

**Establishment of Guided Bicycle Routes through Neighborhoods
Study Issue – Draft RTC**

For year 2010, the City Council ranked a study issue initiated by staff and sponsored by BPAC entitled Establishment of Guided Bicycle Routes Through Neighborhoods. This study would identify routes to assist bicyclists in finding ways through the city utilizing streets lightly traveled by vehicular traffic. The BPAC members requested utilizing guide signs to indicate locations of major bicycle traffic generators, main transit stations, and the Borregas Avenue Bicycle and Pedestrian bridges over-crossing US 101 and SR 237.

The staff recommended criteria for selecting guided neighborhood bicycle routes and a set of routes which were discussed during the BPAC meetings held on March 18, April 15, and May 20 2010. BPAC members also cycled along the staff suggested routes and noted deficiencies and recommended improvements such as addition of signage, pavement markings, bicycle detection, and access improvements that still need further investigation.

Enclosed is a Draft RTC for BPAC review and recommendation prior to proceeding for Council consideration on October 26, 2010. The RTC covers background information on the study issue, a bike routes concept map, a typical guide bike route sign, and a list of issues and improvements for future review as part of the second phase of the project. It should be noted that the Draft RTC and its attachments were revised based on comments raised during the BPAC meeting held on July 15 2010.

Staff recommends accepting the bike route concept map as presented in Attachment C of the Draft RTC. Also consider a guided bicycle route signage project and a project for associated improvements, including improvements recommended by BPAC, as part of FY 2011/12 Capital budget. The BPAC members are provided with a number of alternatives that allow them to accept, revise, or not take action with regard to the staff recommendation.

**DRAFT FOR BICYCLE AND PEDESTRIAN ADVISORY
COMMISSION REVIEW, August 19, 2010****Council Meeting: October 26, 2010****SUBJECT: Establishment of Guided Bicycle Routes through
Neighborhoods – STUDY ISSUE****REPORT IN BRIEF**

Action Item B4.b of the 2006 City Bicycle Plan calls for consideration of bicycle guide signage on routes through neighborhoods, incorporation of destination names and directional arrows, and distances where appropriate. This study identifies streets for a network of guided routes to assist bicyclists in finding ways through the city utilizing streets lightly traveled by vehicular traffic. Staff and the Bicycle and Pedestrian Advisory Commission (BPAC) have prepared a route concept map and are recommending that Council accept the route concept map and consider a guided bicycle route signage project and a project for associated improvements as part of the FY 2011/12 Capital budget.

EXISTING POLICY

Land Use and Transportation Element C3.5, Maximize the provision of bicycle and pedestrian facilities.

DISCUSSION

The City Council authorized a 2010 study issue (Attachment A) to identify a network of streets more lightly traveled by vehicular traffic that can serve as bicycle routes for riders less comfortable riding on streets with heavy traffic. These routes can be identified using signs consistent with Federal and State design standards for local bike route networks.

The BPAC and staff identified criteria for selecting the guided neighborhood bike routes (Attachment B), then selected and field checked a network of 16 potential routes (Attachment C). The network is a rough grid of streets traversing the entire City. The route concept was to provide alternative ways to traveling on major streets. The BPAC believes that just as some motorists are not comfortable driving on busy streets and prefer to remain on quieter streets, so do cyclists. Conversely, the vast majority of motorists find that major roads are essential to make efficient use of their transportation time, as do cyclists. Therefore, the creation of the guided route network is intended to supplement, but not replace safe bike accommodations on major streets. Creation of a guided bike route network provides encouragement and opportunity for

potential riders who otherwise might be intimidated by traveling on heavily traveled streets. It can also encourage recreational or destination riding. Guide signs with route numbering augmented by destination placard signs, would be placed at key points on each route. Signing would be done consistent with Federal and State standards, as illustrated in Attachment D. The BPAC and public members identified some locations of concern requiring further investigation and improvement. Locations of concern and potential improvement as identified to date are listed in Attachment E for reference.

The BPAC and staff recommend that the Council consider inclusion of two capital projects for installation of guided bike route signage and associated improvements as part of the FY 2011/12 capital budget. Staff estimates the cost of the signing project to be approximately \$40,000. The additional access improvements are estimated at a cost of approximately \$200,000. In order not to delay the relatively easier-to-implement signing improvements, the BPAC and staff recommend that a separate "Phase II" project for the access improvements also be considered for FY 2011/12. The BPAC and staff are not recommending a funding source for either project at this time. Bicycle capital improvements typically are advanced as revenue dependent projects.

FISCAL IMPACT

There is no fiscal impact with accepting the guided bike route concept map. Fiscal impacts of capital improvements associated with implementing the guided bicycle route network would be considered as part of the FY 2011/12 budget. Staff estimates the cost of a signed bike route network as conceptualized to be approximately \$40,000. The associated access improvements are estimated to cost approximately \$200,000. No funding sources have been identified for these improvements at this time, although typically the City Council has directed that bicycle capital improvements be made on a revenue dependent basis.

PUBLIC CONTACT

Public contact was made during the BPAC public hearings held on March 18, April 15, May 20, and July 15, 2010. Also by posting the Council agenda on the City's official-notice bulletin boards outside City Hall, in the Council Chambers lobby, the City Clerk's office, at the Library, Senior Center, Community Center, and Department of Public Safety; posting the agenda and report on the City's Web site; and making the report available at the Library and Office of the City Clerk.

ALTERNATIVES

1. Accept the guided bike route concept map as presented in Attachment C and consider a guided bicycle route signage project and a project for associated improvements as part of the FY 2011/12 Capital budget.
2. Modify the bike route concept map.
3. Do not take action at this time discontinue the development of a guided bicycle route network.

DRAFT

RECOMMENDATION

The Bicycle and Pedestrian Advisory Commission and staff recommend Alternative No. 1: Accept the guided bike route concept map as presented in Attachment A and consider a guided bicycle route signage project and a project for associated improvements as part of the FY 2011/12 Capital budget.

Acceptance of the guided bike route network map lays the foundation for subsequent capital improvements to implement a network of bike routes that will supplement bike facilities on major streets and encourage a broader spectrum of bike riding trips.

Reviewed by:

Marvin A. Rose, Director of Public Works

Prepared by: Jack Witthaus, Transportation and Traffic Manager

Approved by:

Gary M. Luebbers
City Manager

Attachments:

- A. Study Issue Paper DPW 10-04 Establishment of Guided Bike Routes through Neighborhoods
- B. Criteria for Selecting the Guided Neighborhood Bike Routes
- C. Guided Bike Route Network Concept Map
- D. Typical Guided Bike Route Signage
- E. Locations of Concern and Potential Improvement

Proposed 2010 Council Study Issue

DPW 10-04 Establishment of Guided Bicycle Routes Through Neighborhoods

Lead Department Public Works
 Element or Sub-element Land Use and Transportation Element and Bicycle Plan
 New or Previous New
 Status Pending History 1 year ago None 2 years ago None

1. What are the key elements of the issue? What precipitated it?

Action Item B4.b of the 2006 City Bicycle Plan calls for consideration of bicycle guide signage on routes through neighborhoods, incorporation of destination names and directional arrows, and distances where appropriate. This study would identify streets for a network of guided routes to assist bicyclists in finding ways through the city utilizing streets lightly traveled by vehicular traffic.

BPAC members noted the need for referencing locations of transit stations and the Borregas Bicycle and Pedestrian bridges overcrossing US 101 and SR 237.

2. How does this relate to the General Plan or existing City Policy?

- C3.5 Support a variety of transportation modes;
- C3.5.1 Promote alternative modes of travel to the automobile; and,
- BP.B Create and follow transportation planning, funding, design, construction and maintenance practices that support cycling

3. Origin of issue

Council Member(s)
 General Plan
 City Staff Transportation and Traffic Manager
 Public
 Board or Commission none

4. Multiple Year Project? No Planned Completion Year 2010

5. Expected participation involved in the study issue process?

Does Council need to approve a work plan? No
 Does this issue require review by a Board/Commission? Yes
 If so, which?
 Bicycle and Pedestrian Advisory Committee
 Is a Council Study Session anticipated? No

What is the public participation process?
 BPAC and City Council public hearings

6. Cost of Study

Operating Budget Program covering costs
 115 Transportation and Traffic Operation

Project Budget covering costs

Budget modification \$ amount needed for study

Explain below what the additional funding will be used for

Staff's review of the City's roadway network in relation to existing bicycle facilities, locations of schools and other traffic generators, locations of main transit stations, etc. Development and installation of recommended signs, establishment of recommended pavement markings, and development and publishing of information on the City's web site and other sources.

7. Potential fiscal impact to implement recommendations in the Study approved by Council

Capital expenditure range	Under \$500
Operating expenditure range	None
New revenues/savings range	None

Explain impact briefly

Would require implementation of the appropriate signage and markings along the selected road segments and identified key locations and services. The network identified would become the basis for a subsequent capital improvement project. Implementation of this project could potentially be funded with outside grant funds. A guided routes system will also need to be maintained on a regular basis as part of the overall bicycle network.

8. Staff Recommendation

Staff Recommendation For Study

If 'For Study' or 'Against Study', explain

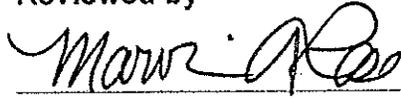
This initiative will assist staff in implementing City policies and objectives. It is intended to encourage cycling within Sunnyvale's neighborhoods by enhancing cyclists' sense of security, improving visibility conditions, and increasing motorists awareness of bicycle traffic.

9. Estimated consultant hours for completion of the study issue

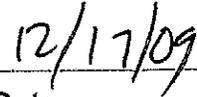
Managers	Role	Manager	Hours	
	Lead	Witthaus, Jack	Mgr CY1: 40	Mgr CY2: 0
			Staff CY1: 80	Staff CY2: 0
Total Hours CY1: 120				
Total Hours CY2: 0				

Note: If staff's recommendation is 'For Study' or 'Against Study', the Director should note the relative importance of this Study to other major projects that the Department is currently working on or that are soon to begin, and the impact on existing services/priorities.

Reviewed by

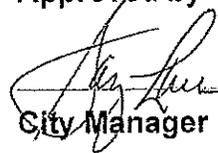


Department Director

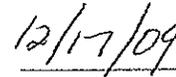


Date

Approved by



City Manager



Date

Addendum

A. Board / Commission Recommendation

Issue Created Too Late for B/C Ranking

Board or Commission	Rank	Rank
	1 year ago	2 years ago
Arts Commission		
Bicycle and Pedestrian Advisory Committee		
Board of Building Code Appeals		
Board of Library Trustees		
Child Care Advisory Board		
Heritage Preservation Commission		
Housing and Human Services Commission		
Parks and Recreation Commission		
Personnel Board		
Planning Commission		

Board or Commission ranking comments

B. Council

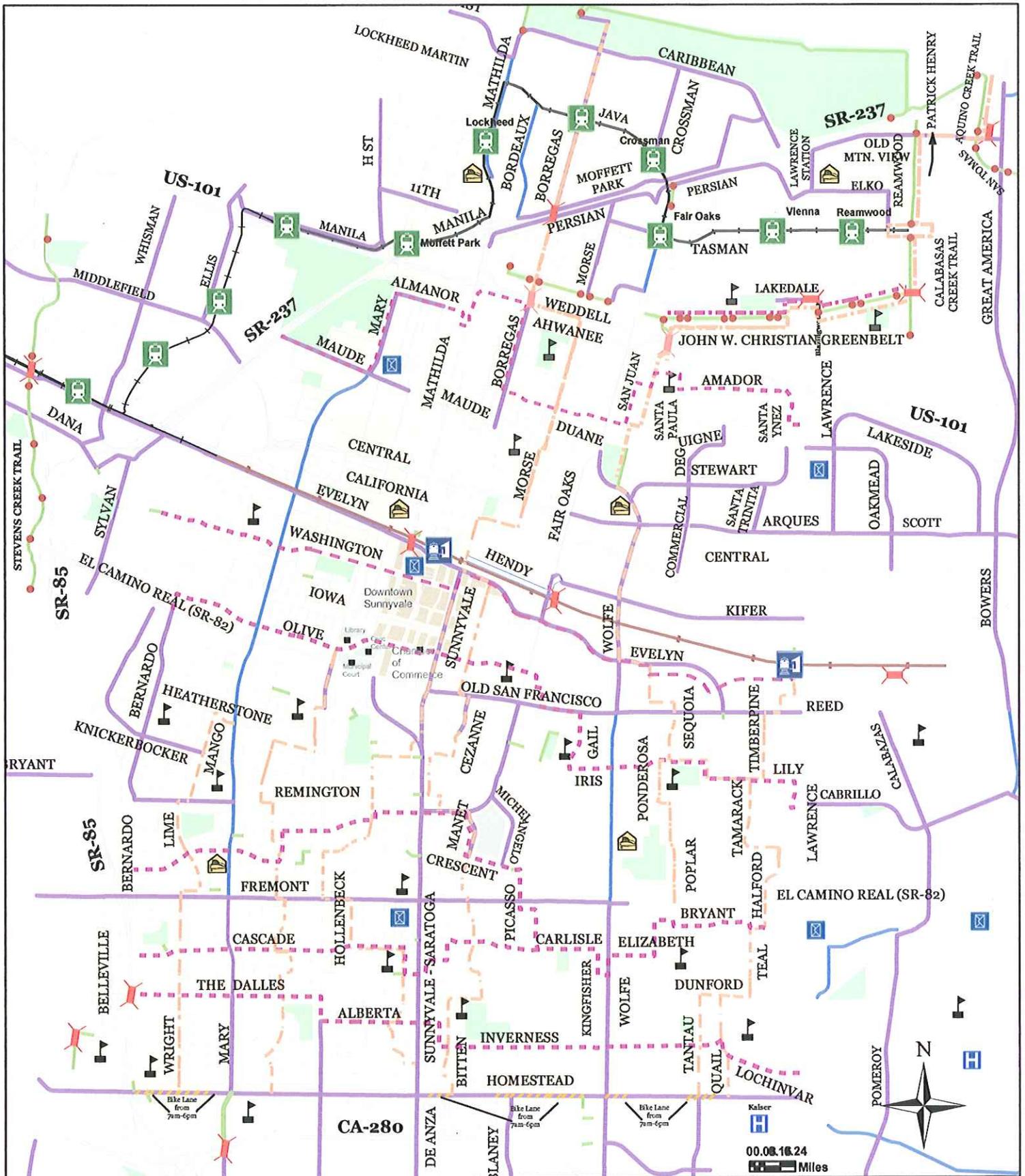
Council Rank (no rank yet)
Start Date (blank)
Work Plan Review Date (blank)
Study Session Date (blank)
RTC Date (blank)
Actual Complete Date (blank)
Staff Contact

64

Criteria for Selecting Guided Neighborhood Bike Routes

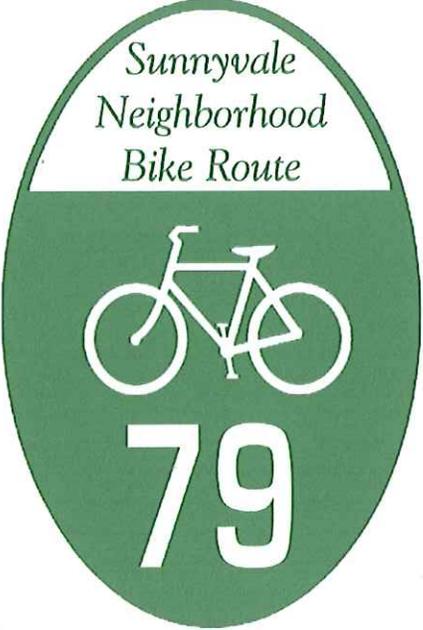
- Connectivity with major traffic generators (such as a school, large clinic, business park, shopping center, etc.) and transit stations (such as the Caltrain Station) either directly or through direct connections with the main bicycle routes within the City.
- Provides the most direct connections (i.e., the shortest distances) to the aforementioned key locations, and when possible select routes that are parallel to arterial streets serving vehicular traffic.
- Supplements the existing and planned future Class I, Class II, and Class III bicycle facilities within Sunnyvale and the neighboring jurisdictions, taking into account locations of bicycle/pedestrian bridges.
- Actual or observed low vehicular traffic volumes (daily and/or peak hour volumes).
- Low posted speed limit along the selected routes.
- Good safety conditions based on observations and collision statistics.
- Acceptable visibility conditions along the routes with minimal blind spots and obstructions.
- Routes can be established through residential or industrial areas depending on the traffic volumes and safety conditions.
- Minimize number of intersection controls (such as stop signs, traffic signals, etc.) to reduce the potential for delays.
- Minimize number of unsignalized intersections with major roads and heavily used commercial driveways.
- Minimize routes that contain obstructive traffic calming devices.
- Minimize capital and operational costs associated with the implementation and maintenance of the routes.
- Public acceptance.

Attachment C - Guided Bike Route Concept Map



Legend

- | | | | |
|-----------------------------|--------------------------------|------------------|--------------|
| Bike Lane | Future North-South Bike Routes | Light Rail Route | School |
| Signed On-Street Bike Route | Future East-West Bike Routes | Caltrain Route | Parks |
| Bike Path | Access Points | Post Office | Fire Station |
| City Jurisdiction | Bike / Pedestrian Bridge | | Hospital |



Sunnyvale
Neighborhood
Bike Route



79



CALTRAIN STATION 0.3 MI



DOWNTOWN SUNNYVALE 0.2 MI

The image shows a rectangular sign for the Sunnyvale Neighborhood Bike Route 79. On the left is a large green oval with a white border. The top half of the oval is white with the text 'Sunnyvale Neighborhood Bike Route' in a serif font. The bottom half is green with a white bicycle icon and the number '79' in a large, bold, sans-serif font. To the right of the oval are two green square icons. The top icon shows a train and a station platform, with the text 'CALTRAIN STATION 0.3 MI' to its right. The bottom icon shows a city skyline, with the text 'DOWNTOWN SUNNYVALE 0.2 MI' to its right.

Issues for Review As Identified to Date

Proposed Phase II Improvements

- There is limited lighting and damage caused by tree roots on Britton Avenue/path adjacent to the Fair Oaks Park.
- It is not possible for cyclists to cross Wolfe Road and turn left to the north of Stewart Drive. This is due to the presence of a center median that restricts access, a horizontal curve that limits visibility, and high vehicular traffic volumes.
- There is a need for street name signs at Elmira Drive/Qnetta Avenue and Pome Avenue/Steuben Drive.
- Some intersections may require pedestrian crossing facilities and/or upgrade in intersection control. Intersections reported are: Dartshire Way/Wolfe Road, Azure Street/Remington Drive, Grand Fir Avenue/Old San Francisco Road, Duane Avenue/San Juan Drive, Olive Avenue/Mary Avenue, and Spinosa Drive/Remington Drive.
- Further north along this route, there is a chain link fence at Crawford Drive and a gap where there is a need for signage to avoid having cyclists ending up in a parking lot.
- The route connecting between the Caltrain Station and the water tank bike path should not be publicized until it is formally instated. This is to avoid cyclists using such route and missing their train.
- There is a need for left-turn bike detection loops at the intersection of Fremont Avenue/Bernardo Avenue.

Other Issues/Staff Responses

- There is a desire for a bicycle/pedestrian bridge over-crossing US 101 east of Lawrence Expressway in the Sandia/Wildwood area. This can be considered as a separate study issue in a future year.
- Crossing the light rail tracks from the Calabazas Creek Trail currently requires northbound cyclists to use the signal at Patrick Henry Drive, while southbound cyclists have to cross as pedestrians at Reamwood Avenue. The current configuration allows for legal access, but the City plans to construct a low water crossing at this location to eliminate the need to diverge from the bike path.
- There is a need for crosswalks across Morse Avenue and Borregas Avenue to serve users of the John W. Christian Greenbelt. The City is currently pursuing a capital project to provide these improvements.
- There is a need for information signs to show possible access points to the greenbelt, including access on the east side of Fair Oaks Avenue. Access signs exist along the Greenbelt. Staff can evaluate whether an additional sign is needed at Fair Oaks.
- The future guide signs need to be clear to differentiate between the slow neighborhood routes relative to the major bicycle corridors where cyclists could travel at higher speeds. This is to avoid unintended diversion of bicycle traffic unfamiliar with the City to the slow neighborhood bicycle routes. Staff will follow Federal and State protocol for signing of Class II facilities and neighborhood routes. These signs portray clearly different messages.

