



DRAFT MINUTES
MINUTES OF THE REGULAR MEETING OF THE
BICYCLE PEDESTRIAN COMMISSION

May 19, 2021

Draft Minutes

The meeting was called to order at 7:01 p.m.

ROLL CALL:

Present: Jack Carter, Maanya Condamoor, Gerhard Eschelbeck (Chair), Ilango Ganga (Vice Chair), Erik Lindskog

Absent: None

Staff: David Stillman, Transportation Manager, Staff Liaison

Others Present: Marlon Aumentado, Assistant Civil Engineer

APPROVAL OF MINUTES

1. April 21, 2021 Minutes

Commissioner Carter motioned to approve the minutes as presented, Vice Chair Ganga seconded the motion. Motion passed 5-0.

POSTPONEMENTS

No postponements.

ORAL COMMUNICATIONS

No Oral Communications.

WRITTEN COMMUNICATIONS

Jim Lentfer wrote regarding Presidio Drive near Bubb Road and how a front bicycle tire could drop in the storm drain, causing a fatal result. David Stillman, Transportation Manager said a temporary fix was in place until a permanent fix could be instituted. Mr. Lentfer also wrote about a missing valve cover near 21111 Rainbow Drive, causing a hazard to bicyclists and vehicles. Mr. Stillman forwarded this issue to maintenance, and it has since been resolved.

Peggy Griffin commented that it was hard to provide input on the Junipero Serra Trail due to the website configuration. Content did not show up very well and it was at the very bottom of the page. David Stillman said that the issue had been resolved.

A copy of these Written Communications is attached with these minutes.

OLD BUSINESS

Item 2: Future Agenda Items (Eschelbeck)

Carmen Road Bridge

McClellan Separated Bikeway Phase 3

Public places for bike racks

Education on how to use two-stage left turn boxes

Path between Lincoln Elementary and Monta Vista High School

Next steps for commission Work Plan Item

Touchless pedestrian push buttons

The impact of semi-rural designation on bike and ped projects/priorities

Adaptive traffic signal pilot update

Multi-modal traffic count pilot update

Cupertino crash data analysis

Vice Chair Ganga wanted to add the Bollinger Road Study, which was a Work Program Item from 2020. Commissioner Carter asked about the Rental Bicycle Item. Commissioner Condamoor was interested in the Electric Scooter (E-scooter) Item and asked that it be included.

Item 3: Blackberry Farm Entrance Road Feasibility Study (Stillman)

David Stillman, Transportation Manager reported that the City completed a Feasibility Study to improve the entrance at Blackberry Farm, specifically with the bicyclists and pedestrians in mind. The Feasibility Study went before the City Council and the Bicycle Pedestrian Commission (Commission) before it returned to the Commission today. When this item went before the Commission, they asked staff to include an analysis of a Modified Alternative B. The current item is a follow-up to that request.

Mr. Stillman clarified that there was no direction from the City Council to proceed with this item. This information in the Study would be accessible, should the Council move forward with the Study.

Chair Eschelbeck asked if the difference between the two alternatives was a matter of striping. Mr. Stillman said yes and added that the entry way needed to be converted into a two-way bicycle pedestrian pathway and that it needed to meet all applicable standards and regulations, which it did.

Commissioner Carter thought it was good for the pedestrians to be located along the outside of the pathway.

Commissioner Lindskog noted that the City did own a property near the proposed path and if the City owned that property, there was more room to outline the path. Commissioner Carter replied there was a significant drop-off on the golf course side and there was a need to build up. Mr. Stillman said yes and noted that the cost estimate was \$3-4 million. Commissioner Lindskog thought that if the City owned the property then there was more flexibility. The Commission planned to endorse an alternative, by means of a motion, and forward that to the City Council as a Commission action at this meeting.

Vice Chair Ganga understood that under the Modified Alternative B proposal there was going to be a 14 foot Class 1 bike lane that was shared with bicyclists and pedestrians. He noted there was striping between the different directions of traffic lanes but not between the bicyclists and pedestrians that shared a direction. Mr. Stillman answered that staff has not delineated a specific striping layout for the path. He made sure that the project met the Caltrans Class 1 criteria. Vice Chair Ganga supported this option and noted that this project needed to be compared against the Commission priorities.

Vice Chair Ganga motioned to recommend to the City Council the endorsement of Modified Alternative B to the Blackberry Farm Entrance Road Feasibility Study (which is a Tier 3 Project,) over other alternatives. Commissioner Lindskog seconded the motion. Motion passed 5-0.

NEW BUSINESS

4. McClellan Road Separated Bikeway Project, Phase 3 (Aumentado)

Marlon Aumentado, Assistant Civil Engineer gave a presentation on the McClellan Road Separated Bikeway Project, Phase 3, De Anza Boulevard and McClellan Road/Pacifica Drive Intersection Modifications. He presented draft conceptual improvements to that intersection and sought feedback on the conceptual design elements that were received from Kimley-Horn, which was the design consultant for the project.

Commissioner Carter asked if he was making a left turn on De Anza Boulevard, was he able to do that in one move, as was the case currently. Mr. Aumentado said that was not going to be possible under this design because bicyclists would need to follow the traffic markings. Vice Chair Ganga clarified there was a green box in front of the left only lanes; he suggested a green bike box as an addition because the new proposal showed the bicyclist going to the other side of the street, using the bike lane. Mr.

Stillman clarified that in this situation, a person would be able to take the number two left turn lane, (and maybe there was a need for a green bike box,) and proceed left, in front of or with the left turning vehicle onto northbound De Anza. Staff was proposing an eight phase signal operation, which meant the left turns would go independent of the through traffic. A green bike box was probably a good addition to this plan.

Commissioner Lindskog inquired if the bicycle light would be separate from the vehicle light. Mr. Stillman said the intent was that the bicyclist and vehicle would be in the same signal phase, so if the bicyclist wanted to turn left, they needed to get in the lane to do so or they could do a two-stage crossing. Commissioner Lindskog commented that the proposal was not very different from a typical intersection, but the angle of the intersection possibly made things confusing. Vice Chair Ganga suggested clear markings for a bicyclist on how to make a left turn.

Commissioner Lindskog suggested making the pedestrian crossing further south and to line it up with the sidewalk. Mr. Aumentado explained that where there was a crosswalk, there was a stop bar, and pushing the vehicles back more was further than what a planner would like at an intersection. Commissioner Lindskog thought, rather than have the bikes go diagonal, have them follow the crosswalk. Mr. Aumentado replied that generally the plan was to try to keep things parallel with the existing traffic through lanes.

Commissioner Condamoor asked about the purpose of the detectable warning surface. Mr. Aumentado explained that per ADA compliance, when a person steps onto a location where vehicles would be, there needed to be a difference in texture in the road for the visually impaired to detect.

Commissioner Condamoor inquired about the push button, asking if it could be evaluated for a touchless button. Mr. Aumentado noted that in his report.

Commissioner Condamoor asked staff for a cost breakdown on the value of each part of the project. Mr. Aumentado tried to understand if she wanted to split up the bicycle versus pedestrian improvements and said there was not a way to quantify that in terms of impact. He promised to investigate the matter.

Chair Eschelbeck thought it was good to have a proxy on the amount of people that used the intersection. Mr. Stillman noted that whatever data staff had might not be representative of what is expected. Making the suggested improvements might encourage new riders to use this facility and could curb anxiety.

Commissioner Lindskog asked if there was a barrier included in the presented plan. Mr. Aumentado answered yes. Commissioner Lindskog noted that regarding the sections in the proposal that did not have a protected bike lane, it was good to have at least a lane for a bike.

Commissioner Carter asked if pedestrian bridges were out of the conversation. Mr. Stillman responded yes for two reasons: 1) because of cost; and 2) bridges need to be ADA accessible. There would need to be ramps that do not exceed ADA grades, which require a lot of room.

Vice Chair Ganga said there was no crosswalk on the south side of the De Anza and McClellan intersection and that was a good addition. Secondly, he remarked that it was a hazard for bicyclists that were traveling eastbound on McClellan and wanting to turn left on De Anza because they would still have to negotiate their way to turn left. Mr. Aumentado remarked that in both proposals, bicyclists would still have to negotiate their way.

Commissioner Lindskog felt the proposal did not really improve things for bicyclists because it would take longer to navigate the intersection; there were more signal conflicts. The crosswalk was good for pedestrians but there was not much of an improvement for bicyclists. Mr. Stillman answered that one big benefit for bicyclists was the widening of the approaches and the elimination of the split phasing of the traffic signals. By separating the left lanes and the through lanes, it allowed bicyclists to clearly be at the front of the number two left turn lane and to be able to make a sweeping left turn without worrying about vehicles.

5. Stevens Creek Boulevard Separated Bikeway Project Traffic Signal Phasing (Stillman)
David Stillman, Transportation Manager said he was looking for feedback on the phasing sequences of the traffic signal along the Stevens Creek Boulevard Separated Bikeway. Mr. Stillman gave a presentation highlighting the existing signal phasing at the Stevens Creek Blvd/Wolfe Road intersection. Video detection was going to be done at most, if not all locations because it offered the most flexibility and enabled staff to conduct vehicle counts easily.

Commissioner Lindskog shared that he liked the signal arrangement that was in place now because he liked the ability for the bicycles to go straight; the presented option gave bicyclists a shorter green light. He did not see the need for the bicyclists to have a red light when the pedestrians had a green light. Mr. Stillman answered that the reason behind that was the need to separate bicyclists from right turning cars.

Commissioner Carter asked that in this scenario, did it mean that he would have to stop his bike at every intersection. Mr. Stillman said no. The way he would like intersections to work was to use video detection, which allowed definition of detection zones. It was possible to define a detection zone say, 100-200 feet in advance of the intersection so that as the bicyclist approaches the intersection it would be detected by the traffic signal. The light would then turn green as the bicyclist approached the intersection so the bicyclist would not have to stop and could proceed through the intersection. There were also plans for a stop bar detection at the intersections.

Commissioner Carter felt there was too much clutter, having too many signal lights. Mr. Stillman agreed and suggested having bigger signals too. Commissioner Condamoor commented that what was in position now was not effective, she wanted to simplify things, as that would lead to people following the traffic rules. Vice Chair Ganga agreed that it was too complex and crowded.

Chair Eschelbeck asked if the signal operations were easily changed, in terms of software. Mr. Stillman believed the software could be easily changed. He said at narrow cross streets, where there was not a lot of time needed for people to cross, the San Francisco option was good.

STAFF AND COMMISSION REPORTS

6. Staff Update and Commissioner Activity Report (All)

Commissioner Condamoor attended the Safe Routes to School (SRTS) meeting and the Mayor's meeting on behalf of the Bicycle Pedestrian Commission (Commission) last month. Regarding the SRTS, most of the discussion revolved around Stelling Road and Orion Lane and how people were frequently running the intersection; there was discussion about how that could better be enforced. Some commissioners also shared that they were lessening their meeting cycles. David Stillman, Transportation Manager shared some work that he had been doing and some of the progress on the Linda Vista Trail. The last part of the meeting was talk about brochures that were being made for kids returning to school and how they were being designed after SRTS.

Chair Eschelbeck did not foresee a shortening of the Commission meeting cycle.

Commissioner Lindskog gave an update on the Valley Transportation Authority (VTA)/Bicycle Pedestrian Advisory Committee (BPAC) for May.

Vice Chair Ganga attended the TICC Commission meeting and there were two projects that were approved. One was an Automatic Signaling Project. He also attended the

Bollinger Road Safety Study Meeting. His intent was to understand what kind of input the community has.

ADJOURNMENT

Meeting adjourned at 9:42 p.m.

SUBMITTED BY:

David Stillman, Staff Liaison

Note: Any attachments can be found on the Cupertino Website

<https://www.cupertino.org/our-city/agendas-minutes>

Kim Lunt

From: David Stillman
Sent: Thursday, May 20, 2021 9:40 AM
To: Kim Lunt
Subject: FW: Presidio near Bubb for Bicycle Commision.

BPC Written Communication #1



David Stillman

Transportation Manager
Public Works
DavidS@cupertino.org
(408) 777-3249



From: Jim Lentfer <jim.lentfer@gmail.com>
Sent: Tuesday, April 27, 2021 3:54 PM
To: David Stillman <DavidS@cupertino.org>
Subject: Presidio near Bubb for Bicycle Commision.

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

A front tire could drop in here with fatal result. Thank you in advance. Jim



Jim

Kim Lunt

From: David Stillman
Sent: Thursday, May 20, 2021 9:40 AM
To: Kim Lunt
Subject: FW: Missing valve cover Rainbow

BPC Written Communication #2



David Stillman

Transportation Manager
Public Works
DavidS@cupertino.org
(408) 777-3249



From: Jim Lentfer <jim.lentfer@gmail.com>
Sent: Thursday, April 29, 2021 6:37 AM
To: David Stillman <DavidS@cupertino.org>
Subject: Missing valve cover Rainbow

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

David:

For bicycle commission there is a missing valve cover near 21111 Rainbow that could be a hazard to bikes or cars.

Thank you,
Jim Lentfer

Kim Lunt

From: David Stillman
Sent: Thursday, May 20, 2021 9:41 AM
To: Kim Lunt
Subject: FW: Hard to provide input on Junipero Serra Trail due to website

BPC Written Communication #3



David Stillman

Transportation Manager
Public Works
DavidS@cupertino.org
(408) 777-3249



From: Peggy Griffin <griffin@compuserve.com>
Sent: Friday, May 7, 2021 11:53 AM
To: Bill Mitchell <BillM@cupertino.org>
Cc: City Council <CityCouncil@cupertino.org>; David Stillman <DavidS@cupertino.org>; City of Cupertino Bike and Ped Commission <Biapedcommission@cupertino.org>
Subject: Hard to provide input on Junipero Serra Trail due to website

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hi Mr. Mitchell,

Recently, the City has been trying to notify residents regarding providing input on the Junipero Serra Trail BUT the way the website is set up, the information on how to provide input does not show up by default AND is at the very bottom of the page.

The website below takes you to the Junipero Serra Trail page.

<https://www.cupertino.org/our-city/departments/public-works/transportation-mobility/bicycle-and-pedestrian-travel/bicycle-transportation-plan-implementation/junipero-serra-trail-4346>

PROBLEM:

- Follow the link above
- Scroll down to the bottom of the page
- Under the heading "Community Meeting Schedule" there is NOTHING. Only if you happen to notice the ">" arrow at the far right would you think to click it to expand the information. Also the floating Twitter-Facebook-etc bar covers most of the arrow on a normal iPad!

REQUESTS:

1. Make the information under the "Community Meeting Schedule" EXPANDED by default so anyone arriving on the page sees the information.
2. Move all of it to the top of the page.

I hope these improvements can be done quickly. In order to get input, it must be easy to locate. Thank you.

Sincerely,
Peggy Griffin

Alternative B (Modified)

At the February 19, 2020 meeting of the Cupertino Bicycle Pedestrian Commission, City staff presented a summary of Alternatives A through E from the Blackberry Farm Entrance Road Improvements Feasibility Study, Final Report, by Underwood & Rosenblum, Inc. At the meeting, the Commission expressed a preference to have an additional Alternative studied. This alternative, to be referred to as “Alternative B Mod”, would maintain the 14-foot width of Alternative B, but would allow for two-way traffic for both bicyclists and pedestrians. The Commission’s desire was to be able to accommodate downhill bicycle traffic, in addition to the uphill bicycle traffic currently included in Alternative B.

A Class I Bikeway would satisfy the Commission’s desire for a two-way bicycle facility. The design of bicycle facilities is regulated by the California Highway Design Manual (HDM) Chapter 1000. HDM Section 1003.1(1)(a), *Class I Bikeways (Bike Paths)*, specifies that, for a Class I Bikeway, “The minimum paved width of travel way for a two-way bike path shall be 8 feet, 10-foot preferred.” The section goes on to say, “Where heavy bicycle volumes are anticipated and/or significant pedestrian traffic is expected, the paved width of a two-way bike path should be greater than 10 feet, preferably 12 feet or more.” Consequently, the available 14-foot width exceeds the HDM’s recommended width for this facility.

A shoulder is not required, per HDM Section 1003.1(1)(b), as a result of the facility being located on a structure.

Grades are regulated by DIB 82, per HDM Section 1003.1(14). DIB 82 is the California Department of Transportation (Caltrans) accessibility design guidance, “Pedestrian Accessibility Guidelines for Highway Projects”, last updated November 16, 2017 as DIB 82-06. Per DIB 82 Section 4.3.7, this facility would be classified as a “ramp”, meeting the following specifications:

- Slopes that are greater than 1V:20H (5.0%) will be considered ramps and must not exceed a 30-inch rise without landings. [2010 ADA Standards 106.5, 405.6 and Title 24 11B-403.3, 11B-405.6]
- The maximum slope of a ramp shall not exceed 1V:12H (8.3%). [2010 ADA Standards 405.2 and Title 24 11B-405.2]
- The cross slope of ramp surfaces shall be no greater than 2.0%. [2010 ADA Standards 405.3 and Title 24 11B-405.3]

Section 4.3.10 of DIB 82 specifies the requirements for handrails:

- Ramp runs with a rise greater than 6 inches shall have handrails. Handrails shall be provided on both sides of stairs and ramps. [2010 ADA Standards 405.8, 505.2 and Title 24 11B-505.2]

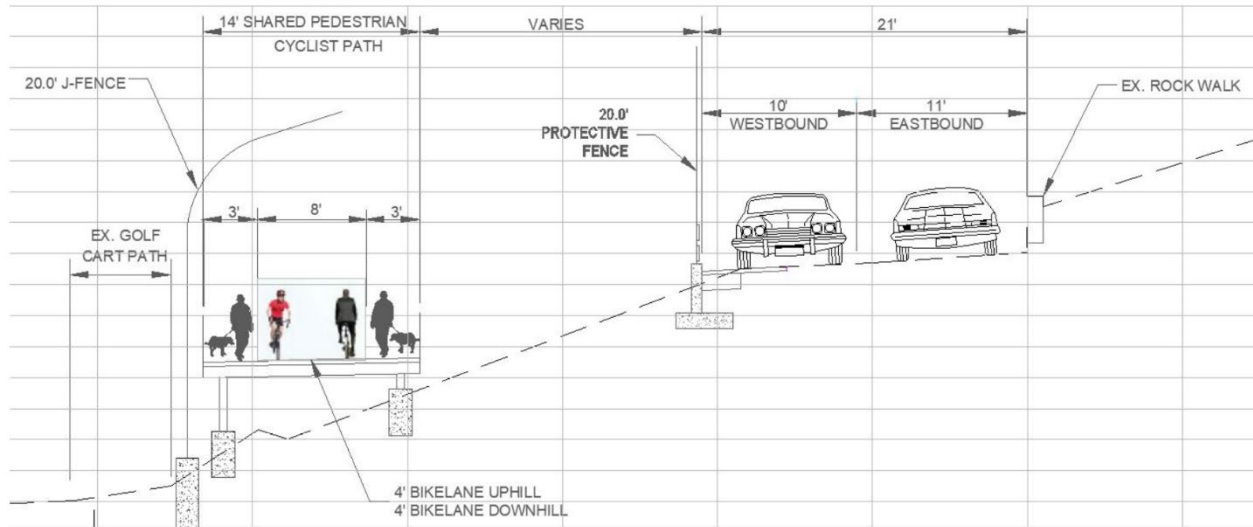
Providing handrails along the outside of the facility, adjacent to the pedestrian walkway areas, satisfies this requirement.

Advantages

This option retains the same advantages as Alternative B, but provides for both uphill and downhill bicycle movements, as requested by the commission.

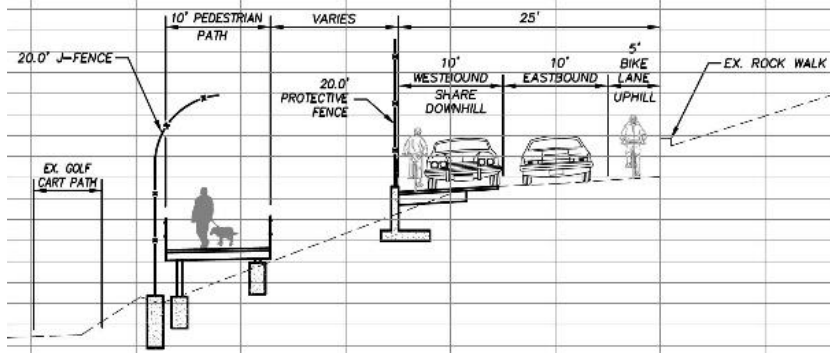
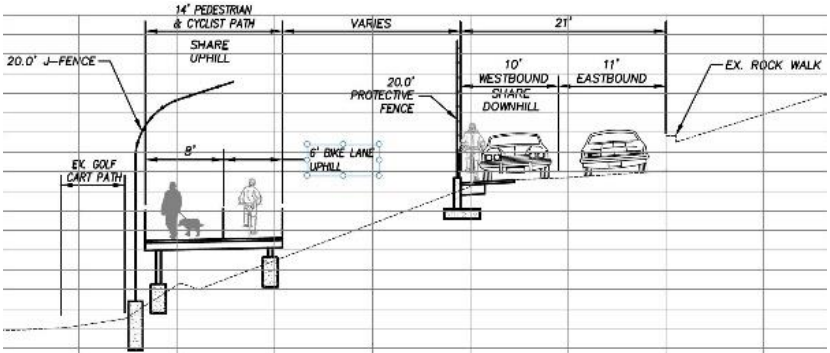
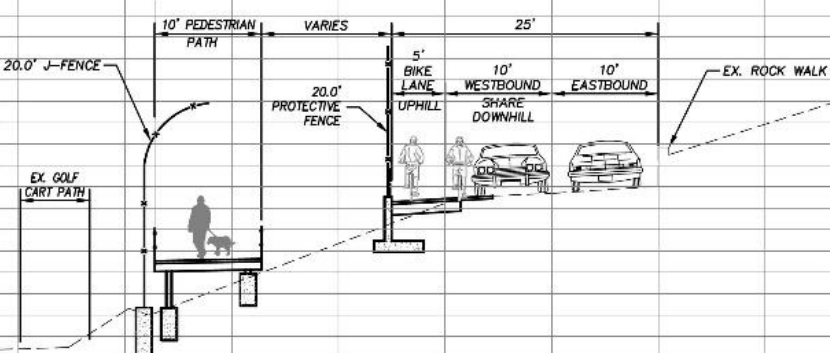
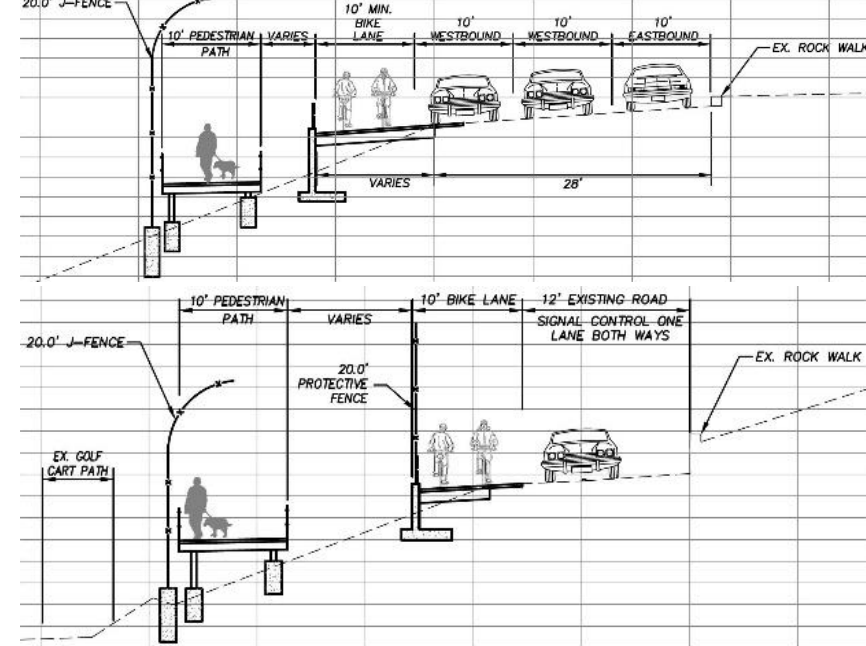
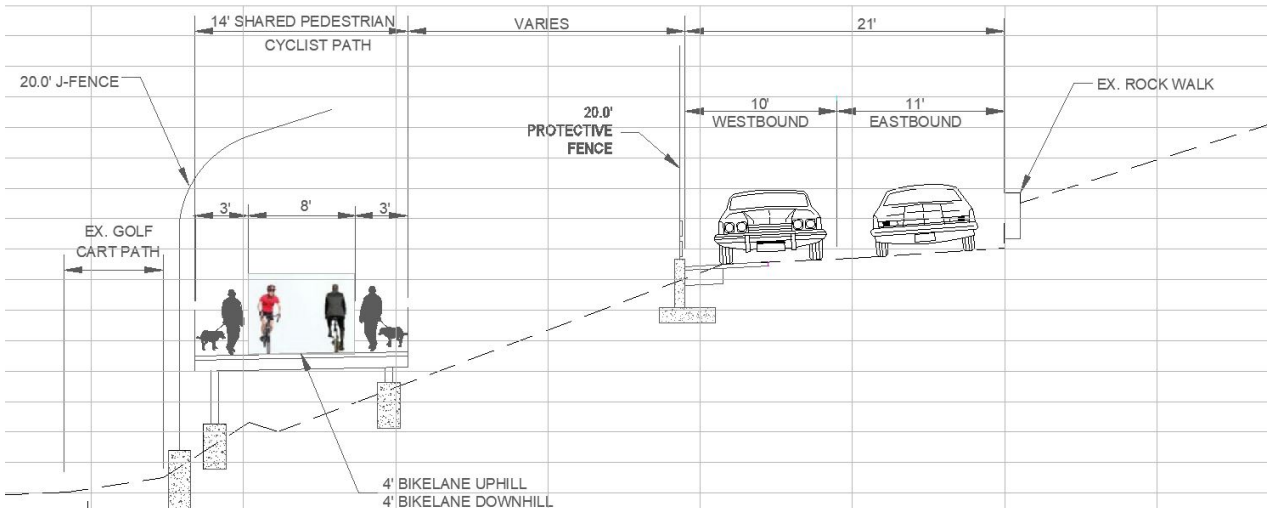
Disadvantages

This option retains the same disadvantages as Alternative B. An additional disadvantage is that pedestrians could be in close proximity to downhill bicyclists, who may be travelling at a higher rate of speed relative to the pedestrians. This could potentially be minimized by providing signage regulating downhill bicycle speed. Proposed landings provided along the ramp will also help to regulate downhill speed.



Alternative B "Modified"

Alternatives Comparison*

	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative B (Mod)
Descriptions	A Climbing Bike Lane (5') wide next to the Existing Rock Retaining Wall.	A Climbing Bike Lane (5') next to the ADA Path for a total of 14' wide.	A Climbing Bike Lane (5') next to Descending Auto Lane w/ Traffic Delineator separation.	New Traffic Signals control a Bi-Directional Auto Lane next to the rock wall & a 10' wide 2-way Bike Lane.	2 traffic lanes & two 5' wide sidewalks for a total of 30' wide.	A 14' WIDE SHARED PEDESTRAIN CYCLIST PATH
Cross-Sections						
Factors\Score	High.	High.	Moderate.	Lowest.	Low.	Moderate.
Safety	High.	High.	Moderate.	Moderate.	Low.	Moderate.
Cost	\$3.01M	\$3.12M	\$3.00M	\$3.97M	\$3.58 M	\$3.12M
Road Widening	Moderate.	Lowest.	Moderate.	Highest.	High.	Lowest.
Tree Loss	High (21)	Low (9)	High (21)	Low (9)	High (29)	Low (9)
Traffic Impact	Low.	Low.	Low.	High.	Low.	Low.
Constructability	Moderate.	Easy.	Moderate.	Difficult.	Difficult.	Easy.

City of Cupertino Bicycle Pedestrian Commission

May 19, 2021

Public Works – Transportation Division
David Stillman, Transportation Manager



Item # 3

Blackberry Farm Entrance Road Feasibility Study

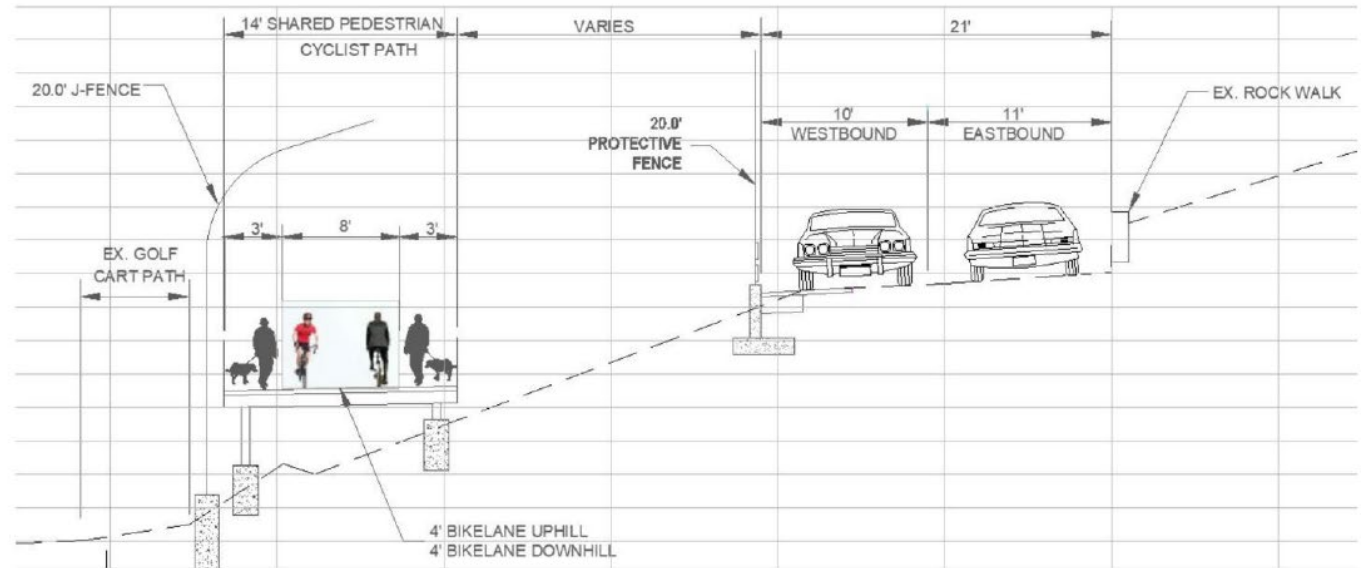
Modified Alternative A



Blackberry Farm Entrance Road Feasibility Study

- *Blackberry Farm entrance road improvements recommended in Bike and Ped Plans*
- *Improvements needed to address safety and ADA*
- *Entrance Road Feasibility Study presented to BPC 2/19/20*
 - *Requested staff evaluate modification to Alternative B, allowing 2-way bike travel*
- *City Council 9/15/20*
 - *Motion endorsing Alternative B, and Alternative B as recommended by BPC*
- *Currently no plans to proceed with design*

Blackberry Farm Entrance Road Feasibility Study





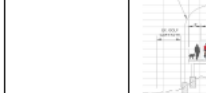


Alternative B "Modified"

Blackberry Farm Entrance Road Feasibility Study

Blackberry Farm Access Road Improvement and Feasibility Study
Cupertino, CA

Alternatives Comparison*

	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative B (Mod)
Descriptions	A Climbing Bike Lane (7') wide next to the Existing Rock Retaining Wall.	A Climbing Bike Lane (7') next to the ADA Path for a total of 14' wide.	A Climbing Bike Lane (7') next to Descending Auto Lane w/ Traffic Delimiter separation.	New Traffic Signal control a Bi-Directional Auto Lane next to the rock wall & a 30' wide 2-way Bike Lane.	2 traffic lanes & two 7' wide sidewalks for a total of 30' wide.	A 14' WIDE SHARED PEDESTRIAN CYCLIST PATH
Cross-Sections						
Factors/Score	High.	High.	Moderate.	Lowest.	Low.	Moderate.
Safety	High.	High.	Moderate.	Moderate.	Low.	Moderate.
Cost	\$3.03M	\$3.12M	\$3.00M	\$3.37M	\$3.58 M	\$3.12M
Road Widening	Moderate.	Lowest.	Moderate.	Highest.	High.	Lowest.
Tree Loss	High (21)	Low (9)	High (21)	Low (9)	High (20)	Low (9)
Traffic Impact	Low.	Low.	Low.	High.	Low.	Low.
Constructability	Moderate.	Easy.	Moderate.	Difficult.	Difficult.	Easy.

De Anza Blvd and McClellan Rd / Pacifica Dr Intersection Modifications

McClellan Rd Separated Bikeways Project – Phase 3

Conceptual Improvements - DRAFT

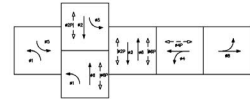


Background

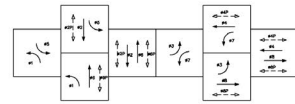
- Phase 3 completes gap in McClellan Road Separated Bikeways Project
 - Phase 1 & 2 completed in 2019 and 2020 respectively
- VERBS Grant received for construction
 - Amount awarded \$1M
- City receives right-of-way dedication from 10490 / 10495 S De Anza Blvd

Commission action

- Staff is seeking feedback on conceptual design elements



EXISTING PHASE DIAGRAM



PROPOSED PHASE DIAGRAM

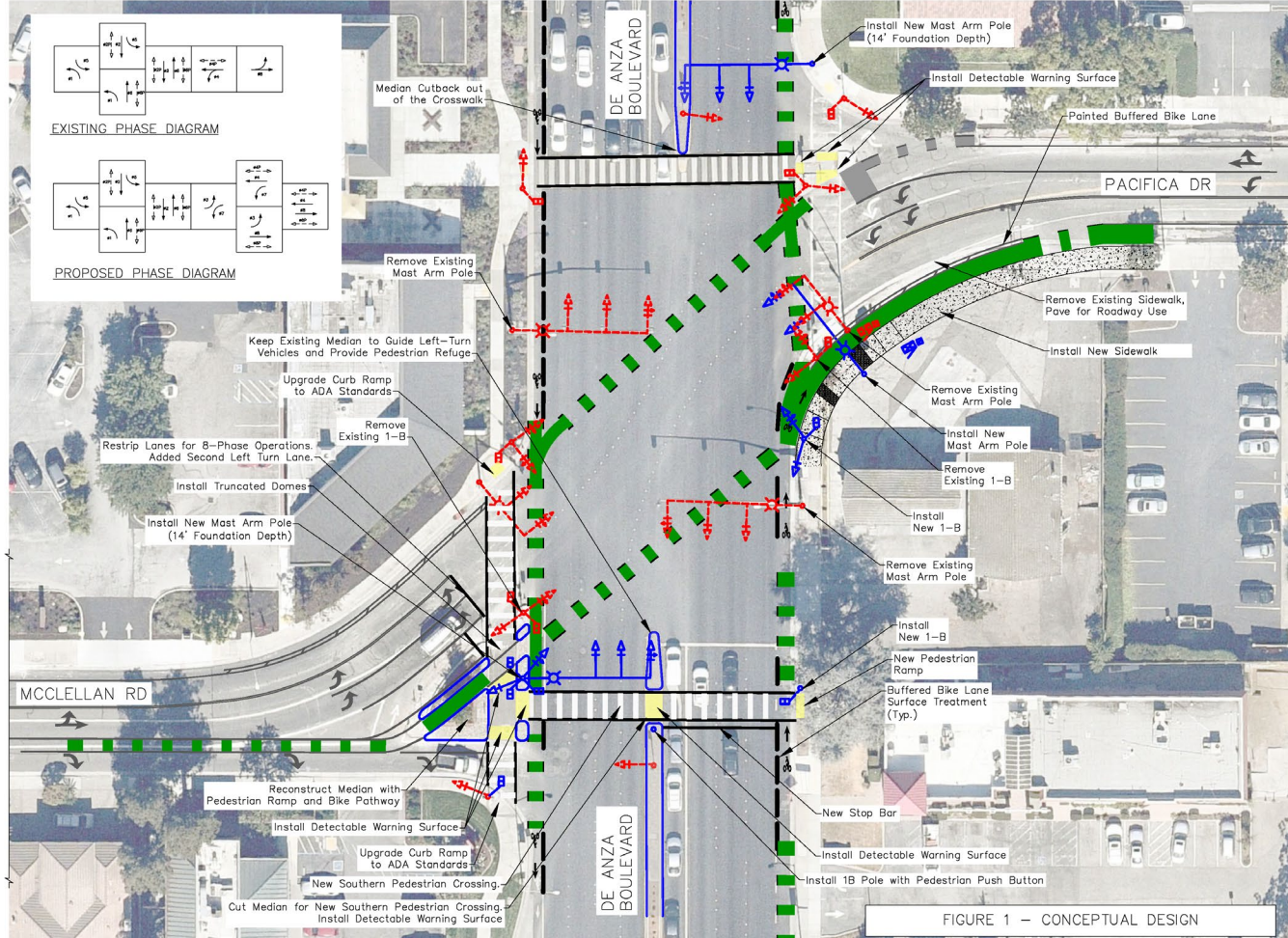
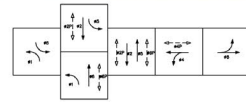
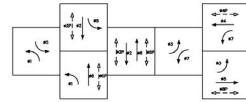


FIGURE 1 — CONCEPTUAL DESIGN



EXISTING PHASE DIAGRAM



PROPOSED PHASE DIAGRAM

Reconfigure Right Turn Lane to Increase EB Queue Length.

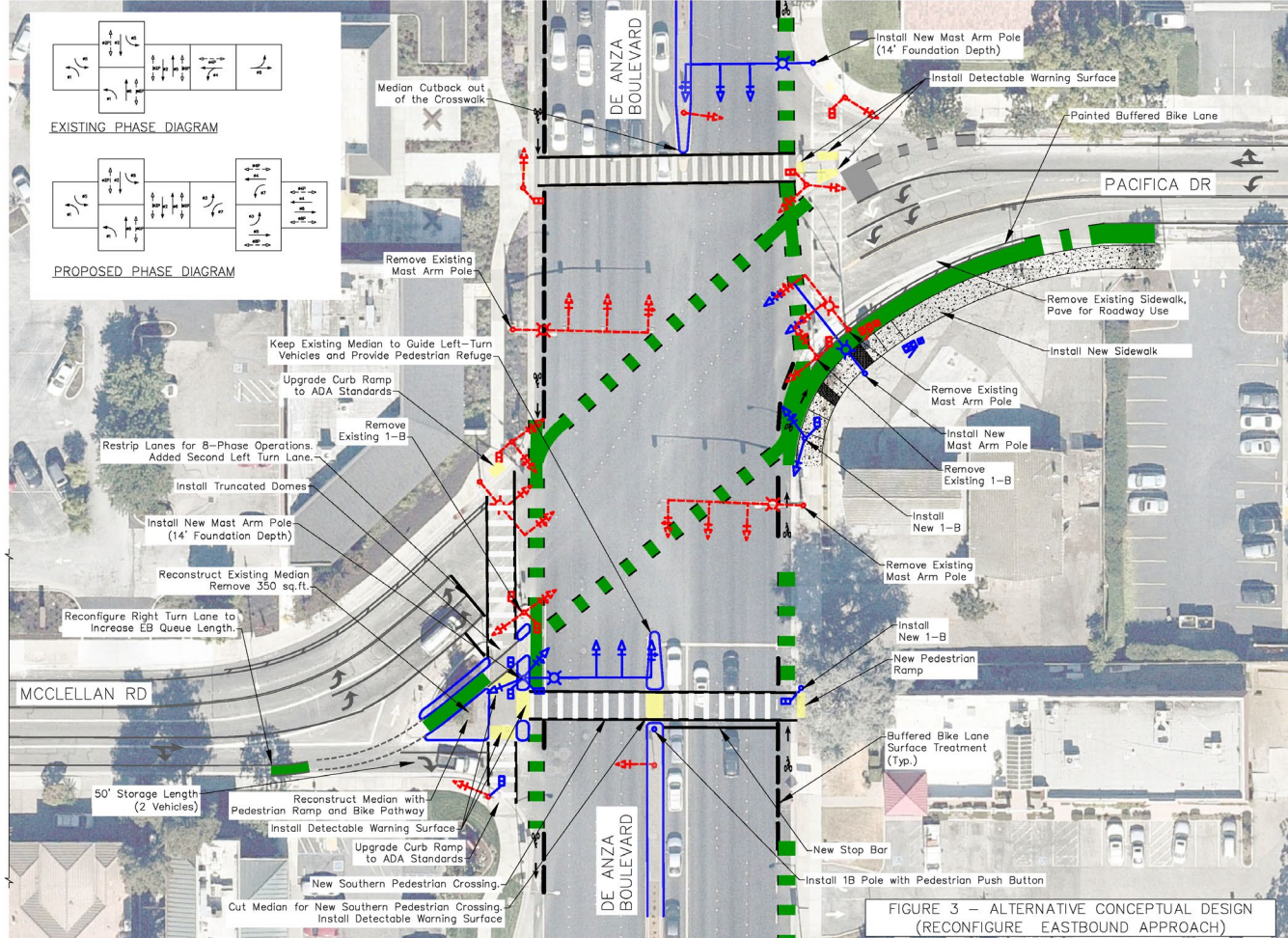
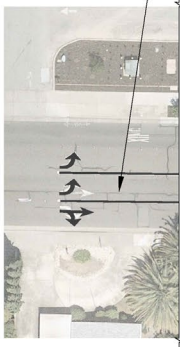


FIGURE 3 – ALTERNATIVE CONCEPTUAL DESIGN (RECONFIGURE EASTBOUND APPROACH)

Item # 5

Stevens Creek Blvd Separated Bikeway Project Traffic Signal Phasing



Protected Bicycle Phasing

- *Recently implemented WB Stevens Creek Blvd/Wolfe Rd*
- *Implementation soon at EB Stevens Creek Blvd/Finch*
- *BPC feedback desired regarding signal operation*
- *Alternatives*
 - *San Francisco – Polk/Geary model*
 - *Other?*

Stevens Creek Blvd/Wolfe Rd

- **Stevens Creek Blvd/Wolfe Road**

- 1) **Phase 1**

- 1) *Bike green*
 - 2) *Ped Don't Walk*
 - 3) *Right-turn vehicle red*



- 2) **Phase 2**

- 1) *Bike red*
 - 2) *Ped Walk*
 - 3) *Right-turn vehicle flashing arrow*



- 3) **Phase 3**

- 1) *Bike red*
 - 2) *Ped Don't Walk*
 - 3) *Right-turn vehicle green*



Stevens Creek Blvd/Wolfe Rd



Stevens Creek Blvd/Wolfe Rd

- **Advantages**
 - *Bikes have priority (beginning of cycle)*
 - *Vehicles allowed to turn right with active ped*
 - *Bikes can be served multiple times per cycle*
- **Disadvantages**
 - *Peds must wait until after bicycle phase*
 - *Bikes and peds can't proceed concurrently*
 - *Flashing arrow not typical*

San Francisco – Polk/Geary

- **Polk/Geary**

- 1) **Phase 1**

- 1) **Bike green**
 - 2) **Ped Green**
 - 3) **Right-turn vehicle red**



- 2) **Phase 2**

- 1) **Bike red**
 - 2) **Ped Don't Walk**
 - 3) **Right-turn vehicle green**



San Francisco – Polk/Geary



San Francisco – Polk/Geary

- *Advantages*
 - *Bikes and peds can proceed concurrently at beginning of cycle*
 - *Simpler operation*
- *Disadvantages*
 - *No right-turn vehicles allowed during ped phase*
 - *No recurring bike phase*
 - *For wide street crossings, less practical (more delay) due to need to serve peds and right-turns separately*