



CITY OF ALBANY CITY COUNCIL AGENDA STAFF REPORT

Agenda Date: May 5, 2025

Reviewed by: NA

SUBJECT: Active Transportation Plan Network Parking Analysis for Potential Bicycle Facilities on Solano Avenue

REPORT BY: Justin Fried, Transportation and Sustainability Manager
Jeff Bond, Community Development Director

SUMMARY

This item presents parking and cost analysis for potential bicycle facilities on Solano Avenue for City Council guidance on the Active Transportation Plan development.

STAFF RECOMMENDATION

That the Council receive a presentation on parking and cost analysis for potential bicycle facilities on Solano Avenue and provide direction to staff on whether to either:

1. Continue study of dedicated cycling facilities on Solano Avenue in the future cycling network analysis for the new Active Transportation Plan; or
2. Develop the future cycling network for the new Active Transportation Plan without dedicated cycling facilities on Solano Avenue

CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

Review of compliance with the requirements of the California Environmental Quality Act will accompany the draft Active Transportation Plan once it has been developed.

BACKGROUND

The 2012 Active Transportation Plan does not include bicycle facilities on Solano Avenue in the identified bicycle network. For east-west bicycle facilities in that plan, 'Slow Bikeways' are proposed on Washington Avenue and Dartmouth Avenue and 'Fast Bikeways' are proposed on Marin Avenue and Brighton Avenue. Since 2012, there has been significant focus in the planning field on facility designs for busier corridors to provide safer cycling access closer to destinations.

Separated bikeways (also known as cycle tracks) are the only bicycle facility type considered to meet "All Ages and Abilities" guidance on a roadway with the characteristics of Solano Avenue (high motor vehicle volumes and high curbside activity). Protected facilities would be

expected to be safer and more comfortable for cyclists than conditions today. However, even with protected bike lanes, Solano Avenue's high volume of pedestrians and frequent unsignalized intersection crossings (due to short blocks) may continue to limit the range of users that are comfortable cycling on Solano.

Additional study of Solano Avenue began in 2018 as part of the [Solano Avenue Complete Streets Study](#). During the development of the study the consultants prepared a memorandum discussing a range of options for cycling facilities on Solano Avenue with a high-level comparison based upon safety, comfort, loss of parking, construction costs, and construction impacts (Attachment 2). At the conclusion of that process, Council directed staff to evaluate bicycle safety improvements for Solano Avenue as part of an update to the Active Transportation Plan (Resolution 2019-69).

On [February 18, 2025](#), Council discussed considerations for Solano Avenue and provided direction to staff to prepare an analysis of parking impacts of two alternatives of cycling facilities on Solano Avenue and a rough order of magnitude cost estimate. One alternative would consist of an uphill cycle track and parking reorganization to one side parallel parking and the other side 60-degree angle parking. The other alternative would consist of cycle tracks in both directions with parallel parking on both sides of the street.

Background on Solano Avenue

The relatively narrow right-of-way width, and the multiple functions of Solano Avenue make it difficult to accommodate all modes of travel to a high level of comfort. For example, Solano Avenue east of San Pablo Avenue serves a number of functions:

- a designated truck route for commercial truck activity in Albany and Berkeley;
- a bus route for AC Transit with local service (Line 18) and transbay service (Line G); and
- a main street retail corridor with significant pedestrian use.

Different segments of Solano Avenue have different upgrade needs:

- Solano Avenue between Masonic Avenue/Ohlone Greenway and Tulare Avenue needs curb ramp upgrades and sidewalk repairs to meet city legal obligation for accessibility improvements, as well as pavement rehabilitation work to maintain roadway function. In addition, sidewalk widths are narrow, and street furniture is dated. This segment would likely be the first phase of a future improvement project.
- Lower Solano Avenue between San Pablo Avenue and Masonic Avenue/Ohlone Greenway received streetscape improvements including lighting, furnishings, and corner curb extensions in the late 1990's/ early 2000's, as well as recent curb ramp upgrades. Although there are improvements that could be made to meet contemporary standards, this segment of Solano would likely be a second phase of a future improvement project.

- Solano Avenue east of Tulare Avenue is within Berkeley. The City of Berkeley's recently updated bike plan recommends this segment for a Class IV Cycletrack and a Complete Streets Corridor Study similar to its designation in the 2017 plan. Albany staff do not have any information on where future improvements to the Berkeley portion of Solano fits into the City of Berkeley's overall capital improvement program phasing.

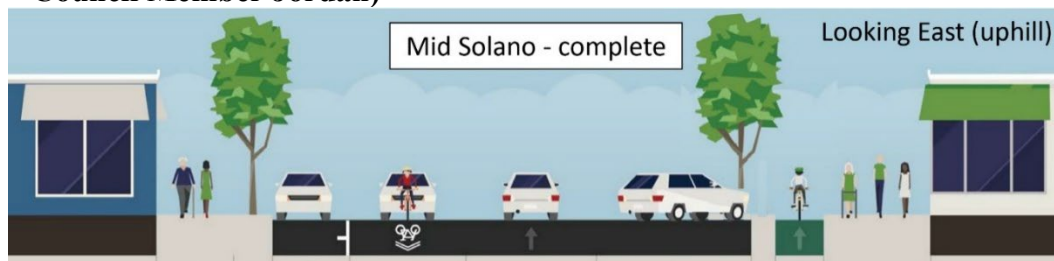
DISCUSSION

This report focuses on a high-level analysis of the parking, travel lane layout, and cost analysis requested by City Council. With this information, Council may be better informed to give direction on whether bicycle facilities on Solano Avenue should be studied and considered in the Active Transportation Plan (ATP). The design developed to provide that analysis is very preliminary and has not been presented for community feedback. If Council provides direction to pursue a bicycle facility further, community engagement and technical analysis will be incorporated into the ATP preparation. This report looks at two alternatives.

Alternative 1 – Uphill Separated Bikeway

Alternative 1 provides a separated bikeway in the uphill (eastbound) direction between angled parking and the sidewalk. In the downhill (westbound) direction, there is parallel parking, and cyclists would share the narrowed vehicle lane with motorists. This provides different levels of cycling comfort, parking capacity, and driving facilities in the uphill and downhill directions.

Alternative 1 (as shown in Attachment 2 – Evaluation of Bicycle Facility Options for Mid-Solano Avenue, from presentation to Traffic & Safety Commission by Council Member Jordan)

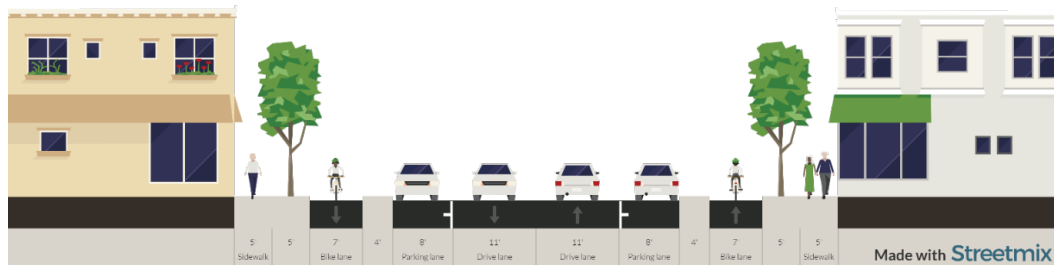


Alternative 2 – Separated Bikeways in Both Directions

Alternative 2 provides separated bikeways in both directions between parking and the sidewalk. With parallel parking in both directions, both vehicle travel lanes are narrowed. This alternative provides uniform cycling comfort, parking capacity, and driving facilities in both directions, but with a more-significant change to on-street parking for motor vehicles.

Alternative 2 (as shown in Attachment 2– Evaluation of Bicycle Facility Options for Mid-Solano Avenue)

Separated Bike Lanes & Parallel Parking



ANALYSIS

Council direction was focused on parking and costs. In the course of analyzing parking, it became apparent that other roadway safety and engineering issues are important at this conceptual level of analysis. Thus, to better understand the range of issues, the consultant team prepared a more detailed exhibit of 1-block from Santa Fe Avenue to Curtis Street as a sample of how on-street parking and separated bikeways could be configured (Attachment 1). The block includes both a signalized and unsignalized intersection as well as driveways onto Solano Avenue. The on-street parking dimensions, no parking red zones, vehicle lane widths, and bikeway widths are consistent with State and Federal standards, among others. Note that both the intersection design and parking counts provided in the analysis are at an early conceptual level and may change further if the project proceeds and as rules and guidance changes over time. Recent changes in accessibility guidance for public right-of-way, including for accessible parking spaces is one example that is likely to change the numbers provided following greater design development.

Motor Vehicle Sightlines

One of the keys to improving safety and avoiding collisions at intersections for all street users are clear sightlines for motorists traveling on Solano Avenue. It has been recommended that motorists have a relatively clear view of vehicles and pedestrian at a point 125 feet from an intersection. This distance is what would be required to react and stop if traveling at 20 mph and is consistent with the design of Lower Solano. Sight distance was measured to/from the centerline of Solano Avenue and to/from the centerline of the intersecting street.

In Alternative 1, the sight distance for the south side intersecting streets was measured from the ‘shadow’ of the angled parking, presuming that a driver entering Solano would conduct the turn in two stages, first stopping behind the crosswalk and eastbound bikeway, and then stopping again past the crosswalk and bike lane when they have a better view of intersecting traffic on Solano Avenue. For the north side of Alternative 1 and both sides of Alternative 2,

the sight distance was measured presuming the driver would encroach into the crosswalk but not the vehicle lane and assuming the driver sees ‘through’ a portion of the nearest parked vehicle (this assumption is consistent with sight lines when laid out in accordance with AB 413 daylighting law). These assumptions are consistent with commonplace driver behavior.

Parking

Due to the complexity of the proposed configuration and change in roadway width and curb lines associated with the alternatives, Parametrix laid out a plan-view sample block in order to detail available curbside parking under the two configurations. Alternative 1 is expected to have a moderate reduction in vehicle parking available. Alternative 2 would have a more significant reduction, which could lead to parking occupancy rates close to 100% in peak hours in high demand areas.

This analysis tabulated motor vehicle parking for the block between Santa Fe and Curtis as follows:

Existing:	27	
Alternative 1: Uphill Cycle Track:	26	-4%
Alternative 2: Two-way Cycle Track:	18	-33%

Emergency Services

The Fire Department routinely uses both an ambulance and Truck 1 to respond to service calls, including on Solano Avenue. Truck 1 is 10 feet 2 inches wide mirror to mirror but requires 15 feet of clearance when stopped to access equipment on either side of the vehicle.

Under the current layout and practice, the vehicle blocks the lane on one side of the street. With 15 feet of width on the opposite side, traffic is generally able to proceed slowly in both directions around the vehicle. If the call is expected to be for a longer duration, the Police Department is asked to provide traffic control.

Over the last 3 years, the Fire Department has responded to 385 calls for service on Solano Avenue from San Pablo Avenue to Tulare Avenue (of which 271 have been from Masonic Avenue to Tulare Avenue). 74% of these have been for medical calls and 26% other calls. Medical EMS related calls have averaged 30 minutes and 52 seconds and other calls (call types range from public assists to structure fires (including fire alarm activations)) averaged 21 minutes and 27 seconds on scene. Based upon the past 3 years, average annual response duration for calls on Solano Avenue from San Pablo to Tulare is around 60 hours (43 hours for the segment Masonic to Tulare).

In Alternative 1, the combined travel lane width is reduced to approximately 26 ft. With the fire engine width needs, this would restrict Solano traffic more clearly to one direction while on a call. This may require more-regular Police Department traffic control requests when there are service calls on Solano Avenue.

In Alternative 2, the combined travel lane width is reduced to 22 ft. With the fire engine needs, the Fire Department would likely block traffic in both directions while on a call on Solano Avenue and require Police Department traffic control when service calls are made on Solano Avenue.

Other Considerations

Other operational considerations for Solano Avenue include transit service, loading and delivery, parklets, user compliance, and events. These would need to be analyzed further but are noted in brief here.

- The alternatives discussed provide minimum 11-foot travel lanes and would likely include in-lane boarding for AC Transit service. AC Transit has developed multimodal design guidelines that would inform bike facility design at bus stop locations.
- The narrower travel lanes in the alternatives may require additional designated loading zones to allow for loading and delivery access to the commercial district without disrupting the flow of traffic. This would require repurposing additional space from general motor vehicle parking along Solano Avenue and/or on side street approaches.
- Existing restaurant parklets and bus stop parklets would need to change to utilize the new parking configuration.
- Parking-protected bicycle lanes will reduce vehicle-bicycle conflicts but introduce new bicycle-pedestrian conflicts for those accessing the parking lane. With the narrow sidewalks along Solano Avenue, pedestrians may also utilize the bicycle lane when the sidewalk is congested.
- A one-way facility would also introduce potential use of the bicycle lane for travelling in the opposite direction counter to the design intent.
- Design and operational strategies may need to be developed to address special events that use the roadway or sidewalks.

ENVIRONMENTAL CLEARANCE

Review of compliance with the requirements of the California Environmental Act will accompany the draft Active Transportation Plan once it has been developed.

SUSTAINABILITY CONSIDERATIONS

Goal 1 of the City's Climate Action Plan is "Decrease passenger vehicle miles traveled (VMT) through use of alternative modes." The decision regarding the future active transportation

network and motor vehicle parking configuration along Solano Avenue impacts the access to the commercial district via cycling.

SOCIAL EQUITY AND INCLUSIVITY CONSIDERATIONS

Equity and inclusivity considerations have been identified in prior engagement on this issue from the perspectives of small business owners, vulnerable roadway users, and people who rely on accessibility improvements for safe pedestrian travel. Different types of roadway users share a relatively narrow space on Solano Avenue. ‘Equitable Outcomes’ is Goal 3 for the developing Active Transportation Plan. The goal is to ensure the needs of all users, including disadvantaged populations, are integral factors in project prioritization and development.

CITY COUNCIL STRATEGIC PLAN INITIATIVES

This item will provide guidance for the development of the Active Transportation Plan. Goal 3 of the City Council’s 2023-2025 Strategic Plan is “Promote streets that support safety and transportation mobility options. The first objective listed in the objectives of Goal 3 is to update the ATP.

FINANCIAL CONSIDERATIONS

A streetscape improvement project that incorporates not only bicycle facilities, but drainage, lighting, sidewalk, and roadway improvements would be a large undertaking under any of these alternatives. Changes to curb lines have implications for street and sidewalk grades (need to raise or lower the level of the pavement), which are constrained by ADA requirements, building access, and drainage needs. Based upon the work foreseen, a rough order of magnitude estimate for an inclusive project was prepared for the City and is in the range of \$30-50 million, with \$30 million involving reconstruction of infrastructure without significant changes to the layout and \$50 million involving significant changes to layout including curb lines and accompanying roadway grade.

If Council directs staff to further develop designs, more-detailed cost estimates can be prepared and incorporated into future budget appropriations as necessary.

NEXT STEPS

If the Council makes a recommendation to continue studying the potential for dedicated cycling facilities on Solano Avenue in the new Active Transportation Plan, staff will incorporate potential cycling facilities into upcoming public engagement on the future active transportation network. Identifying project priorities will be the focus of a third round of engagement in the plan development. The final decision on the incorporation of Solano Avenue into the bike network would be part of adoption of the final plan.

If the Council directs not to include dedicated cycling facilities on Solano Avenue, staff will conduct upcoming public engagement and analysis on alternative bicycle transportation network routes. Solano Avenue is expected to remain part of the discussion for the priority

pedestrian network as well as for locations where the priority cycling network crosses Solano Avenue.

Independent of this direction, staff will continue to develop plans for accessible curb ramps and pavement repair for Solano Avenue between Masonic Avenue and Tulare Avenue under a nearer-term capital improvement project to meet obligations to upgrade accessibility along the corridor.

Engagement for Phase 2 of development of the Active Transportation Plan is getting underway with a public workshop scheduled for May 20th from 5:30-7:30 at the Community Center.

Attachments

1. Concept Alternatives for Parking Analysis
2. Evaluation of Bicycle Facility Options for Mid-Solano Avenue Memo