

CITY COUNCIL AGENDA REPORT

November 15, 2022
Community Development
Traffic Engineering Division

TITLE: ADOPT THE WEST LAS POSITAS BOULEVARD BICYCLE AND PEDESTRIAN CORRIDOR IMPROVEMENT PLAN AND AUTHORIZE THE PHASE 1 IMPROVEMENTS AS PART OF THE WEST LAS POSITAS MULTIMODAL RECONSTRUCTION PROJECT, CIP NO. 11514

SUMMARY

In 2018, the City of Pleasanton adopted an update to the Bicycle and Pedestrian Master Plan. The updated Master Plan includes provisions to make the city more pedestrian and bicycle friendly by adopting a low stress “all ages and abilities” design philosophy and promoting pedestrian and bicycle infrastructure that can be used by the entire population. The Master Plan identifies the West Las Positas Boulevard corridor between Foothill Road and Fairlands Drive as the highest priority corridor for pedestrian and bicycle improvements. The City Council identified West Las Positas corridor improvements as a high priority project in 2019 and reaffirmed in 2021. Accordingly, the West Las Positas Corridor Improvement Plan was developed with extensive public input and endorsed by the Bicycle, Pedestrian and Trails Committee (BPTC) in December 2019. In 2021 the City Council, through the work plan process, combined the West Las Positas Reconstruction Project, CIP No. 11514, and the West Las Positas Bicycle and Pedestrian Corridor Improvement Project, CIP No. 17567 into a single project (continuing to use CIP No. 11514).

Staff is preparing to move forward with more detailed design work for the West Las Positas Multimodal Reconstruction Project and is requesting City Council adoption of the Bicycle and Pedestrian Corridor Improvement Plan so that appropriate design direction can be incorporated into the 35 percent design drawings. And, since the reconstruction project is expected to take some time to complete, staff is also requesting Council authorization for a more limited set of “quick build” pedestrian and bicycle improvements that can be implemented in the near term, at relatively modest cost.

RECOMMENDATION

1. Review and Adopt the West Las Positas Boulevard Bicycle and Pedestrian Corridor Improvement Plan.

2. Authorize the implementation of the Phase 1 “quick build” of the West Las Positas Boulevard Corridor Improvement Plan between Hopyard Road and Hacienda Drive.

FINANCIAL STATEMENT

The West Las Positas Bicycle and Pedestrian Corridor Improvement Plan was developed to have a phased implementation with six phases. Phase 1 contains “quick build” elements between Hopyard Road and Hacienda Drive at an estimated cost of \$155,000.

Following the current requested Council action to review and adopt the Corridor Improvement Plan, staff will seek proposals for the work and return to seek Council authority for the subsequent contract(s). At this time, there is no need for Council action for funding. Funding will be addressed in more detail when related contracts are presented to Council; funding is available in the West Las Positas Multimodal Reconstruction Project, CIP No. 11514.

BACKGROUND

Bicycle and Pedestrian Master Plan

In 2018, the City Council adopted the updated City of Pleasanton Bicycle and Pedestrian Master Plan. The most significant changes in the updated Master Plan were the addition of two new goals to the plan. The first new goal is to create a “Low Stress” bicycle and pedestrian network that may be enjoyed by all users and abilities. The second new goal changes the project priority from individual improvements to “Complete Corridors” so that the highest priority corridor is completed before moving to the next priority corridor.

The Complete Corridors goal required the creation of a detailed scoring matrix that evaluates safety, routes to school benefit, demand, connectivity and feasibility. This scoring matrix was used to rank each project both individually and by corridor. Based on the scoring matrix, the plan identified the West Las Positas Boulevard corridor between Foothill Road and Fairlands Drive (approximately 3.4 miles in length) as the highest priority corridor.

Prioritization of Corridor Improvements

The West Las Positas Boulevard Corridor ranked highest in the Pedestrian and Bicycle Master Plan priority scoring matrix for several reasons:

1. Collisions

West Las Positas Boulevard had the highest number of bicycle and pedestrian related collisions; 14 collisions occurred between 2015 and 2017, outranking higher vehicular volume corridors like Santa Rita Road and Stoneridge Drive. This pattern continues today with West Las Positas Boulevard continuing to have the greatest number of collisions, with 22 pedestrian and bicycle (six pedestrian and 16 bicycle) related collisions in three years. (See Figure 1).

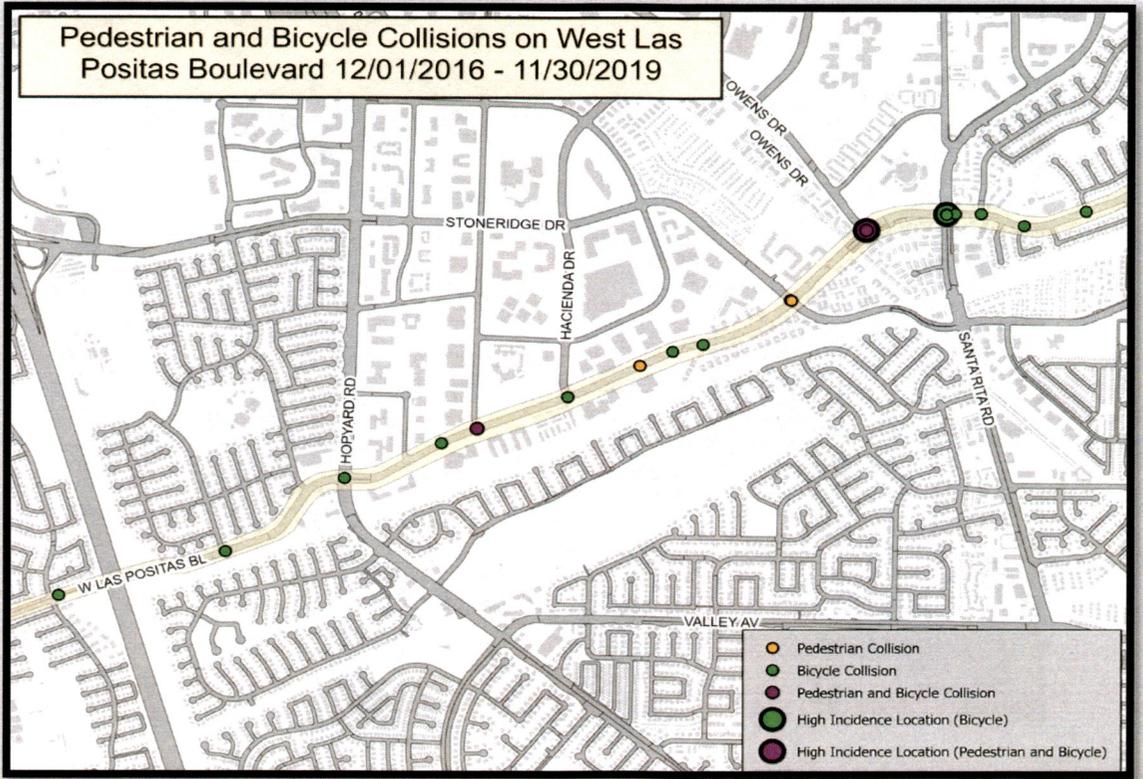


Figure 1 – Pedestrian and Bicycle Collision Locations, 2016-2019

There have been four pedestrian and bicycle collisions at Owens Drive and West Las Positas Boulevard alone, which is the highest incidence location in the city.

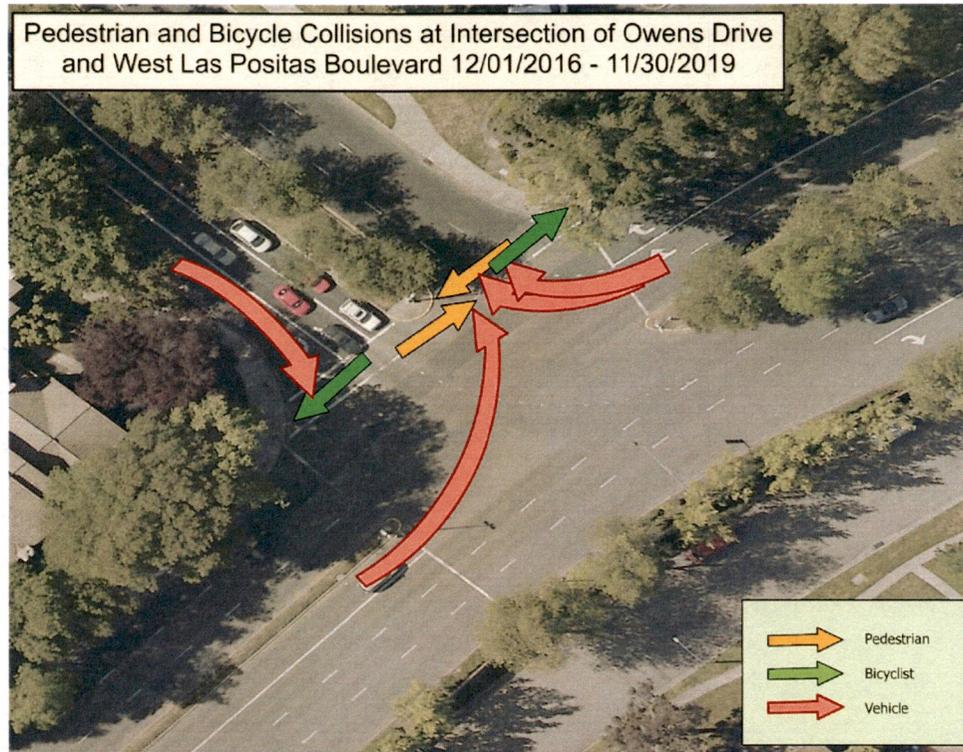


Figure 2 – West Las Positas Blvd at Owens Dr Pedestrian and Bicycle Collisions

2. Primary east/west connection

West Las Positas Boulevard provides a major east/west bicycle connection within the city. Hopyard and Santa Rita Roads serve as north/south connections, but the city does not have an east/west route for the northern side of the city.

3. Major destinations

Multiple schools are adjacent to and/or within proximity of the corridor (Fairlands Elementary School, Hart Middle School, Donlon Elementary School and Foothill High School). The Bicycle, Pedestrian and Trails Committee (BPTC) noted it was extremely important that the Safe Routes to School criteria carry significant weight in the corridor ranking system.

4. High pedestrian and bicycle volumes

This corridor has a high pedestrian and bicycle volume, primarily during school peak hours. The list below shows a few examples of the combined pedestrian and bicycle volumes at intersections along West Las Positas Boulevard:

Table 1: Pedestrian and Bicycle Volumes

Intersection	8 AM	3PM	5PM
West Las Positas at Hopyard	54	90	16
West Las Positas at	69	(No Data)	85

Iron Horse Trail			
West Las Positas at Dorman	95	80	18
West Las Positas at Willow:	155	167	19
West Las Positas at Santa Rita	272	271	45
Santa Rita at Valley:	117	232	61

West Las Positas Reconstruction Project

West Las Positas Boulevard has a history of soil settlement and differential movement that has created an uneven roadway surface and some localized roadway failures. The City has implemented several maintenance repairs projects and geotechnical investigations over the years to remediate uneven roadway experiencing pavement distress and/or settlement. The various repairs have provided a short-term fix, but these repairs have not lasted as long as anticipated. To address the settlement, a more comprehensive reconstruction of the worst affected segments of the road is necessary.

In October 2021, the City Council awarded a contract to BSK Associates (BSK) to conduct an extensive geotechnical study to identify the causes of road failures and develop recommended repair strategies. The study included the collection of soil samples from 19 locations (borings) with the collections occurring at varying depths from seven to 40 feet deep, as well as review of similar soil investigations from adjacent properties. The borings identified that the area consisted of expansive clay soils 35 to 40 feet deep that have consolidated and are highly susceptible to shrinkage and contraction when dried out. The study determined the primary cause of settlement is attributed to the loss in soil moisture along the roadway edges and medians within the top five feet of soil, causing the surficial soils that are highly susceptible to shrinkage and swelling to contract when dried out.

With the settlement issue worsening in recent years, staff has accelerated efforts to advance the Reconstruction Project. In May 2022, the City issued a Request for Qualifications for professional services to develop project plans, specifications and estimates for the reconstruction of West Las Positas Boulevard between Foothill Drive and Owens Drive. Staff intends to recommend a contract for design service for approval by the City Council at an upcoming meeting.

Originally, the West Las Positas Reconstruction Project and the Bicycle and Pedestrian Corridor Plan had been conceived somewhat separately, since the Reconstruction Project was thought to be on a longer implementation timeframe due to its likely significant cost. However, as the need to undertake the Reconstruction Project has become more urgent, there is an opportunity to integrate the two efforts more closely and potentially achieve some cost efficiencies for later phases of the Bicycle and Pedestrian Corridor Plan. The City Council’s 2021 Work Plan combined the West Las Positas Reconstruction and the West Las Positas Bicycle and Pedestrian Corridor

Improvement projects into a single project called the West Las Positas Multimodal Reconstruction Project.

As described, the West Las Positas Multimodal Reconstruction Project is ready to begin design. Adoption of the Corridor Plan will provide design direction to the consultant and be incorporated into the project plans and cost estimates that are developed under the forthcoming contract and scope of work.

DISCUSSION

West Las Positas Bicycle and Pedestrian Corridor Plan Development

The City issued a Request for Proposals in May 2018 for a consulting firm to develop conceptual design plans for the West Las Positas Corridor. The RFP contained several deliverables including an existing conditions report, creation of a project website (WLPbike.com), public outreach, and the creation and evaluation of two alternatives and a final Corridor Plan Design. The BPTC was to serve as the Advisory Committee for the process, which was scoped to take approximately nine months to complete. Toole Design Group (TDG) was selected as the design consultant and was awarded the contract by City Council on August 21, 2018. The project kickoff meeting was held at BPTC meeting on August 27, 2018.

In April 2019, TDG delivered a draft concept plan showing two alternatives. After internal review, it was decided that the two alternatives did not sufficiently explore the options available along the corridor. The following month, the scope of work for TDG was expanded to increase the number of alternatives from two to seven to give the BPTC a more comprehensive mix of alternatives. The revised scope added approximately six months to the timeline, with conceptual design and cost estimates targeted for September 2019.

During the process, staff and the professional services team conducted significant public outreach including multiple meetings of the BPTC, a survey, community events, and stakeholder consultations. The public outreach process is described in more detail below.

Among the seven conceptual designs were options for different configurations for a Separated Bikeway, including one-way and two-way bikeway options. The seven conceptual designs were as follows:

1. Alternative 1A – One-way Separated Bikeways (Lower-cost)
2. Alternative 1B – One-way Separated Bikeways (Higher-cost)
3. Alternative 2A – Two-way Separated Bikeway on south side (Lower-cost)
4. Alternative 2B – Two-way Separated Bikeways on south side (Higher-cost)
5. Alternative 3A - Hybrid Concept with both One-way and Two-way Separated Bikeways (Lower-cost)
6. Alternative 3B - Hybrid Concept with both One-way and Two-way Separated Bikeways (Higher-cost)
7. Alternative 4 – Elevated Two-way Separated Bikeway with Landscaping

Figure 3 illustrates an example of a one-way separated bikeway which includes bike lanes on both sides of the road with physical buffer between bike lane and vehicle lane – bikes travel in same direction as the vehicles (Alternative 1A).

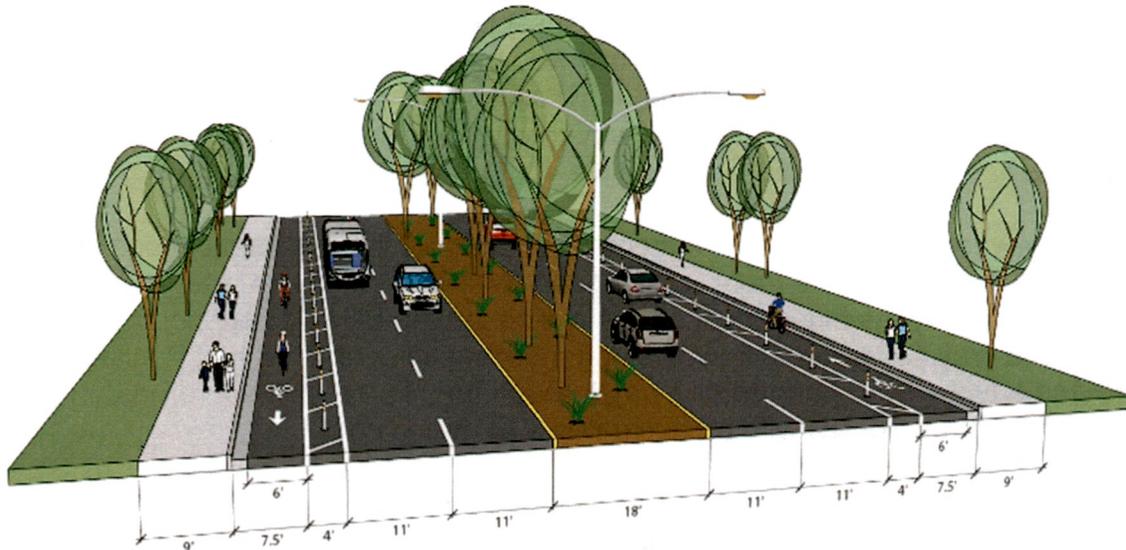


Figure 3 – One Way lower cost Protected Bike Lane Concept (Alternative 1A)

Figure 4 illustrates a two-way separated bikeway (cycle track). In this example bike lanes are provided on both sides of road, but the bike lane located on the right side (south side) of the image allows for bikes to ride in both directions (Alternative 2A).

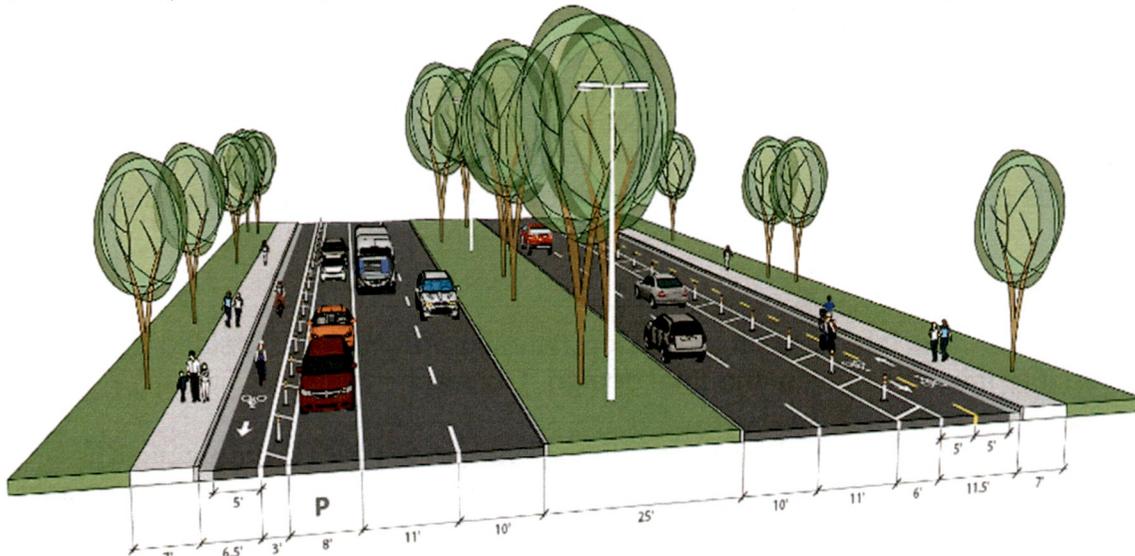


Figure 4 –One Way Protected Bike Lane and Two-Way Cycle Track (Alternative 2A).

The BPTC reviewed the seven alternatives at its September 2019 meeting, including cost estimates and a summary of the information obtained from three community

engagement events held to gather public input on the plans. The BPTC recommended two alternatives for further refinement and study:

- A one-way separated bikeway along most sections of West Las Positas Boulevard and a two-way separated bikeway through the highest collision areas (a combination of Alternatives 1A and 3B) and
- An elevated two-way separated bikeway throughout the corridor located exclusively on the south side (Alternative 4).

The BPTC reviewed refined versions and cost estimates for the two final options at its December 2019 meeting. While there was support for the Alternative 4, elevated two-way separated bikeway, its higher cost of \$14 million led the BPTC to support the concept of a one-way separated bikeway along most sections of West Las Positas Boulevard and a two-way separated bikeway through the highest collision areas (combined Alternatives 1A-3B) with an estimated \$10 million cost.

The BPTC cited several reasons for the selection of the combined Alternatives 1A-3B. More importantly than the lower overall cost, the committee noted the ability to construct the entire corridor with a “quick build” approach allowing for a more immediate completion of the corridor and the opportunity to upgrade to a concrete and planter design when funding became available.

At its January 2020 meeting, the BPTC considered additional analysis and data regarding the proposed design and recommended eliminating the two-way separated bikeway element due to the short length of the two-way segment (only 1,500 feet in length on the south side of West Las Positas Boulevard between Fairlands Drive and Owens Drive). Short sections of two-way sections are not commonly used as they would require additional crossings. The BPTC recommended the revised version move forward, including the elimination of the two-way cycle track section as suggested by staff.

Public Outreach and Committee Participation

Public engagement was integral to the corridor planning process, and yielded input that was factored into the alternatives and final design. Outreach included:

- Public comments and input received during each of the BPTC meetings. The BPTC reviewed the project at six separate meetings during the 15-month project.
- Field walk audits along the entire corridor performed by TDG, staff and BPTC members, with input received from BPTC members reported to the entire committee and input incorporated into the plan design.
- Community meetings/events including:
 - Community meeting to review the seven design options.
 - Pop-up events at the Pleasanton Farmer’s Market, and along the Iron Horse Trail.

- An online survey provided through the project website, WLPBike.com, which allowed respondents to select a preferred design and provide feedback; over 500 surveys were received.
- Regular updates to the project website.
- Focused outreach to key stakeholders including Bike East Bay, LAVTA, Hacienda, and businesses and schools along the corridor.

Bicycle and Pedestrian Corridor Plan Details

The West Las Positas Bicycle and Pedestrian Corridor Improvement Project is separated into six phases that are shown in Table 2. The phasing plan was developed for the Corridor improvements with the intent of allowing the City to implement improvements at a lower cost, or in stages. As noted, the total project costs amount to an estimated \$10 million, and a phased approach would allow more time to find funding sources for construction of the entire project, including permanent concrete separation islands and other features.

Table 1 – Phasing of West Las Positas Corridor Improvements

PHASE	LOCATION	COST
1 (initial quick build)	Hopyard to Hacienda	\$155,000
2	Hacienda to IHT	\$300,000
3	Foothill to Hopyard	\$400,000
4	IHT to Fairlands	\$1,100,000
5	Protected Intersections	\$1,400,000
6	Convert to Concrete	\$6,700,000
Total Project		\$10,055,000

Phase 1:

Phase 1 is a “quick build” version of the project between Hopyard Road and Hacienda Drive, which will use roadway paint and bollards to create the protected bike lanes and protected intersections. The quick build design allows for faster implementation of improvements and a demonstration of the design before permanent construction changes are made to the roadway. Figure 5 shows the typical quick build design along a roadway segment.

recommends use of the green K71 bollards shown in the left image as they are equally visible, but the bollard's wider profile discourages vehicles from hitting them.



Figure 7 – K71 (green 12-inch bollard) and standard 2-inch white delineator

Maintenance: Maintenance will be a key aspect of the first phase. The delineators provide the physical separation between vehicles and bicycles, but the delineators also create a barrier that blocks the ability for a standard street sweeper to be used. Smaller street sweepers are available that can sweep within the protected bike lane, but they are not a standard vehicle owned by street sweeping contractors.

The current street sweeping contract requires the contractor to “hand sweep” areas that are inaccessible by the street sweeping vehicle. However, hand sweeping is infrequently completed and is normally conducted only on a request basis. Phase 1 will allow staff to determine the frequency of hand sweeping necessary and include this added cost in future contracts or require/purchase a smaller street sweeper to clean the corridor.

Phases 2-4: Extension of Quick Build Improvements

As conceptualized in the Bicycle and Pedestrian Corridor Plan, the lower cost “quick build” concept would be extended in subsequent phases from Hopyard Road to Foothill Road and from Hacienda Drive to Fairlands Drive. However, as described below, these phases may be bypassed as a result of the implementation of the Reconstruction Project.

Phase 5: Intersection Improvements

Phase 5 will install protected intersections at Foothill Road, Hopyard Road, Willow Road, Stoneridge Drive and Santa Rita Road. This phase has varying levels of traffic signal modifications and will likely be completed one intersection at a time. Stanley Boulevard at Valley Avenue/Bernal Avenue provides an example of a protected intersection design within the city.

Phase 6: Install Permanent Bikeway Separation (in conjunction with West Las Positas Reconstruction)

Phase 6 upgrades all the separation from thermoplastic striping/flex posts to concrete separation islands, resulting in one-way separated bike lanes shown in Attachment 2. This design was modified in January 2022 to replace the separated bike lanes with elevated bike lanes. The elevated design eliminates collection of debris in the bike lane and may provide some additional construction cost savings by reducing the cross section of roadway that must be reconstructed.

The elevated concept was brought to BPTC in January 2022. The committee liked the elevated bike lane design and requested that there be a clear separation between the pedestrian walking area and the bicycle area. Figure 8 shows examples of an elevated bike lane.



Figure 8 – Elevated Bikeway Examples (Boston, MA)

The overall cost of this elevated bike lane design in comparison to the cost of concrete separation island design will be reviewed as part of the West Las Positas Reconstruction project.

Phase 1 is fully designed and ready for advertisement. The detailed design of the West Las Positas Bicycle and Pedestrian Corridor Improvement Plan is also scheduled to begin later this year as part of the West Las Positas Multimodal Reconstruction Design project, with a professional services agreement for design services soon to be brought to City Council for approval.

Lane Reductions

West Las Positas Boulevard today includes a variety of profiles, including segments with one-lane, two lanes and three lanes in each direction. The West Las Positas Corridor Improvement Plan recommends a uniform lane profile of two through lanes in each direction on West Las Positas Boulevard, except for the segments from Foothill Road to just east of Payne Road which are recommended to retain their one-lane per direction design.

Review of the existing and modeled traffic volumes for West Las Positas Boulevard identifies that the traffic volumes on West Las Positas Boulevard are low enough to easily accommodate the four-lane design (two lanes in each direction). The intersections along the corridor will continue to have the necessary turn pockets to ensure acceptable levels of service.

The maximum peak hour traffic volumes on West Las Positas Boulevard vary from 800-1600 vehicles per hour (depending on location within the corridor) with the greatest volume on the roadway just to the east of Hopyard Road and just west of Santa Rita Road. The list below provides a comparison of the maximum peak hour volumes to several other four-lane roadways.

Table 3: Peak Hour Volumes on Four-lane Pleasanton Roadways

Existing Four-lane Roadways	Maximum Peak Hour Volumes
West Las Positas	1,600 vehicles per hour
Sunol north of Junipero	1,700 vehicles per hour
Valley Avenue east of Santa Rita	1,900 vehicles per hour
Bernal Avenue west of Valley	2,000 vehicles per hour
Stoneridge east of Santa Rita	2,200 vehicles per hour
Stanley east of Valley/Bernal	2,300 vehicles per hour

GENERAL PLAN AND POLICY CONFORMANCE

This plan is supportive of the City’s Complete Streets Program that is a required component of any roadway reconstruction project, as well as General Plan policies that support enhanced pedestrian and bicycle facilities. These include:

Policy 22: Create and maintain a safe, convenient and effective bicycle system which encourages increased bicycle use.

Program 22.3: Integrate bicycle lanes or separate bikeways into street projects whenever feasible.

Policy 23: Create and maintain a safe and convenient pedestrian system which encourages walking as an alternative to driving.

Program 23.2: Develop a pedestrian trail system with connects all major portions of the Planning Area.

Finally, this plan addresses several elements of the City’s CAP 2.0 Actions including:

- TLU-2. Advance active, shared, and public transportation
- E3. Implement Bicycle & Pedestrian Master Plan and Trails Master Plan
- E5. Implement Complete Streets program
- S4. Reduce VMT for K-12 activities

Each of these actions support the reduction in Vehicle Miles Traveled and the reduction of greenhouse gases.

SUMMARY AND CONCLUSION

The West Las Positas Corridor Improvement Project is a high priority project for the City Council, listed in both the 2019 and 2021 City Council priority lists as a "Priority A" project.

The BPTC served as the steering committee for the project and supports the plan. The plan creates a design that meets the 2018 Pedestrian and Bicycle Master Plan's goal of creating a continuous facility that is usable by all ages and abilities. West Las Positas Boulevard is a primary route to school for four different schools and used by hundreds of students every day, and which sees a high level of pedestrian and bicycle use, while at the same time experiencing some of the highest collision volumes in the city for pedestrians and cyclists. The proposed Phase 1 improvements, and implementation of the Bicycle and Pedestrian Corridor Plan as a whole, is an opportunity to provide much-needed complete, high-quality pedestrian and bicycle facilities along a key arterial street.

Submitted by:



Ellen Clark
Director of
Community Development

Fiscal Review:



Susan Hsieh
Director of Finance

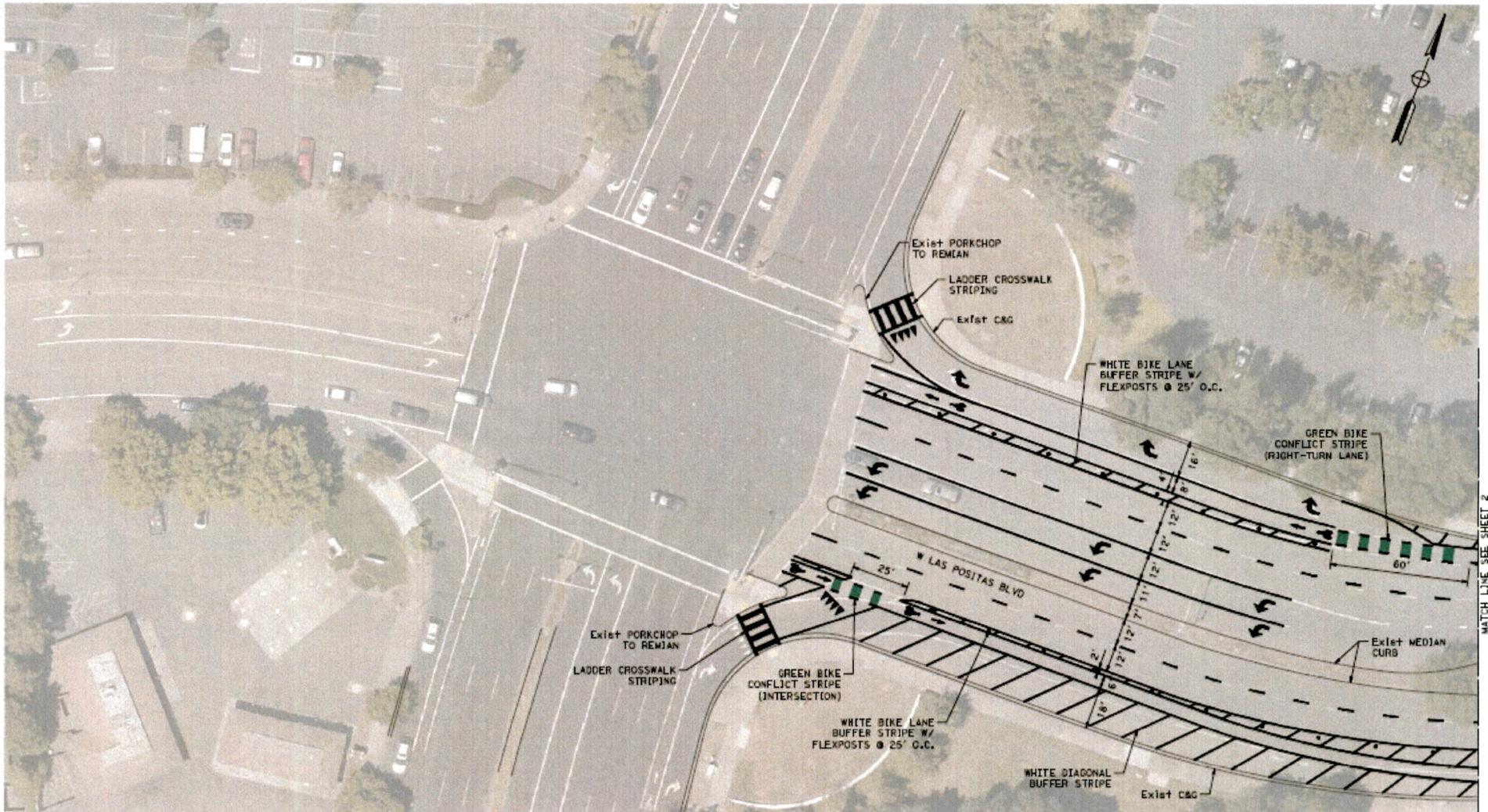
Approved by:



Gerry Beaudin
City Manager

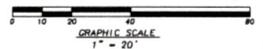
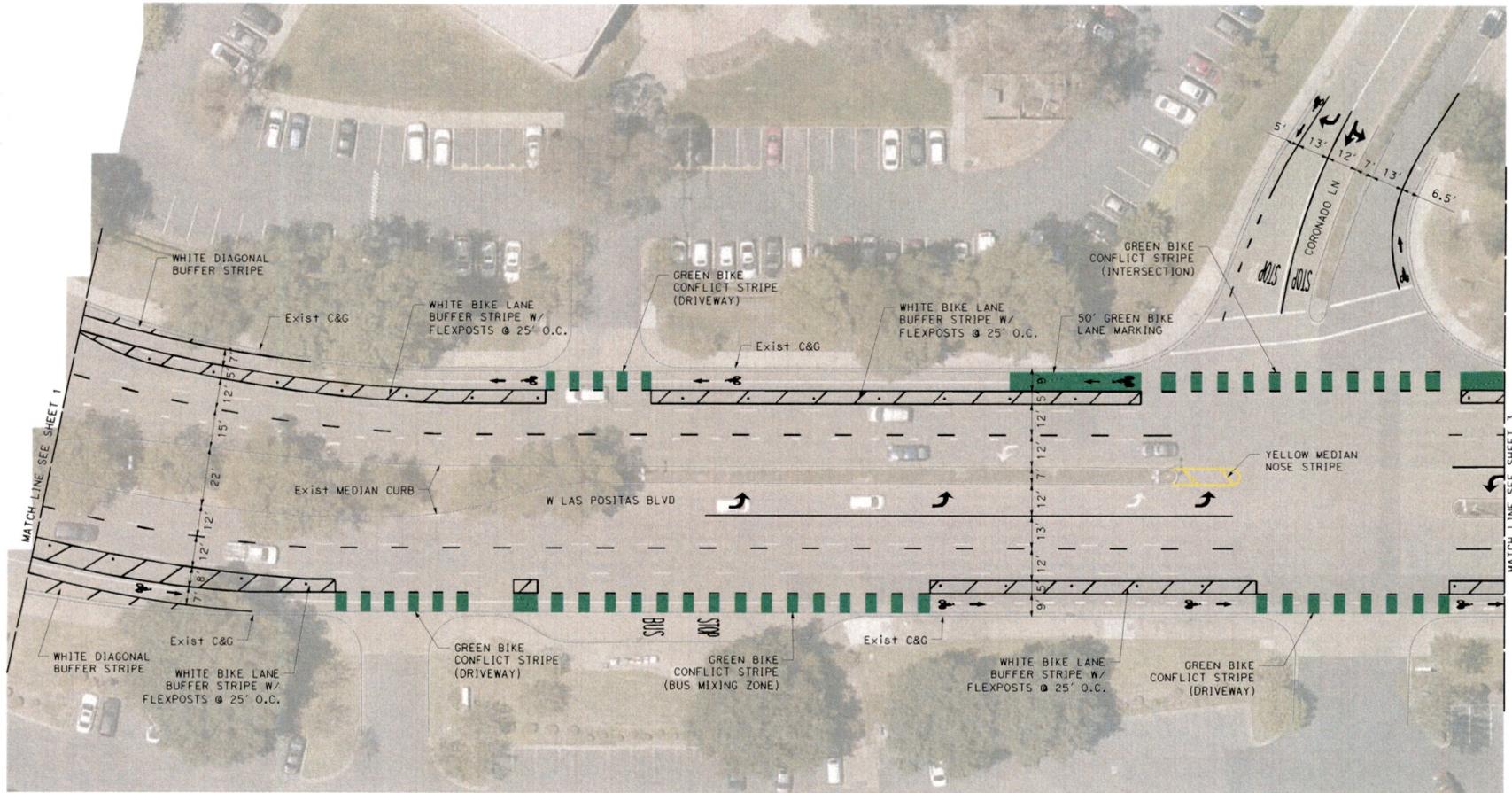
Attachments:

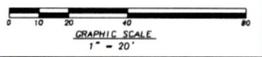
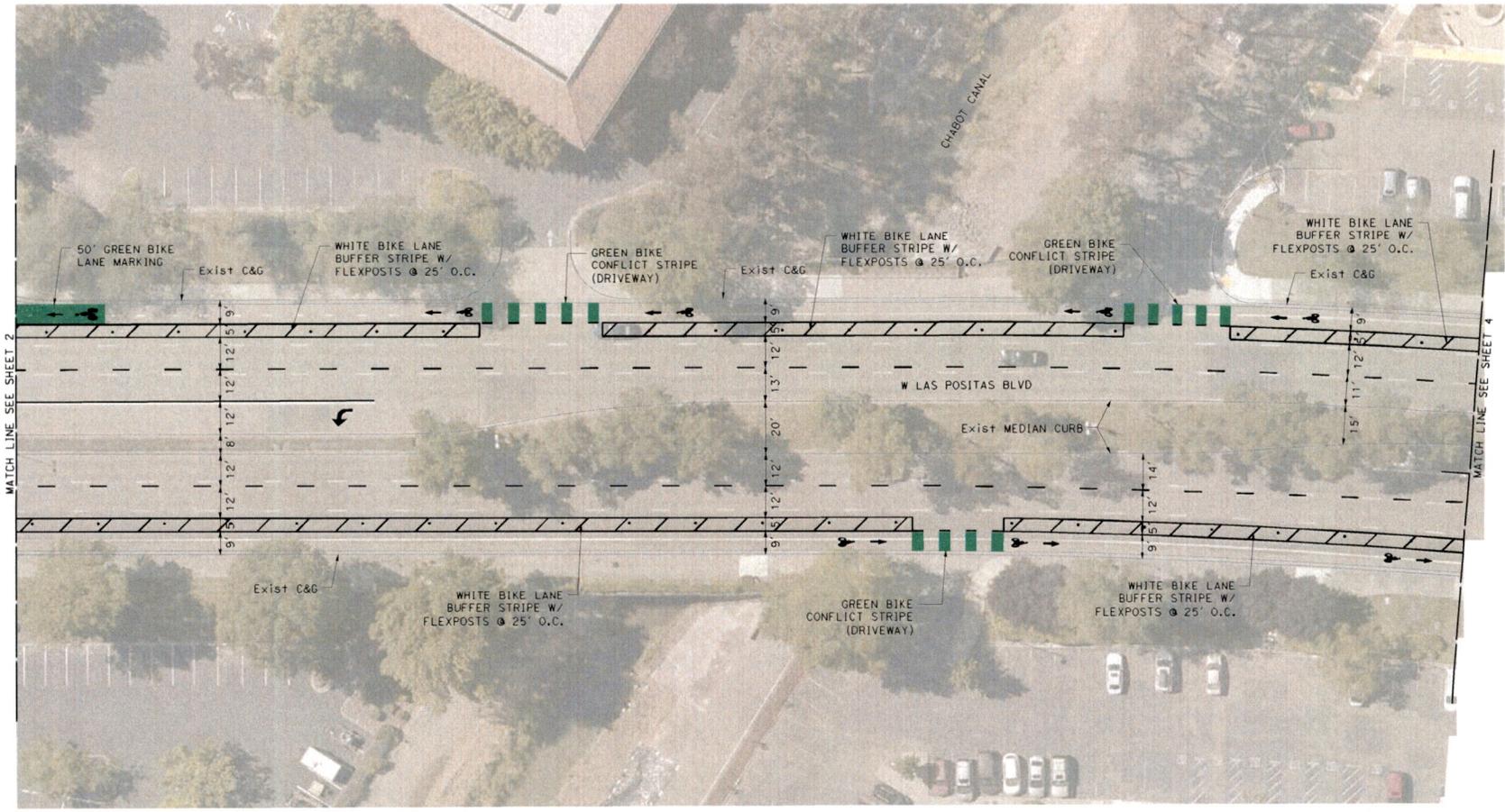
1. Phase 1 Design
2. WLP Bicycle and Pedestrian Corridor Preferred Alternative

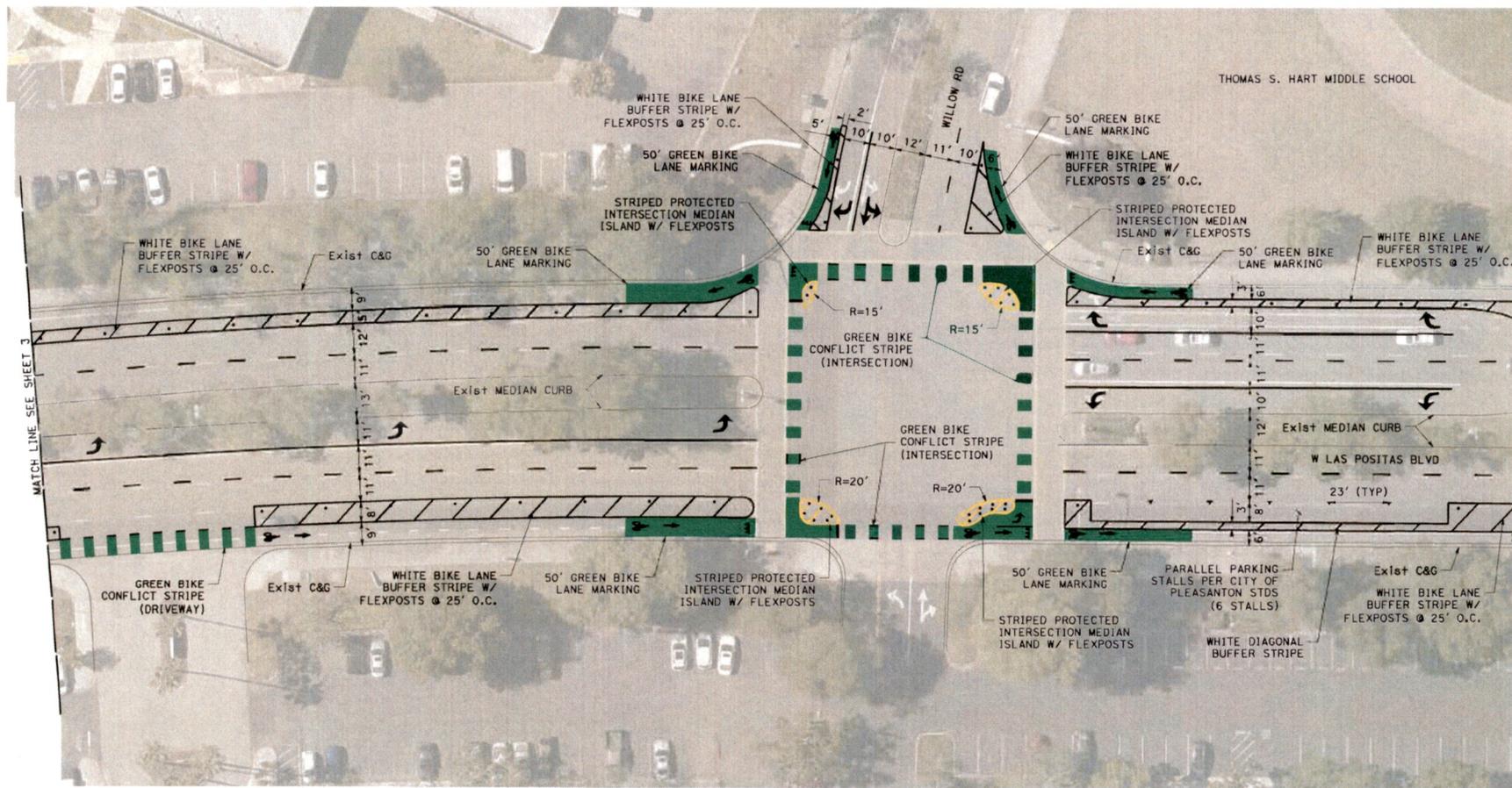


MATCH LINE SEE SHEET 2









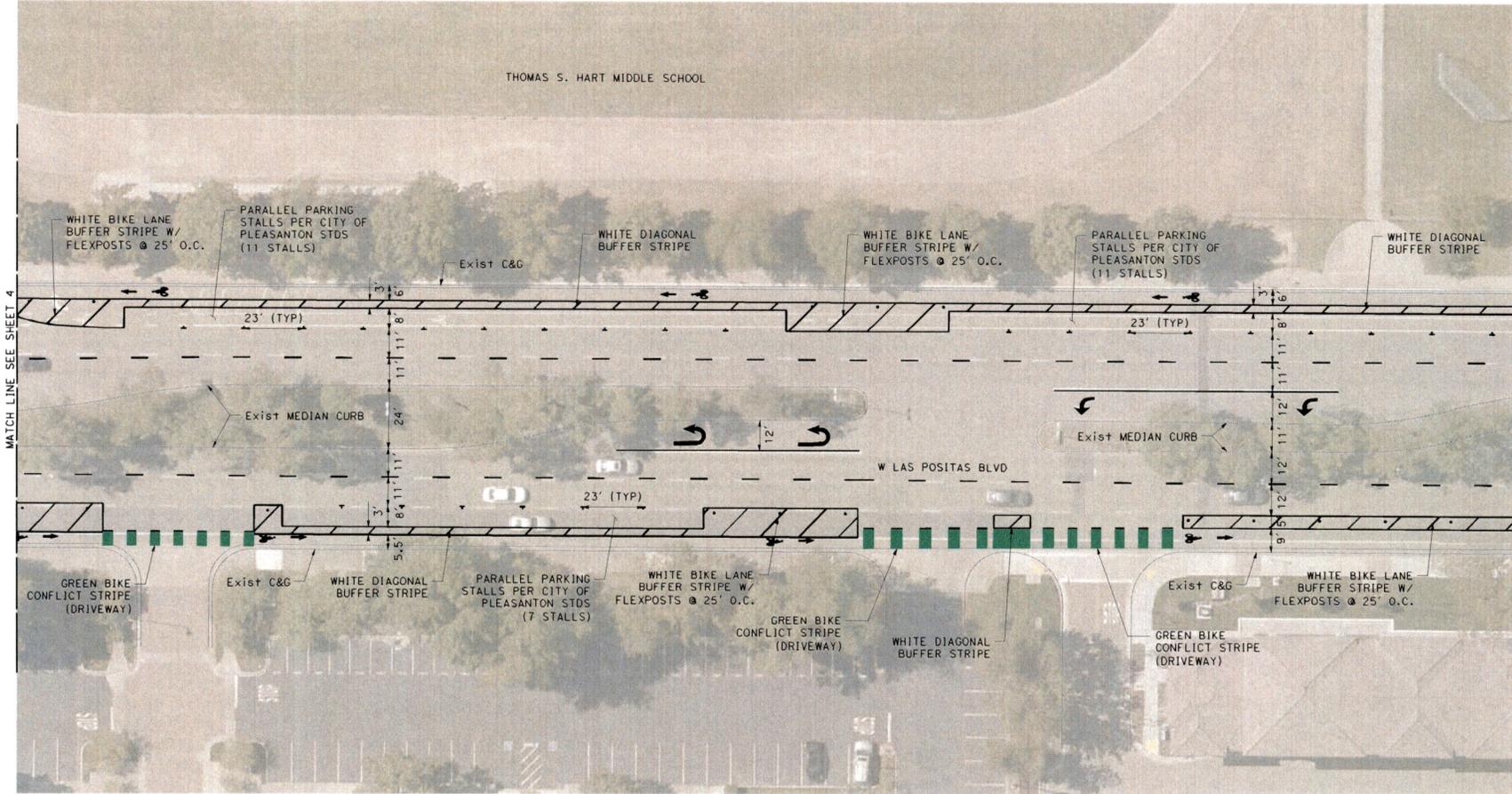
MATCH LINE SEE SHEET 3

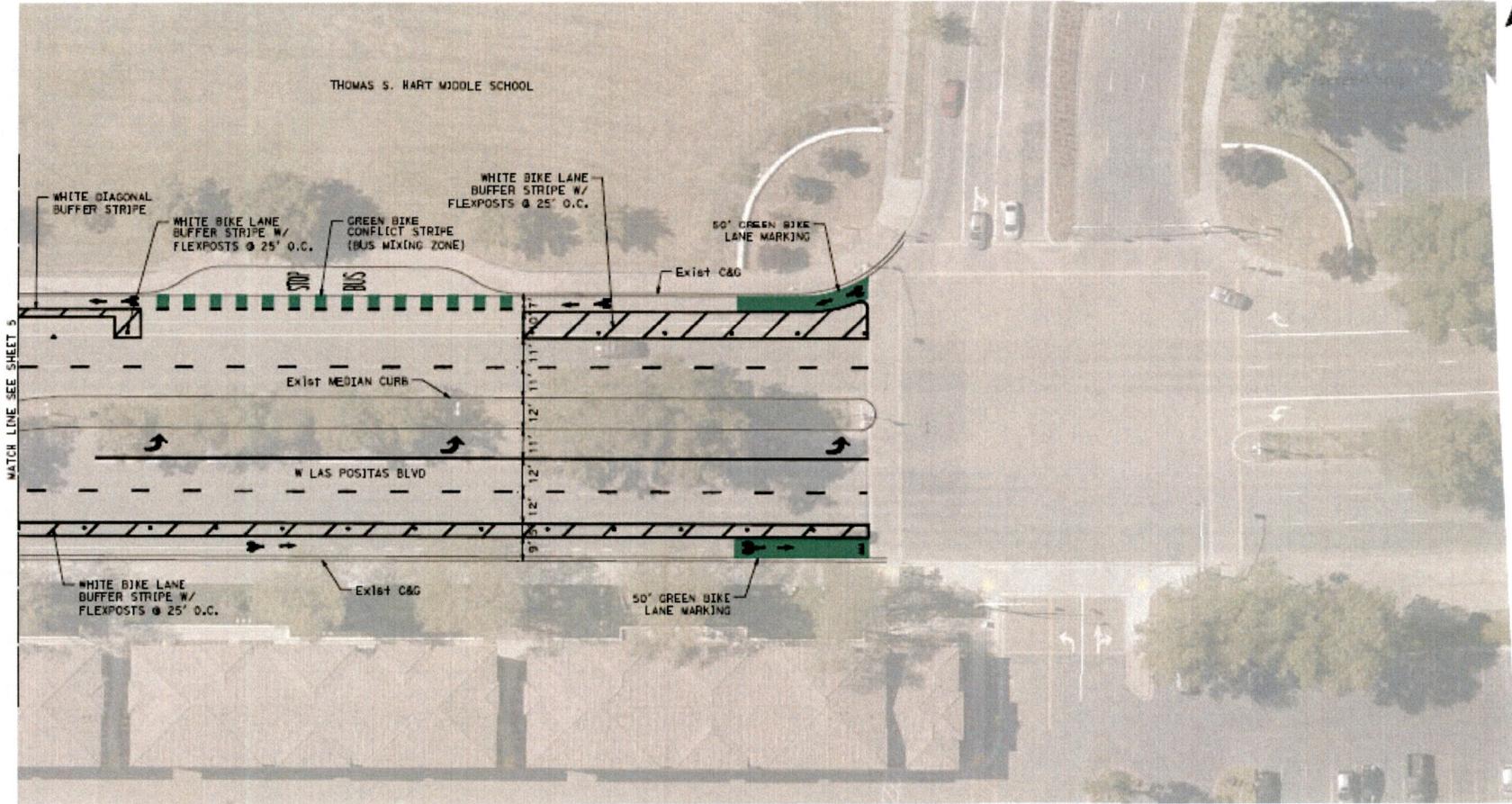
MATCH LINE SEE SHEET 5

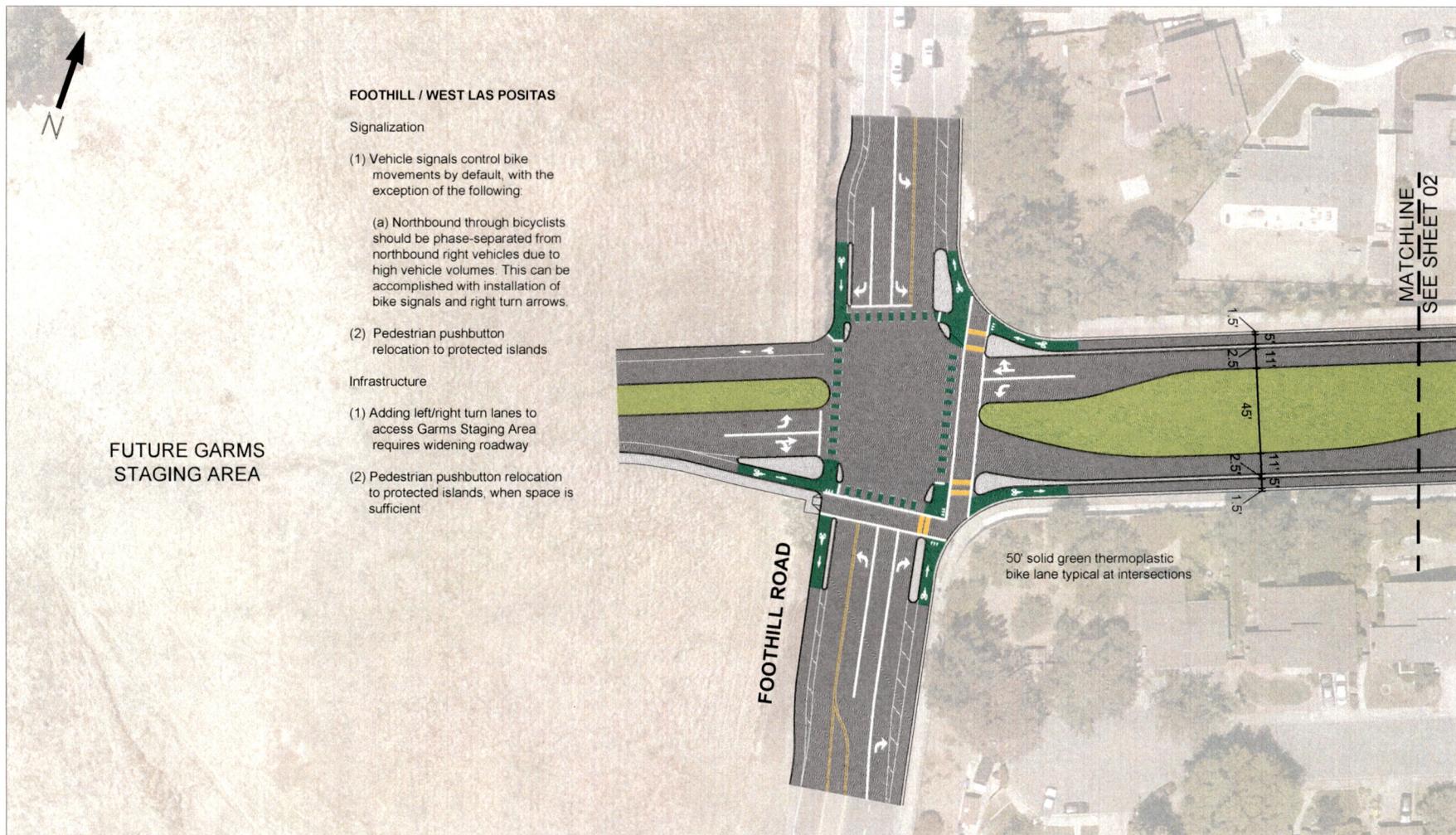




THOMAS S. HART MIDDLE SCHOOL







FOOTHILL / WEST LAS POSITAS

Signalization

- (1) Vehicle signals control bike movements by default, with the exception of the following:
 - (a) Northbound through bicyclists should be phase-separated from northbound right vehicles due to high vehicle volumes. This can be accomplished with installation of bike signals and right turn arrows.
- (2) Pedestrian pushbutton relocation to protected islands

Infrastructure

- (1) Adding left/right turn lanes to access Garms Staging Area requires widening roadway
- (2) Pedestrian pushbutton relocation to protected islands, when space is sufficient

FUTURE GARMS STAGING AREA

FOOTHILL ROAD

50' solid green thermoplastic bike lane typical at intersections

**MATCHLINE
SEE SHEET 02**

CONCEPTUAL DESIGN - NOT FOR CONSTRUCTION

TOOLE DESIGN
1835 BROADWAY, SUITE 200
OAKLAND, CA 94612
PHONE: 510.268.0740
FAX: 301.927.2800
www.tooledesign.com

REUSE OF DOCUMENTS					
ALL DRAWINGS ARE INSTRUMENTS OF PROFESSIONAL SERVICE FOR THIS PROJECT. REUSE OR ALTERATION IS AT THE USER'S SOLE RISK.					
DSGN	JS				
DR	JS				
CHK	CS				
APVD	RB	NO	DATE	REVISION	BY
					APVD

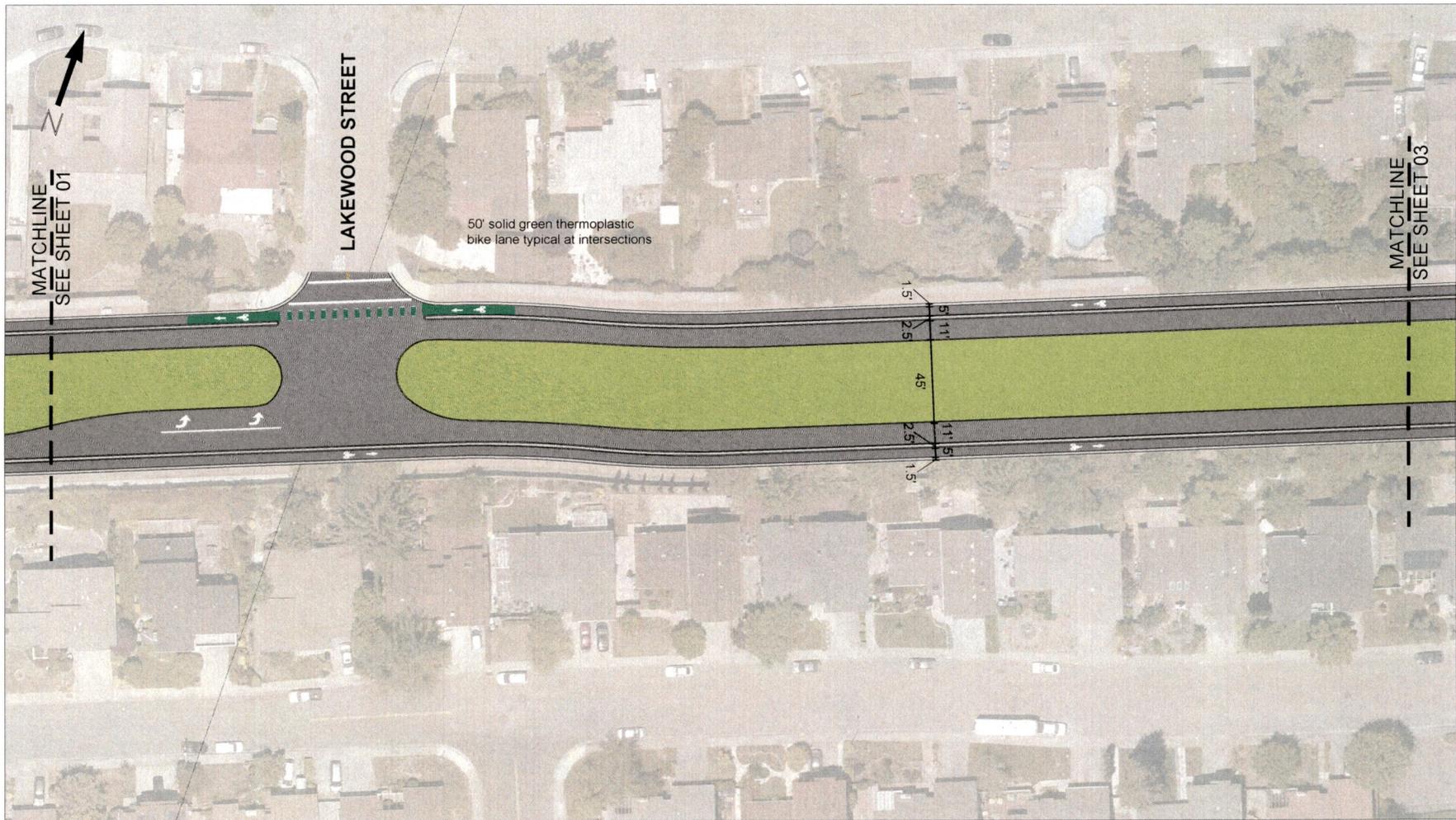
THIS GRAPHIC REPRESENTS A CONCEPTUAL RENDERING. FINAL DETAILS INCLUDING STREETSCAPING, LANDSCAPING, SIDEWALKS, LANE MODIFICATIONS, CURBLINE ADJUSTMENTS, SIGNAL TIMING MODIFICATIONS, ON-STREET PARKING, AND BIKEWAY DESIGN WILL BE DETERMINED DURING PRELIMINARY DESIGN.



**WEST LAS POSITAS BOULEVARD
BIKEWAY FEASIBILITY STUDY**

**CONCRETE ISLAND
PREFERRED ALTERNATIVE**
PLEASANTON, CA

PROJECT NO	E049
DATE	APRIL 2020
DRAWING NO	01 OF 21
SHEET NO	01 OF 21



50' solid green thermoplastic bike lane typical at intersections

MATCHLINE
SEE SHEET 01

LAKWOOD STREET

MATCHLINE
SEE SHEET 03

CONCEPTUAL DESIGN - NOT FOR CONSTRUCTION

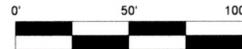
TOOLE
DESIGN

1635 BROADWAY, SUITE 200
OAKLAND, CA 94612
PHONE: 510.288.0740
FAX: 510.927.2800
www.tooledesign.com

REUSE OF DOCUMENTS
ALL DRAWINGS ARE INSTRUMENTS OF PROFESSIONAL SERVICE FOR
THIS PROJECT. REUSE OR ALTERATION IS AT THE USER'S SOLE RISK.

DSGN	JS				
DR	JS				
CHK	CS				
APVD	RB	NO.	DATE	REVISION	BY

THIS GRAPHIC REPRESENTS A CONCEPTUAL RENDERING
FINAL DETAILS INCLUDING STREETSCAPING,
LANDSCAPING, SIDEWALKS, LANE MODIFICATIONS,
CURBLINE ADJUSTMENTS, SIGNAL TIMING MODIFICATIONS,
ON-STREET PARKING, AND BIKEWAY DESIGN WILL BE
DETERMINED DURING PRELIMINARY DESIGN.



**WEST LAS POSITAS BOULEVARD
BIKEWAY FEASIBILITY STUDY**

**CONCRETE ISLAND
PREFERRED ALTERNATIVE
PLEASANTON, CA**

PROJECT NO	F049
DATE	APRIL 2020
DRAWING NO	02 OF 21
SHEET NO	02 OF 21



MUIRWOOD / WEST LAS POSITAS

Infrastructure

- (1) Two-stage left turn boxes must be placed outside of the path of right-turning vehicles if right turns on red are to remain permitted.

MATCHLINE
SEE SHEET 02

MATCHLINE
SEE SHEET 04

50' solid green thermoplastic bike lane typical at intersections

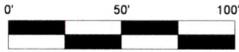
CONCEPTUAL DESIGN - NOT FOR CONSTRUCTION

**TOOLE
DESIGN**

1635 BROADWAY, SUITE 200
OAKLAND, CA 94612
PHONE: 510.288.0740
FAX: 510.927.2800
www.tooledesign.com

REUSE OF DOCUMENTS				
ALL DRAWINGS ARE INSTRUMENTS OF PROFESSIONAL SERVICE FOR THIS PROJECT. REUSE OR ALTERATION IS AT THE USER'S SOLE RISK.				
DSGN	JS			
DR	JS			
CHK	CS			
APVD	RB	NO	DATE	REVISION
				BY
				APVD

THIS GRAPHIC REPRESENTS A CONCEPTUAL RENDERING. FINAL DETAILS INCLUDING STREETSCAPING, LANDSCAPING, SIDEWALKS, LANE MODIFICATIONS, CURBLINE ADJUSTMENTS, SIGNAL TIMING MODIFICATIONS, ON-STREET PARKING, AND BIKEWAY DESIGN WILL BE DETERMINED DURING PRELIMINARY DESIGN.



**WEST LAS POSITAS BOULEVARD
BIKEWAY FEASIBILITY STUDY**
CONCRETE ISLAND
PREFERRED ALTERNATIVE
PLEASANTON, CA

PROJECT NO.	FD49
DATE	APRIL 2020
DRAWING NO.	03 OF 21
SHEET NO.	03 OF 21



TOOLE DESIGN
 1635 BROADWAY, SUITE 200
 OAKLAND, CA 94612
 PHONE: 510.268.0740
 FAX: 510.527.2850
 www.tooledesign.com

REUSE OF DOCUMENTS		ALL DRAWINGS ARE INSTRUMENTS OF PROFESSIONAL SERVICE FOR THIS PROJECT. REUSE OR ALTERATION IS AT THE USER'S SOLE RISK	
DSGN	JS		
DR	JS		
CHK	CS		
APVD	RB	NO	DATE
		REVISION	BY
			APVD

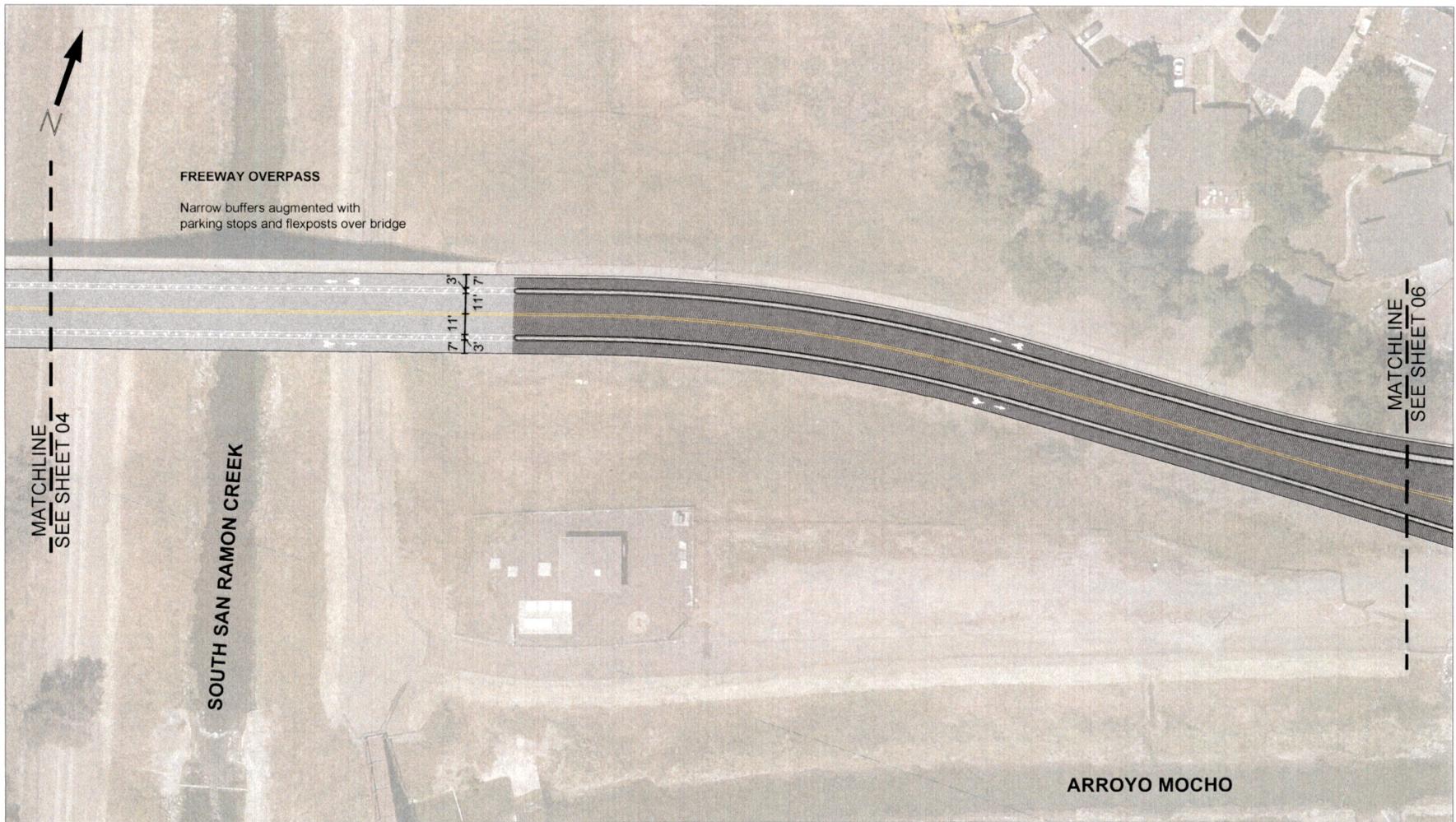
THIS GRAPHIC REPRESENTS A CONCEPTUAL RENDERING. FINAL DETAILS INCLUDING STREETSCAPING, LANDSCAPING, SIDEWALKS, LANE MODIFICATIONS, CURBLINE ADJUSTMENTS, SIGNAL TIMING MODIFICATIONS, ON-STREET PARKING, AND BIKEWAY DESIGN WILL BE DETERMINED DURING PRELIMINARY DESIGN.



**WEST LAS POSITAS BOULEVARD
 BIKEWAY FEASIBILITY STUDY**
 CONCRETE ISLAND
 PREFERRED ALTERNATIVE
 PLEASANTON, CA

CONCEPTUAL DESIGN - NOT FOR CONSTRUCTION

PROJECT NO	FD49
DATE	APRIL 2020
DRAWING NO	04 OF 21
SHEET NO	04 OF 21



FREEWAY OVERPASS

Narrow buffers augmented with parking stops and flexposts over bridge

MATCHLINE
SEE SHEET 04

SOUTH SAN RAMON CREEK

MATCHLINE
SEE SHEET 06

ARROYO MOCHO

CONCEPTUAL DESIGN - NOT FOR CONSTRUCTION

**TOOLE
DESIGN**

1635 BROADWAY, SUITE 200
DANFORD, CA 94612
PHONE: 510.288.0740
FAX: 510.927.2600
www.tooledesign.com

REUSE OF DOCUMENTS
ALL DRAWINGS ARE INSTRUMENTS OF PROFESSIONAL SERVICE FOR
THIS PROJECT. REUSE OR ALTERATION IS AT THE USER'S SOLE RISK.

DSGN	JS				
DR	JS				
CHK	CS				
APVD	RB	NO	DATE	REVISION	BY

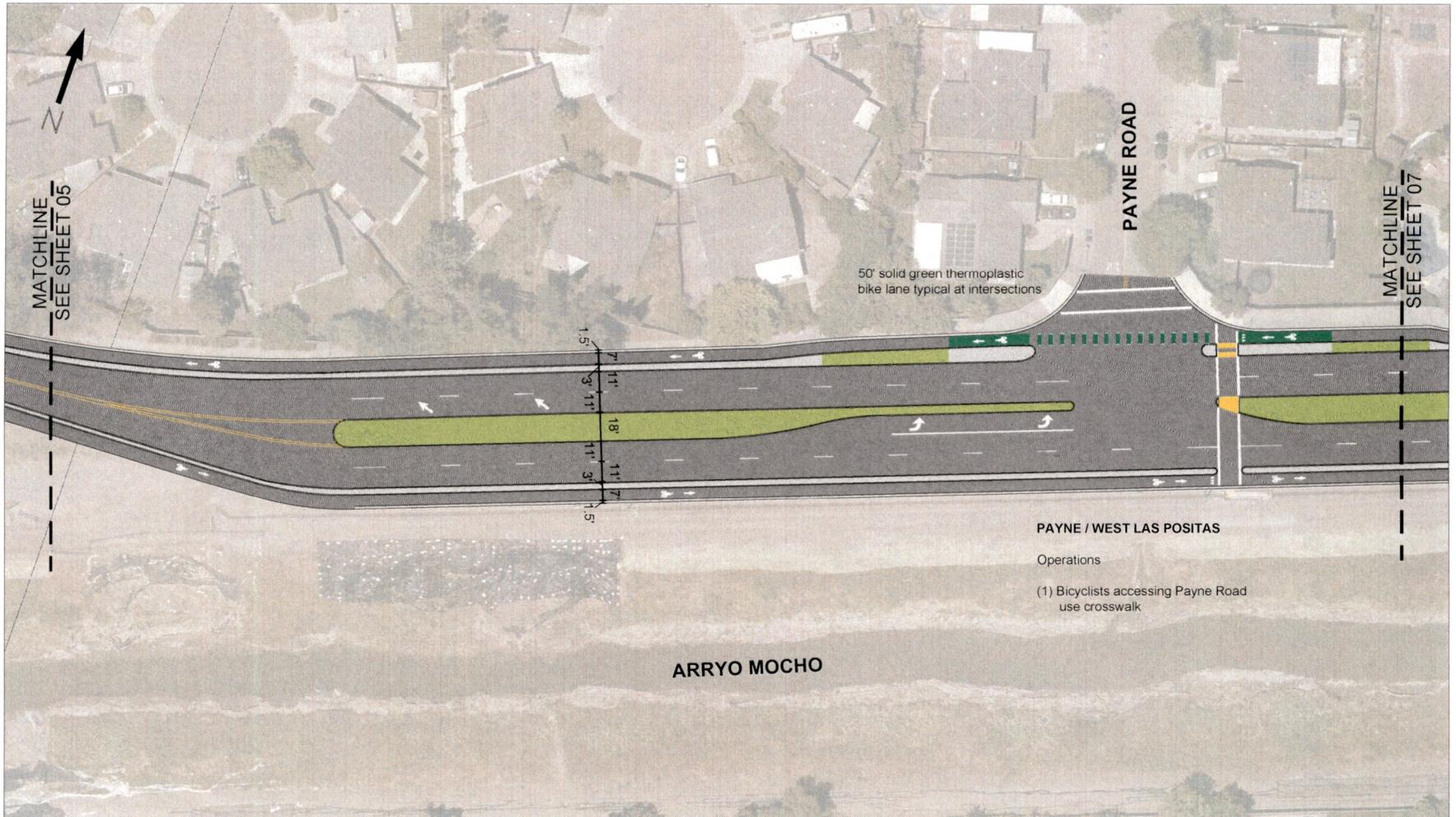
THIS GRAPHIC REPRESENTS A CONCEPTUAL RENDERING
FINAL DETAILS INCLUDING STREETSCAPING,
LANDSCAPING, SIDEWALKS, LANE MODIFICATIONS,
CURBLINE ADJUSTMENTS, SIGNAL TIMING MODIFICATIONS,
ON-STREET PARKING, AND BIKEWAY DESIGN WILL BE
DETERMINED DURING PRELIMINARY DESIGN



**WEST LAS POSITAS BOULEVARD
BIKEWAY FEASIBILITY STUDY**

CONCRETE ISLAND
PREFERRED ALTERNATIVE
PLEASANTON, CA

PROJECT NO	EQ49
DATE	APRIL 2020
DRAWING NO	05 OF 21
SHEET NO	05 OF 21



CONCEPTUAL DESIGN - NOT FOR CONSTRUCTION

**TOOLE
DESIGN**

1635 BROADWAY, SUITE 200
OAKLAND, CA 94612
PHONE: 510.288.0740
FAX: 510.927.2800
www.tooledesign.com

REUSE OF DOCUMENTS
ALL DRAWINGS ARE INSTRUMENTS OF PROFESSIONAL SERVICE FOR
THIS PROJECT REUSE OR ALTERATION IS AT THE USER'S SOLE RISK

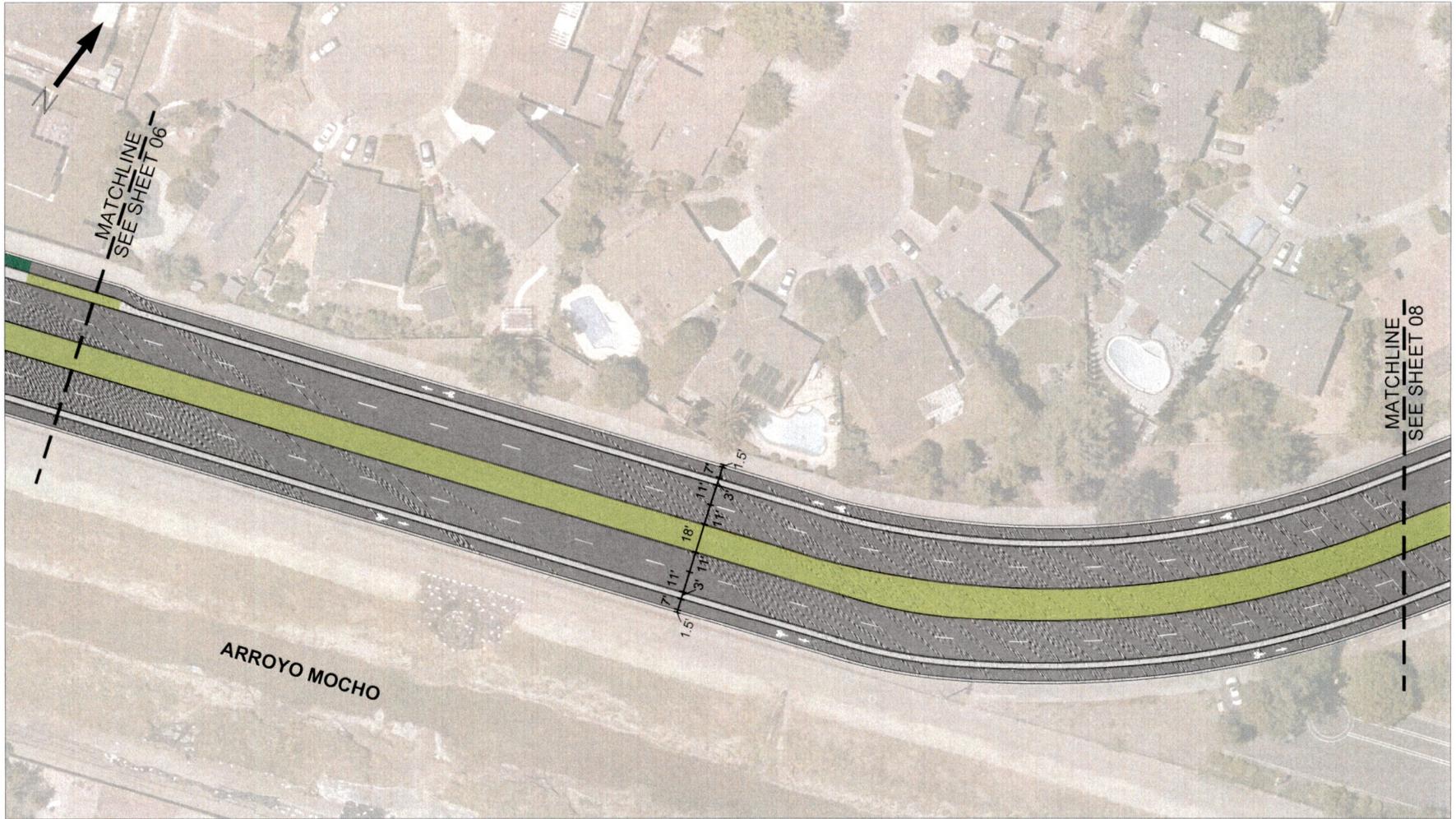
DSGN	JS				
DR	JS				
CHK	CS				
APVD	RB	NO	DATE	REVISION	BY

THIS GRAPHIC REPRESENTS A CONCEPTUAL RENDERING.
FINAL DETAILS INCLUDING STREETSCAPING,
LANDSCAPING, SIDEWALKS, LANE MODIFICATIONS,
CURBLINE ADJUSTMENTS, SIGNAL TIMING MODIFICATIONS,
ON-STREET PARKING, AND BIKEWAY DESIGN WILL BE
DETERMINED DURING PRELIMINARY DESIGN



**WEST LAS POSITAS BOULEVARD
BIKEWAY FEASIBILITY STUDY**
CONCRETE ISLAND
PREFERRED ALTERNATIVE
PLEASANTON, CA

PROJECT NO	FS49
DATE	APRIL 2020
DRAWING NO	08 OF 21
SHEET NO	08 OF 21



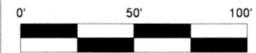
CONCEPTUAL DESIGN - NOT FOR CONSTRUCTION

**TOOLE
DESIGN**

1635 BROADWAY, SUITE 200
OAKLAND, CA 94612
PHONE: 510.268.0740
FAX: 510.927.2800
www.tooledesign.com

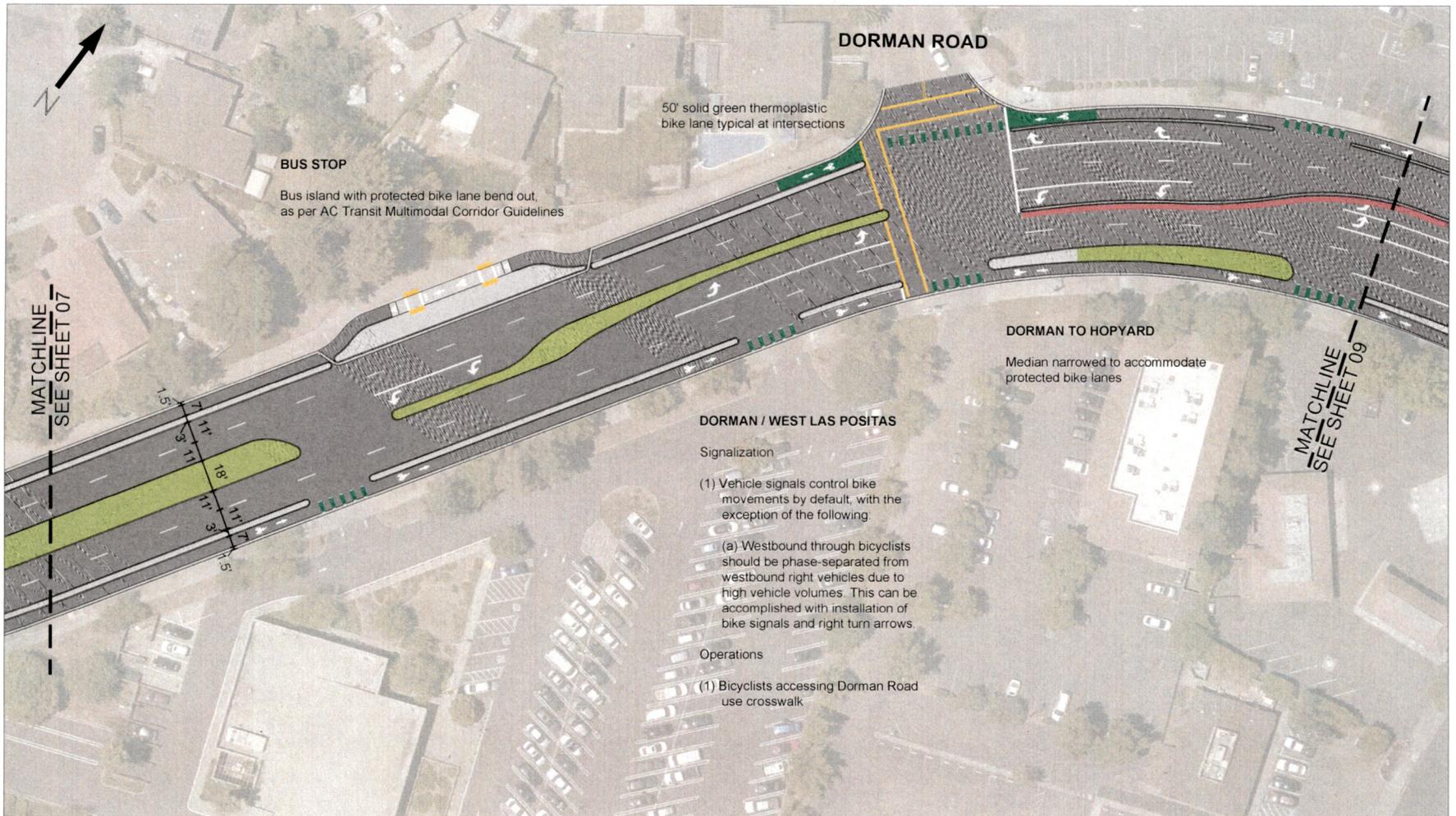
REUSE OF DOCUMENTS				
ALL DRAWINGS ARE INSTRUMENTS OF PROFESSIONAL SERVICE FOR THIS PROJECT. REUSE OR ALTERATION IS AT THE USER'S SOLE RISK.				
DSGN	JS			
DR	JS			
CHK	CS			
APVD	RB	NO	DATE	REVISION
				BY
				APVD

THIS GRAPHIC REPRESENTS A CONCEPTUAL RENDERING. FINAL DETAILS INCLUDING STREETSCAPING, LANDSCAPING, SIDEWALKS, LANE MODIFICATIONS, CURBLINE ADJUSTMENTS, SIGNAL TIMING MODIFICATIONS, ON-STREET PARKING, AND BIKEWAY DESIGN WILL BE DETERMINED DURING PRELIMINARY DESIGN.



**WEST LAS POSITAS BOULEVARD
BIKEWAY FEASIBILITY STUDY**
**CONCRETE ISLAND
PREFERRED ALTERNATIVE**
PLEASANTON, CA

PROJECT NO	E049
DATE	APRIL, 2020
DRAWING NO	07 OF 21
SHEET NO	07 OF 21



CONCEPTUAL DESIGN - NOT FOR CONSTRUCTION

TOOLE DESIGN

1635 BROADWAY, SUITE 200
OAKLAND, CA 94612
PHONE: 510.298.0740
FAX: 510.827.2800
www.tooledesign.com

REUSE OF DOCUMENTS
ALL DRAWINGS ARE INSTRUMENTS OF PROFESSIONAL SERVICE FOR THIS PROJECT. REUSE OR ALTERATION IS AT THE USER'S SOLE RISK.

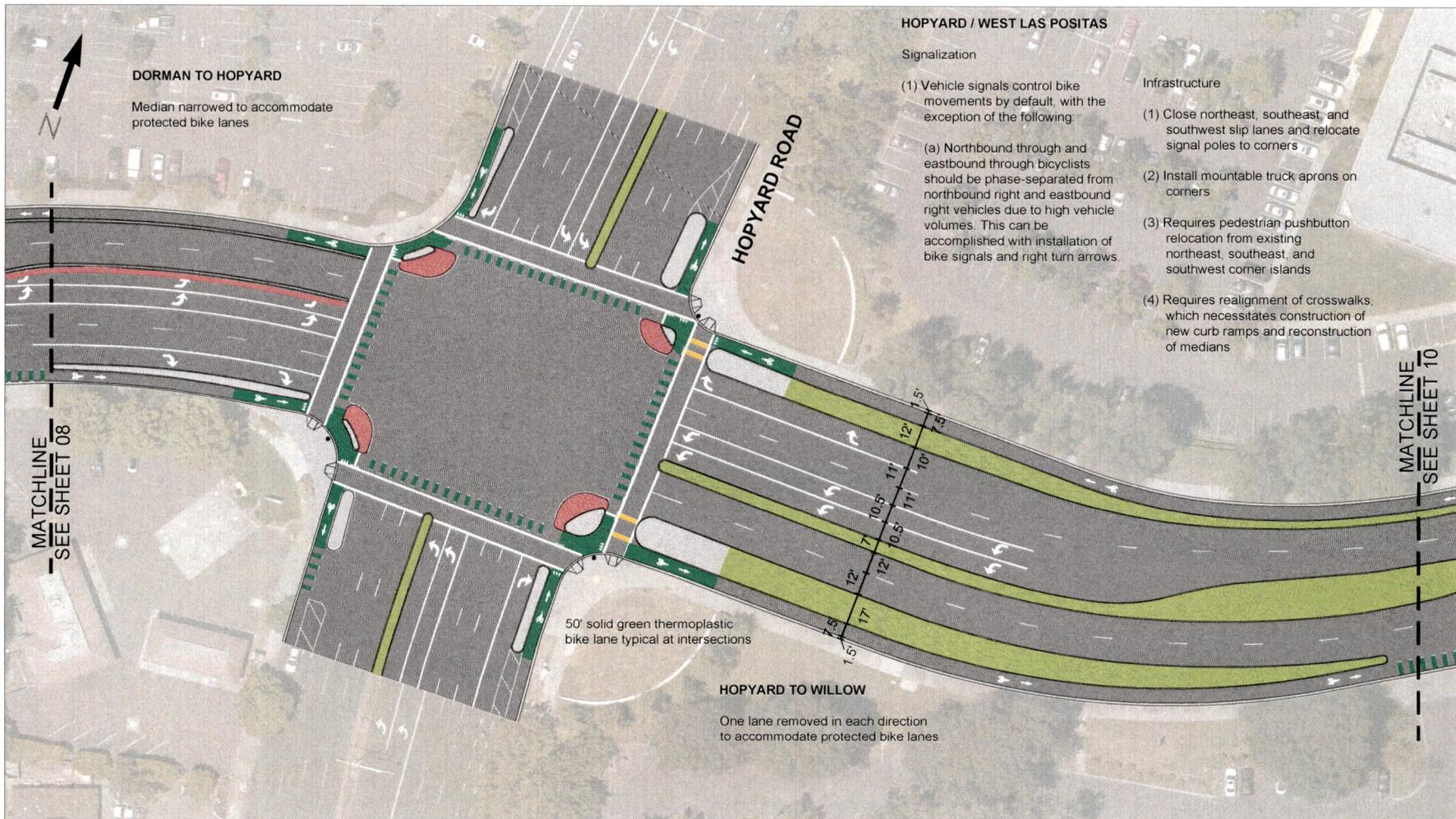
DSGN	JS				
DR	JS				
CHK	CS				
APVD	RB	NO	DATE	REVISION	BY

THIS GRAPHIC REPRESENTS A CONCEPTUAL RENDERING FINAL DETAILS INCLUDING STREETSCAPING, LANDSCAPING, SIDEWALKS, LANE MODIFICATIONS, CURBLINE ADJUSTMENTS, SIGNAL TIMING MODIFICATIONS, ON-STREET PARKING, AND BIKEWAY DESIGN WILL BE DETERMINED DURING PRELIMINARY DESIGN.



**WEST LAS POSITAS BOULEVARD
BIKEWAY FEASIBILITY STUDY**
CONCRETE ISLAND
PREFERRED ALTERNATIVE
PLEASANTON, CA

PROJECT NO	FS49
DATE	APRIL 2020
DRAWING NO	08.DF.21
SHEET NO	08.DF.21



DORMAN TO HOPYARD
Median narrowed to accommodate protected bike lanes

HOPYARD / WEST LAS POSITAS

Signalization

- (1) Vehicle signals control bike movements by default, with the exception of the following:
 - (a) Northbound through and eastbound through bicyclists should be phase-separated from northbound right and eastbound right vehicles due to high vehicle volumes. This can be accomplished with installation of bike signals and right turn arrows.

Infrastructure

- (1) Close northeast, southeast, and southwest slip lanes and relocate signal poles to corners
- (2) Install mountable truck aprons on corners
- (3) Requires pedestrian pushbutton relocation from existing northeast, southeast, and southwest corner islands
- (4) Requires realignment of crosswalks, which necessitates construction of new curb ramps and reconstruction of medians

50' solid green thermoplastic bike lane typical at intersections

HOPYARD TO WILLOW
One lane removed in each direction to accommodate protected bike lanes

MATCHLINE
SEE SHEET 08

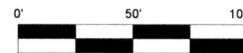
MATCHLINE
SEE SHEET 10

CONCEPTUAL DESIGN - NOT FOR CONSTRUCTION

TOOLE DESIGN
1635 BROADWAY, SUITE 200
OAKLAND, CA 94612
PHONE: 510.268.0140
FAX: 301.927.2800
www.tooledesign.com

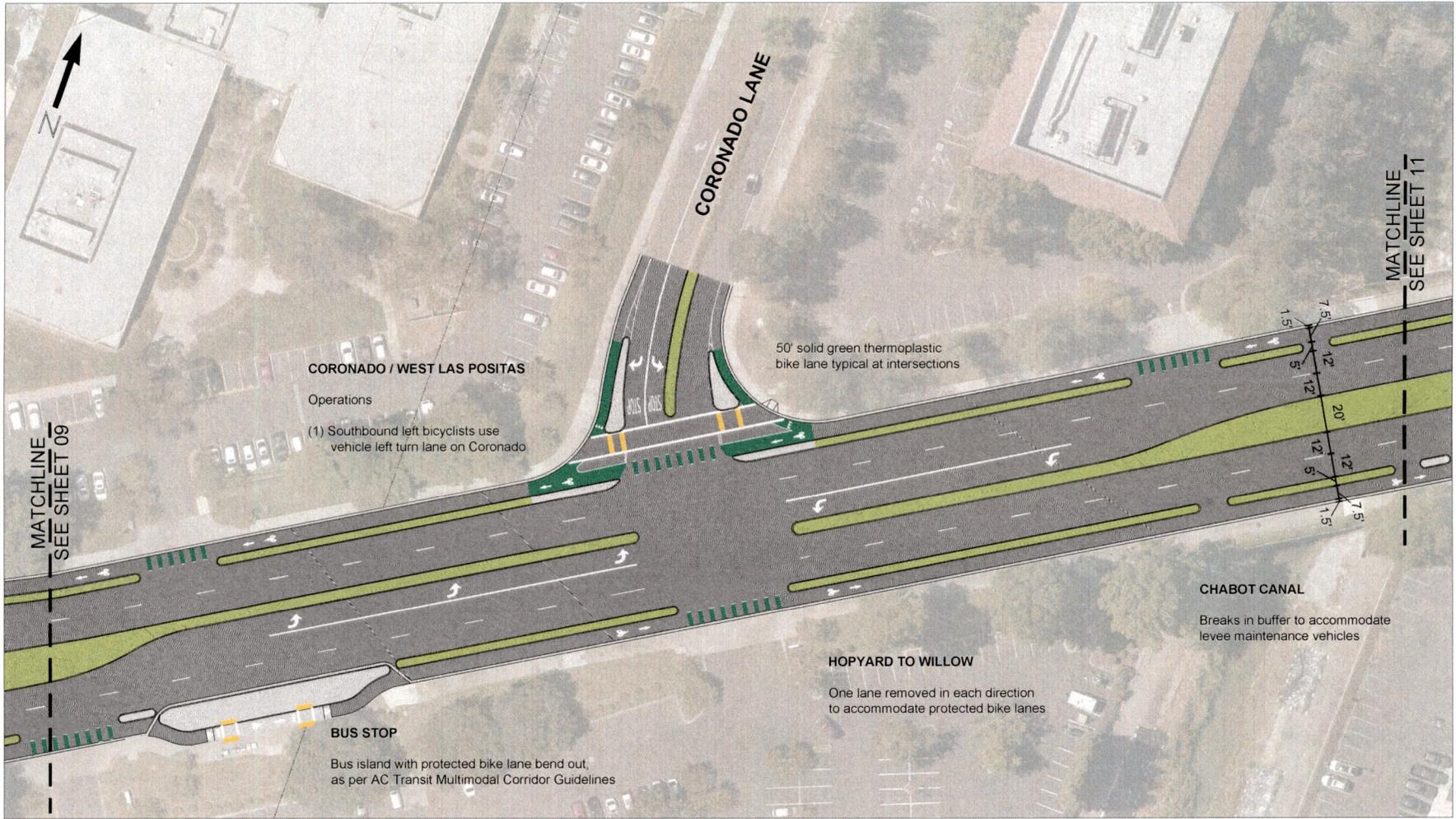
REUSE OF DOCUMENTS				
ALL DRAWINGS ARE INSTRUMENTS OF PROFESSIONAL SERVICE FOR THIS PROJECT. REUSE OR ALTERATION IS AT THE USER'S SOLE RISK.				
DSGN	DR	CHK	APVD	NO. DATE REVISION BY APVD
J5	J5	CS	RB	

THIS GRAPHIC REPRESENTS A CONCEPTUAL RENDERING. FINAL DETAILS INCLUDING STREETSCAPING, LANDSCAPING, SIDEWALKS, LANE MODIFICATIONS, CURBLINE ADJUSTMENTS, SIGNAL TIMING MODIFICATIONS, ON-STREET PARKING AND BIKEWAY DESIGN WILL BE DETERMINED DURING PRELIMINARY DESIGN.



**WEST LAS POSITAS BOULEVARD
BIKEWAY FEASIBILITY STUDY**
CONCRETE ISLAND
PREFERRED ALTERNATIVE
PLEASANTON, CA

PROJECT NO.	FD49
DATE	APRIL 2020
DRAWING NO.	08 OF 21
SHEET NO.	08 OF 21



CONCEPTUAL DESIGN - NOT FOR CONSTRUCTION

TOOLE DESIGN

1635 BROADWAY, SUITE 200
OAKLAND, CA 94612
PHONE: 510.298.0140
FAX: 301.927.2800
www.tooledesign.com

RELEASE OF DOCUMENTS
ALL DRAWINGS ARE INSTRUMENTS OF PROFESSIONAL SERVICE FOR
THIS PROJECT. REUSE OR ALTERATION IS AT THE USER'S SOLE RISK.

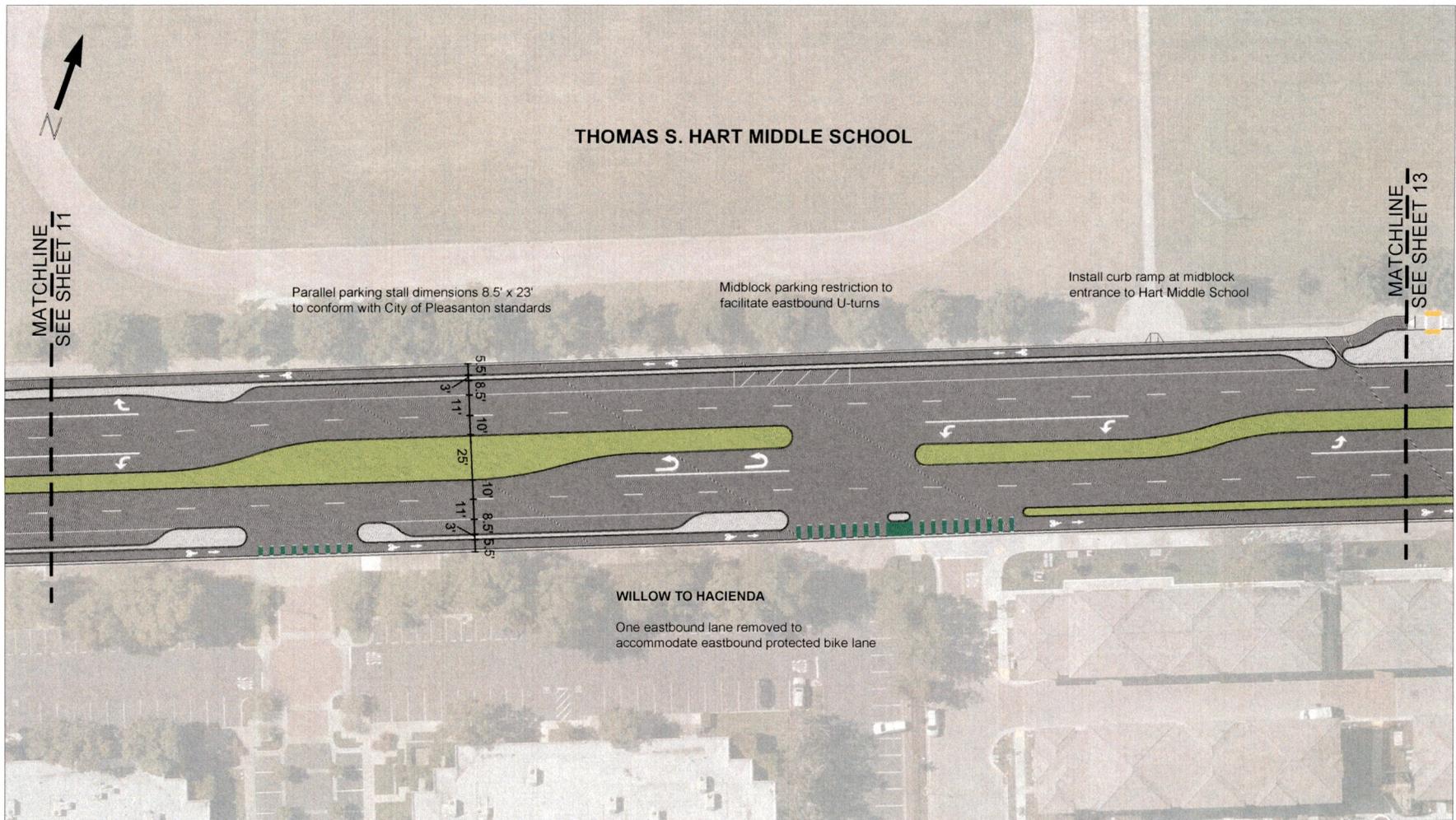
DSGN	JS				
DR	JS				
CHK	CS				
APVD	RB	NO.	DATE	REVISION	BY

THIS GRAPHIC REPRESENTS A CONCEPTUAL RENDERING. FINAL DETAILS INCLUDING STREETSCAPING, LANDSCAPING, SIDEWALKS, LANE MODIFICATIONS, CURBLINE ADJUSTMENTS, SIGNAL TIMING MODIFICATIONS, ON-STREET PARKING, AND BIKEWAY DESIGN WILL BE DETERMINED DURING PRELIMINARY DESIGN.



**WEST LAS POSITAS BOULEVARD
BIKEWAY FEASIBILITY STUDY**
CONCRETE ISLAND
PREFERRED ALTERNATIVE
PLEASANTON, CA

PROJECT NO.	FP49
DATE	APRIL 2020
DRAWING NO.	10.02.21
SHEET NO.	10 OF 21



CONCEPTUAL DESIGN - NOT FOR CONSTRUCTION

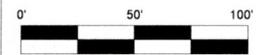
TOOLE DESIGN

1635 BROADWAY, SUITE 200
 OAKLAND, CA 94612
 PHONE: 510.298.0740
 FAX: 510.927.2800
 www.tooledesign.com

REUSE OF DOCUMENTS
 ALL DRAWINGS ARE INSTRUMENTS OF PROFESSIONAL SERVICE FOR
 THIS PROJECT. REUSE OR ALTERATION IS AT THE USER'S SOLE RISK

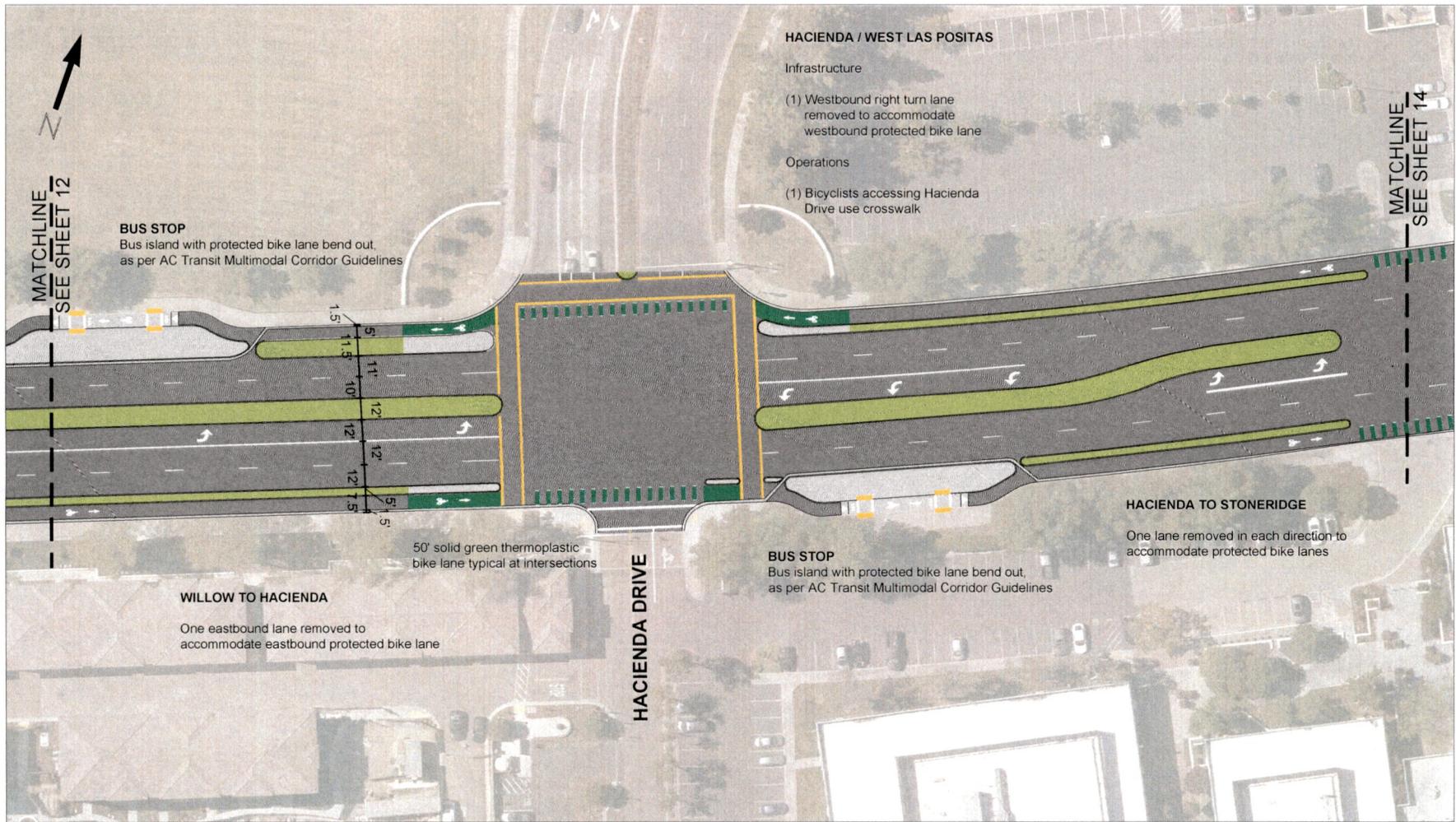
DISGN	JS				
DR	JS				
CHK	CS				
APVD	RB	NO	DATE	REVISION	BY

THIS GRAPHIC REPRESENTS A CONCEPTUAL RENDERING
 FINAL DETAILS INCLUDING STREETSCAPING,
 LANDSCAPING, SIDEWALKS, LANE MODIFICATIONS,
 CURBLINE ADJUSTMENTS, SIGNAL TIMING MODIFICATIONS,
 ON-STREET PARKING, AND BIKEWAY DESIGN WILL BE
 DETERMINED DURING PRELIMINARY DESIGN.



**WEST LAS POSITAS BOULEVARD
 BIKEWAY FEASIBILITY STUDY**
 CONCRETE ISLAND
 PREFERRED ALTERNATIVE
 PLEASANTON, CA

PROJECT NO	EQ48
DATE	APRIL 2020
DRAWING NO	12 OF 21
SHEET NO	12 OF 21



CONCEPTUAL DESIGN - NOT FOR CONSTRUCTION

TOOLE DESIGN
1635 BROADWAY, SUITE 200
OAKLAND, CA 94612
PHONE: 510.269.0140
FAX: 510.927.2800
www.tooledesign.com

REUSE OF DOCUMENTS
ALL DRAWINGS ARE INSTRUMENTS OF PROFESSIONAL SERVICE FOR THIS PROJECT. REUSE OR ALTERATION IS AT THE USER'S SOLE RISK.

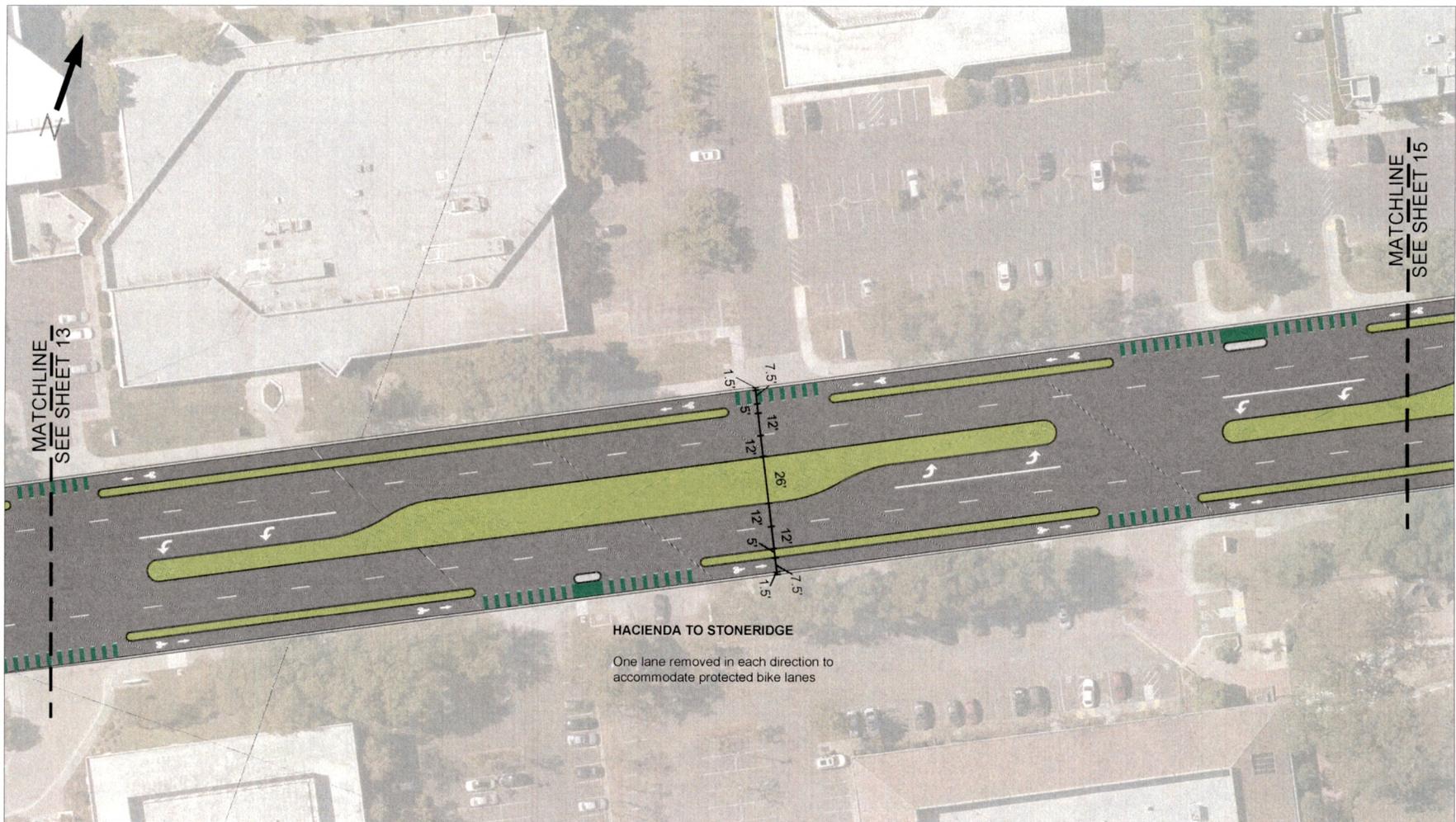
DSGN	JS				
DR	JS				
CHK	CS				
APVD	RB	NO	DATE	REVISION	BY

THIS GRAPHIC REPRESENTS A CONCEPTUAL RENDERING. FINAL DETAILS INCLUDING STREETSCAPING, LANDSCAPING, SIDEWALKS, LANE MODIFICATIONS, CURBLINE ADJUSTMENTS, SIGNAL TIMING MODIFICATIONS, ON-STREET PARKING, AND BIKEWAY DESIGN WILL BE DETERMINED DURING PRELIMINARY DESIGN.



**WEST LAS POSITAS BOULEVARD
BIKEWAY FEASIBILITY STUDY**
**CONCRETE ISLAND
PREFERRED ALTERNATIVE**
PLEASANTON, CA

PROJECT NO	F049
DATE	APRIL 2020
DRAWING NO	13 OF 21
SHEET NO	13 OF 21



HACIENDA TO STONERIDGE

One lane removed in each direction to accommodate protected bike lanes

CONCEPTUAL DESIGN - NOT FOR CONSTRUCTION

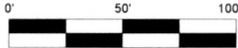
**TOOLE
DESIGN**

1635 BROADWAY, SUITE 200
OAKLAND, CA 94612
PHONE: 510.288.0740
FAX: 510.927.2800
www.tooledesign.com

REUSE OF DOCUMENTS
ALL DRAWINGS ARE INSTRUMENTS OF PROFESSIONAL SERVICE FOR
THIS PROJECT REUSE OR ALTERATION IS AT THE USER'S SOLE RISK

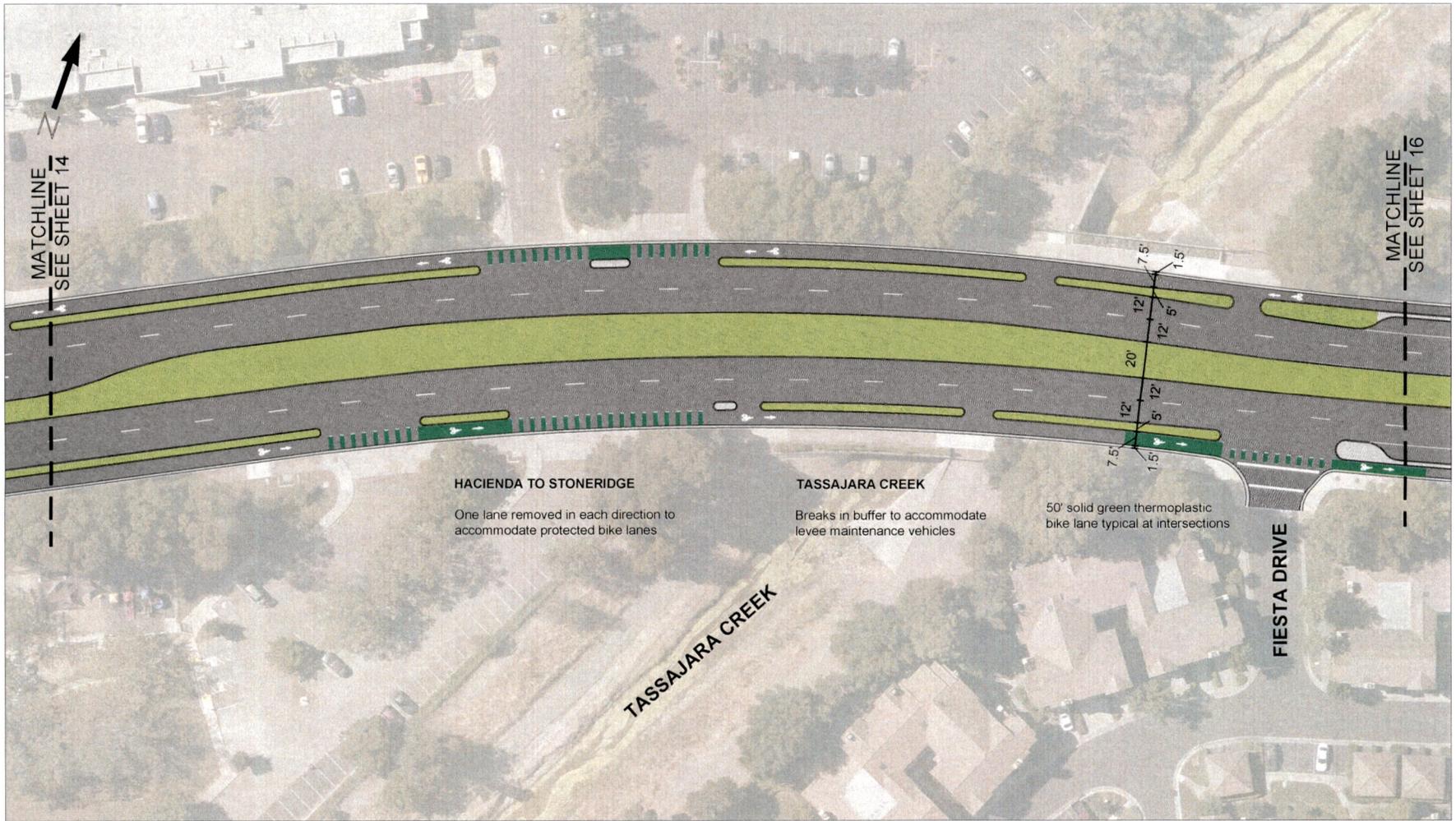
DSGN	JS				
DR	JS				
CHK	CS				
APVD	RB	NO	DATE	REVISION	BY
					APVD

THIS GRAPHIC REPRESENTS A CONCEPTUAL RENDERING.
FINAL DETAILS INCLUDING STREETSCAPING,
LANDSCAPING, SIDEWALKS, LANE MODIFICATIONS,
CURBLINE ADJUSTMENTS, SIGNAL TIMING MODIFICATIONS,
ON-STREET PARKING, AND BIKEWAY DESIGN WILL BE
DETERMINED DURING PRELIMINARY DESIGN.



**WEST LAS POSITAS BOULEVARD
BIKEWAY FEASIBILITY STUDY**
**CONCRETE ISLAND
PREFERRED ALTERNATIVE**
PLEASANTON, CA

PROJECT NO	FG49
DATE	APRIL 2020
DRAWING NO	14 OF 21
SHEET NO	14 OF 21



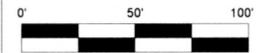
CONCEPTUAL DESIGN - NOT FOR CONSTRUCTION

**TOOLE
DESIGN**

1635 BROADWAY, SUITE 200
OAKLAND, CA 94612
PHONE: 510.258.0740
FAX: 510.927.2800
www.tooledesign.com

REUSE OF DOCUMENTS				
ALL DRAWINGS ARE INSTRUMENTS OF PROFESSIONAL SERVICE FOR THIS PROJECT. REUSE OR ALTERATION IS AT THE USER'S SOLE RISK.				
DSGN	DR	CHK	APVD	NO
JS	JS	CS	RB	
NO	DATE	REVISION	BY	APVD

THIS GRAPHIC REPRESENTS A CONCEPTUAL RENDERING. FINAL DETAILS INCLUDING STREETSCAPING, LANDSCAPING, SIDEWALKS, LANE MODIFICATIONS, CURBLINE ADJUSTMENTS, SIGNAL TIMING MODIFICATIONS, ON-STREET PARKING, AND BIKEWAY DESIGN WILL BE DETERMINED DURING PRELIMINARY DESIGN.



**WEST LAS POSITAS BOULEVARD
BIKEWAY FEASIBILITY STUDY**

**CONCRETE ISLAND
PREFERRED ALTERNATIVE
PLEASANTON, CA**

PROJECT NO.	E049
DATE	APRIL 2020
DRAWING NO.	15 OF 21
SHEET NO.	15 OF 21



Parallel parking stall dimensions 8.5' x 23'
to conform with City of Pleasanton standards

HACIENDA TO STONERIDGE

One lane removed in each direction to
accommodate protected bike lanes
and on-street parking

50' solid green thermoplastic
bike lane typical at intersections

BELLEZA LANE

CONCEPTUAL DESIGN - NOT FOR CONSTRUCTION

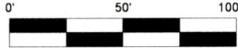
**TOOLE
DESIGN**

1635 BROADWAY, SUITE 200
OAKLAND, CA 94612
PHONE: 510.298.0740
FAX: 510.577.2800
www.tooledesign.com

REUSE OF DOCUMENTS
ALL DRAWINGS ARE INSTRUMENTS OF PROFESSIONAL SERVICE FOR
THIS PROJECT REUSE OR ALTERATION IS AT THE USER'S SOLE RISK

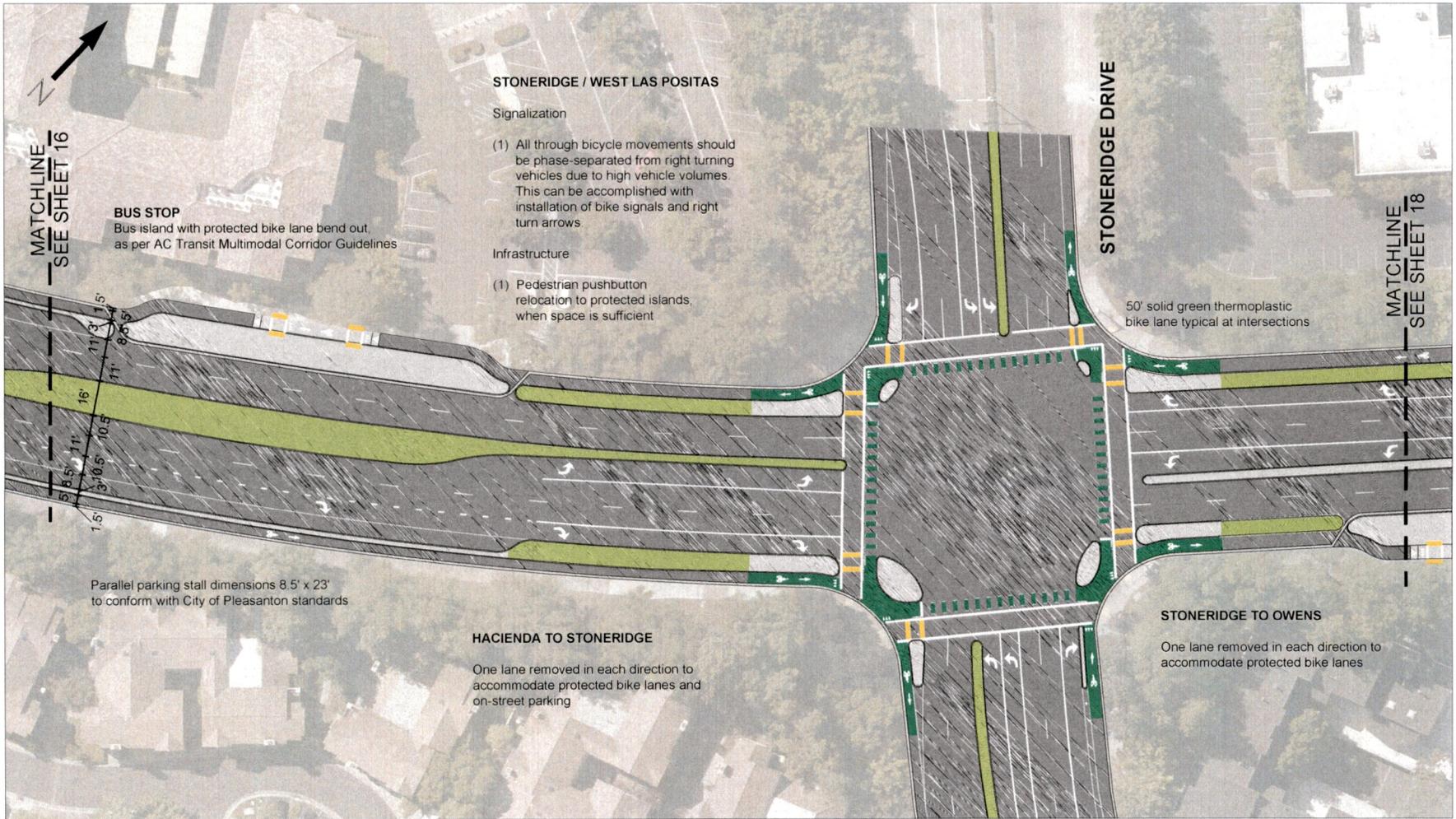
DSON	JS				
DR	JS				
CHK	CS				
APVD	RB	NO	DATE	REVISION	BY

THIS GRAPHIC REPRESENTS A CONCEPTUAL RENDERING.
FINAL DETAILS INCLUDING STREETSCAPING,
LANDSCAPING, SIDEWALKS, LANE MODIFICATIONS,
CURBLINE ADJUSTMENTS, SIGNAL TIMING MODIFICATIONS,
ON-STREET PARKING, AND BIKEWAY DESIGN WILL BE
DETERMINED DURING PRELIMINARY DESIGN.



**WEST LAS POSITAS BOULEVARD
BIKEWAY FEASIBILITY STUDY**
**CONCRETE ISLAND
PREFERRED ALTERNATIVE**
PLEASANTON, CA

PROJECT NO.	F049
DATE	APRIL 2020
DRAWING NO.	18 OF 21
SHEET NO.	18 OF 21



STONERIDGE / WEST LAS POSITAS

Signalization

- (1) All through bicycle movements should be phase-separated from right turning vehicles due to high vehicle volumes. This can be accomplished with installation of bike signals and right turn arrows.

Infrastructure

- (1) Pedestrian pushbutton relocation to protected islands, when space is sufficient

MATCHLINE
SEE SHEET 16

BUS STOP
Bus island with protected bike lane bend out as per AC Transit Multimodal Corridor Guidelines

11' 3" 1.5'
11' 8" 1.5'
16'
11'
5' 8.5" 1.5" 1.5"
3' 10.5" 10.5"
1.5'

Parallel parking stall dimensions 8.5' x 23' to conform with City of Pleasanton standards

HACIENDA TO STONERIDGE

One lane removed in each direction to accommodate protected bike lanes and on-street parking

STONERIDGE DRIVE

50' solid green thermoplastic bike lane typical at intersections

MATCHLINE
SEE SHEET 18

STONERIDGE TO OWENS

One lane removed in each direction to accommodate protected bike lanes

CONCEPTUAL DESIGN - NOT FOR CONSTRUCTION

**TOOLE
DESIGN**

1835 BROADWAY, SUITE 200
OAKLAND, CA 94612
PHONE: 510.268.0740
FAX: 301.927.2800
www.tooledesign.com

REUSE OF DOCUMENTS			
ALL DRAWINGS ARE INSTRUMENTS OF PROFESSIONAL SERVICE FOR THIS PROJECT. REUSE OR ALTERATION IS AT THE USER'S SOLE RISK.			
DSGN	JS		
DR	JS		
CHK	CS		
APVD	RB	NO	DATE
			REVISION
			BY
			APVD

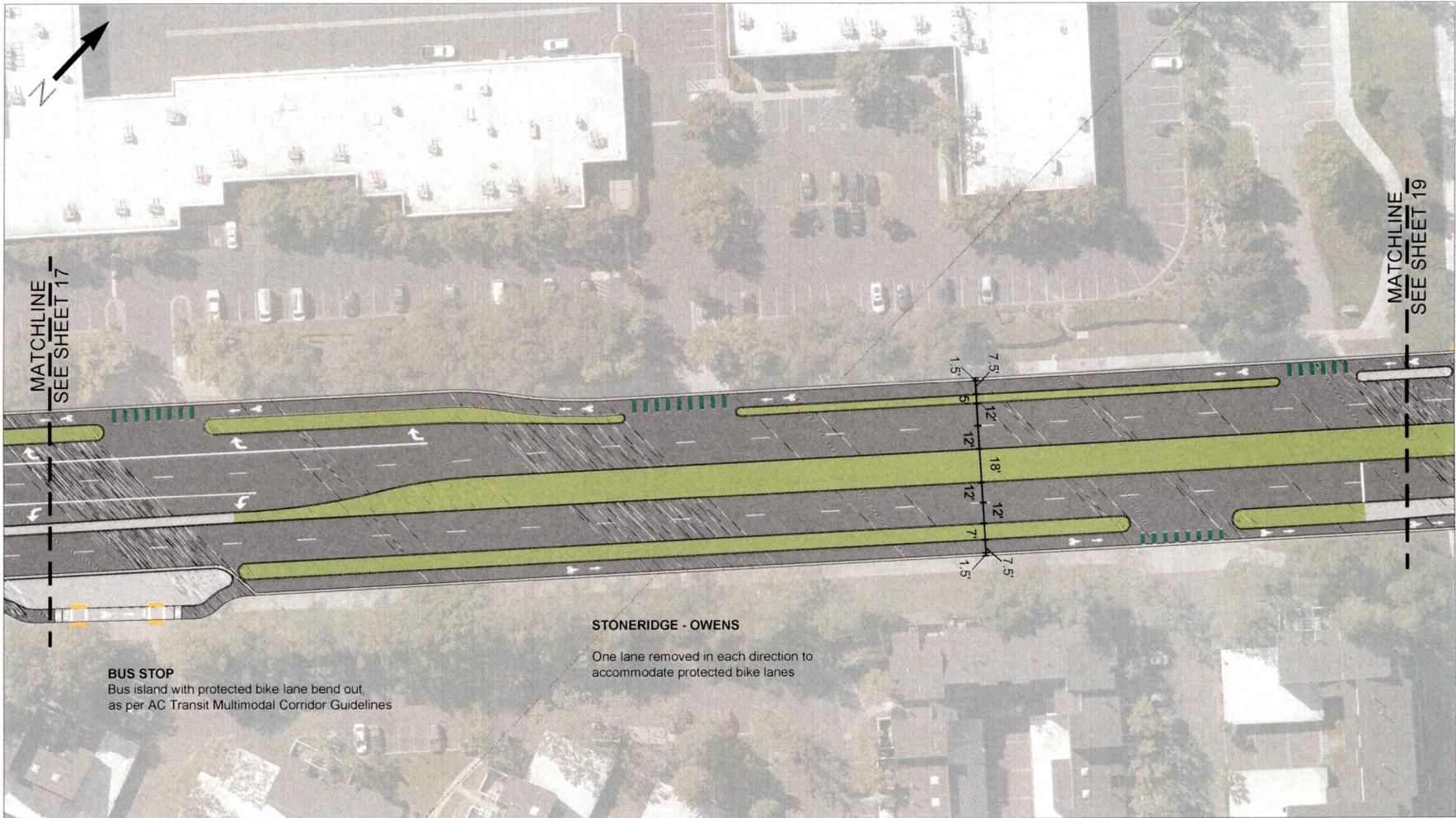
THIS GRAPHIC REPRESENTS A CONCEPTUAL RENDERING. FINAL DETAILS INCLUDING STREETSCAPING, LANDSCAPING, SIDEWALKS, LANE MODIFICATIONS, CURBLINE ADJUSTMENTS, SIGNAL TIMING MODIFICATIONS, ON-STREET PARKING, AND BIKEWAY DESIGN WILL BE DETERMINED DURING PRELIMINARY DESIGN.



**WEST LAS POSITAS BOULEVARD
BIKEWAY FEASIBILITY STUDY**

CONCRETE ISLAND
PREFERRED ALTERNATIVE
PLEASANTON, CA

PROJECT NO	E049
DATE	APRIL 2020
DRAWING NO	17 OF 21
SHEET NO	17 OF 21



BUS STOP
 Bus island with protected bike lane bend out,
 as per AC Transit Multimodal Corridor Guidelines

STONERIDGE - OWENS

One lane removed in each direction to
 accommodate protected bike lanes

CONCEPTUAL DESIGN - NOT FOR CONSTRUCTION

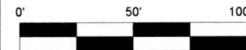
**TOOLE
 DESIGN**

1635 BROADWAY, SUITE 200
 OAKLAND, CA 94612
 PHONE: 510.298.0740
 FAX: 510.827.2602
 www.tooledesign.com

REUSE OF DOCUMENTS
 ALL DRAWINGS ARE INSTRUMENTS OF PROFESSIONAL SERVICE FOR
 THIS PROJECT. REUSE OR ALTERATION IS AT THE USER'S SOLE RISK

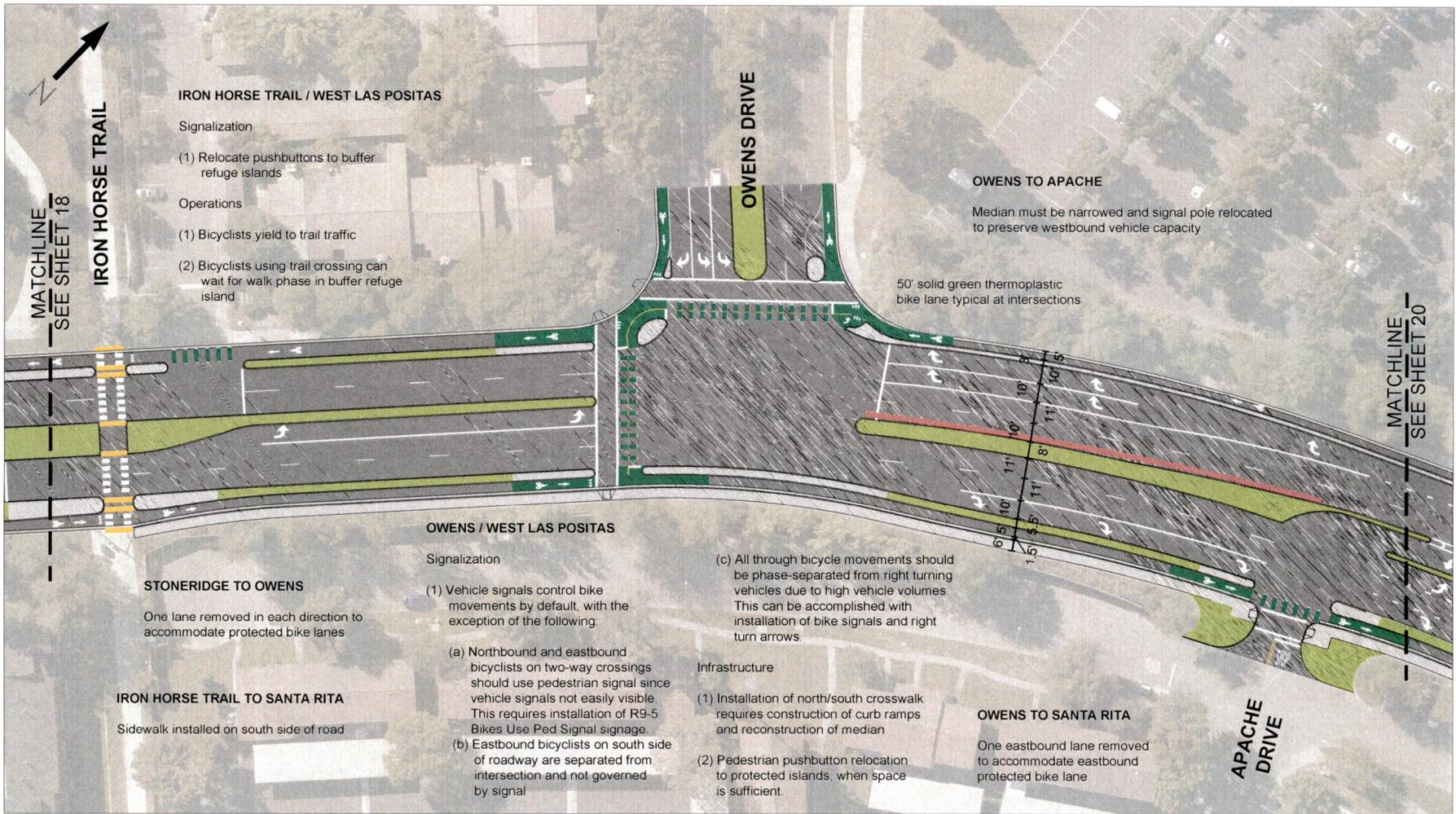
DSGN	JS				
DR	JS				
CHK	CS				
APVD	RB	NO	DATE	REVISION	BY

THIS GRAPHIC REPRESENTS A CONCEPTUAL RENDERING
 FINAL DETAILS INCLUDING STREETSCAPING,
 LANDSCAPING, SIDEWALKS, LANE MODIFICATIONS,
 CURBLINE ADJUSTMENTS, SIGNAL TIMING MODIFICATIONS,
 ON-STREET PARKING, AND BIKEWAY DESIGN WILL BE
 DETERMINED DURING PRELIMINARY DESIGN.



**WEST LAS POSITAS BOULEVARD
 BIKEWAY FEASIBILITY STUDY**
 CONCRETE ISLAND
 PREFERRED ALTERNATIVE
 PLEASANTON, CA

PROJECT NO	FD49
DATE	APRIL 2020
DRAWING NO	18 OF 21
SHEET NO	18 OF 21



IRON HORSE TRAIL / WEST LAS POSITAS

- Signalization
- (1) Relocate pushbuttons to buffer refuge islands
- Operations
- (1) Bicyclists yield to trail traffic
 - (2) Bicyclists using trail crossing can wait for walk phase in buffer refuge island

OWENS TO APACHE

Median must be narrowed and signal pole relocated to preserve westbound vehicle capacity

50' solid green thermoplastic bike lane typical at intersections

OWENS / WEST LAS POSITAS

- Signalization
- (1) Vehicle signals control bike movements by default, with the exception of the following:
 - (a) Northbound and eastbound bicyclists on two-way crossings should use pedestrian signal since vehicle signals not easily visible. This requires installation of R9-5 Bikes Use Ped Signal signage.
 - (b) Eastbound bicyclists on south side of roadway are separated from intersection and not governed by signal
 - (c) All through bicycle movements should be phase-separated from right turning vehicles due to high vehicle volumes. This can be accomplished with installation of bike signals and right turn arrows.
- Infrastructure
- (1) Installation of north/south crosswalk requires construction of curb ramps and reconstruction of median
 - (2) Pedestrian pushbutton relocation to protected islands, when space is sufficient.

STONERIDGE TO OWENS

One lane removed in each direction to accommodate protected bike lanes

IRON HORSE TRAIL TO SANTA RITA

Sidewalk installed on south side of road

OWENS TO SANTA RITA

One eastbound lane removed to accommodate eastbound protected bike lane

TOOLE DESIGN

1635 BROADWAY, SUITE 200
 OAKLAND, CA 94612
 PHONE: 510.268.0740
 FAX: 510.268.2800
 www.tooledesign.com

REUSE OF DOCUMENTS
 ALL DRAWINGS ARE INSTRUMENTS OF PROFESSIONAL SERVICE FOR THIS PROJECT. REUSE OR ALTERATION IS AT THE USER'S SOLE RISK.

DSGN	JS				
DR	JS				
CHK	CS				
APVD	RB	NO	DATE	REVISION	BY / APVD

THIS GRAPHIC REPRESENTS A CONCEPTUAL RENDERING. FINAL DETAILS INCLUDING STREETSCAPING, LANDSCAPING, SIDEWALKS, LANE MODIFICATIONS, CURBLINE ADJUSTMENTS, SIGNAL TIMING MODIFICATIONS, ON-STREET PARKING AND BIKEWAY DESIGN WILL BE DETERMINED DURING PRELIMINARY DESIGN.



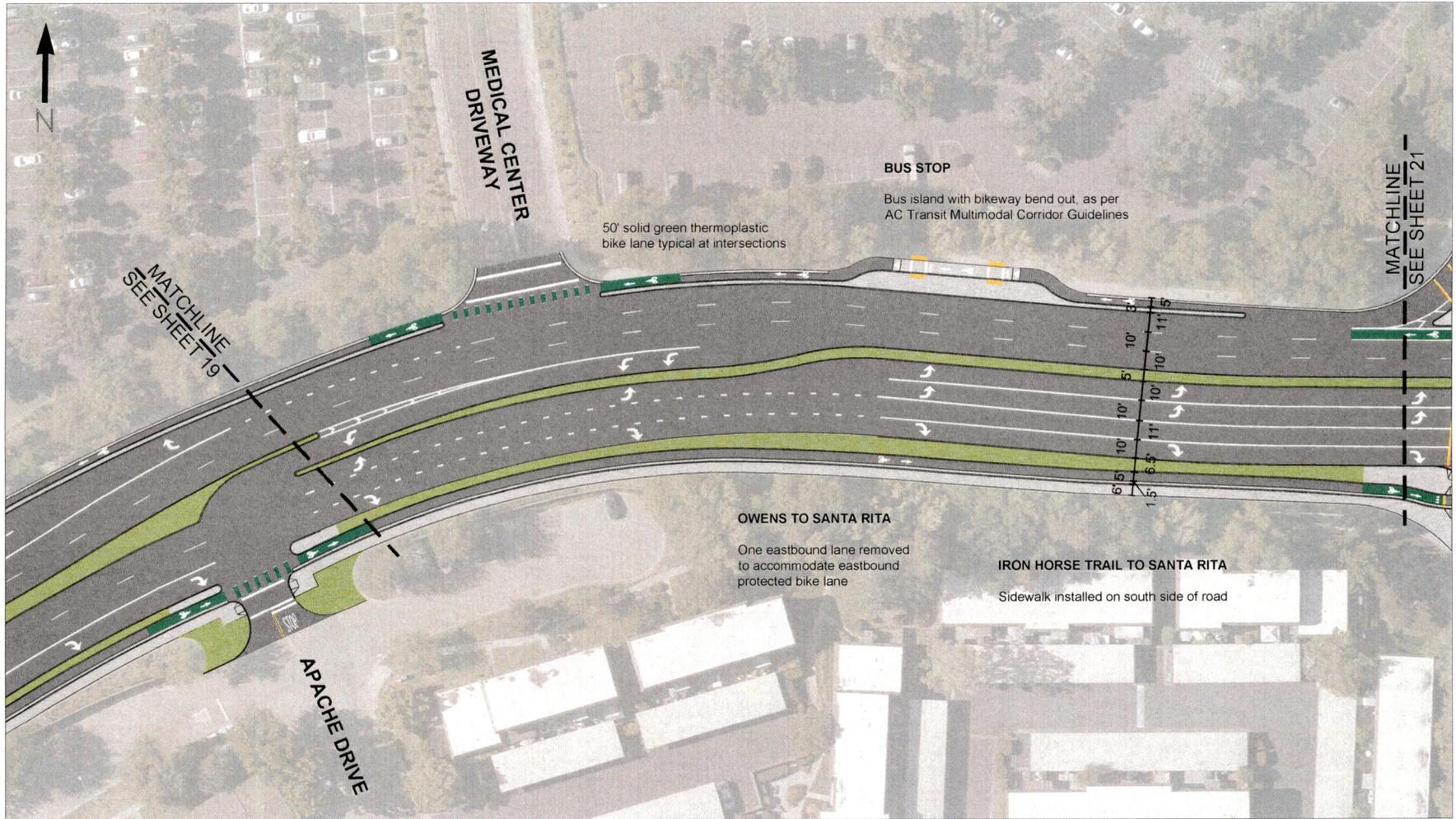
WEST LAS POSITAS BOULEVARD BIKEWAY FEASIBILITY STUDY

CONCRETE ISLAND PREFERRED ALTERNATIVE

PLEASANTON, CA

CONCEPTUAL DESIGN - NOT FOR CONSTRUCTION

PROJECT NO.	FD49
DATE	APRIL 2020
DRAWING NO.	18 OF 21
SHEET NO.	19 OF 21



CONCEPTUAL DESIGN - NOT FOR CONSTRUCTION

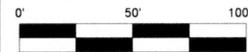
TOOLE DESIGN

1635 BROADWAY, SUITE 200
OAKLAND, CA 94612
PHONE: 510.296.0740
FAX: 510.607.2900
www.tooledesign.com

REUSE OF DOCUMENTS
ALL DRAWINGS ARE INSTRUMENTS OF PROFESSIONAL SERVICE FOR THIS PROJECT. REUSE OR ALTERATION IS AT THE USER'S SOLE RISK.

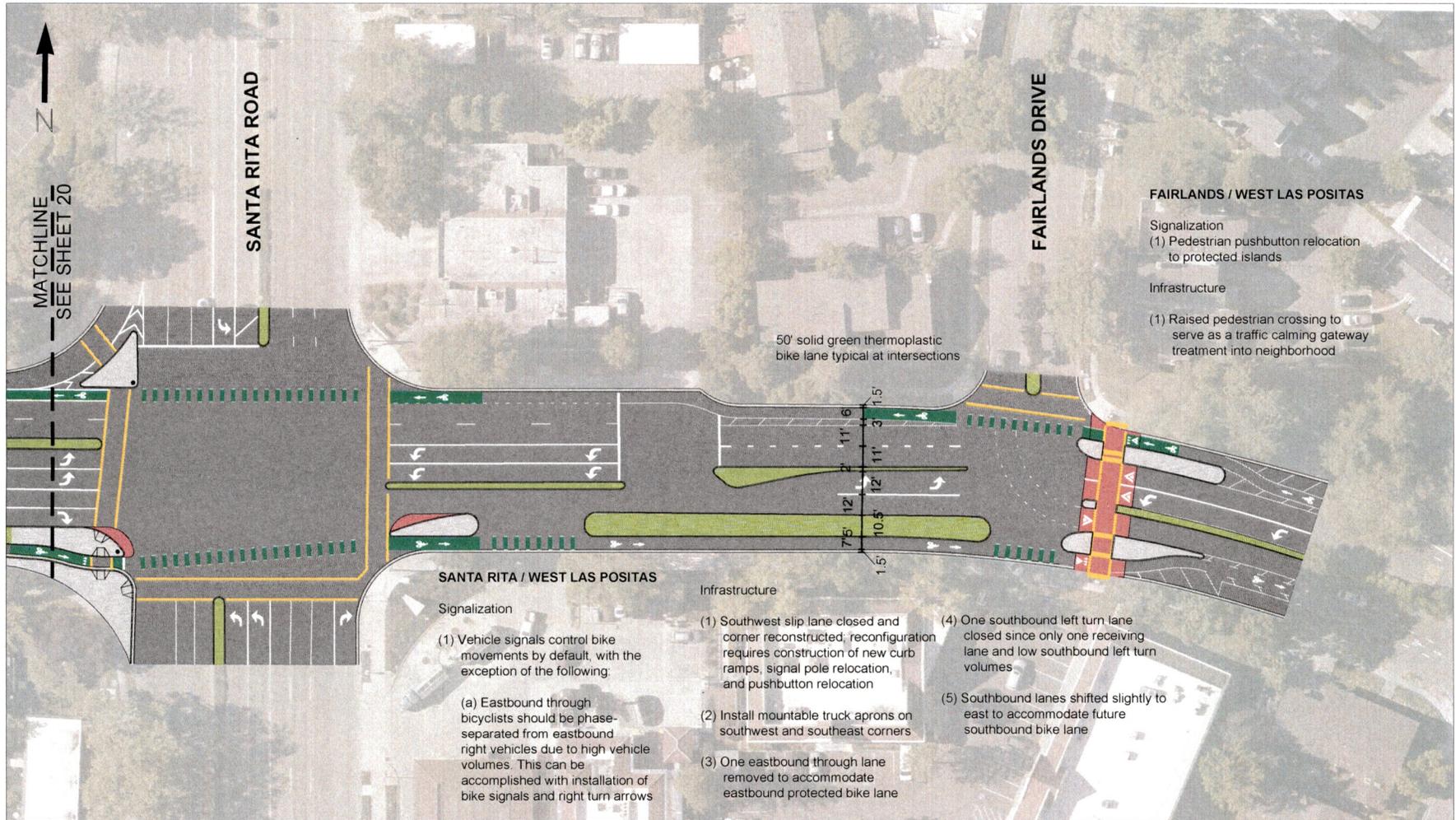
DSGN	JS				
DR	JS				
CHK	CS				
APVD	RB	NO	DATE	REVISION	BY

THIS GRAPHIC REPRESENTS A CONCEPTUAL RENDERING FINAL DETAILS INCLUDING STREETSCAPING, LANDSCAPING, SIDEWALKS, LANE MODIFICATIONS, CURBLINE ADJUSTMENTS, SIGNAL TIMING MODIFICATIONS, ON-STREET PARKING, AND BIKEWAY DESIGN WILL BE DETERMINED DURING PRELIMINARY DESIGN.



WEST LAS POSITAS BOULEVARD BIKEWAY FEASIBILITY STUDY
CONCRETE ISLAND PREFERRED ALTERNATIVE
PLEASANTON, CA

PROJECT NO	EQ49
DATE	APRIL 2020
DRAWING NO	20 DE 21
SHEET NO	20 DE 21



CONCEPTUAL DESIGN - NOT FOR CONSTRUCTION

TOOLE DESIGN

1635 BROADWAY, SUITE 200
 OAKLAND, CA 94612
 PHONE: 510.298.0140
 FAX: 510.927.2800
 www.tooledesign.com

REUSE OF DOCUMENTS				
ALL DRAWINGS ARE INSTRUMENTS OF PROFESSIONAL SERVICE FOR THIS PROJECT. REUSE OR ALTERATION IS AT THE USER'S SOLE RISK.				
DSGN	DR	CHK	APVD	NO
JS	JS	CS	RB	
NO	DATE	REVISION	BY	APVD

THIS GRAPHIC REPRESENTS A CONCEPTUAL RENDERING. FINAL DETAILS INCLUDING STREETSCAPING, LANDSCAPING, SIDEWALKS, LANE MODIFICATIONS, CURBLINE ADJUSTMENTS, SIGNAL TIMING MODIFICATIONS, ON-STREET PARKING, AND BIKEWAY DESIGN WILL BE DETERMINED DURING PRELIMINARY DESIGN.



WEST LAS POSITAS BOULEVARD BIKEWAY FEASIBILITY STUDY

CONCRETE ISLAND PREFERRED ALTERNATIVE
 PLEASANTON, CA

PROJECT NO.	E048
DATE	APRIL 2020
DRAWING NO.	21 OF 21
SHEET NO.	21 OF 21