

SIR FRANCIS DRAKE BOULEVARD REHABILITATION PROJECT COMPONENT RECOMMENDATIONS FOR BOARD OF SUPERVISORS CONSIDERATION

The following recommendations of the various project components developed and refined as part of the community outreach, engineering analysis, and environmental review processes for the Sir Francis Drake Boulevard Rehabilitation Project are to be considered by the Board of Supervisors at the May 8, 2018 project EIR certification and final project selection hearings. Each of the project components considered are recommended for one of three categories and are discussed below.

PROJECT COMPONENTS RECOMMENDED FOR CONSTRUCTION

The following project components are recommended for construction with the funding currently available, as they have the greatest impacts in achieving the project's goals.

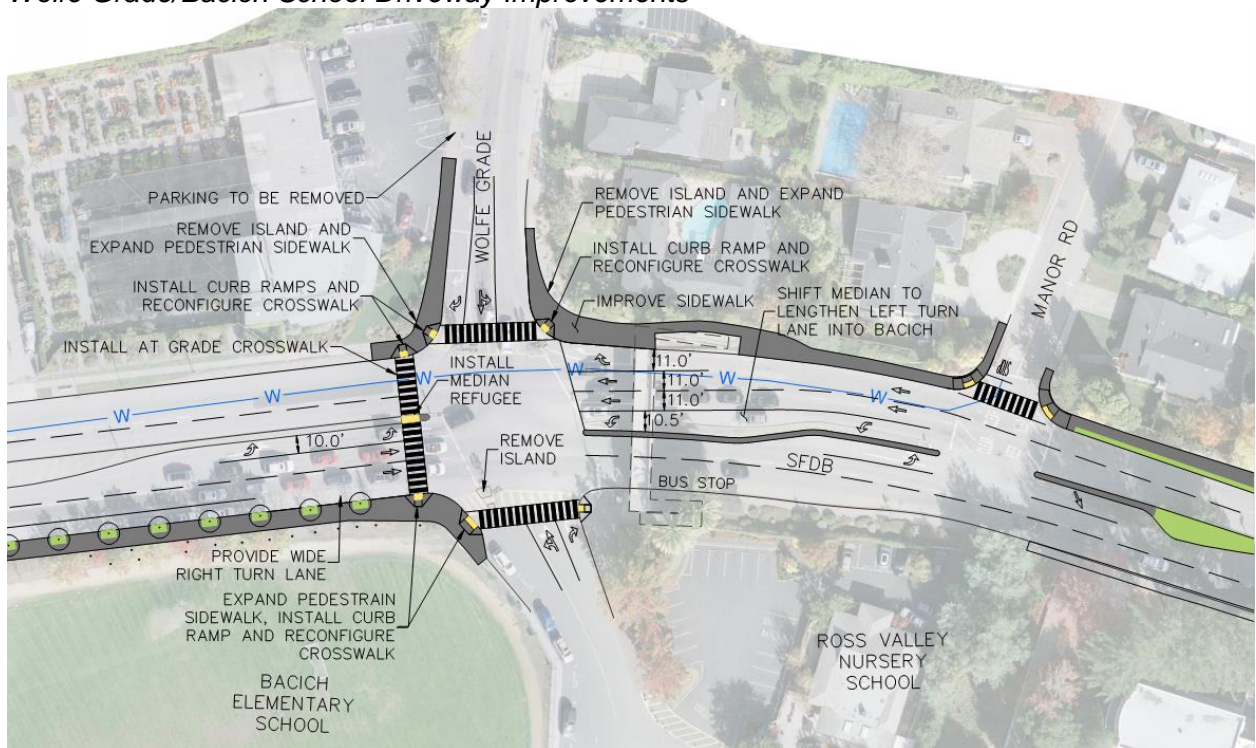
1. Pavement Rehabilitation and ADA Compliance

The project's baseline component is rehabilitation of the roadway pavement, based on its funding source being Measure A Road Rehabilitation funds. The baseline project repaves the entire roadway from Highway 101 to the Ross town limits. Also included in roadway repaving are several Americans with Disabilities Act (ADA) compliance projects, which are required when roadway repaving occurs. Typically, these additional project items include provision of compliant curb ramps, removal of barriers to passage, and provision of compliant paths of travel. Improvements made to intersections as identified in other project components will be constructed in compliance with ADA. For those intersections not being otherwise modified, any deficient curb ramps will be replaced.

Wolfe Grade Crosswalk

The most substantial ADA modification triggered by the baseline project is provision of an ADA-compliant path of travel at Wolfe Grade. This intersection is not a compliant crossing of Sir Francis Drake at this time. While the current overpass (which will remain in place) does provide a means of getting across Sir Francis Drake, it is not accessible for those with mobility impairments because of its lack of compliant ramps. It is not reasonably feasible to make the current overpass ADA compliant, or to replace the overpass with a modern structure due to a construction cost in excess of \$6 million, the need to acquire additional right-of-way at additional expense to provide for the substantial ramp structures that would be necessary, and the visual impacts of such a substantially larger structure than what exists currently. As a result, provision of an at-grade crossing of Sir Francis Drake on the west side of the intersection will provide the required compliant path of travel. Considerable community opposition to the at-grade crosswalk was expressed throughout the outreach process with the two primary concerns being additional traffic impacts to a busy intersection and pedestrian safety in using the crosswalk. However, ADA compliance is not discretionary. The existing overpass will remain in place for those who would prefer to continue using it to cross Sir Francis Drake, while the redesign of the intersection and installation of modern traffic signals will enable the pedestrian crossing phase to not impact the signal phasing for vehicle flow.

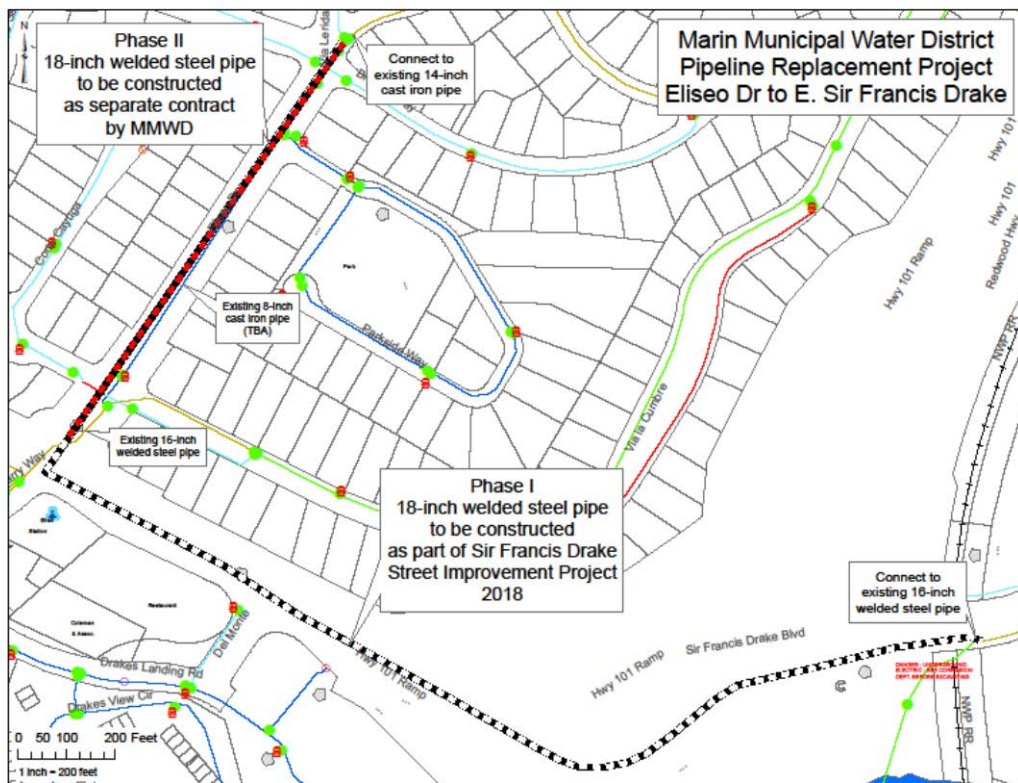
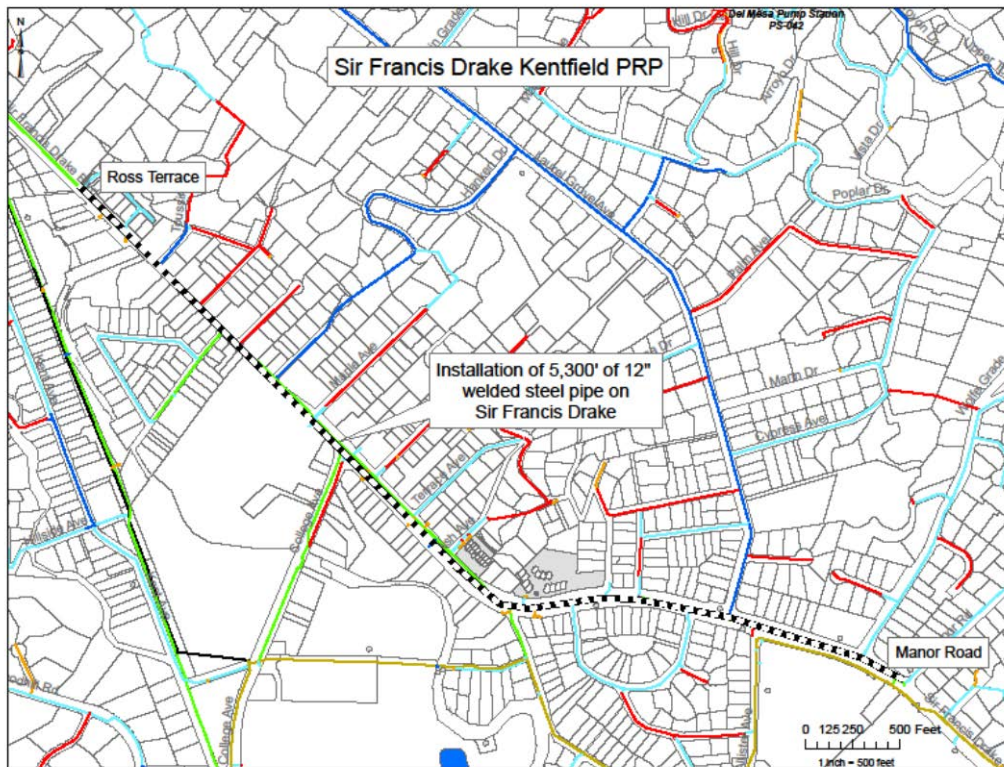
Wolfe Grade/Bacich School Driveway Improvements



2. Marin Municipal Water District Pipeline Replacement

MMWD has a pipeline replacement project in the corridor scheduled as part of their work program. The project involves two separate segments: Between Ross Terrace and Manor Road, and Between Eliseo Drive and Highway 101. Construction of the project is planned to be incorporated into the Rehabilitation Project in order to minimize the time and disruption to the community than undertaking as a separate projects. Costs of the pipeline replacement are being borne by MMWD.

Marin Municipal Water District Proposed Pipeline Replacements



3. Highway 101 to El Portal Drive

The project segment from US 101 to El Portal Drive consists of three key components: Intersection reconstruction, Traffic signal replacement, and Provision of a third lane eastbound.

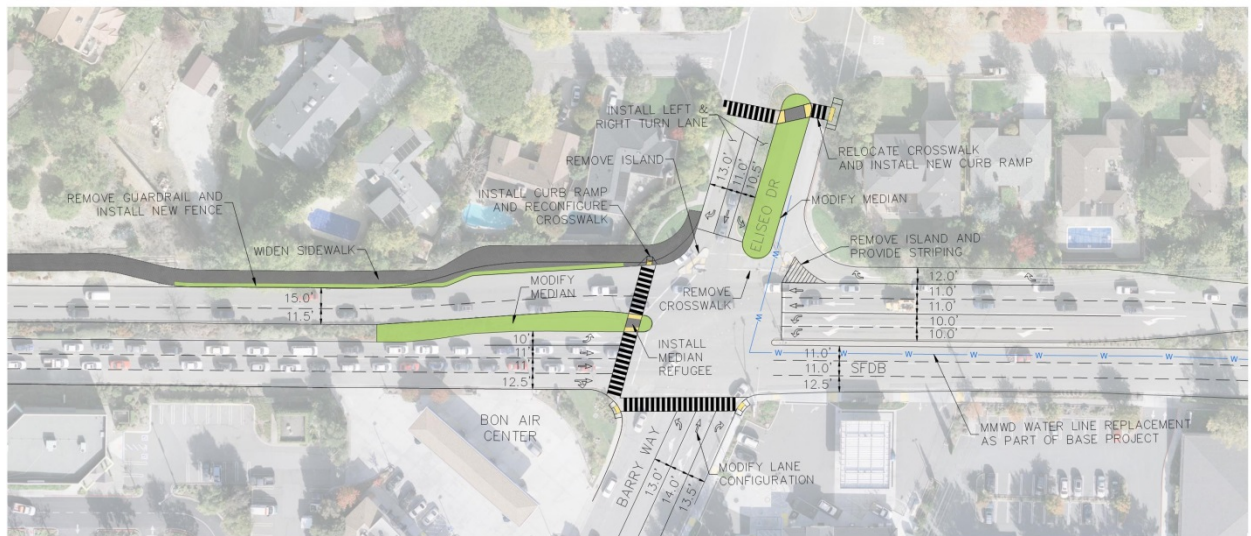
Intersection Reconstruction

The Eliseo/Barry, La Cuesta, and El Portal intersections will be substantially reconstructed to improve vehicle circulation efficiency, provide flexibility with traffic signal phasing, address pedestrian safety concerns, and reduce pedestrian crossing distances. At both Eliseo and La Cuesta, the large medians on both streets will be shifted to the east to enable provision of an additional southbound vehicle lane dedicated to turning movements. Currently, it is not possible to allow opposing concurrent or overlapping left turns from these streets because of the tight intersection geometry, which results in inefficiencies in vehicle movement and signal timing. These geometric modifications provide additional flexibility in vehicle turning movements and, in conjunction with modernized signal equipment, will enable a more efficient allocation of green time for various movements through both intersections.

At Eliseo Drive, the current pedestrian crossing across Eliseo will be removed and relocated one block to the north at Via La Cumbre. This relocation allows for retention of the current dedicated right turn lane from westbound Sir Francis Drake, while still providing a marked crossing of Eliseo Drive. It also enables the installation of a bus bypass lane westbound on Sir Francis Drake to the bus stop on the opposite side of the intersection. The eastbound left turn lane from Sir Francis Drake on to Eliseo will be lengthened to accommodate more left-turning vehicles without obstructing the eastbound through lanes.

At both La Cuesta and El Portal, “pork chop” islands and the two quarter-circle paved areas framing the intersections will be replaced with conventional intersection geometry while retaining dedicated turn lanes, improving pedestrian crossing safety, and shortening pedestrian crossing distance, which also has beneficial effects on signal timing overall. The areas where paving is to be removed have been identified as potential bioswale opportunities.

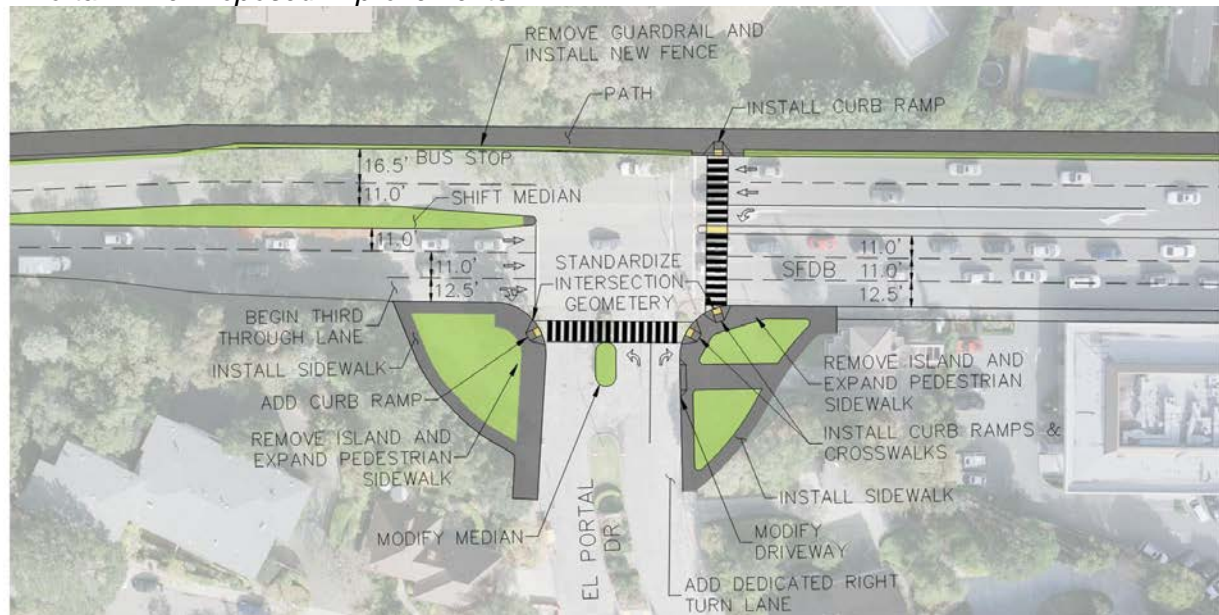
Eliseo Drive/Barry Way Proposed Improvements



La Cuesta Drive Proposed Improvements



El Portal Drive Proposed Improvements



Traffic Signal Replacement

Signals at the three signalized intersections will be replaced with modern signal technology which provides greater flexibility and responsiveness to changing conditions. In conjunction with the intersection modifications, the new signals will allow for separated turn movements that enable clearing the greatest number of vehicles per cycle over what can currently be accommodated. As with other signals in the project corridor that will be replaced, there will be interconnectivity between them to further improve efficiency and responsiveness.

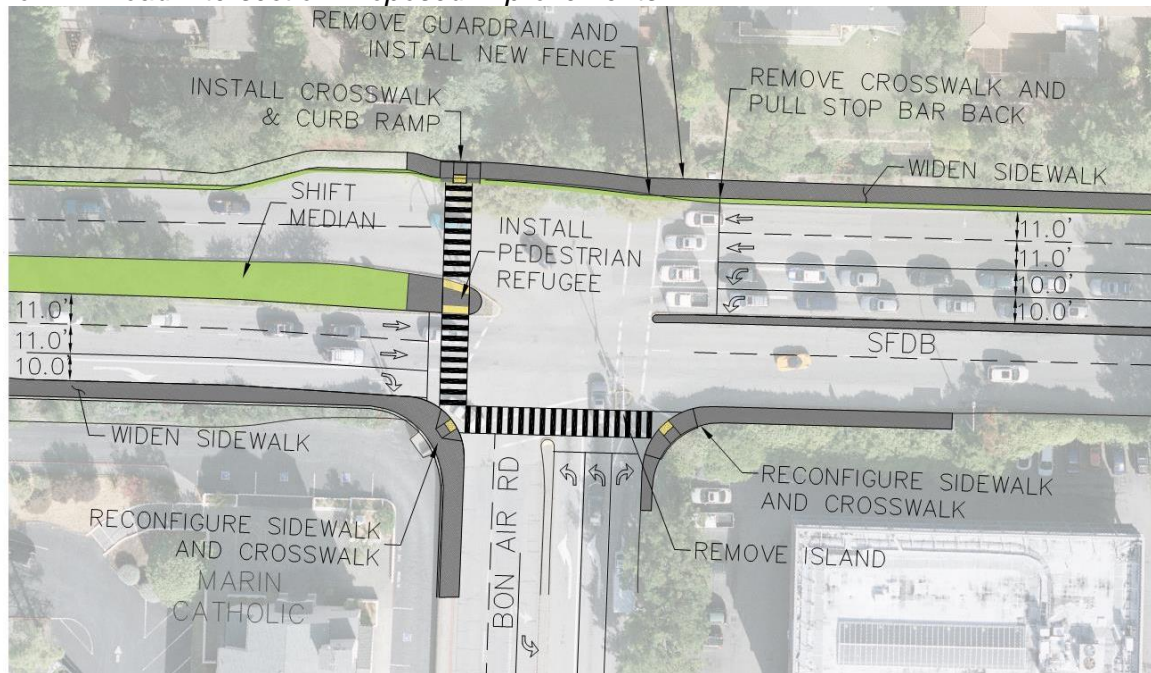
Third Lane Eastbound

Starting just west of the El Portal intersection and continuing to just before the US 101 southbound onramp, the roadway will be three lanes instead of the current two. This is accomplished between the existing curb and median by striping the third lane in what is now unallocated pavement area. The merge area approaching the US 101 ramps will have the far right lane merge into the center lane.

4. Bon Air Road Intersection

At Bon Air Road, the traffic signal will be replaced with modern equipment similar to the other signalized intersections in the corridor. The current crosswalk across Sir Francis Drake will be switched from the east side of the intersection to the west to allow for greater efficiency with the traffic signal. The southwest and southeast corners will be modified to shorten pedestrian crossing distances without affecting right turn movements, such as traffic turning right from Bon Air Road on to Sir Francis Drake.

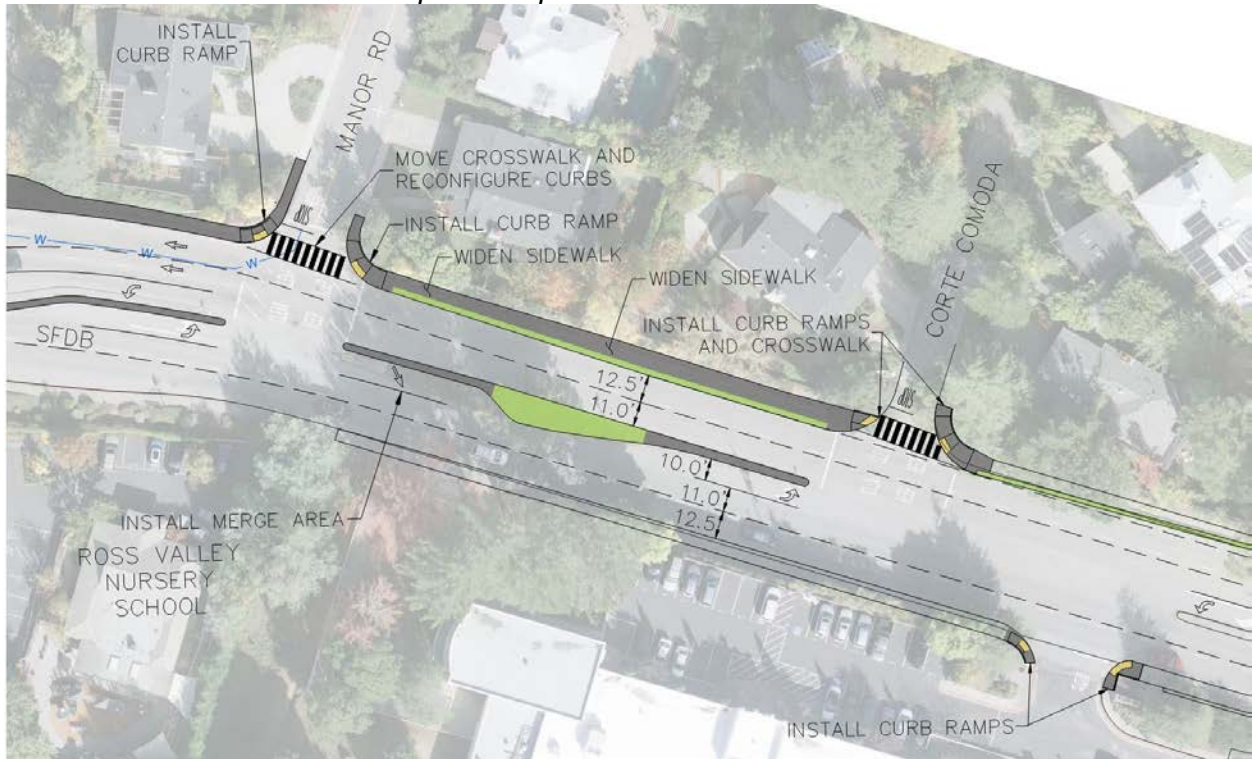
Bon Air Road Intersection Proposed Improvements



5. Corte Comoda to Wolfe Grade

At both Corte Comoda and Manor Road Sir Francis Drake is gradually descending and on a curve which, combined with the tight right-of-way in this segment, results in obstructed views by westbound Sir Francis Drake motorists of pedestrians in the crosswalks. Manor Road also serves as an informal drop-off zone for Bacich students and sees far higher vehicle counts and movements than it would otherwise. In this segment, the sidewalks and corners at the two intersections would be raised and enlarged to improve visibility of pedestrians crossing the two side streets. Drainage issues in this segment, including the sidewalk as it approaches Wolfe Grade, will also be addressed. Restriping westbound lanes in advance of the Wolfe Grade intersection will retain the right turn lane onto Wolfe Grade and lengthen the left turn lane into Bacich School. Within the median on the east leg of the intersection, a merge lane will be added to enable motorists turning left on to Sir Francis Drake from Manor Road to proceed when clear of westbound traffic by pulling into the median merge lane and merging with eastbound traffic.

Corte Comoda/Manor Road Proposed Improvements

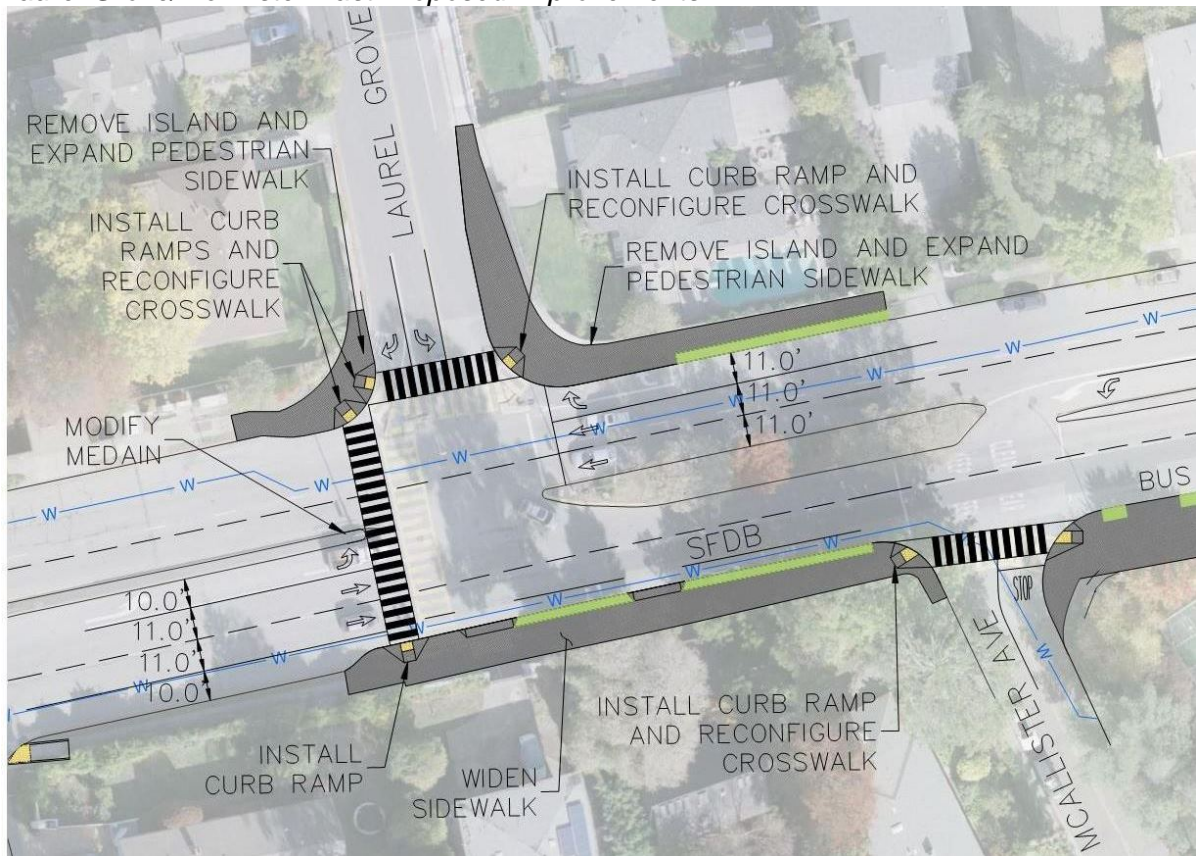


6. Bacich School to Laurel Grove

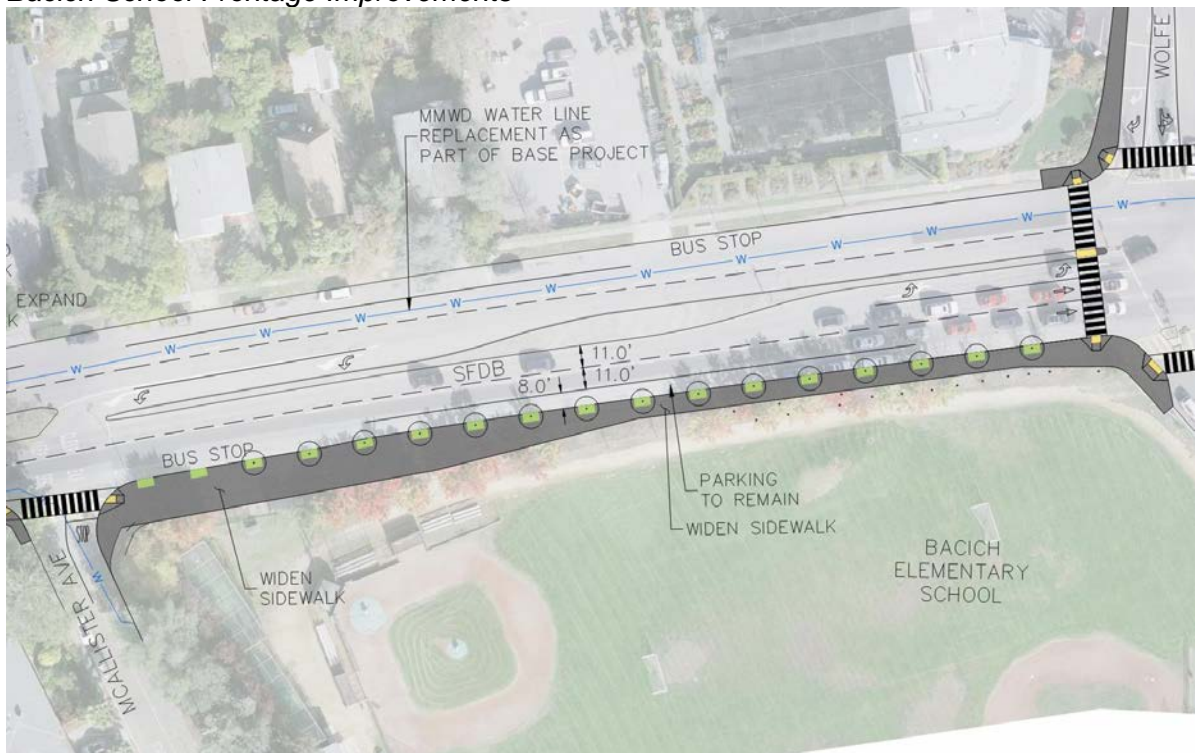
Between Bacich School and Laurel Grove Avenue on the south side of Sir Francis Drake, the sidewalk will be widened to better accommodate the number of students that traverse the area and reduce conflicts with the drop-off zone along Sir Francis Drake in front of the school.

Both the Laurel Grove and Wolfe Grade intersections will be reconfigured to eliminate the “pork chop” islands that currently exist and square up the corners to shorten pedestrian crossing distances and enlarge pedestrian waiting areas. Dedicated right-turn lanes will continue to be provided so the execution of right turn movements will not obstruct through lanes on Sir Francis Drake. Upgraded traffic signals at both intersections with modern signal technology will be more responsive to changing conditions and improve operational efficiency. At Wolfe Grade, a new crosswalk across Sir Francis Drake will be provided to comply with ADA. Concerns about this crosswalk resulting in an unsafe situation, particularly for students, have been raised throughout the public outreach process; however, the existing overpass will remain in place and usable for those who still prefer to use the overpass to cross.

Laurel Grove/McAllister East Proposed Improvements



Bacich School Frontage Improvements

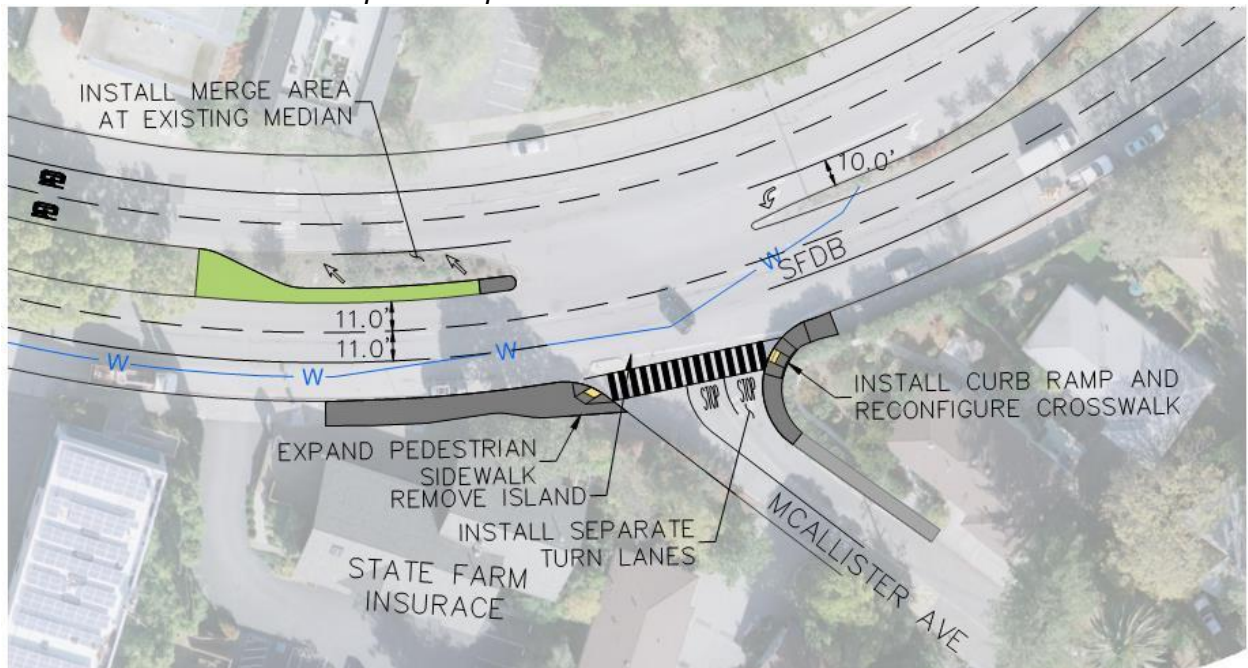


7. McAllister Avenue (West) and Ash Avenue

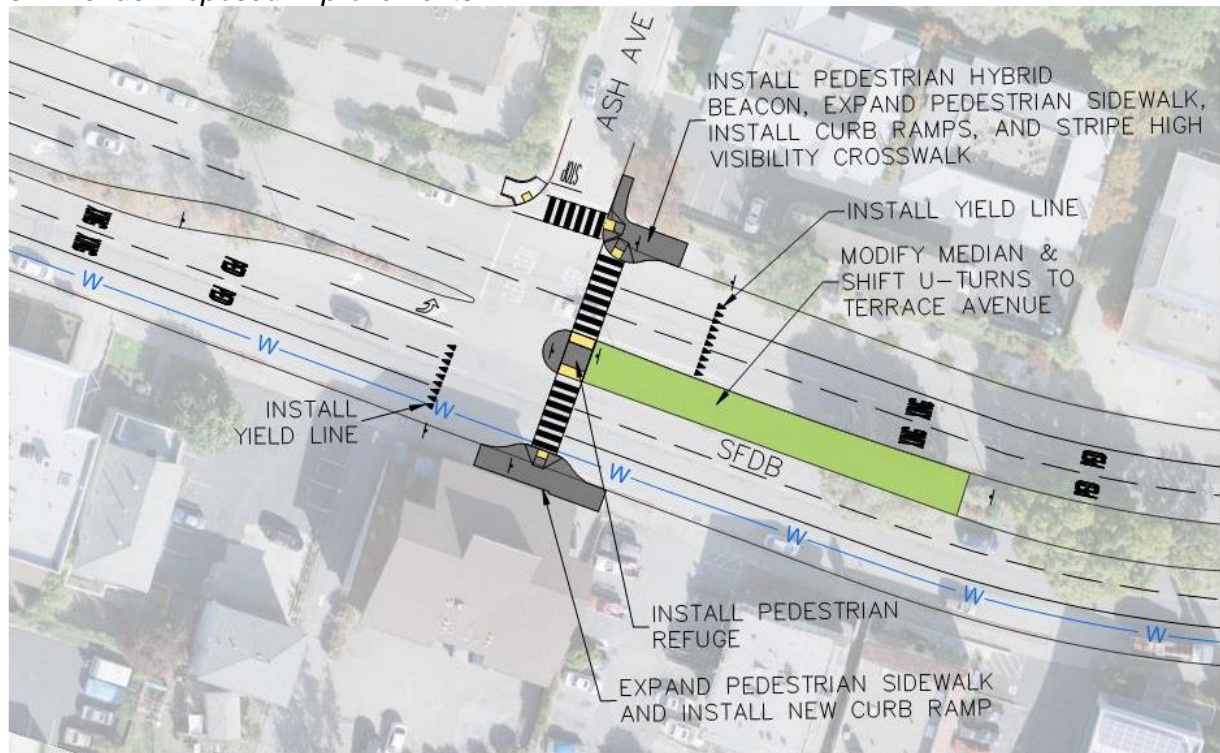
McAllister Avenue (West) intersects Sir Francis Drake at an oblique angle and features a large radius corner to turn on to the roadway from Sir Francis Drake, resulting in a long pedestrian crossing. It is also situated on a curve and near the bottom of a downslope on Sir Francis Drake, which makes it difficult for motorists turning left from McAllister on to westbound Sir Francis Drake to see traffic coming from the east to safely enter the intersection. At Ash Avenue, there is a marked crosswalk; however, that crossing has seen numerous pedestrian-involved collisions as it involves a long crossing of five vehicle lanes at once.

This component will modify the McAllister intersection by shortening the pedestrian crossing and reducing the turn radius of the southwest corner to improve visibility of pedestrians and reduce speeds entering the residential neighborhood. Within the median on the west leg of the intersection, a merge lane will be added to enable motorists turning left on to Sir Francis Drake to proceed when clear of eastbound traffic, pull into the median merge lane, and then merge with westbound traffic when safe to do so. At Ash Avenue, the current westbound U-turn lane will be removed to create a wide median refuge area for pedestrians crossing Sir Francis Drake. Bulb-outs will be provided on each curb side of the crosswalk to further shorten the crossing distance and improve the visibility of pedestrians waiting to cross. A Pedestrian Hybrid Beacon (also known as a HAWK) will be installed to control vehicle movement when pedestrians are present to cross the roadway. The HAWK is a more substantial, effective, and safe crossing beacon for situations with multiple vehicle lanes in each direction.

McAllister Avenue West Proposed Improvements



Ash Avenue Proposed Improvements

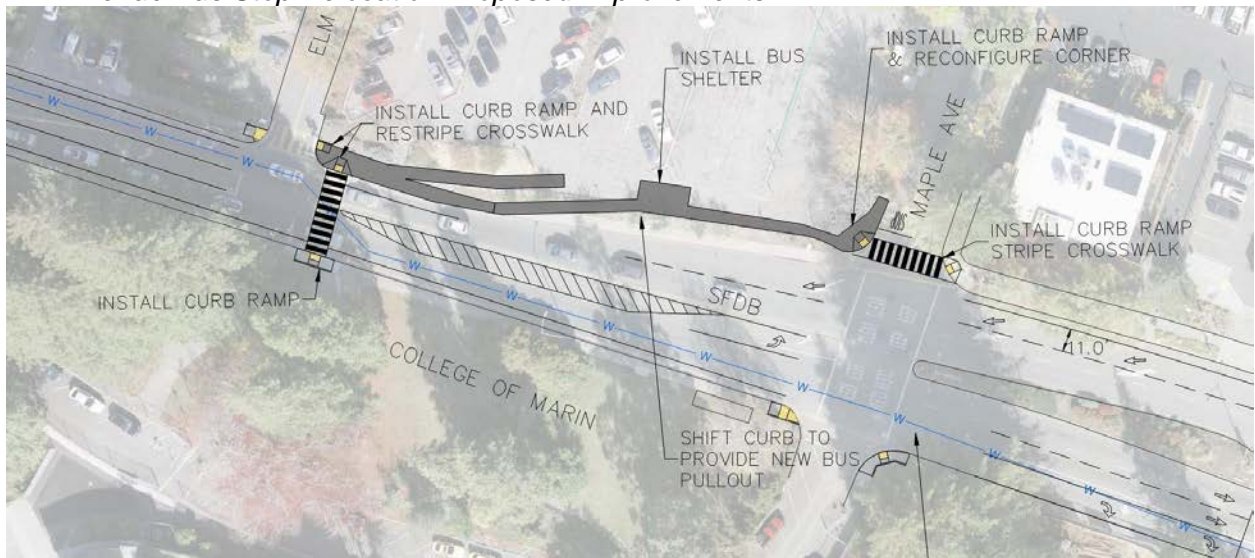


8. Elm Avenue and Toussin Avenue

The segment of Sir Francis Drake west of College Avenue narrows to one lane in each direction with a center two-way left turn lane and features three marked crosswalks, at Elm, Toussin, and Ross Terrace. The current westbound bus stop location is east of Maple Avenue, which has resulted in students crossing Sir Francis Drake to get to College of Marin in unmarked locations. At Toussin Avenue there have been several pedestrian-involved collisions.

This project component will install a Rectangular Rapid Flashing Beacon at the existing marked crosswalk at Toussin Avenue to better alert motorists to the presence of pedestrians crossing Sir Francis Drake. In conjunction with College of Marin and Marin Transit, the westbound bus stop at Maple Avenue will be moved one block further west to be near the signal-controlled Elm Avenue intersection.

Elm Avenue Bus Stop Relocation Proposed Improvements



PROJECT COMPONENTS RECOMMENDED FOR CONSTRUCTION SHOULD ADDITIONAL FUNDING BE SECURED

The following projects are recommended for construction should additional funding be secured. If additional funds can be secured, construction with the Rehabilitation Project (or at some point in the future) is dependent on when funding is available.

1. Eliseo Drive to El Portal Multiuse Path

The current sidewalk on the north side of Sir Francis Drake would be widened to an overall width of 8-10 feet to enable usage by pedestrians and cyclists and provide a safer, more usable path of travel, particularly for students walking or bicycling to school. This section could be accomplished within the current area allocated to the sidewalk while still retaining landscaping and providing a barrier between the path and roadway.

2. El Portal to Bon Air Road Multiuse Path

The current sidewalk on the north side of Sir Francis Drake would be widened to an overall width of 8-10 feet to enable usage by pedestrians and cyclists and provide a safer, more usable path of travel, particularly for students walking or bicycling to school. This section would necessitate minor retaining wall improvements in some sections to allow for the necessary path width and retain a barrier between the path and roadway.

3. Bon Air Road to Bacich School Sidewalk

The current sidewalk on the south side of Sir Francis Drake along the frontage of Marin Catholic High School is not continuous. This project would widen the sidewalk and reconstruct the school's current exit driveway to provide a continuous sidewalk. The driveway enters on to Sir Francis Drake at an oblique angle and creates a nearly 100-foot gap in the sidewalk.

PROJECT COMPONENTS NOT RECOMMENDED FOR CONSTRUCTION AT THIS TIME

1. College Avenue Dual Left Turn Lanes

The intersection of College Avenue and Sir Francis Drake Boulevard currently features a single westbound left turn lane onto southbound College Avenue, which experiences backups that extend into the westbound through lanes on Sir Francis Drake during certain periods, particularly on weekdays during College of Marin class-change periods and during drop-off and pick-up times at Kent Middle School. The proposed improvement would provide two left turn lanes on to College Avenue. This would also involve extending the short, two-lane segment on College Avenue in front of the Ambrosia restaurant back to Sir Francis Drake to receive the two lanes of turning traffic. The merge at the end of the current short, two-lane section in front of Half Day Cafe would remain as the merge point. To provide the additional space on Sir Francis Drake to accommodate the second left turn lane, the through lanes would be shifted to the north, encroaching into the current on-street parking lane. Current on-street parking would be retained by shifting the parking lane northward by incorporating what is now a landscape strip between the sidewalk and curb.

Community concern about potential impacts to College Avenue and the businesses that front it, revisions to on-street parking, and the potential loss of landscaping has been consistent through the public process. It is also recognized that there are several ongoing traffic flow issues on College Avenue beyond the scope of the Sir Francis Drake rehabilitation that are appropriate for additional analysis and a separate community discussion. Deferring the dual left turn design concept at this time will not affect other components of the Rehabilitation Project; traffic conditions at the intersection will continue as they do currently.

2. Bon Air Road to Corte Comoda Sidewalk Widening

This project would widen the sidewalk on the north side of Sir Francis Drake from Bon Air Road westward to Corte Comoda. This project was determined to be infeasible at this time as this segment currently has a retaining wall over which the current, narrower sidewalk ramps up to connect with the Rosey Path, a paved pedestrian path that connects to the end of Almenar Drive. The significant cost of reconstructing the retaining wall while maintaining the Rosey Path connection and correcting current slope and grade deficiencies is beyond the resources available. Funding for design and construction of this project could be pursued through various grant opportunities at a later date without affecting the other improvements to the roadway in this segment.