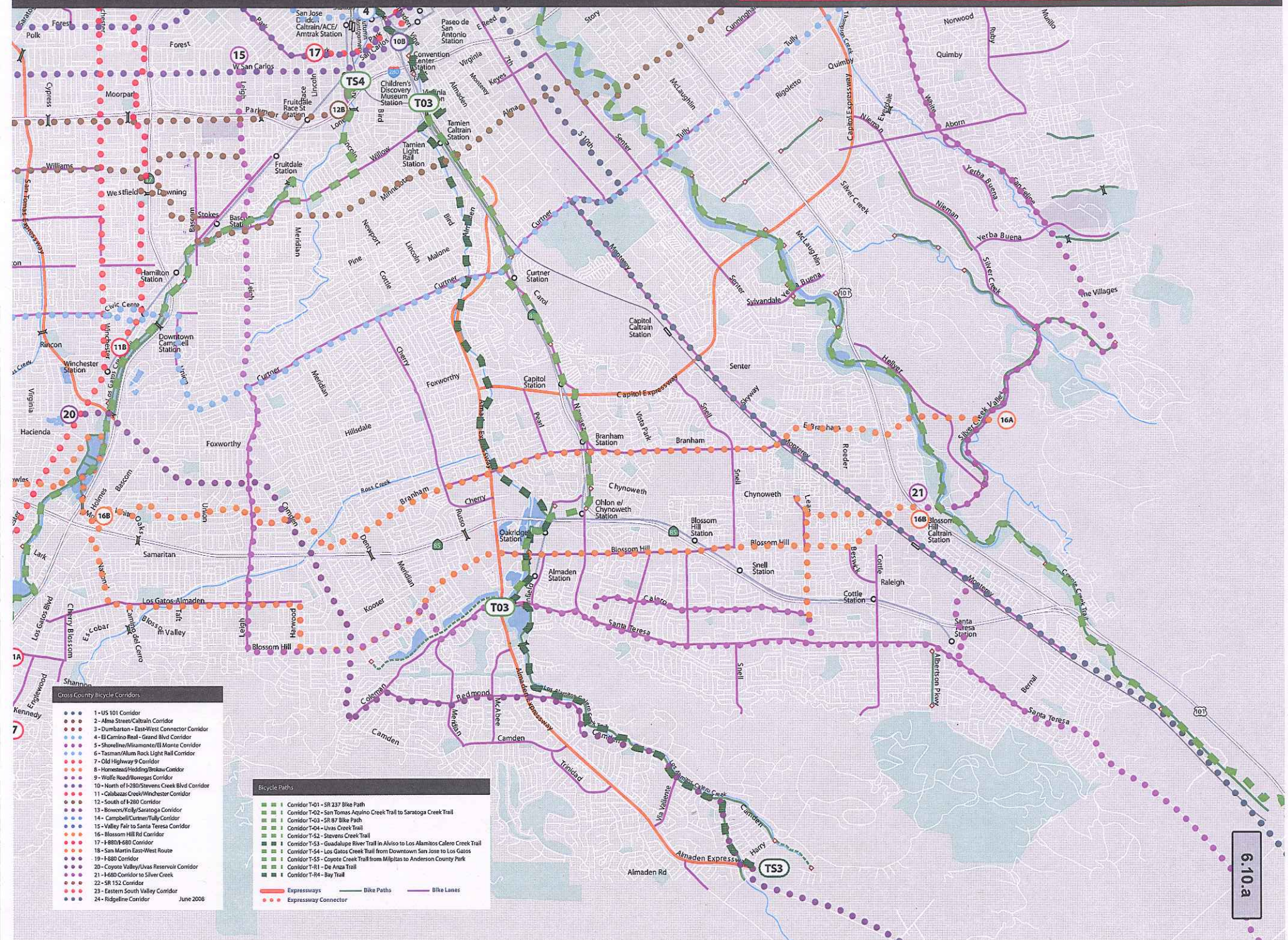


Figure 3-2 Cross County Bicycle Corridors - Southwest County

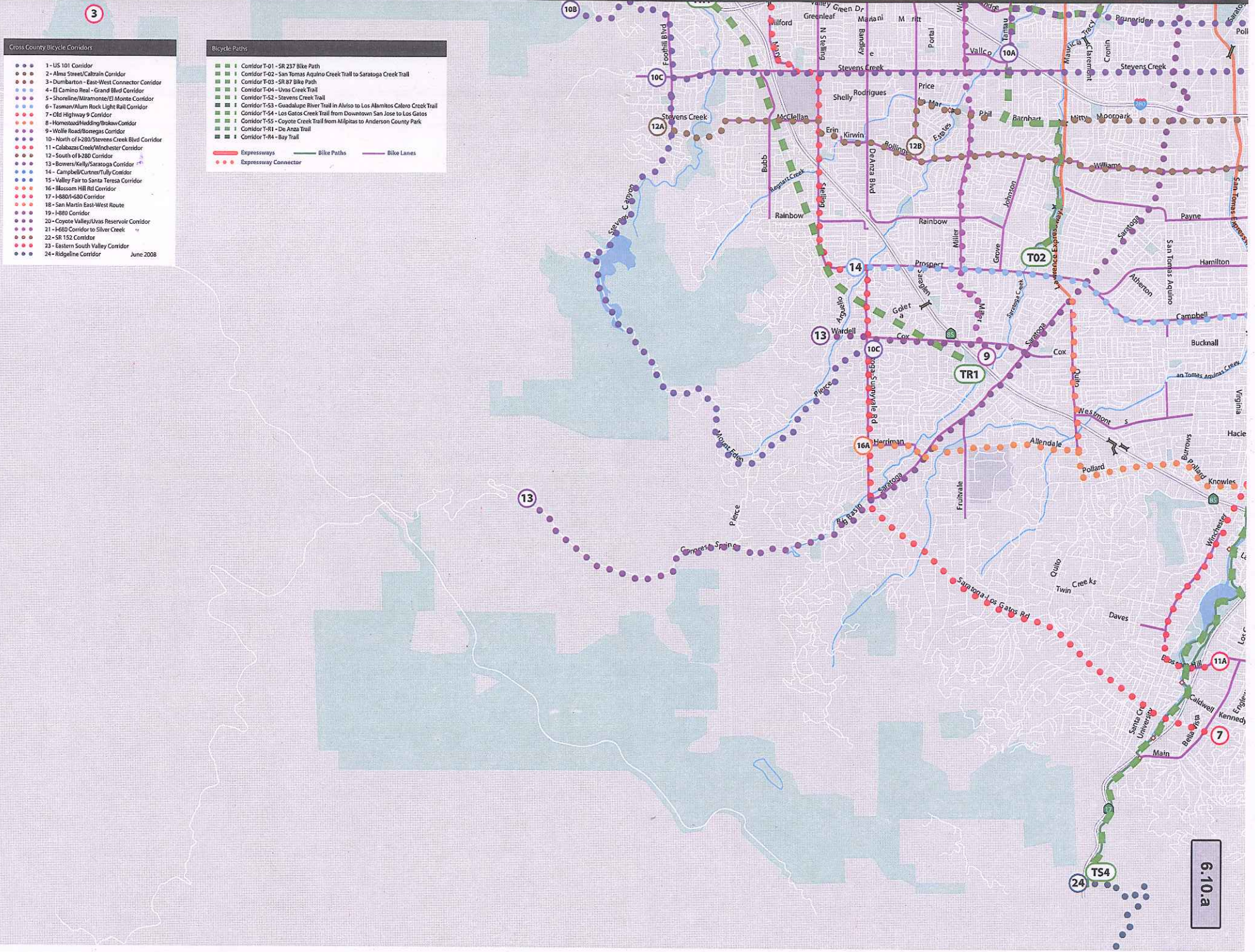
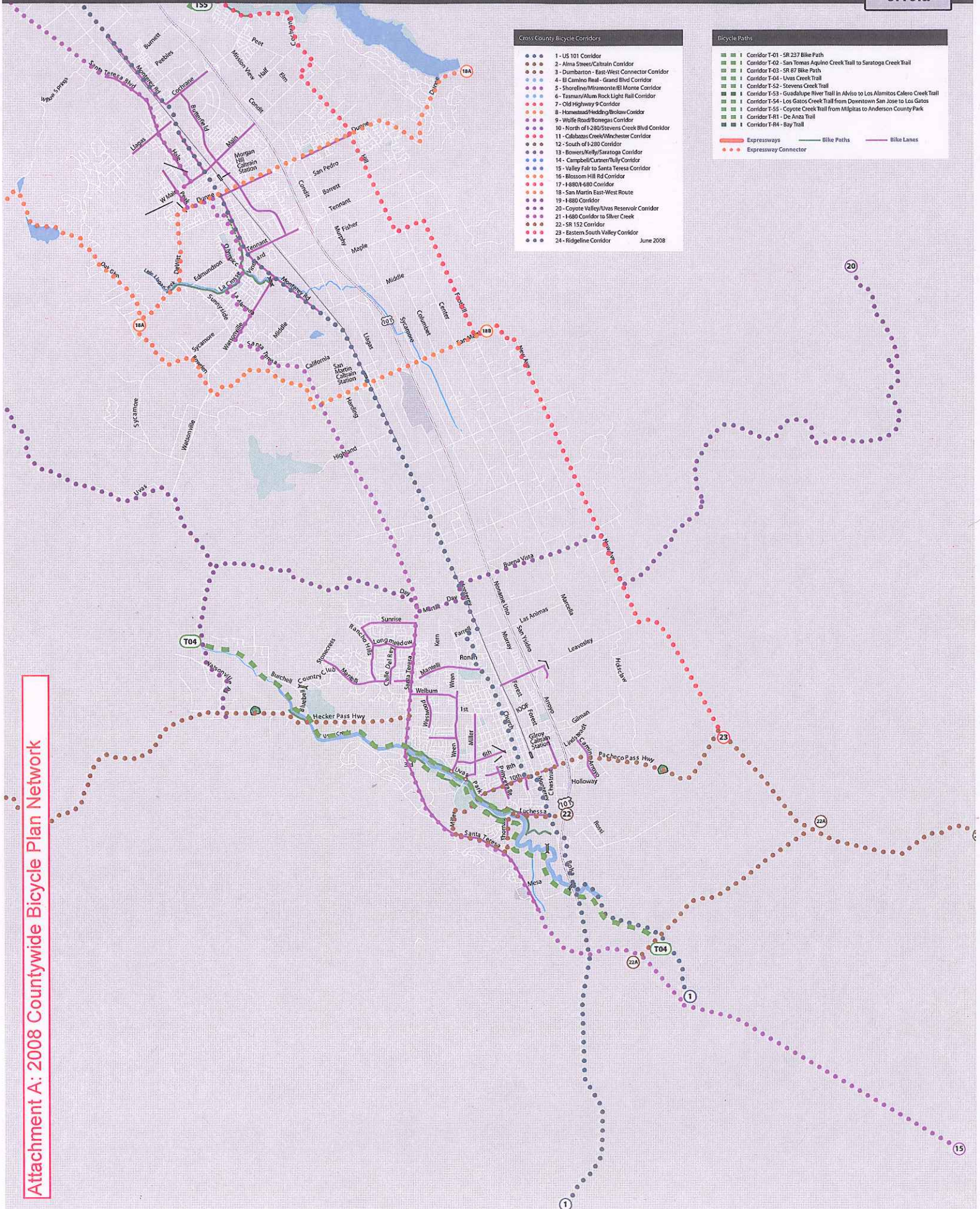


Figure 3-2 Cross County Bicycle Corridors - South County



Attachment A: 2008 Countywide Bicycle Plan Network

- Cross County Bicycle Corridors**
- 1 - US 101 Corridor
 - 2 - Alma Street/Caltrain Corridor
 - 3 - Dumbarton - East-West Connector Corridor
 - 4 - El Camino Real - Grand Blvd Corridor
 - 5 - Shoreline/Miramar/El Monte Corridor
 - 6 - Tassara/Alum Rock Light Rail Corridor
 - 7 - Old Highway 9 Corridor
 - 8 - Hamstead/Hedding/Blokaw Corridor
 - 9 - Wolfe Road/Bonitas Corridor
 - 10 - North of I-280/Stevens Creek Blvd Corridor
 - 11 - Caballeros Creek/Winchester Corridor
 - 12 - South of I-280 Corridor
 - 13 - Bowers/Kelly/Saratoga Corridor
 - 14 - Campbell/Curtner/Tully Corridor
 - 15 - Valley Fair to Santa Teresa Corridor
 - 16 - Blossom Hill Rd Corridor
 - 17 - I-880/680 Corridor
 - 18 - San Martin East-West Route
 - 19 - I-880 Corridor
 - 20 - Coyote Valley/Alvarado Reservoir Corridor
 - 21 - I-680 Corridor to Silver Creek
 - 22 - SR 152 Corridor
 - 23 - Eastern South Valley Corridor
 - 24 - Ridgeline Corridor
- June 2008

- Bicycle Paths**
- Corridor T-01 - SR 237 Bike Path
 - Corridor T-02 - San Tomas Aquino Creek Trail to Saratoga Creek Trail
 - Corridor T-03 - SR 87 Bike Path
 - Corridor T-04 - Liver Creek Trail
 - Corridor T-52 - Stevens Creek Trail
 - Corridor T-53 - Guadalupe River Trail in Alviso to Los Alamos Calero Creek Trail
 - Corridor T-54 - Los Gatos Creek Trail from Downtown San Jose to Los Gatos
 - Corridor T-55 - Coyote Creek Trail from Millpitas to Anderson County Park
 - Corridor T-R1 - De Anza Trail
 - Corridor T-R4 - Bay Trail

- Expressways
- Bike Paths
- Bike Lanes
- Expressway Connector

Attachment B: Proposed Prioritization Criteria for the Countywide Bicycle Plan

Criterion	Assessment	Percent of Total Score*	
Safety			
1	Provides opportunity to improve safety in a corridor with high number of collisions.	Bicycle collision density, with fatal and severe injury collisions weighted higher than other types of collisions. Data from Statewide Integrated Traffic Records System, most recent five years of data.	10%
2	Provides opportunity to improve a corridor with high Bicycle Level of Traffic Stress (LTS).	Current LTS as calculated based on roadway factors such as posted speeds, vehicle volumes, and existing bicycle infrastructure.	10%
Projected Bicycle Ridership Numbers			
3	Has potential to serve many bicyclists.	Projected ridership in 2026, calculated by the VTA travel demand model, assuming the entire Cross County Bicycle Corridor (CCBC) network is built out.	20%
Transit Access			
4	Serves first mile/ last mile transit access.	Projected number of bicyclists traveling from major transit stops in 2026, calculated by the VTA travel demand model, assuming the entire CCBC network is built out.	15%
Employment and School Access			
5	Serves work and school commutes.	Projected number of work and school commuter bicyclists in 2026, calculated by the VTA travel demand model, assuming the entire CCBC network is built out.	15%
Equity			
6	Serves Communities of Concern (COC).**	Projected number of bicyclists traveling from COC's in 2026, calculated by the VTA travel demand model, assuming the entire CCBC network is built out.	10%
Destinations			
7	Serves all trip purposes.	Average density per mile of schools, parks, and shopping areas within 1/4 mile of corridor. Additional weight for services, employment, or high-density housing that serve disadvantaged populations.	15%
Community Support			
8	Has support from the community.	Corridor desirability based on input from members of the public. (Comments received during public outreach for bicycle plan at in person events, or on web map survey in spring 2016.)	5%

* Scores will be calculated on a sliding scale, with the weight representing the maximum percent that each criterion can contribute to the total score.

** Metropolitan Transportation Commission has established Communities of Concern (COC) for the Bay Area. COCs are defined as Census tracts with high concentrations of both minority and low-income households or Census tracts with a high concentration of low-income households and three of the following criteria: limited English proficiency, zero-vehicle households, seniors 75 years or older, people with disabilities, single parent families, or rent-burdened households.