



DATE: October 26, 2021

CATEGORY: Unfinished Business

DEPT.: Public Works

TITLE: **Shoreline Boulevard Interim Bus Lane and Utility Improvements, Design, Project 16-58, and Phase I Construction, Project 18-43 – Various Actions**

RECOMMENDATION

1. Approve transplanting three Heritage trees on West Middlefield Road from the east side of the intersection at North Shoreline Boulevard to the west side of the intersection.
2. Approve the removal of and mitigation for one Heritage tree on North Shoreline Boulevard and replacement at a four-to-one ratio with 24" box trees.
3. Transfer and appropriate \$90,000 from the Wastewater Fund and \$90,000 from the Water Fund to Shoreline Boulevard Interim Bus Lane and Utility Improvements, Design, Project 16-58. (Five votes required)
4. Acting in its capacity as Board of Directors of the Shoreline Regional Park Community, transfer and appropriate \$60,000 from Shoreline Regional Park Community 2018 Series A Bond Proceeds and \$60,000 from Shoreline Community Fund to Shoreline Boulevard Interim Bus Lane and Utility Improvements, Design, Project 16-58.
5. Authorize the City Manager or designee to amend the professional services agreement with Mark Thomas & Company for an additional \$440,000 to provide design support during construction in a not-to-exceed amount of \$2,243,669.

BACKGROUND

The Shoreline Boulevard Reversible Bus Lane is a multi-phase project that is one of many transportation improvements intended to support commercial and residential development allowed in the North Bayshore Precise Plan (NBPP). In addition to transit and bicycle improvements, the project includes new water lines that also support growth in North Bayshore and sewer lines for growth outside of North Bayshore. The elements

included in the first phase of the project are shown in Figure 1 and further described below. Heritage tree impacts associated with each element are also described.

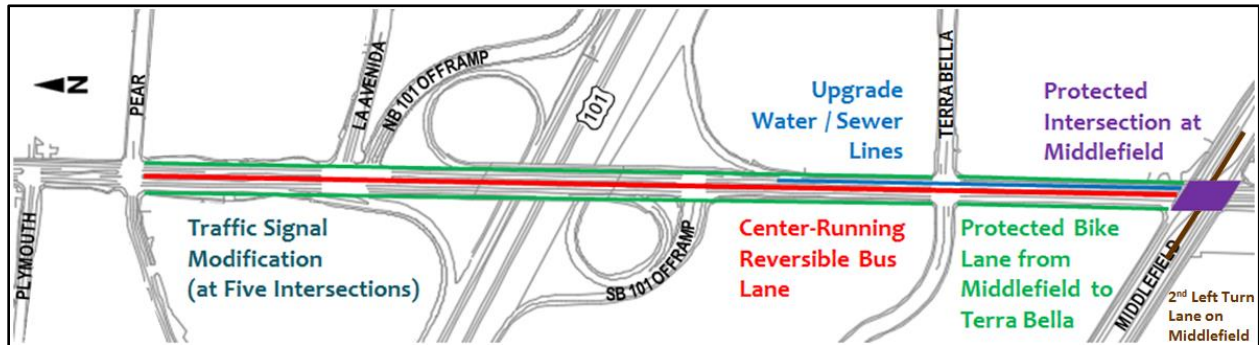


Figure 1: Project Overview

1. Add a reversible transit lane on North Shoreline Boulevard in the median between West Middlefield Road and Pear Avenue. No Heritage trees are being removed for the transit lane.
2. Add Class 4 protected bikeways on North Shoreline Boulevard between West Middlefield Road and Terra Bella Avenue, connecting the Federal grant-awarded Stierlin Bike and Pedestrian Improvement project with the new bicycle/pedestrian bridge over U.S. 101 that is in design. This project element requires the removal of 12 Heritage trees previously approved for removal by Council on September 3, 2019, plus one additional Heritage tree (discussed in the Analysis section of this report), for a total of 13 Heritage trees.
3. Install a new 16" water transmission main and upsize an existing sanitary sewer main to 21" on North Shoreline Boulevard between West Middlefield Road and U.S. 101. No trees are being removed for this element of the project.
4. Add a protected intersection at North Shoreline Boulevard and West Middlefield Road to enhance bicycle and pedestrian crossings. No trees are being removed for this element.
5. Replace aging and substandard traffic signals and equipment at five intersections. No trees are being removed for this element.
6. Add second left-turn lanes on both eastbound and westbound West Middlefield Road. This was identified as a mitigation measure in the NBPP Environmental Impact Report (EIR). Council previously approved the removal of four Heritage

trees from the median of West Middlefield Road for this project element on September 3, 2019. Recent analysis by the City arborist determined that construction of the left-turn lanes would damage the roots of an additional three Heritage trees with diameters of 5" to 6". Due to their small size, these three trees could be transplanted elsewhere in the median of West Middlefield Road.

Council has taken several actions over the last several years for the design, right-of-way acquisition, and construction of the project. Key actions include:

- [September 3, 2019](#): Council approved the removal of and associated mitigation for 16 Heritage trees (12 on North Shoreline Boulevard and four on West Middlefield Road) as shown in Figure 2 with replacement at a ratio of two to one with 24" box trees. None of these trees have been removed yet.
- [December 3, 2019](#): Council approved plans and specifications and authorized staff to advertise for bids.
- [December 8, 2020](#): Council approved amending the project budget to add funding and award the construction contract.
- Right-of-way acquisition: The City has completed the purchase of the right-of-way needed for the protected bikeways from eight parcels. One additional property is still in the eminent domain legal process, but the City has received an Order of Possession for the right-of-way allowing the project to proceed with construction.



Figure 2: Heritage Tree Removals Approved on September 3, 2019

The first phase of work is construction of the water and sewer lines, with the next planned phase being tree removals and the widening of North Shoreline Boulevard.

ANALYSIS

Additional Tree Removals on West Middlefield Road

During design, staff's goal was to minimize tree removals and impacts. While staff identified existing trees in direct conflict with the proposed improvements, trees that had improvements in close proximity and within the tree root structure were not initially identified for removal as the design consultant believed these trees could be preserved. During a construction field review to coordinate work limits and protection of adjacent trees conducted by the contractor, design consultant, City arborist, and staff, the City arborist initially determined that there are 10 additional Heritage trees in the West Middlefield Road median adjacent to the new left-turn lane improvements where the root structures will be severely impacted. Preservation of these trees would not be possible due to resulting instability and potential for tree uproot and falling.

On September 8, 2021, staff presented to the Parks and Recreation Commission (PRC) the mitigation for 11 Heritage trees at a two-to-one ratio with 24" box trees. Ten (10) of the 11 trees are on West Middlefield Road median (discussed above), and the one other tree is on North Shoreline Boulevard near West Middlefield Road (discussed later in this report). The PRC deliberated and approved the following motion:

"The PRC does not recommend taking out an additional 11 Heritage trees at the intersection of Middlefield and Shoreline. The PRC finds that removing an additional 11 Heritage trees at the intersection will significantly decrease canopy coverage, biodiversity, and walkability in the surrounding area. Heritage tree mitigation measures will not change the resultant heat-island effect and car-first, freeway look of this important intersection in the heart of an increasingly residential area, in close proximity to schools and the downtown. The PRC notes that the EIR found that even with the addition of the left-turn lanes, the Shoreline/Middlefield intersection will experience a significant unavoidable impact. The PRC does not believe there is justification for taking out Heritage trees at this intersection to enable the building of additional left-turns."¹

¹ The PRC's motion inadvertently specified 11 additional Heritage trees to be removed related to adding left-turn lanes on West Middlefield Road at North Shoreline Boulevard. Only 10 of the 11 additional Heritage trees brought to the PRC for mitigation recommendations were for the left-turn lanes. The PRC did not take action related to mitigation for the eleventh Heritage tree located on North Shoreline Boulevard for the protected bikeways element of the project.

The motion passed with four votes and one abstaining.

Due to the PRC concerns and community feedback, staff conducted a detailed review and analysis of the NBPP EIR Transportation Impact Analysis (TIA) related to the need and benefits of the additional left-turn lanes.

In correcting discrepancies found in the TIA (described later in this report), staff determined that the left-turn lanes could be reduced in length while continuing to provide for improved intersection operations with the development in North Bayshore and in compliance with the NBPP EIR mitigation. The reduced lane length allows seven of the 10 previously identified additional Heritage trees to remain. The three remaining additional Heritage trees, which are smaller redwoods (5" to 6" in diameter), were further reviewed by the City arborist, who determined that those three trees can be transplanted (Figure 3 and Table 1). **Staff recommends transplanting these three smaller Heritage redwood trees from their current locations on the east side of North Shoreline Boulevard to just west of North Shoreline Boulevard in the West Middlefield Road median.**

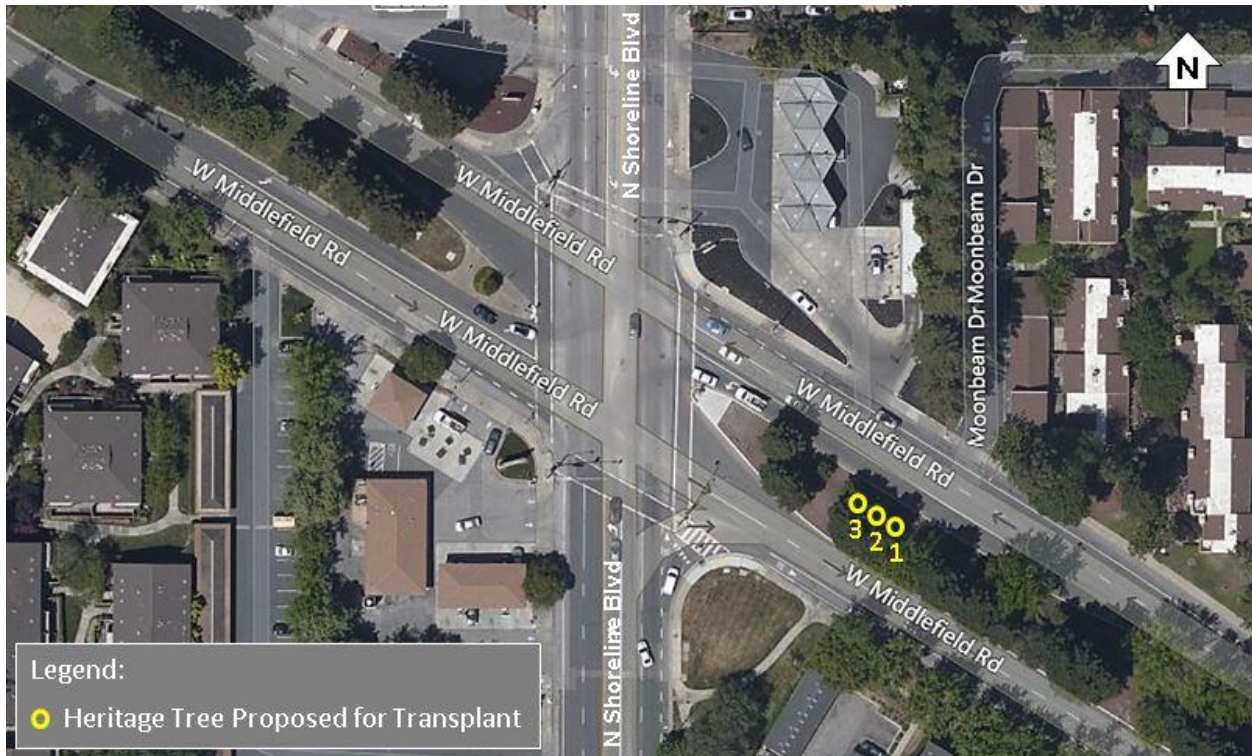


Figure 3: Locations of Heritage Trees to be Transplanted on West Middlefield Road

Table 1: Heritage Tree Transplants on West Middlefield Road

No.	Tree ID	Tree Diameter at 54" Above Grade	Tree Type
1	45464	6"	Coast redwood
2	45465	6"	Coast redwood
3	45466	5"	Coast redwood

The existing landscape conditions of the medians is shown in Figure 4. Figure 5 shows the final planting conditions in the West Middlefield Road median that includes removal of the four Heritage trees approved in September 2019 (three on the west side of the intersection and one on the east side, as shown in Figure 2) and the transplant of three existing small redwood trees from the east side of the intersection to the remaining median area just west of the intersection. East of North Shoreline Boulevard, the median is unusually wide and has two rows of existing trees, where the one Heritage tree previously approved to be removed and the three additional smaller Heritage trees to be transplanted would only affect trees in one row, and the other row would remain as is.



Figure 4: Existing Planting Conditions

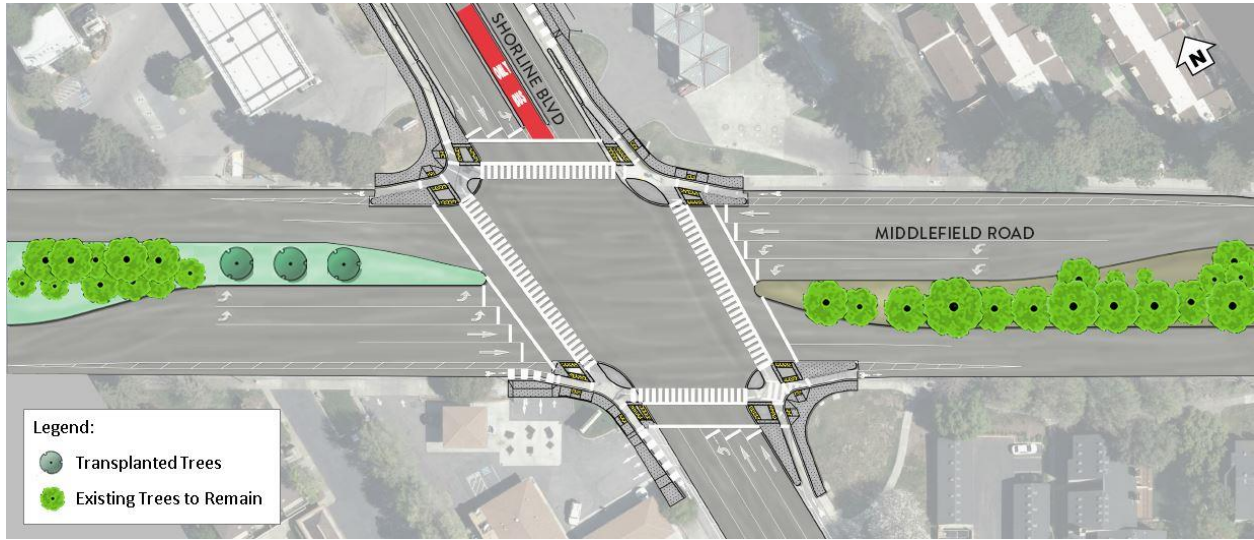


Figure 5: Final Planting Conditions

Figure 6 shows a rendering of the completed intersection and the West Middlefield Road median (west side) trees transplanted five years after project completion (approximately spring 2028) with anticipated tree growth.



Figure 6: Completed North Shoreline Boulevard/West Middlefield Road Intersection (West Leg Looking North)

Figure 7 shows the West Middlefield Road median (east side) trees remaining at project completion (approximately spring 2023).



**Figure 7: Completed North Shoreline Boulevard/West Middlefield Road Intersection
(East Leg Looking South)**

Second Left-Turn Lanes on West Middlefield Road

The PRC and some members of the community have questioned the value of the additional left-turn lanes on West Middlefield Road, particularly considering the need to remove additional Heritage trees. The following outlines the results of an analysis with and without the additional left-turn lanes with anticipated North Bayshore growth.

The NBPP TIA found that the addition of NBPP growth will impact many intersections within or near the North Bayshore area, including the intersection at North Shoreline Boulevard and West Middlefield Road. The largest impact at the intersection is the increase in vehicles using the left-turn pockets, with the resulting vehicle queue extending beyond the existing turn pockets and blocking the adjacent through lanes.

In response to the community feedback received, staff conducted a detailed review of the NBPP TIA and discovered some discrepancies at the North Shoreline Boulevard/West

Middlefield Road intersection in the original 2017 traffic analysis. The discrepancies were related to the data input on the geometry and vehicle volume under the “Existing plus NBPP Build-Out” condition. Staff reviewed the data and evaluated this intersection with the original data and updated the data in the new analysis, as shown in Attachments 1 and 2. These updates were confirmed with the original traffic consultant that prepared the NBPP TIA.

With the new results, staff further analyzed the design and left-turn lane needs and identified that the left-turn lanes can be reduced in length while meeting vehicle demand (Attachment 3). This results in significantly fewer impacts to the existing trees. The revisions to the West Middlefield Road left-turn lanes result in three of the smaller Heritage trees (redwoods 5” to 6” in diameter) impacted, but those trees can be transplanted to just west of North Shoreline Boulevard in the West Middlefield Road median. The four previously approved tree removals from 2019 still require removal.

Tables 2 and 3 summarize the results of the updated analysis of the left-turn movements from West Middlefield Road to North Shoreline Boulevard during the a.m. and p.m. peak hour under existing conditions and with the additional traffic from NBPP growth ((E) + NBPP). This analysis is based on the current intersection configuration with a single left-turn lane in each direction. In three of the four circumstances, left-turn queues extend beyond the existing turn pocket, as shown in the yellow highlighted boxes. As a result, delay is projected to increase at the intersection, particularly in the eastbound peak hour, which may see delays approaching five minutes in the p.m. peak hour (highlighted in green).

**Table 2: Eastbound West Middlefield Road Peak Hour Single Left Turn
Existing versus NBPP Build-Out**

Eastbound Middlefield Road Left-Turn Lane	a.m. Peak Hour		p.m. Peak Hour	
	Existing (E)	(E) + NBPP	Existing (E)	(E) + NBPP
Volume (vehicles per hour)	116	122	112	295
Queue Length 95th Percentile (ft)	175	184	164	553
Turn Bay Length (ft)	220	220	220	220
Delay (seconds)	84.7	86.6	79.5	274.3
Level of Service (LOS)	E	E	E	F

**Table 3: Westbound West Middlefield Road Peak Hour Single Left Turn
Existing versus NBPP Build-Out**

Westbound Middlefield Road Left-Turn Lane	a.m. Peak Hour		p.m. Peak Hour	
	Existing (E)	(E) + NBPP	Existing (E)	(E) + NBPP
Volume (vehicles per hour)	127	153	284	295
Queue Length 95th Percentile (ft)	191	257	473	494
Existing Turn Bay Length (ft)	230	230	230	230
Delay (seconds)	87.2	95.7	130.6	142.2
Level of Service (LOS)	E	F	F	F

The insufficient left-turn lane capacity results in left-turning vehicles extending beyond the turn pocket and blocking the adjacent (No. 1) through lane, adding delay and decreased Level of Service (LOS) to both the through and left-turn movements. Frustrated drivers may also pull from the blocked (No. 1) through lane to the free-flowing (No. 2) through lane, leading to extended back-ups for the No. 2 lane and potentially unsafe lane changes.

Right-Turning Vehicles

While not directly related to the left-turn movement, a project element that also degrades vehicle LOS at this intersection are the protected-intersection improvements that reduce crossing distances for pedestrians and bicyclists. With the existing intersection configuration, right-turning vehicles can pull to the side and use the adjacent bike lane space next to the No. 2 lane, allowing parallel through movement in the No. 2 lane to continue. With the protected intersection, right-turning vehicles from West Middlefield Road will no longer be able to pull to the side but will wait in the No. 2 lane, taking up queuing storage and reducing through-lane capacity (see Figure 8). All of these factors contribute to the overall delay and substandard LOS for the entire intersection.



Figure 8: Example of West Middlefield Road Traffic Congestion

To reduce and mitigate the traffic impacts at the North Shoreline Boulevard/West Middlefield Road intersection, the NBPP EIR Mitigation Monitoring and Reporting Program includes a second left-turn lane in both approaches on West Middlefield Road at North Shoreline Boulevard (see Figure 9).

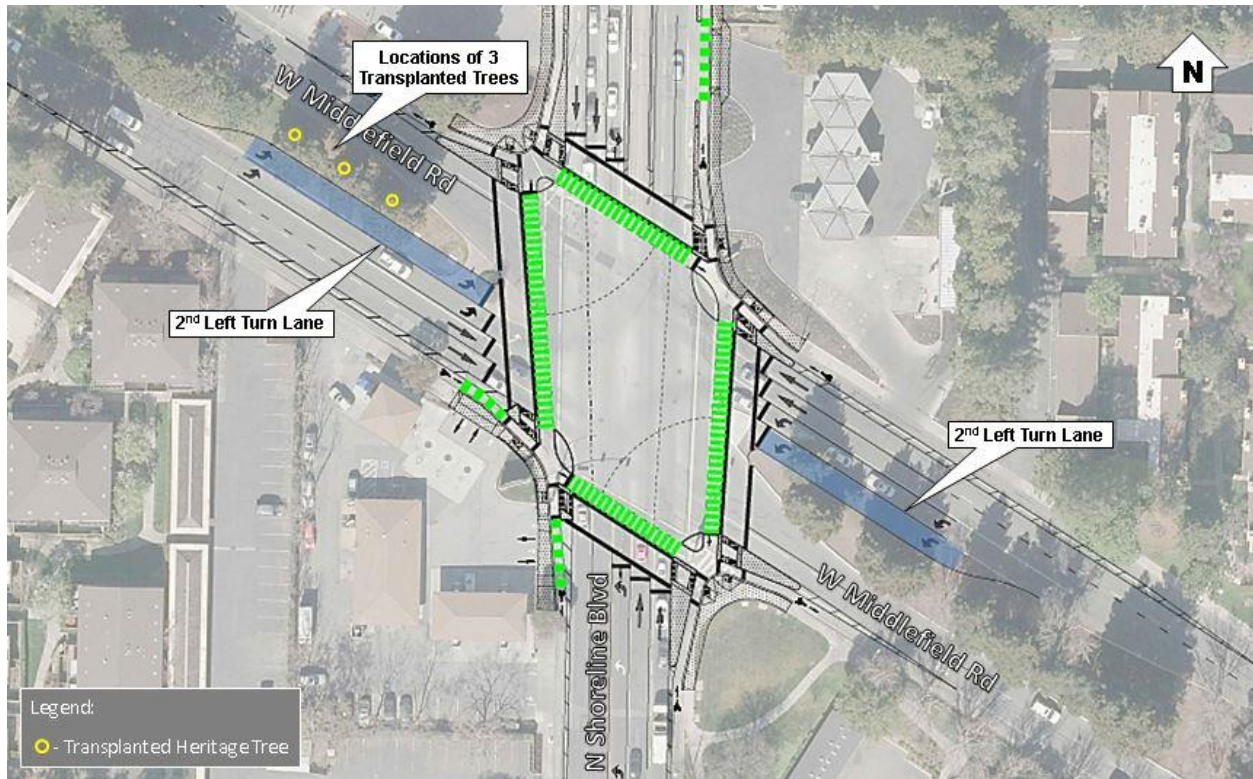


Figure 9: Second Left-Turn Lane on West Middlefield Road at North Shoreline Boulevard

The second left-turn lanes provide a significant traffic benefit under the NBPP build-out scenario as shown in Tables 4 and 5. With the second left-turn lanes on West Middlefield Road, the queuing and delays are reduced during the a.m. and p.m. peak hours with significant reduction in the p.m. peak hour. The left-turn queues no longer extend or extend only slightly beyond the turn pockets on any movement (see yellow highlighted boxes). Although the original analysis found that some movements performed at LOS F even with the additional turn lanes, the updated analysis shows each intersection leg performs at an improved LOS E with the additional turn lanes (green highlighted boxes).

**Table 4: Eastbound West Middlefield Road Peak-Hour Left Turn
One versus Two Lanes**

Eastbound Middlefield Road Left-Turn Lane	a.m. Peak Hour Existing + NBPP		p.m. Peak Hour Existing + NBPP	
	1 Lane	2 Lanes	1 Lane	2 Lanes
Volume (vehicles per hour)	122	122	295	295
Queue Length 95th Percentile (ft)	184	94	553	189
Turn Bay Length (ft)	220	170	220	170
Delay (seconds)	86.6	78.5	274.3	76.2
Level of Service (LOS)	E	E	F	E

**Table 5: Westbound West Middlefield Peak-Hour Left Turn
One versus Two Lanes**

Westbound Middlefield Road Left-Turn Lane	a.m. Peak Hour Existing + NBPP		p.m. Peak Hour Existing + NBPP	
	1 Lane	2 Lanes	1 Lane	2 Lanes
Volume (vehicles per hour)	153	153	295	295
Queue Length 95th Percentile (ft)	257	112	494	179
Existing Turn Bay Length (ft)	230	160	230	160
Delay (seconds)	95.7	76.8	142.2	68.2
Level of Service (LOS)	F	E	F	E

North Shoreline Boulevard and West Middlefield Road are two key arterials in Mountain View, with their intersection being one of the busiest intersections during commute hours in the City. This intersection provides access not only into North Bayshore, but also to U.S. 101, Central Expressway, and residential areas further south along North Shoreline Boulevard. Providing an improved LOS at this intersection will help avoid drivers cutting through residential neighborhood and smaller collector streets, such as Terra Bella Avenue, to avoid the congestion at this intersection. Improving the LOS also reduces transit vehicle delays through the intersection and access to the transit lane, supporting transit ridership, which is needed to meet the single-occupant vehicle targets in the NBPP.

Current and Future Traffic Patterns

While the pandemic brought reduced traffic over the past year, it may not be possible to fully quantify or understand the actual effect of the pandemic on future commute traffic

patterns for many years. It is staff's opinion that traffic volumes will return to pre-pandemic levels for the following reasons:

- The Metropolitan Transportation Commission (MTC) has reported that regional traffic has steadily risen since summer 2020. Available data and reporting on regional traffic indicated traffic was at about 70% of pre-pandemic levels as of July 2021 (see Figure 10). Traffic volumes further increased when schools resumed in-person learning in August and September. This increase in traffic has occurred even as most employers have delayed having office-based employees return to the office until 2022.

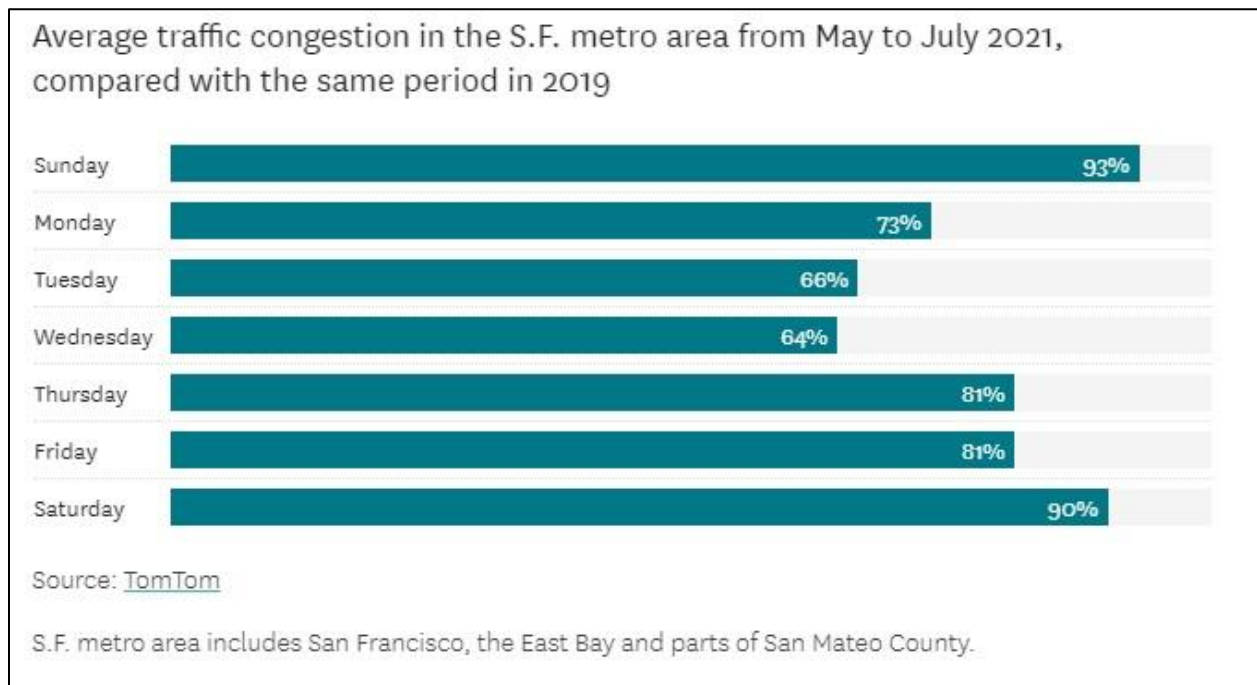


Figure 10: San Francisco Bay Area Average Traffic Patterns
(Source: [San Francisco Chronicle](#))

- Many employers are proposing to implement a hybrid return-to-work model with plans to call all employees back to the office several days per week in 2022. Some of these employers may have two or three core days where everyone needs to be present, creating “peak days” of the week for traffic congestion.
- Some employers are setting up hot-office/-desk arrangements, which will support working from home certain days of the week; however, employers will not likely leave their buildings underutilized during the week. Rather, they may use the work-from-home and hot-desk arrangement to hire more employees assigned to an

existing building. Thus, the number of daily vehicle trips to a building would remain the same as prepandemic but be spread out over more employees.

- Remote work where an employee only needs to commute to the office two or three days per week may actually promote living further away from work for more housing options (a long commute may be more bearable if only for two or three days per week). Longer commutes can lead to greater use of single-occupant vehicle travel.
- Commuters appear reluctant to return to transit or ridesharing/carpooling arrangements due to health and safety concerns. It may take years for them to become comfortable again traveling in closed-in spaces with other people, resulting in more single-occupant vehicle trips.

Overall, staff believes that any reductions in commute traffic from more work-from-home may be offset by more employees assigned to an office building and lower use of transit and carpooling. Therefore, it is anticipated that the traffic volumes at the West Middlefield Road/North Shoreline Boulevard intersection will return to prepandemic levels, and implementation of the NBPP will increase the traffic volumes and levels of congestion as indicated in the traffic studies.

Project Alternative

In response to the substantial amount of correspondence received from the public to protect trees in the West Middlefield Road median at the North Shoreline Boulevard intersection, staff has evaluated the alternative to remove the second left-turn lane improvements from both directions on West Middlefield Road. There would be implications with project costs and delay and with the NBPP EIR prepared under the California Environmental Quality Act (CEQA).

Cost and Delay Considerations

While removing the second left-turn lanes would provide construction savings, it will require redesign of the planned protected intersection improvements, including changes to traffic signals, median curbs in the intersection, and striping. The changes will impact several design plan sheets and will require additional plan development and review. The key delay and cost factor will be changes for the traffic signal poles and mast arms, which typically must be ordered months in advance. Due to COVID-related supply chain problems, there is a reduced supply and longer-than-usual lead-time for traffic signal poles. The delays necessary to redesign the signal system for the intersection may result

in project delay claims and material escalation costs if the traffic signal poles are not available when needed.

Shortening the additional left-turn lanes as recommended will also require some changes to design plan sheets, but this redesign is far simpler in nature and will not impact the intersection and signal design. Shorter left-turn lanes should also provide some construction savings as it lessens the length of median curb to be modified and the amount of new paved area.

Should the additional left-turn lanes be removed from this project and there is a future Council decision to install the left-turn lanes as a stand-alone project in response to congestion and delay, the construction costs for this work will be significantly higher due to loss of economies of scale and escalating construction costs.

CEQA Consideration

The additional left-turn lane improvements are identified in the NBPP EIR as an environmental impact mitigation measure. Council's action in 2017 to adopt the NBPP and the corresponding EIR included adoption of a Statement of Overriding Considerations (SOC). If Council chooses to remove the second left-turn lanes at the West Middlefield Road/North Shoreline Boulevard intersection, a revision to the EIR and a resolution approved by the City Council are required. A new traffic analysis will be conducted to determine if a revised SOC is required to remove this work as an NBPP mitigation measure. Staff would engage a CEQA consultant for this effort with the cost estimated at approximately \$50,000 and the effort expected to take approximately five months.

Revising the EIR may impact the project schedule and the City's ability to finalize the scope removal with the contractor. While design work for the scope removal and coordination discussions with the contractor's schedule can be performed in parallel with both the CEQA work and utility construction work, the City may not be able to remove the work from the contractor's scope until Council adopts a resolution for the revision to the EIR. This may impact the planned sequence of work the contractor has identified and may add further contractor claims, increasing project costs.

One Additional Heritage Tree Removal on North Shoreline Boulevard

During the construction field review, one Heritage redwood tree (33" in diameter) located on North Shoreline Boulevard, between Terra Bella Avenue and West Middlefield Road (identified as Tree No. 11 in Figure 11), was determined by the City

arborist to be severely impacted, and its preservation is not possible due to instability resulting in potential tree uproot and falling. The tree is located directly behind the sidewalk and protected bikeway improvements (see Figure 12 outlining the approximate footprint of its root structure relative to the improvements on North Shoreline Boulevard). Staff recommends the removal and mitigation for this tree with replanting at a four-to-one ratio with 24" box trees to allow the installation of the new protected bikeway and sidewalk.



Figure 11: Location of Additional Heritage Tree Removal on North Shoreline Boulevard

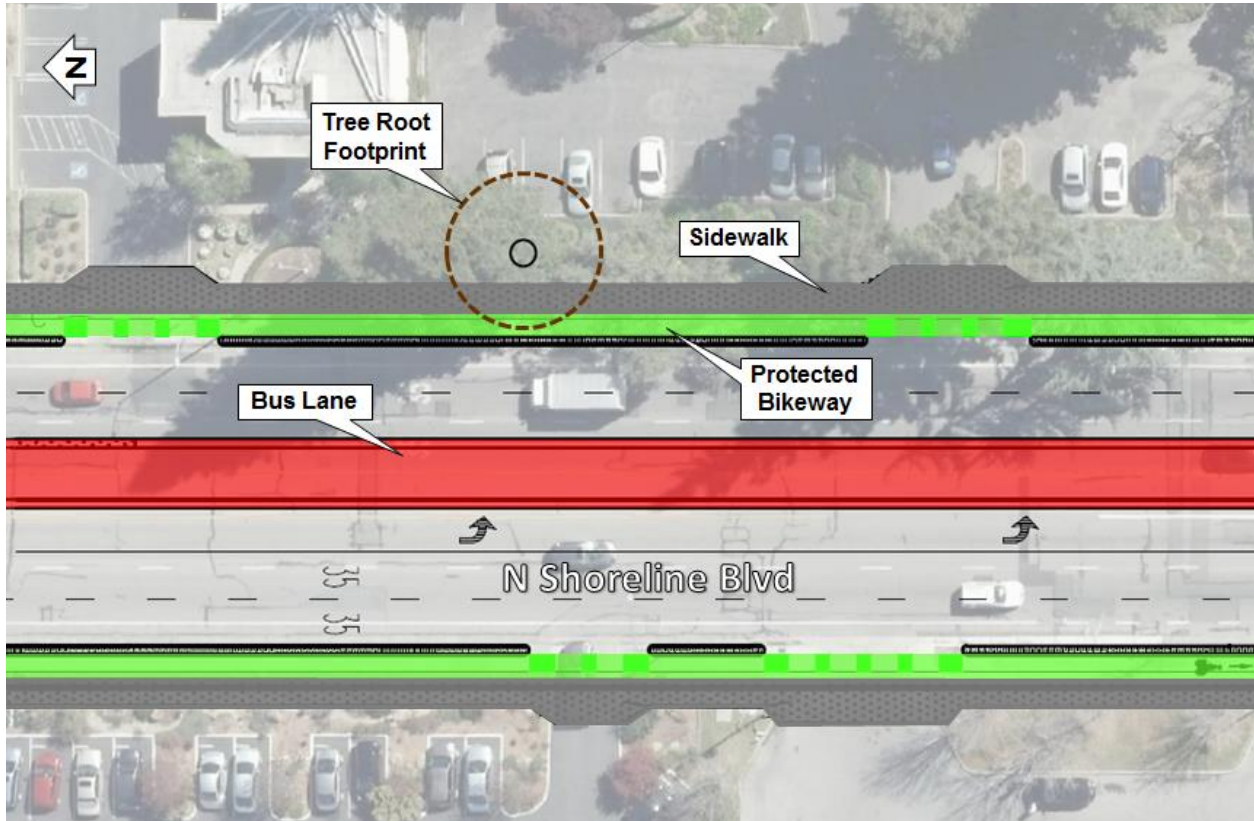


Figure 12: Approximate Tree Root Footprint of the Additional Heritage Tree Removal on North Shoreline Boulevard

PG&E Gas Regulator Station

Staff has been coordinating the Shoreline Bus Lane project with a Pacific Gas and Electric Company (PG&E) gas pipeline safety project. While the PG&E project is needed regardless of the Shoreline Bus Lane project and no Council action is required, the work is within the limits of the Shoreline Bus Lane project, and Heritage trees are impacted. Staff is, therefore, including information about the PG&E project in this Council report.

The project involves replacement of a gas regulator station in the West Middlefield Road median just west of North Shoreline Boulevard. Due to the left-turn lanes reducing the available median area, PG&E has applied for a permit to relocate the regulator to behind the West Middlefield Road sidewalk at San Veron Park. The current location in the median conflicts with the second left-turn lane on westbound West Middlefield Road. The regulator must be relocated now to accommodate the second left-turn lane or in the future if the second left-turn lane is ever installed.

Should the second left-turn lane scope be removed from the project, the regulator must still be upgraded for gas pipeline safety, either in its current location in the median or the new location at San Veron Park. There will be Heritage tree impacts with either location, as follows:

- Replacing the regulator in the current location will require the removal of the three large Heritage trees in the median that were approved for removal to add the left turns in September 2019 (see Figure 13 and Table 6) and will include adding vertical barriers for worker safety protection.
- Moving the regulator to the San Veron Park location will require removing three Heritage and two non-Heritage trees as shown in Figure 14 and Table 7. The Heritage trees impacted at San Veron Park are smaller than the Heritage trees impacted in the West Middlefield Road median.

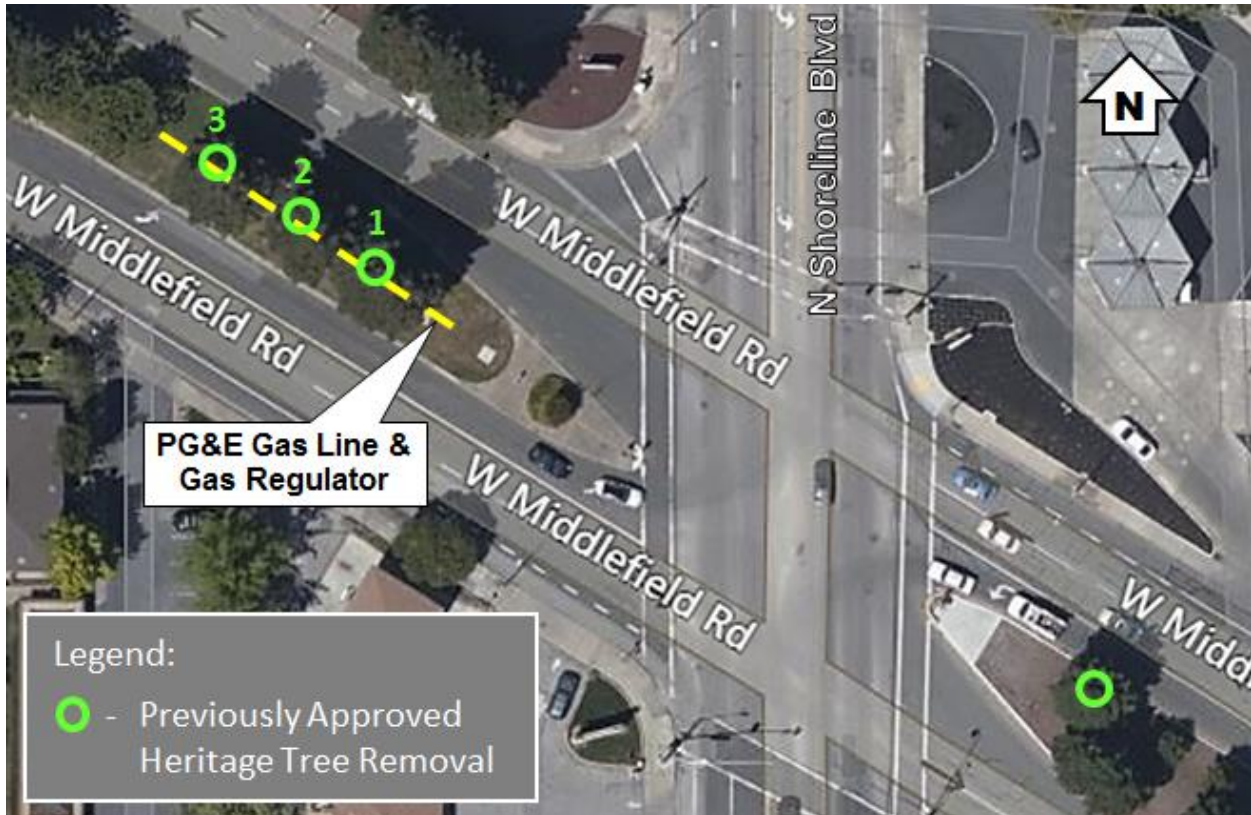


Figure 13: September 2019 Approved Heritage Tree Removals on West Middlefield Road Required for Upgrading PG&E Gas Regulator

**Table 6: Size and Species of December 12, 2018 Approved
Heritage Tree Removals on West Middlefield Road**

No.	Tree Diameter at 54" Above Grade	Tree Type
1	34"	Coast redwood
2	28"	Coast redwood
3	25"	Coast redwood



Figure 14: Tree Removals at San Veron Park

Table 7: Tree Removal Size and Species at San Veron Park

No.	Tree Diameter at 54" Above Grade	Heritage Tree	Tree Type
1	30"	Yes	Pine
2	22"	Yes	Purple leaf plum
3	12"	Yes	Coast redwood
4	6"	No	Ginkgo
5	6"	No	Ginkgo

PG&E has preliminarily indicated replacement trees at a seven-to-three ratio with 24” box trees to mitigate the Heritage tree removals, where native trees will be considered, if feasible. This would be in lieu of paying a fee for the tree removals.

Should the second left-turn lane not be installed as part of the project, it will be a policy question as to where to locate the regulator and which Heritage trees will be removed. In this case, staff would review this policy question with the Parks and Recreation Commission/Urban Forestry Board for recommendations to Council.

Unforeseen Underground Utility Conflicts and Groundwater Condition

North Shoreline Boulevard is a major corridor with many existing underground utilities, and not all of the existing utility information was available, known, or accurate. After potholing by the contractor, existing gas, fiber optic, and other service lines were found to be in conflict with planned water and sewer lines, and the project plans have been revised accordingly. The revisions to the plans due to these conflicts was an additional design effort.

Additionally, due to the high groundwater level, dewatering during trenching work is required, and the result of the groundwater quality sampling indicates that it will need to be treated before it can be discharged due to metals found in the sampling. While dewatering was anticipated, treatment of the water was an unforeseen condition. The treatment system consists of filtering and settling the groundwater through a series of tanks.

These two changes related to the new and upsized water and sewer mains have resulted in additional coordination with the contractor and ongoing negotiations to determine cost and schedule implications for the project.

Project Schedule

The construction project was placed on hold due to nesting birds in summer 2021 and to resolve utility coordination conflicts. Should Council approve staff’s recommendations for transplanting the three Heritage trees in the median of West Middlefield Road and removing one Heritage tree on North Shoreline Boulevard, staff anticipates construction to start again in November 2021 and be completed by early 2023.

Should the scope of work be revised to remove the left-turn lane improvements on West Middlefield Road, staff will analyze the scope of all the revisions (including the

unforeseen utility conditions) to determine whether the construction contract can be modified with minimal delay and cost increases or if the construction contract should be terminated and rebid with revised plans and specifications after a revision to the NBPP EIR is adopted.

FISCAL IMPACT

Shoreline Boulevard Interim Bus Lane and Utility Improvements, Phase I Construction, Project 18-43, is funded with \$16,401,606 from the Shoreline Community Fund, Shoreline Regional Park Community 2018 Series A Bond Proceeds (Bond Proceeds), Water and Wastewater Funds (both capacity charges and North Bayshore development impact fee), Capital Improvement Program Reserve Fund, and reimbursement from the 1045 La Avenida development (Microsoft) in the North Bayshore Area.

The design contract with Mark Thomas is funded from Shoreline Boulevard Interim Bus Lane and Utility Improvements, Design, Project 16-58, using Shoreline Community Fund and Water and Wastewater Capacity Fees. Staff recommends adding \$440,000 to the design contract for additional design services, additional contingency, and an allowance for potential additional services, for a total not-to-exceed amount of \$2,243,669. These additional design services support the changes in design for the unforeseen underground utility conditions and for shortening the additional left-turn lanes.

Staff recommends transferring \$90,000 of Wastewater Funds, \$90,000 of Water Funds, \$60,000 of Shoreline Community Bond Proceeds, and \$60,000 of Shoreline Community Funds to the Shoreline Boulevard Transit Lane and Utility Improvements, Design, Project 16-58, providing a total project funding of \$2,755,000. With the recommended transfer of funds, there are sufficient funds in the project budget for the proposed amendment to the design consultant agreement.

Based on Council's decision regarding the tree transplants and removal and the analysis of the breadth of revisions to the contract, staff may negotiate the scope of work changes with the contractor or recommend terminating the construction contract. Staff would return to Council if additional funding is needed for the construction contract or to terminate the contract and rebid the project.

CONCLUSION

The Shoreline Bus Lane is an ambitious and complex project with improvements for all major modes of on-street transportation. Even with the extensive multi-modal improvements that have been constructed or are planned, the allowed growth in North

Bayshore results in additional vehicle trips. Traffic analysis has shown that anticipated left-turn trips will exceed the capacity of the existing left-turn lanes and result in significant delays for vehicles traveling to and from North Bayshore as well as those traveling along West Middlefield Road. These vehicles include both single-occupant as well as transit. The additional left-turn lanes will provide improved service levels with the additional traffic.

The City has multiple policies that support retaining Heritage trees and increasing tree canopy. As shown in Figures 5, 6, and 7, nearly all of the tree canopy will be preserved or restored in the median of West Middlefield Road after project completion with the Heritage trees to be transplanted, some of the replacement trees to be planted elsewhere in the median, and the number of remaining Heritage trees. However, the transplanted/replacement trees would take time to attain the size and provide the benefits of the four existing, mature trees that would be removed.

North Shoreline Boulevard is one of the most challenging streets in the City for installation of underground utilities. Many City-owned utilities already exist, electric and communication lines were undergrounded, and an unusually high number of fiber optic lines are also present. Underground investigation after construction began has revealed a number of conflicts with planned water and sewer lines. These conflicts have been resolved with revisions to the project plans, and additional funds are needed for design efforts.

Council's approval of the three Heritage tree transplants on West Middlefield Road and the one Heritage tree removal on North Shoreline Boulevard will allow this ambitious project to proceed.

ALTERNATIVES

1. Direct staff to proceed with CEQA review for removal of the additional left-turn lanes scope of work on West Middlefield Road, which will include preparing a revision to the NBPP EIR, adoption of which would precede amending or rebidding the construction contract.
2. Provide other direction.

PUBLIC NOTICING

Agenda posting and notice to properties within 750' of the project site.

Prepared by:

Andy Chang
Senior Civil Engineer

Reviewed by:

Robert Gonzales
Principal Civil Engineer

Edward Arango
Assistant Public Works Director/
City Engineer

Approved by:

Dawn S. Cameron
Public Works Director

Kimbra McCarthy
City Manager

AC/TS/6/CAM
913-10-26-21CR
201322

Attachments: 1. 2017 EIR Traffic Analysis Data
2. 2021 Updated Traffic Analysis Data
3. 2021 Revised Queue Analysis with Reduced Lane Lengths

cc: PWD, APWD – Arango, PCE – Gonzales, PCE – Shah, SCE – Chang, SMA – Doan,
SMA – Goedicke, PA – Li, File (18-43)