



City of Sunnyvale

Agenda Item-No Attachments (PDF)

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REPORT TO BICYCLE AND PEDESTRIAN COMMISSION

SUBJECT

Java Drive Road Diet and Bike Lanes Recommendation to City Council

BACKGROUND

The Santa Clara Valley Transportation Authority (VTA) developed a list of bicycle projects as part of VTP2040, the Long-Range Transportation Plan for Santa Clara County. The list of bicycle projects is included in the Bicycle Expenditure Program (BEP) and the projects are eligible for several grant funding sources. One of the listed BEP projects is the Java Drive Road Diet project ("Project"). The City of Sunnyvale's 2020 Active Transportation Plan (ATP) also identifies Class IV bikeways on Java Drive between Mathilda and Crossman Avenues as a Bicycle Plan priority. The Project will include the installation of approximately 5,000 linear feet of buffered Class II (on-street bike lanes) or Class IV (on street, separated) bike facilities via a "Road Diet" on Java Drive from Mathilda Avenue to Crossman Avenue. See Attachment 2 for the Project location. The Project will also include bicycle detection at five signalized intersections for added bicycle travel convenience and safety and green colored pavement treatments for bicycle-vehicle conflict zones.

The City has secured grant funds for design and construction through a competitive selection process from the VTA One Bay Area Grant Cycle 2 (OBAG2) for the Project. The OBAG2 program is funded with a mix of federal Surface Transportation Block Grant Program funds and Congestion Mitigation Air Quality funds. The cost of the Project was estimated at \$632,911 with \$500,000 coming from the OBAG2 Grant and \$132,911 from City funds as a local match. Funding for this Project has been included in the FY 2020/21 Adopted Capital Improvement Projects Budget in Project number 832950 (Java Drive Road Diet and Bike Lanes). Funds were programmed for design beginning in 2018, with a deadline for obligating construction phase funding by January 2022.

Mark Thomas and Company was selected as the project consultant team for conceptual design, environmental clearance, and final design (RTC No. 20-0167). The Project is going through public outreach to develop a conceptual design. A traffic analysis was performed to determine the benefits and potential impacts of the Project. The results of the traffic analysis and initial outreach performed were presented to the Bicycle and Pedestrian Advisory Commission on June 17, 2021.

EXISTING POLICY

General Plan, Chapter 3, Land Use and Transportation Element

The 2017 Land Use and Transportation Element (LUTE) of the Sunnyvale General Plan lists goals and policies that emphasize the need to provide an effective multimodal transportation system and providing options for healthy living.

Complete Streets Policy

The Complete Streets Policy was adopted by City Council on December 6, 2016 through Resolution No. 793-16 (RTC No. 16-0972) and amended on August 28, 2018 through Resolution No. 896-18 (RTC No. 18-0642). Through this policy, the City commits to creating and maintaining Complete Streets that provide safe, sustainable, integrated, efficient and convenient transportation systems that serve all categories of users and maintain sensitivity to local conditions.

Climate Action Plan

City Council adopted the Climate Action Plan (CAP) on May 20, 2014, which includes various strategies to reduce greenhouse gas (GHG) emissions.

Active Transportation Plan

The 2020 Sunnyvale Active Transportation Plan (ATP) includes the addition of bicycle facilities along this segment of Java Drive as a recommendation within the Bicycle Plan.

ENVIRONMENTAL REVIEW

The project is categorically exempt from environmental review under the California Environmental Quality Act (CEQA) pursuant to CEQA Guidelines Section 15301(c): "Existing highways and streets, sidewalks, gutters, bicycle and pedestrian trails, and similar facilities (this includes alterations such as the addition of bicycle facilities, including but not limited to bicycle parking, bicycle-share facilities and bicycle lanes, transit improvements such as bus lanes, pedestrian crossings, street trees, and other similar alterations that do not create additional automobile lanes)."

DISCUSSION

The segment of Java Drive between Mathilda and Crossman Avenues is a highly concentrated workplace area of the City. The existing roadway includes two mixed flow travel lanes with narrow shoulders. There are no bicycle lanes or on-street parking along the entire segment. There are bicycle lanes on Fair Oaks Avenue and Java Drive up to Crossman Avenue. There are bicycle lanes on Mathilda Avenue, connecting to the west end of Java Drive. All of the streets that cross Java Drive have bicycle lanes. There are sidewalks along the entire northern side and along most of the southern side of the street. There are VTA light rail tracks and two stations in the median. There are also bus stops at each block in both directions. Pre-COVID-19, multiple bus and shuttle routes utilized these stops, and it is anticipated that these will resume when businesses return to the office.

In recent years, the commuters to and through this area have increased the demand on bicycle facilities. The main corporate company in the area (Google Inc.) provides shared bicycle programs for employees to travel between sites, further increasing the demand for bicycle facilities in this area. Additionally, this route connects the rest of the City to the Bay Trail, Baylands Park, Twin Creeks Sports Complex, and other recreational uses. There are also plans to study north-south trails that run through or adjacent to this area and connect to the Bay Trail.

The Project proposes to construct approximately 5,000 linear feet of Class II-B buffered bicycle lanes or Class IV separated bikeways on each side of Java Drive between Mathilda and Crossman Avenues via a road diet. One mixed flow lane in each direction would be removed and the selected bicycle facility would be installed through changes in striping and signage. The Project will also include installation of bicycle detection at five signalized intersections and associated signal modifications. No changes to pavement, curbs, gutters, utilities, or other fixed infrastructure would be needed. All work would occur within existing City right-of-way.

If Class II-B buffered bicycle lanes are selected at this time, conversion into a Class IV separated bikeway would be relatively simple in the future. Vertical infrastructure can be installed within the painted buffer zone to convert to a Class IV facility. There are concerns with the operations and maintenance of a Class IV facility that are not yet fully understood at this time. The City plans to undertake an operations impact study of Class IV separated bikeways, but this study has not yet commenced.

Traffic Analysis

As part of the conceptual design phase, the project team performed traffic analyses to analyze the impact of reducing lanes. The Level of Service (LOS) was determined for both options for existing (pre-COVID-19 volumes) and cumulative (2035 projected volumes) conditions. Acceptable LOS thresholds are determined by the City's General Plan, Land Use and Transportation Element 2017 for City intersections and by VTA's Congestion Management Program (CMP) for intersections on urban arterials, freeways and rural highways. The intersection of Mathilda Avenue and Java Drive is a CMP intersection. The other four intersections are subject to the City's LOS standards. The analysis found that under existing volumes and conditions, all intersections during both AM and PM peak periods for both options performed within acceptable LOS.

Under future 2035 volumes with no project, most intersections are expected to perform within acceptable LOS. The following intersections do not perform within acceptable LOS:

- Java Drive/Bordeaux Drive in PM peak hour
- Java Drive/Geneva Drive in PM peak hour
- Java Drive/Crossman Avenue in AM and PM peak hours

Under future 2035 volumes with option 1: Class II-B buffered bicycle lanes, the following intersections do not perform within acceptable LOS:

- Java Drive/Bordeaux Drive in PM peak hour
- Java Drive/Borregas Avenue in AM and PM peak hours
- Java Drive/Geneva Drive in AM and PM peak hours
- Java Drive/Crossman Avenue in AM and PM peak hours

Under future 2035 volumes with option 2: Class IV separated bikeways, the following intersections do not perform within acceptable LOS:

- Java Drive/Bordeaux Drive in PM peak hour
- Java Drive/Borregas Avenue in AM and PM peak hours
- Java Drive/Geneva Drive in AM and PM peak hours
- Java Drive/Crossman Avenue in AM and PM peak hours

As seen from these results, the existing roadway network in this area begins to become over capacity with General Plan buildout and overall growth within the region without the Project. The implementation of a road diet along Java Drive exacerbates the vehicular capacity issue in the traffic model during cumulative scenario analysis. The traffic models cannot adequately account for the anticipated mode shifts that are likely to occur by the installation of a bicycle facility along Java Drive and induced by the overall congestion delays in the long-term outer years as the entire transportation network becomes oversaturated.

Additionally, Moffett Park Specific Plan update efforts are currently underway that will greatly change the land uses and transportation network in this area. Under the currently land use plan being studied, Java Drive will be the core of the residential and retail/entertainment district in the future. The existing car-centric environment is expected to become multi-modal with a greater emphasis on pedestrian and bicycle facilities and connections to transit as the area develops under the new Specific Plan. These changes are likely to begin occurring before 2035.

Although the future 2035 traffic analyses for this Project show unacceptable LOS results, the analysis does not account for the Moffett Park Specific Plan changes since it is not yet an approved plan. It also does not account for the likely mode shifts away from single-occupancy vehicles to bicycle and transit uses after implementation of this Project. The LOS results for existing volumes is a good indicator of traffic operations in the near term before the Moffett Park Specific Plan changes begin.

Public Outreach Summary

The Project includes public outreach to the surrounding community and interested members of the public. The following outreach activities have occurred or are scheduled to occur:

- City Council acceptance of One Bay Area Grant (OBAG) funding (RTC No. 17-0573): July 11, 2017
- City Council award of consultant contract (RTC No. 20-0167): February 4, 2020
- Bicycle and Pedestrian Commission informational presentation: June 17, 2021
- Java Drive Working Group (stakeholders) informational presentation: July 12, 2021
- Java Drive Working Group (stakeholders) project update: September 20, 2021
- Bicycle and Pedestrian Commission recommendation: October 21, 2021
- Moffett Park Business Group Transportation Subcommittee: October 14, 2021
- Public Meeting: Late October (TBD)
- Public Survey (to run for 3 weeks): Late October-early November (TBD)
- Moffett Park Business Group Board: November 8, 2021
- City Council Public Hearing: Tentatively November 30, 2021

Results from and feedback received at all public outreach activities will be presented to City Council at the Public Hearing tentatively scheduled November 30, 2021. As of September 20, 2021, all feedback received has generally supported the Project and increasing bicycle facilities in this area.

FISCAL IMPACT

The design and construction of the Project is fully funded through OBAG2 Program funding with a local match from the City's Transportation Impact Fee (TIF) Program. Installation of Class II-B buffered bicycle lanes will have minimal impacts to operating expenses since similar facilities exist in other parts of the City. A Class IV separated bikeway may have significant operating and maintenance impacts which have not yet been quantified. The City plans to undertake an operations impact study of Class IV separated bikeways as a separate project, but this study has not yet commenced.

PUBLIC CONTACT

Public contact was made through posting of the (insert board or commission name) agenda on the City's official-notice bulletin board, on the City's website, and the availability of the agenda and report

in the Office of the City Clerk.

ALTERNATIVES

1. Recommend to City Council to approve the Java Drive Road Diet removal of one mixed flow lane in each direction between Mathilda and Crossman Avenues and select option 1, Class II-B buffered bike lanes for final design and construction.
2. Recommend to City Council to not approve the Java Drive Road Diet and to not design and construct the project.

RECOMMENDATION

Alternative 1: Recommend to City Council to approve the Java Drive Road Diet removal of one mixed flow lane in each direction between Mathilda and Crossman avenues and select option 1, Class II-B buffered bike lanes for final design and construction.

Staff recommends approving Alternative 1, which if approved by City Council will allow the installation of Class II-B buffered bicycle lanes along this segment of Java Drive without the need for any right of way acquisition. The installation of Class IV separated bicycle pathways, as contained within in the 2020 Active Transportation Plan, may be included as part of the Moffett Park Specific Plan efforts, allowing the City to study the operation and maintenance needs of a separated bicycle facility and plan for any other future needs that may require right of way, such as transit only lanes. Installation of Class II-B buffered bicycle lanes now is expected to increase and accommodate bicycle commuting and recreational use to this area of Moffett Park in the near term.

Prepared by: Angela Obeso, Principal Transportation Engineer

Reviewed by: Dennis Ng, Transportation and Traffic Division Manager

Reviewed by: Chip Taylor, Director, Department of Public Works

Reviewed by: Teri Silva, Assistant City Manager

Approved by: Kent Steffens, City Manager

ATTACHMENTS

1. Reserved for Report to Council
2. Location Map
3. Conceptual Typical Proposed Cross Section
4. Conceptual Typical Proposed Layout