

Complete Streets Commission



REGULAR MEETING AGENDA

Date: 3/10/2021

Time: 7:00 p.m.

Regular Meeting Location: [Zoom.us/join](https://zoom.us/join) – ID# 959 6579 2741

NOVEL CORONAVIRUS, COVID-19, EMERGENCY ADVISORY NOTICE On March 19, 2020, the Governor ordered a statewide stay-at-home order calling on all individuals living in the State of California to stay at home or at their place of residence to slow the spread of the COVID-19 virus. Additionally, the Governor has temporarily suspended certain requirements of the Brown Act. For the duration of the shelter in place order, the following public meeting protocols will apply.

Teleconference meeting: All members of the Complete Streets Commission, city staff, applicants, and members of the public will be participating by teleconference. To promote social distancing while allowing essential governmental functions to continue, the Governor has temporarily waived portions of the open meetings act and rules pertaining to teleconference meetings. This meeting is conducted in compliance with the Governor Executive Order N-25-20 issued March 12, 2020, and supplemental Executive Order N-29-20 issued March 17, 2020.

- How to participate in the meeting
 - Access the special meeting real-time online at:
[Zoom.us/join](https://zoom.us/join) – Regular Meeting ID# 959 6579 2741
 - Access the regular meeting real-time via telephone (listen only mode) at:
(669) 900-6833 Regular Meeting ID # 959 6579 2741

Subject to Change: Given the current public health emergency and the rapidly evolving federal, state, county and local orders, the format of this meeting may be altered or the meeting may be canceled. You may check on the status of the meeting by visiting the City's website www.menlopark.org. The instructions for logging on to the Zoom webinar and/or the access code is subject to change. If you have difficulty accessing the Zoom webinar, please check the latest online edition of the posted agenda for updated information (menlopark.org/agenda).

Regular Meeting ([Zoom.us/join](https://zoom.us/join) – ID# 959 6579 2741)

A. Call To Order

B. Roll Call

C. Reports and Announcements

Under "Reports and Announcements," staff and Commission members may communicate general information of interest regarding matters within the jurisdiction of the Commission. No Commission discussion or action can occur on any of the presented items.

D. Public Comment

Under “Public Comment,” the public may address the Commission on any subject not listed on the agenda. Each speaker may address the Commission once under public comment for a limit of three minutes. Please clearly state your name and address or political jurisdiction in which you live. The Commission cannot act on items not listed on the agenda and, therefore, the Commission cannot respond to non-agenda issues brought up under public comment other than to provide general information.

E. Regular Business

- E1. Approve the Complete Streets Commission regular meeting minutes of February 10, 2021 ([Attachment](#))
- E2. Receive an update from City/County Association of Governments of San Mateo County on the San Mateo County Community Based Transportation Plan ([Presentation](#))
- E3. Receive an update and provide feedback on the Ravenswood Avenue bike lane gap closure project as part of the Ravenswood Avenue Resurfacing project ([Staff Report #21-001-CSC](#))
- E4. Evaluate commission subcommittees to support City Council priorities
- E5. Receive an update from the Transportation Master Plan Implementation Subcommittees ([Attachment](#))

F. Informational Items

- F1. Update on major project status

G. Committee/Subcommittee Reports

- G1. Update from Active Transportation Network Subcommittee (Espinosa/Kirsch)
- G2. Update from Climate Action Plan Subcommittee (Levin/Meyer)
- G3. Update from Downtown Access and Parking Subcommittee (Behroozi/Espinosa)
- G4. Update from Multimodal Metrics Subcommittee (Behroozi/Espinosa/Levin)
- G5. Update from Multimodal Subcommittee (Cebrian/Levin)
- G6. Update from Safe Routes to School Program Subcommittee (Behroozi/Cebrian/Lee)
- G7. Update from Transportation Master Plan Implementation Subcommittee (Cebrian/Levin)
- G8. Update from Zero Emission Subcommittee (Cromie/Meyer)

H. Adjournment

At every Regular Meeting of the Commission, in addition to the Public Comment period where the public shall have the

right to address the Commission on any matters of public interest not listed on the agenda, members of the public have the right to directly address the Commission on any item listed on the agenda at a time designated by the Chair, either before or during the Commission's consideration of the item.

At every Special Meeting of the Commission, members of the public have the right to directly address the Commission on any item listed on the agenda at a time designated by the Chair, either before or during consideration of the item.

For appeal hearings, appellant and applicant shall each have 10 minutes for presentations.

If you challenge any of the items listed on this agenda in court, you may be limited to raising only those issues you or someone else raised at the public hearing described in this notice, or in written correspondence delivered to the City of Menlo Park at, or prior to, the public hearing.

Any writing that is distributed to a majority of the City Council by any person in connection with an agenda item is a public record (subject to any exemption under the Public Records Act) and is available by request by emailing the city clerk at jaherren@menlopark.org. Persons with disabilities, who require auxiliary aids or services in attending or participating in City Council meetings, may call the City Clerk's Office at 650-330-6620.

Agendas are posted in accordance with Government Code §54954.2(a) or §54956. Members of the public can view electronic agendas and staff reports by accessing the City website at menlopark.org/agenda and can receive email notification of agenda and staff report postings by subscribing to the "Notify Me" service at menlopark.org/notifyme. Agendas and staff reports may also be obtained by contacting City Clerk at 650-330-6620. (Posted: 3/4/2021)

Complete Streets Commission



REGULAR MEETING MINUTES – DRAFT

Date: 2/10/2021

Time: 7:00 p.m.

Special Meeting Location: Zoom.us/join – ID# 959 6579 2741

Regular Meeting ([Zoom.us/join](https://zoom.us/join) – ID# 959 6579 2741)

A. Call to Order

Chair Levin called the meeting to order at 7:01 p.m.

B. Roll Call

Present: Behroozi, Cebrian, Cromie, Espinosa, Kirsch, Lee (7:12 p.m.), Levin, Meyer

Absent: None

Staff: Engineering Technician Patrick Palmer, Senior Transportation Engineer Kevin Chen

C. Reports and Announcements

Staff Chen reported out on a summary of City Council actions on transportation related items since the January 13, 2021, Commission meeting.

Chair Levin reported on the City Council goal setting meeting. Commissioner Kirsch inquired about Sharon Road Sidewalk project. Commissioner Behroozi inquired about commission recruitment.

D. Public Comment

None.

E. Regular Business

- E1. Approve the Complete Streets Commission regular meeting minutes of January 13, 2021 (Attachment)

ACTION: Motion and second (Kirsch/Espinosa), to approve the Complete Streets Commission regular meeting minutes of January 13, 2021, passed unanimously.

- E2. Receive a presentation on ongoing regional pedestrian and bicycle plans and proposed facilities within the City of Menlo Park

Staff Chen introduced the item.

Chair Levin led a discussion that included project scopes, priorities, funding, and roles and responsibilities of City staff and commissioners.

F. Informational Items

F1. Update on major project status

Staff Chen provided an update on new speed limit signs on city streets, the citywide 15 miles per hour (mph) school zones, and the Belle Haven traffic calming plan.

Commissioners Lee and Behroozi inquired about the Belle Haven traffic calming plan and signage. Commissioner Kirsch inquired about the 15 mph school zones.

- Cecilia Taylor inquired about the 15 mph school zones for early childhood education facilities.

G. Committee/Subcommittee Reports

G1. Update from Active Transportation Network Subcommittee

Commissioner Kirsch recommended dissolving the subcommittee.

G2. Update from Climate Action Plan Subcommittee

Chair Levin reported on the previous City Council goal setting meeting.

G3. Update from Downtown Access and Parking Subcommittee

Commissioner Behroozi reported on the Santa Cruz Avenue closure.

G4. Update from Multimodal Metrics Subcommittee

Chair Levin reported on an upcoming meeting.

G5. Update from Multimodal Subcommittee

Chair Levin reported on the City of Redwood City's consideration for a mixed-use development at the Sequoia Station.

G6. Update from Safe Routes to School Program Subcommittee

Commissioner Behroozi reported on the concept of a traffic garden.

G7. Update from Transportation Master Plan Implementation Subcommittee

None.

G8. Update from Zero Emission Subcommittee

None.

H. Adjournment

Chair Levin adjourned the meeting at 8:13 p.m.

Kevin Chen, Senior Transportation Engineer

NOVEL CORONAVIRUS, COVID-19, EMERGENCY ADVISORY NOTICE On March 19, 2020, the Governor ordered a statewide stay-at-home order calling on all individuals living in the State of California to stay at home or at their place of residence to slow the spread of the COVID-19 virus. Additionally, the Governor has temporarily suspended certain requirements of the Brown Act. For the duration of the shelter in place order, the following public meeting protocols will apply.

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Menlo Park Complete Streets Commission March 10, 2021



Southeast San Mateo County Community Based Transportation Plan

Goals This Evening

- » Introduce the Southeast San Mateo County Community Based Transportation Plan (CBTP)
- » Increase community participation and stakeholder involvement



Community Based Transportation Plans



CBTP Fundamentals

- » Response to 2001 MTC *Lifeline Transportation Network* report
- » Improve mobility for disadvantaged “Communities of Concern”
- » MTC Requirements
 - Inclusive planning
 - Improve a range of transportation choices
 - Address mobility gaps identified through direct outreach to low-income communities

Communities of Concern

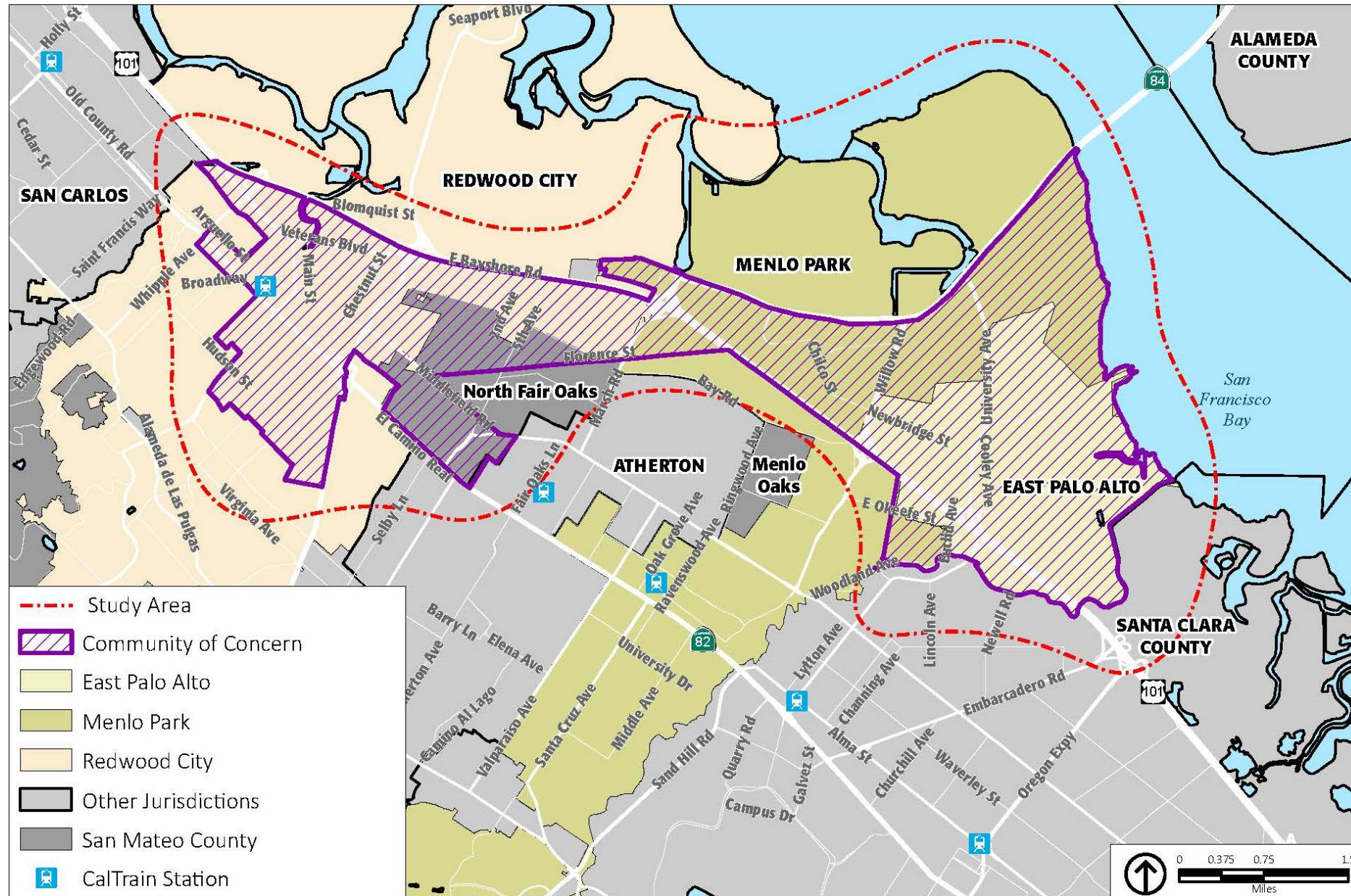
» 8 Variables

1. Minority (70%)
2. Low-Income (30%)
3. Level of English Proficiency (20%)
4. Elderly (10%)
5. Zero-Vehicle Households (10%)
6. Single Parent Households (20%)
7. Disabled (25%)
8. Rent-Burdened Households (15%)

» COCs either:

1. Exceed Low-Income and Minority thresholds
2. Exceed Low-Income threshold and three other thresholds

Southeast San Mateo County CBTP



- » **12 Census Tracts**
- East Palo Alto, Menlo Park, Redwood City, North Fair Oaks, unincorporated
 - 69,280 residents
 - 19,004 households
 - 13,045 families

 - All 12 low-income
 - All 12 rent-burdened

CBTP Outreach



MTC Requirements

» CBTP Advisory Board

- Jurisdiction staff
- samTrans
- Commute.org

» Stakeholder Involvement

- CBOs
- Non-profits

» Diverse Community Engagement Plan



HELP IMPROVE TRANSPORTATION OPTIONS IN PITTSBURG, BAY POINT AND ANTIOCH!

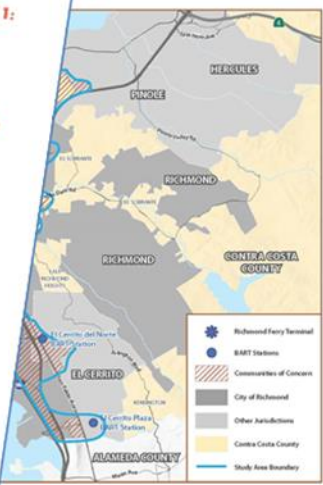
PARTICIPATE IN THE PITTSBURG-BAY POINT COMMUNITYBASED TRANSPORTATION PLAN
 The Pittsburg-Bay Point Community Based Transportation Plan (CBTP) is an opportunity to improve transportation options and quality of life for residents in Bay Point.

PLAN DE RICHMOND DE TRANSPORTE BASADO EN LA COMUNIDAD

¿Qué es Plan de Richmond de Transporte Basado en la Comunidad?
 El plan de Richmond de transporte basada en la comunidad, o CBTP, es una oportunidad para mejorar las opciones de transporte y la calidad de vida de los vecindarios en la Ciudad de Richmond, North Richmond y San Pablo, incluyendo porciones de El Cerrito. El plan reunirá residentes, organizaciones comunitarias y agencias de transporte para identificar los desafíos más importantes de Richmond y zonas aledañas y desarrollar estrategias para superar los.

¿Quiero saber más de el plan! ¿Cómo me informo?
 La página web del proyecto está en construcción, visite www.ccta.net pronto para aprender más del proyecto, ver eventos próximos, tomar una encuesta y ofrecer sus comentarios y sugerencias. Para recibir notificaciones electrónicas, por favor suscribise a nuestra lista de correo electrónico.

Necesamos su colaboración para mejorar con gusto sus sugerencias!



Latest News and Events

- Text-based mobile survey**
 Please take a few moments to answer our short mobile phone survey about your transportation habits and challenges. Access the survey by sending a text to (111) 111-1111
- Project webpage:**
 A project webpage is currently under development. Check www.ccta.net soon to learn more about the project, project partners and community events!



Impacts of COVID

» Creative Outreach

Approaches

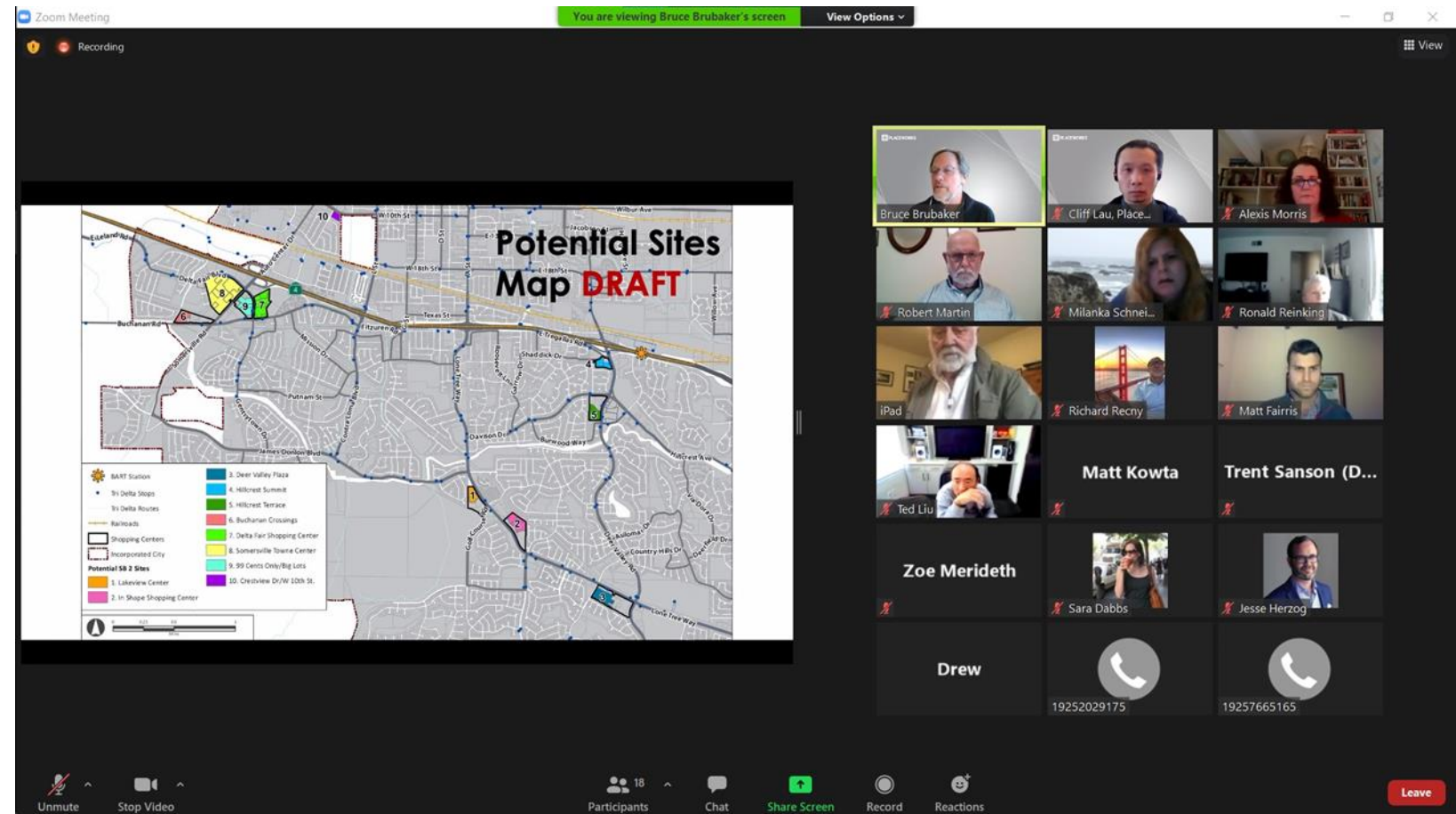
- Distanced engagement
- Digital divide

» Shifted Mobility Landscape

- New community challenges

» Changes in CBO Priorities

- Economic support
- Health and lifestyle support



Current Outreach Efforts

» Stakeholder Surveys

- Broad perspectives


» Community Surveys

- COVID impact questions
- Spanish version: <https://arcg.is/G1WiX>
- English version: <https://arcg.is/j00jb>

» Stakeholder Coordination

- Compensation package
- Various “Levels of Support”

AYUDA A MEJORAR LAS OPCIONES DE TRANSPORTE EN SUR ESTE SAN MATEO COUNTY



PARTICIPE EN EL PLAN CONDADO
SOUTHEAST SAN MATEO PLAN DE
TRANSPORTE BASADO EN LA COMUNIDAD

**POR FAVOR,
TOME NUESTRA ENCUESTA**

**Sus comentarios darán
forma al Plan:**

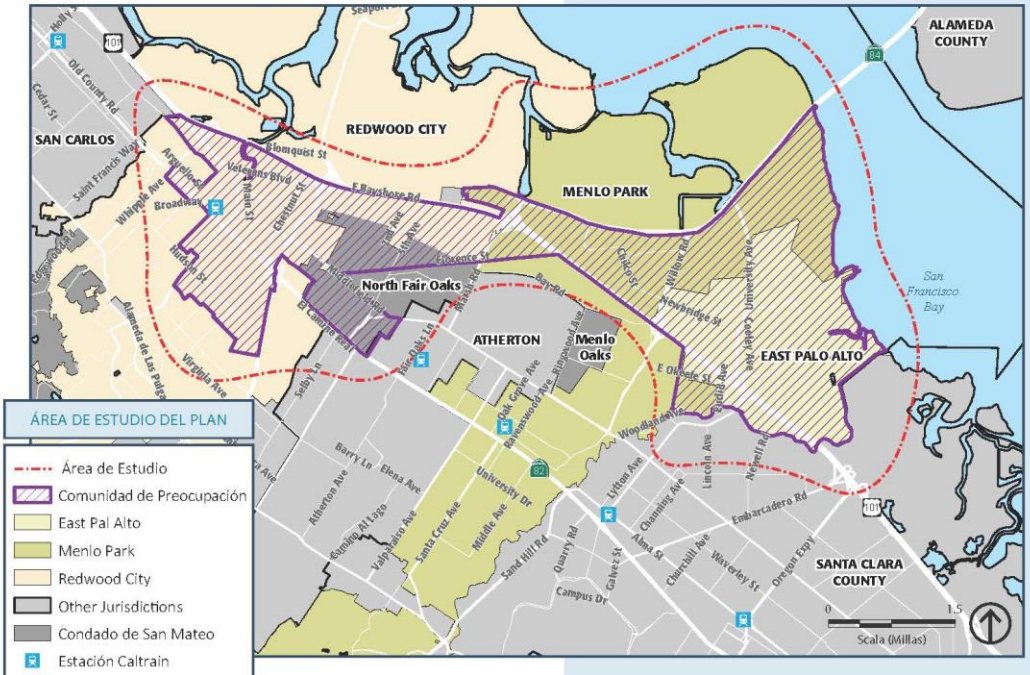
Los resultados de esta breve encuesta sobre los problemas de transporte existentes nos permitirán crear soluciones significativas:

<https://arcg.is/G1WiX>

El CBTP hará:

- Evaluar las brechas de transporte y las barreras identificadas por la comunidad
- Desarrollar soluciones y proyectos para solucionar estos desafíos
- Identificar posibles fuentes de financiación para pagar esas soluciones y proyectos

C/CAG
City/County Association of Governments
of San Mateo County



ÁREA DE ESTUDIO DEL PLAN

- Área de Estudio
- Comunidad de Preocupación
- East Pal Alto
- Menlo Park
- Redwood City
- Other Jurisdictions
- Condado de San Mateo
- Estación Caltrain

CBTP Next Steps

» Increased Survey Distribution

- Stakeholder, government & local leadership social media
- Social support centers

» Stakeholder/CBO Contracts

- Stakeholder survey
- Community Survey distribution
- Meeting facilitation

» Plan & Policy Development

- Advisory Body review and prioritization

Questions for the Commission

- » Known gaps, restrictions or accessibility challenges?
- » Community forums—digital or traditional—for survey distribution?
- » Suggestions for Menlo Park-focused CBO's or non-profits?

- » Web Page: <https://ccag.ca.gov/community-based-transportation-plans/>
- » Susy Kalkin, C/CAG: kkalkin@smcgov.org
- » Greg Goodfellow, PlaceWorks : ggoodfellow@placeworks.com

Menlo Park Complete Streets Commission March 10, 2021



Southeast San Mateo County Community Based Transportation Plans



STAFF REPORT

Complete Streets Commission

Meeting Date: 3/10/2021
Staff Report Number: 21-001-CSC

Regular Business: Receive an update and provide feedback on the Ravenswood Avenue bike lane gap closure project as part of the Ravenswood Avenue Resurfacing project

Recommendation

Staff recommends the installation of the eastbound bike lane to close the gap on Ravenswood Avenue between Alma Street and Noel Drive, as part of the Ravenswood Avenue Resurfacing project.

Policy Issues

The Ravenswood Avenue Resurfacing project, which spans from Alma Street to Marcussen Drive, is included and budgeted in the City's 2020-2021 Capital Improvement Program (CIP).

The Ravenswood Avenue Bike Lane project, from El Camino Real to Noel Drive, is included as part of project No. 78 in the Transportation Master Plan (TMP).

These projects are consistent with policies stated in the 2016 General Plan Circulation Element (eg, CIRC-1.2, CIRC-1.7, CIRC-2.7, etc). These policies seek to maintain a safe, efficient, attractive, user-friendly circulation system that promotes a healthy, safe and active community and quality of life throughout Menlo Park.

Background

On July 28, 2020, the City Council adopted resolution No. 6578 to adopt the five-year CIP for fiscal year 2020-2021, which included funding the Ravenswood Avenue Resurfacing project through the Highway user' tax. Staff expects to construct the Ravenswood Avenue Resurfacing project in the summer of 2021.

On November 17, 2020, the City Council adopted the TMP, which included project No. 78.

Ravenswood Avenue, from El Camino Real to Middlefield Road, is one of the main east-west routes and provides access to key destinations including the Menlo Park Caltrain Station, downtown Menlo Park, Burgess Park, Civic Center, and Menlo-Atherton High School. This route also serves local businesses and many residential units.

Ravenswood Avenue also serves as a key multi-modal connection between US 101 and El Camino Real via Willow Road and Middlefield Road. Other Ravenswood Avenue characteristics include:

- Menlo Park Street Classification: Avenue – Mixed Use (correlated Federal Highway Administration classification: Minor Arterial)
- Four vehicular lanes (two lanes in each direction) from El Camino Real to Noel Drive, then reduces to

- two travel lanes (one lane in each direction) from Noel Drive to Middlefield Road
- Signed 25 miles per hour (mph) from El Camino Real to Laurel Street and 30 mph from Laurel Street to Middlefield Road
- Designated as truck route, fire route, and accommodates several SamTrans bus lines
- Two at-grade Caltrain railroad tracks that run perpendicular to Ravenswood Avenue, located immediately west of Alma Street
- An at-grade Caltrain crossing that has warning gates for vehicular traffic and individual gates for pedestrians
- Existing sidewalk on both sides, except on the north side from Marcussen Drive to Middlefield Road which is in the Town of Atherton
- Existing bike lane in the eastbound direction except from Alma Street to Noel Drive, which has a bike route designation
- Existing bike lane in the westbound direction from Middlefield Road to Noel Drive and a bike route from Noel Drive to El Camino Real

Attachment A illustrates the existing conditions on Ravenswood Avenue as described above.

Analysis

Transportation operations study

The Ravenswood Avenue Resurfacing project is planned for construction in the summer of 2021 and is not scoped or budgeted to change the roadway width. However, a comprehensive approach was taken during the planning phase to evaluate potential bike lane design concepts and consider their advantages and disadvantages. Staff retained Hexagon Transportation Consultants to conduct this analysis.

Since the Ravenswood Avenue bike lane project is intended to utilize the resurfacing project, the scope of this project is limited to between Alma Street and Noel Drive. The following three concepts for Ravenswood Avenue were chosen to move forward with a comprehensive transportation analysis:

- “No project”: Existing roadway geometries
- Concept A: Install bike lanes in both directions and maintain four vehicular travel lanes (two lanes in each direction). This concept requires two main modifications: 1) expand the roadway width by moving the south curb and sidewalk further south toward the Menlo Park Library and, 2) reduce vehicular capacity by relocating the lane transition points in both directions from Noel Drive to Alma Lane, or approximately 160 feet.
- Concept B: Install bike lanes in both directions and three vehicular travel lanes (two eastbound lanes, one westbound lane). This concept maintains the existing curbs.

Attachment B illustrates Concepts A and B.

The study evaluated these concepts using existing (Year 2019) and future (Year 2040) volumes. The “existing” volumes reflect Year 2019 conditions prior to the COVID-19 pandemic. The “future” volumes reflect Year 2040 conditions extracted from the Middle Plaza at 500 El Camino Real environmental study approved in late 2017. Attachment C shows the existing and future volumes along Ravenswood Avenue.

The study was conducted using a microsimulation software called Synchro/SimTraffic. This software is typically chosen for congested corridors due to its ability to simulate and evaluate the full transportation effects and interactions between intersections. Study networks were created using the following criteria and

assumptions:

- Study area: Ravenswood from El Camino Real to Laurel Street
- Study performance metrics: intersection level of service (LOS) and roadway queue distance
- Railroad operation: assumed at-grade operation for both existing and future analyses, with average gate activation and gate down times reflective of pre-COVID conditions
- Ravenswood Avenue and Laurel Street intersection: assumed new configurations and signal operation approved by the City Council on December 8, 2020, for future analyses

Study results

The results from each concept were evaluated individually and compared to each other and to the “no project” concept to fully understand their impacts.

Existing conditions

Under existing conditions, all study intersections continued to operate at LOS D or better during both peak hours for all three concepts. LOS D is the minimum acceptable intersection congestion level based on the City’s standard. The lone notable difference is westbound Ravenswood Avenue at Alma Street, where the average delay is nearly doubled to approximately 25 seconds per vehicle in the morning peak hour and to 31 seconds per vehicles under Concept B, when compared to “no project” or Concept A.

Similar to the LOS results, the 95th percentile peak hour queues at the study intersections were similar between all three concepts, except in the westbound direction at Alma Street, where Concept B extended the queue back to Laurel Street, but did not have visible impact to the operation of the Ravenswood Avenue and Laurel Street intersection. When compared to “no project,” Concept A added an average of 170 feet and Concept B added an average of 410 feet to the westbound queue at Alma Street. The 95th percentile queue is calculated based on simulated maximum queues and commonly used for the design of turn lanes or storage lanes.

Future conditions

Under future conditions, all study intersections deteriorated to LOS F during both peak hours for all three concepts. Due to the significant queue on westbound Ravenswood Avenue, the notable difference occurred at the intersection of Ravenswood Avenue and Laurel Street, where Concept B increased the intersection delay per vehicle by an average of 80 seconds in the morning and 30 seconds in the evening, when compared to “no project” or Concept A.

Similar to the LOS results, the 95th percentile peak hour queues at the study intersections were similar between all three concepts, except at the intersection of Ravenswood Avenue and Laurel Street. Due to the significant queue on westbound Ravenswood Avenue, it impacted the three remaining approaches at the intersection of Ravenswood Avenue and Laurel Street, particularly during the morning peak hour as summarized in Table 1 below.

Table 1: Ravenswood Ave. / Laurel St. queue comparison						
Approach	Peak hour	No project	Concept A	Concept B	Concept A – No project	Concept B – No project
Northbound	AM	1,560	1,980	2,860	420	1,300
	PM	2,880	2,900	2,920	20	40
Southbound	AM	1,040	1,240	1,500	200	460
	PM	1,100	1,360	1,480	260	380

Table 1: Ravenswood Ave. / Laurel St. queue comparison						
Approach	Peak hour	No project	Concept A	Concept B	Concept A – No project	Concept B – No project
Westbound	AM	520	660	1,480	140	960
	PM	680	740	1,320	60	640

These results are reflective of the vehicle capacity reduction in the westbound direction at Alma Street under both Concepts A and B.

Attachment D displays the complete LOS and queue table results and Attachment E illustrated the 95th percentile queues for all three concepts.

Staff recommendation

Based on the study results, Concept A could provide bike lanes without significant increase to roadway congestion. However, Concept A would adversely lengthen the existing Ravenswood crosswalk at Alma Street. Furthermore, relocating the existing southern curb and sidewalk would significantly increase the budget and would not meet the planned schedule for paving in 2021.

Concept B could provide bike lanes without a significant increase to the budget and schedule. However, the impact to roadway congestion, particularly in the westbound direction, would be significant during both the morning and evening peak hours. It’s also important to note that while a new westbound bike lane would extend the existing facility from Noel Drive to Alma Street by approximately 230 feet. It also moves the location of the transition from a bike lane to a bike route to immediately adjacent to the train tracks.

As a result, staff is recommending the installation of the eastbound bike lane to close the gap on Ravenswood Avenue between Alma Street and Noel Drive for the following benefits:

- Provides a complete bike lane facility in the eastbound direction
- Provides an opportunity to reduce the existing travel lane widths
- Retains existing curbs and can be completed with the resurfacing project without adding costs or schedule delays
- Minimizes the increase in roadway congestion

Next steps

The Ravenswood Avenue Resurfacing project is expected start construction this summer. Staff anticipates incorporating Commission feedback from the meeting into the final design within the next few months. If additional budget or City Council is required, staff will bring this item and potential project schedule implications to the City Council for additional direction.

Impact on City Resources

City resources required to complete this transportation study and design is included in the City’s 2020-2021 CIP budget. While no additional resources are being requested at this time, staff will reassess after this Commission meeting.

Environmental Review

This project is categorically exempt under Class 1 of the California Environmental Quality Act. Class 1

allows for minor alterations of existing facilities, including highways and streets, sidewalks, gutters, bicycle and pedestrian access, and similar facilities, as long as there is negligible or no expansion of use.

Public Notice

Public notification was achieved by posting the agenda, with the agenda items being listed, at least 72 hours prior to the meeting. Staff also posted the meeting information on the City's social media platforms and conducted individual outreach to immediately impacted stakeholders such as immediate business owners, Stanford Research Institute, and Menlo Park schools.

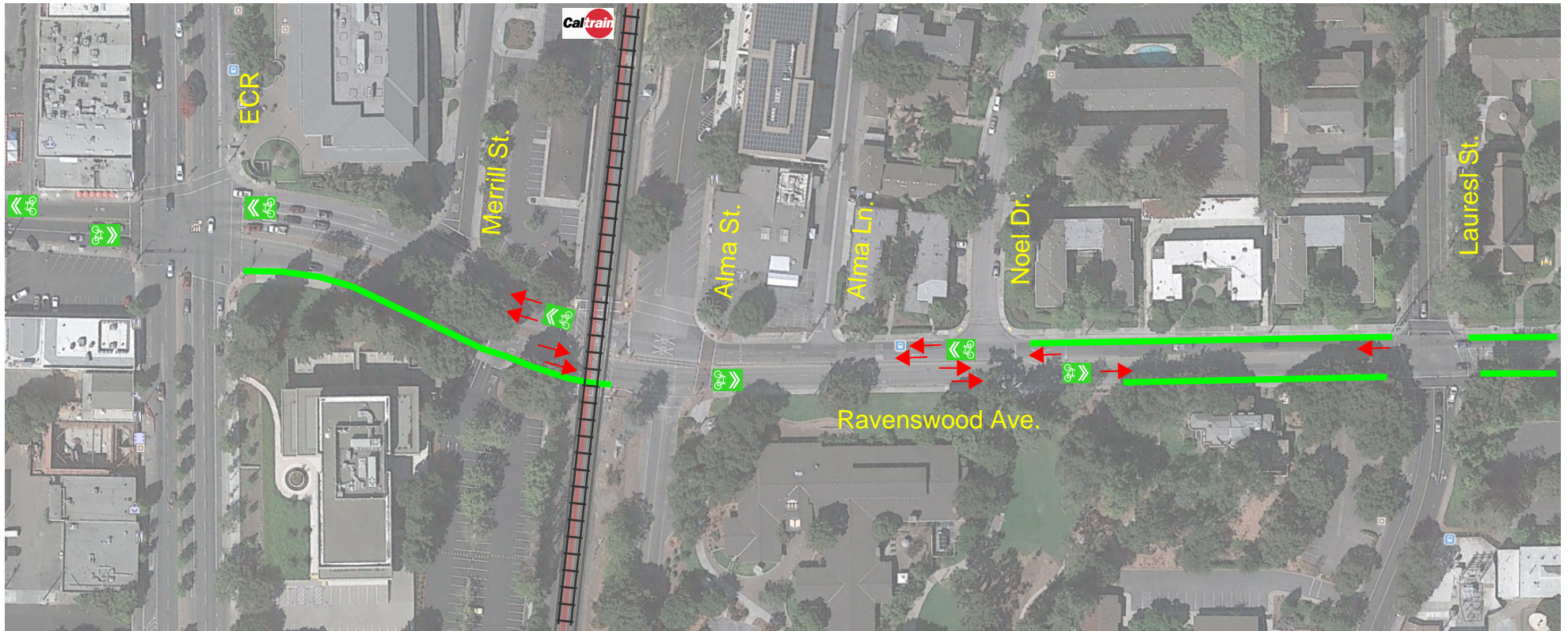
Attachments

- A. Existing conditions
- B. Concepts A and B
- C. Existing and future volumes
- D. LOS and queue tables
- E. 95th percentile queue figures






Report prepared by:
Kevin Chen, Senior Transportation Engineer

Report reviewed by:
Kristiann Choy, Acting Transportation Manager

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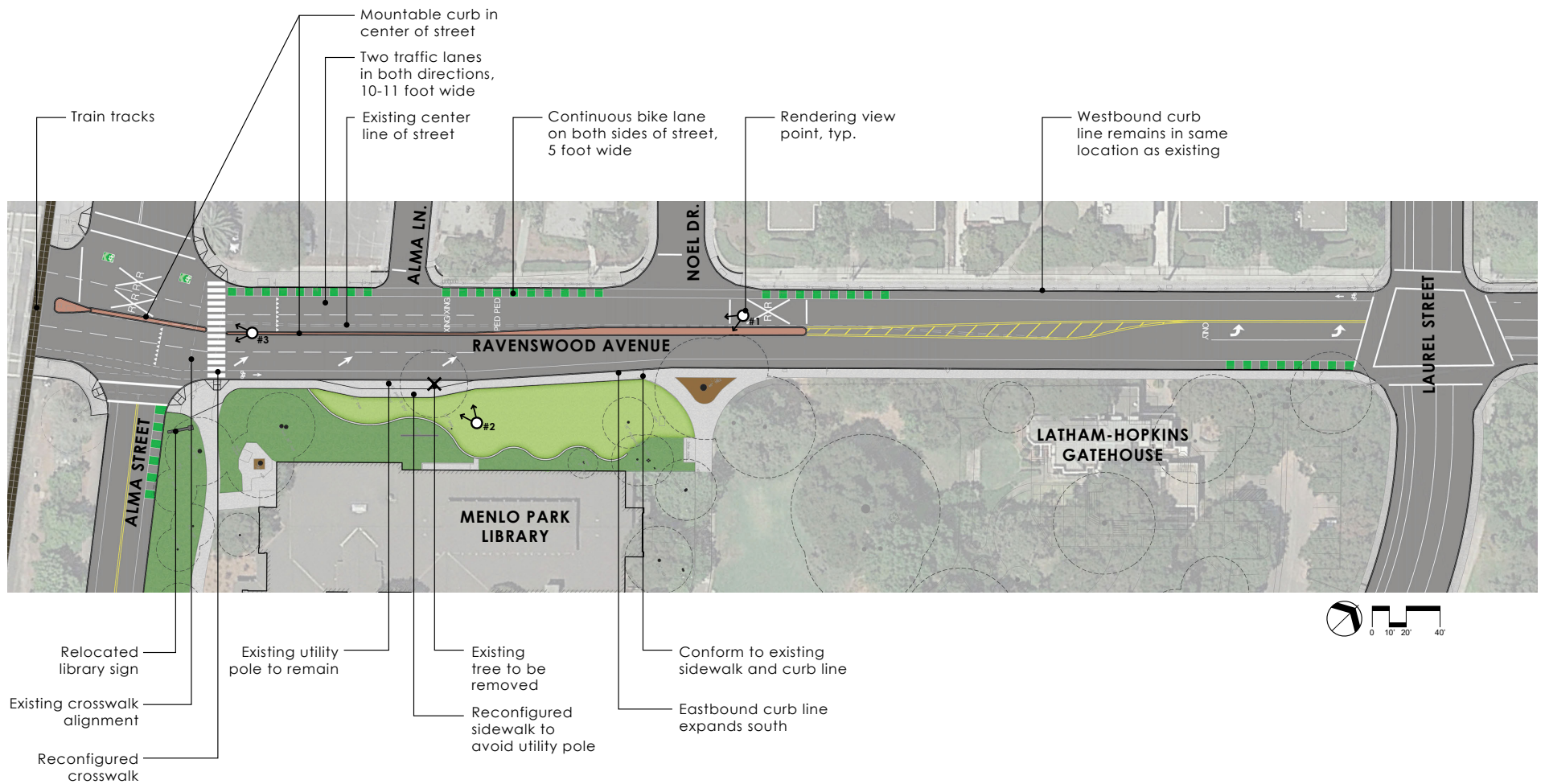
Legends:

 Bike lane	 Bike routes	 Railroad tracks	 Caltrain station	 Travel lanes
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EXISTING CONDITIONS
RAVENSWOOD AVENUE

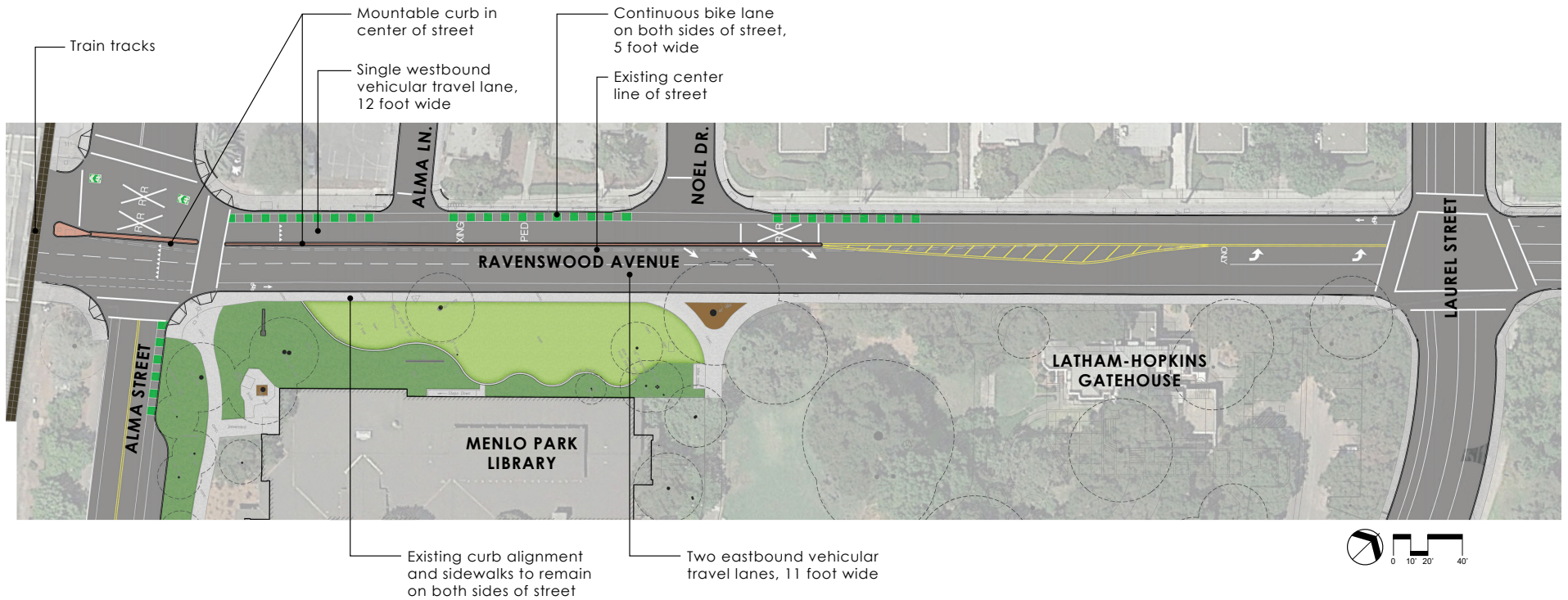
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Ravenswood Bike Lane Improvements



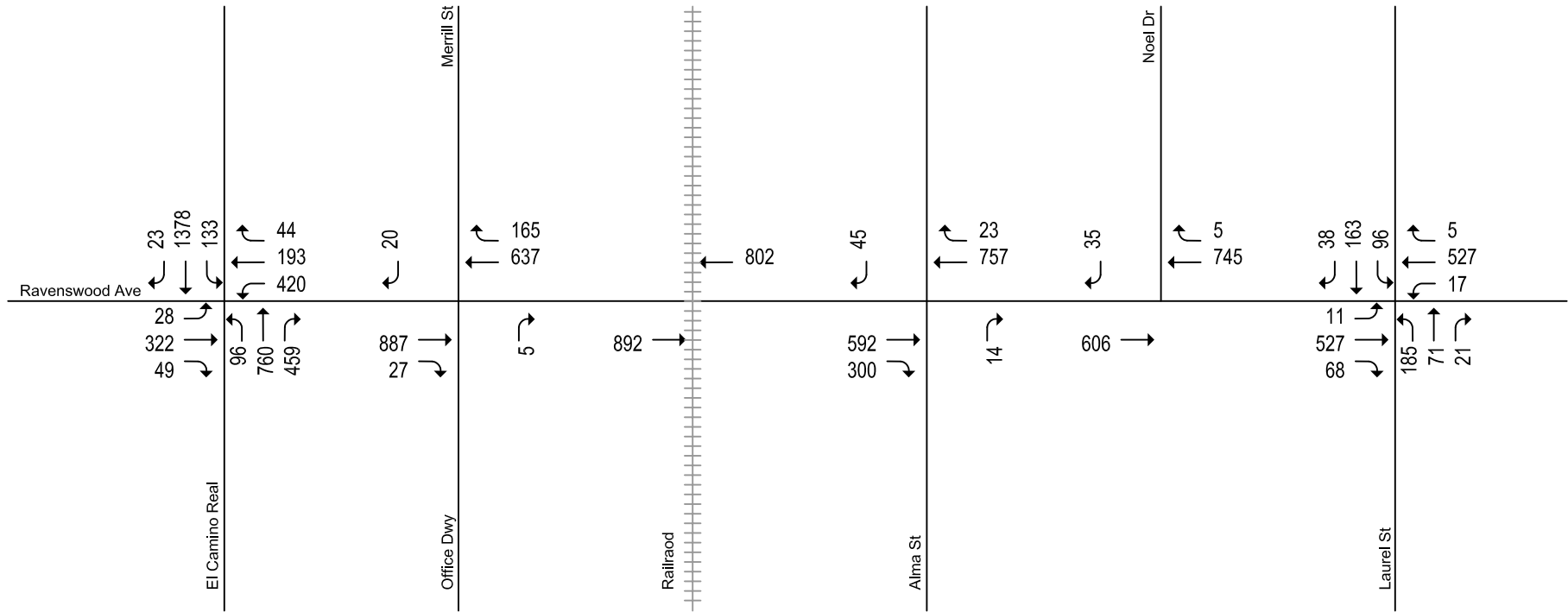
BIKE LANE CONCEPT A
RAVENSWOOD AVENUE

Ravenswood Avenue Bike Lane Concept A



BIKE LANE CONCEPT B
RAVENSWOOD AVENUE

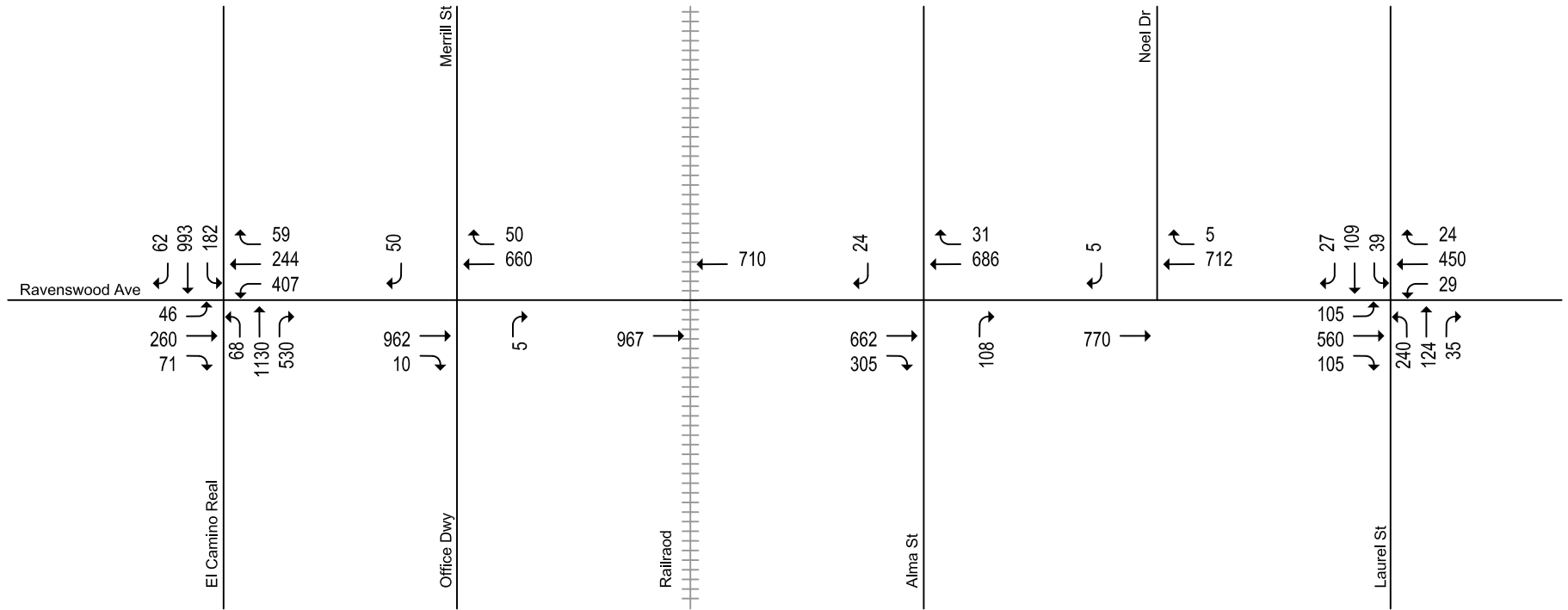
Ravenswood Bike Lane Improvements



LEGEND

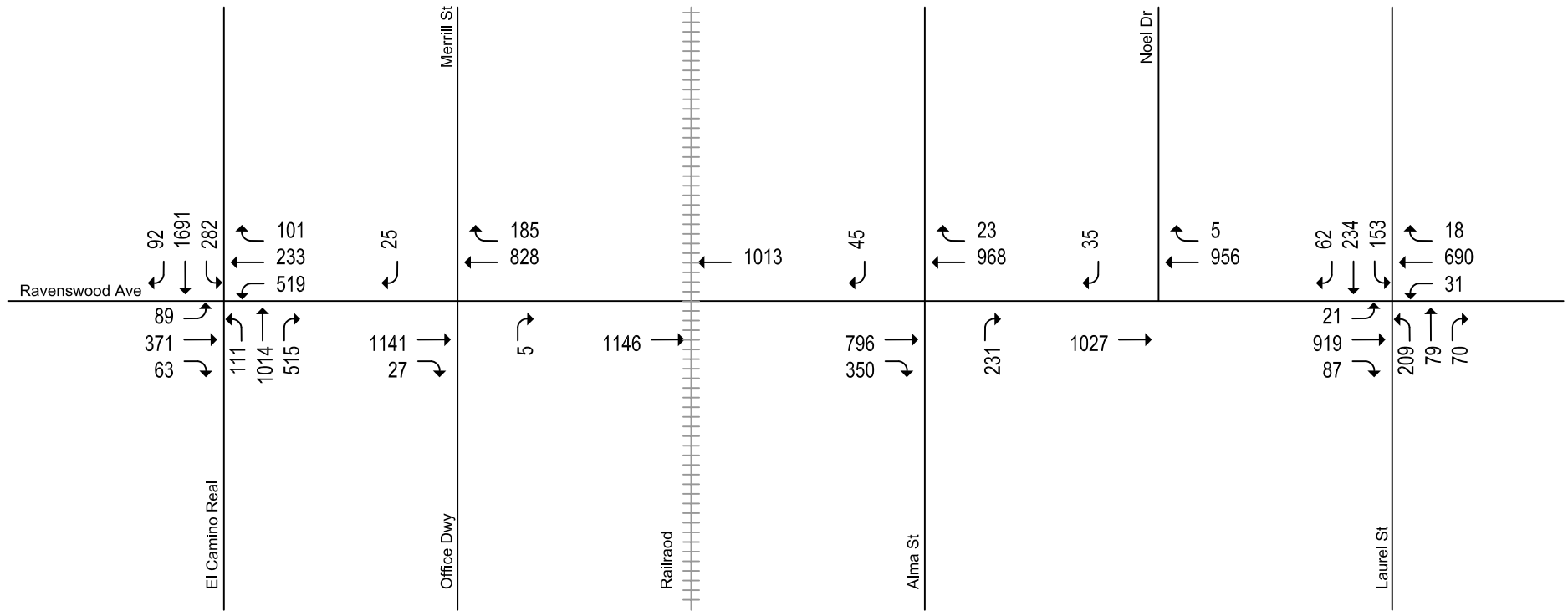
XX = AM Peak-Hour Traffic Volumes

Existing AM Traffic Volumes



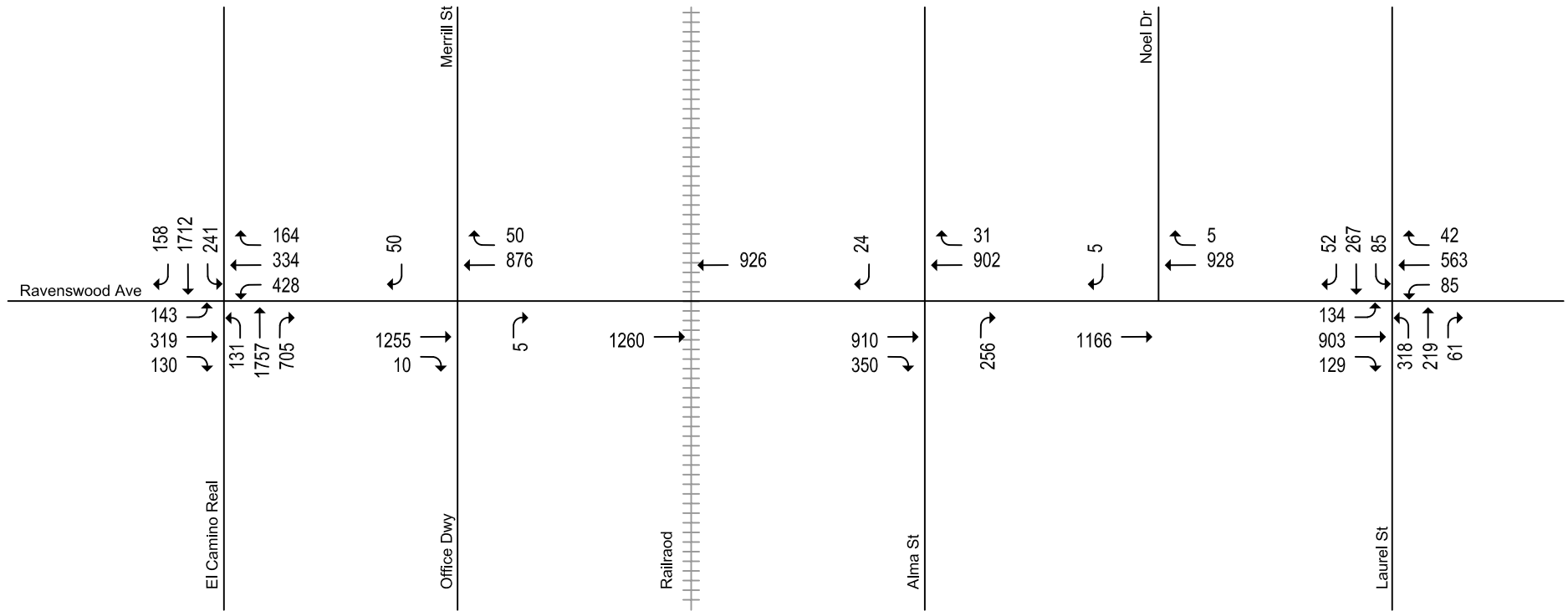
LEGEND

XX = PM Peak-Hour Traffic Volumes



LEGEND

XX = AM Peak-Hour Traffic Volumes



LEGEND

XX = PM Peak-Hour Traffic Volumes

Ravenswood Avenue Bike Lane Improvements – Traffic Analysis

Existing Conditions Intersection Delay and LOS

#	Intersection	Traffic Control	Peak Hour	Existing Traffic Volumes							
				Current (No Bike Lanes)		Concept Plan A ¹		Concept Plan B ²			
				Delay ³	LOS	Delay ³	LOS	Delay ³	LOS		
1	Ravenswood & Laurel St	Signal	AM	31.35	C	31.21	C	31.25	C		
			PM	30.62	C	31.85	C	31.57	C		
2	Ravenswood & Alma St	TWSC	NB Alma Street	Stop	AM	7.10	A	6.20	A	5.80	A
				PM	7.50	A	7.90	A	7.00	A	
			SB Alma Street	Stop	AM	11.30	B	10.60	B	9.30	A
				PM	10.60	B	11.20	B	9.90	A	
			EB Ravenswood	Yield	AM	30.74	D	30.36	D	28.84	D
				PM	46.59	E	52.21	F	45.15	E	
			WB Ravenswood	Yield	AM	12.92	B	14.98	B	25.00	D
				PM	14.93	B	17.18	C	30.61	D	
3	Ravenswood & El Camino Real	Signal	AM	40.40	D	40.75	D	40.59	D		
			PM	44.47	D	49.06	D	43.08	D		

Notes-

TWSC - Two Way Stop Control

BOLD - Indicates deficient LOS operation.

¹ Under Concept Plan A, the existing merge (from 2 travel lanes to 1 travel lane) on eastbound Ravenswood that currently exists east of Noel Drive would be offset approximately 175 feet to the west.

² Under Concept Plan B, travel lanes on westbound Ravenswood between Noel Drive and Alma Street would be reduced from two lanes to one lane. The location of the existing merge (from 2 travel lanes to 1 travel lane) on eastbound Ravenswood would not change.

³ The delay reflects extended queues from the downstream intersection.

Existing Conditions AM Peak Hour Queues

Intersection		Existing Conditions - AM Peak Hour Queues (in feet)						
		Storage	Current (No Bike Lanes)		Concept Plan A ¹		Concept Plan B ²	
			Avg	95th	Avg	95th	Avg	95th
<u>Ravenswood/Laurel street</u>								
NB	Left	1,700	140	260	140	260	140	260
SB	Left/Through/Right	1,000	200	320	200	320	200	320
EB	Through	680	280	500	280	540	280	500
WB	Through	1,920	240	380	240	380	240	380
<u>Ravenswood/Alma Street</u>								
EB	Through	400	240	400	240	400	220	400
WB	Through	680	120	240	160	420	300	640
<u>Ravenswood/El Camino Real</u>								
EB	Through	1,120	180	320	180	300	200	320
WB	Through	360	240	440	240	440	240	420
NB	Right	580	120	220	120	220	120	220
SB	Left	240	180	340	180	360	180	340
Notes:-								
¹ Under Concept Plan A, the existing merge (from 2 travel lanes to 1 travel lane) on eastbound Ravenswood that currently exists east of Noel Drive would be offset approximately 175 feet to the west.								
² Under Concept Plan B, travel lanes on westbound Ravenswood between Noel Drive and Alma Street would be reduced from two lanes to one lane. The location of the existing merge (from 2 travel lanes to 1 travel lane) on eastbound Ravenswood would not change.								
XXX - Bold indicates queue length exceeds storage.								
The queueing analysis takes into account extended queue from the downstream intersection.								

Existing Conditions PM Peak Hour Queues

Intersection		Existing Conditions - PM Peak Hour Queues (in feet)						
		Storage	Current (No Bike Lanes)		Concept Plan A ¹		Concept Plan B ²	
			Avg	95th	Avg	95th	Avg	95th
<u>Ravenswood/Laurel</u>								
NB	Left	1,700	200	340	200	380	200	360
SB	Left/Through/Right	1,000	120	200	120	200	120	200
EB	Through	680	320	560	340	640	320	580
WB	Through	1,920	200	340	200	320	200	340
<u>Ravenswood/Alma Street</u>								
EB	Through	400	280	440	300	460	280	440
WB	Through	680	120	260	140	420	320	680
<u>Ravenswood/El Camino Real</u>								
EB	Through	1,120	200	340	220	460	180	300
WB	Through	360	260	460	260	460	260	460
NB	Right	580	180	340	200	420	180	340
SB	Left	240	200	340	220	360	200	320

Notes:-

¹ Under Concept Plan A, the existing merge (from 2 travel lanes to 1 travel lane) on eastbound Ravenswood that currently exists east of Noel Drive would be offset approximately 175 feet to the west.

² Under Concept Plan B, travel lanes on westbound Ravenswood between Noel Drive and Alma Street would be reduced from two lanes to one lane. The location of the existing merge (from 2 travel lanes to 1 travel lane) on eastbound Ravenswood would not change.

XXX - Bold indicates queue length exceeds storage.

The queueing analysis takes into account extended queue from the downstream intersection.

Year 2040 Intersection Delay and Level of Service

#	Intersection	Traffic Control	Peak Hour	Year 2040 Conditions							
				No Improvements		Concept Plan A ¹		Concept Plan B ²			
				Delay ³	LOS	Delay ³	LOS	Delay ³	LOS		
1	Ravenswood & Laurel St	Signal	AM	88.42	F	113.03	F	181.17	F		
			PM	201.58	F	199.48	F	230.67	F		
2	Ravenswood & Alma St	TWSC	NB Alma Street	Stop	AM	14.20	B	14.60	B	11.20	B
				PM	19.90	C	20.10	C	22.90	C	
			SB Alma Street	Stop	AM	16.40	C	18.30	C	11.40	B
				PM	14.60	B	14.80	B	11.80	B	
			EB Ravenswood	Yield	AM	68.21	F	71.11	F	62.14	F
				PM	75.83	F	80.24	F	82.84	F	
			WB Ravenswood	Yield	AM	22.92	C	29.08	D	65.93	F
				PM	29.20	D	30.17	D	61.21	F	
3	Ravenswood & El Camino Real	Signal	AM	208.32	F	205.02	F	178.89	F		
			PM	305.21	F	310.87	F	312.92	F		

Notes-

TWSC - Two Way Stop Control

XXX - Bold indicates deficient LOS operation.

¹ Under Concept Plan A, the existing merge (from 2 travel lanes to 1 travel lane) on eastbound Ravenswood that currently exists east of Noel Drive would be offset approximately 175 feet to the west.

² Under Concept Plan B, travel lanes on westbound Ravenswood between Noel Drive and Alma Street would be reduced from two lanes to one lane. The location of the existing merge (from 2 travel lanes to 1 travel lane) on eastbound Ravenswood would not change.

³ The delay reflects extended queues from the downstream intersection.

Year 2040 Conditions AM Peak Hour Queues

Intersection	Storage	Year 2040 Conditions - AM Peak Hour Queues					
		No Bike Lane Improvements		Concept Plan A ¹		Concept Plan B ²	
		Avg	95th	Avg	95th	Avg	95th
<u>Ravenswood/Laurel street</u>							
NB Left	1,700	760	1,560	1,080	1,980	1,620	2,860
SB Left/Through/Right	1,000	560	1,040	640	1,240	840	1,500
EB Through	680	460	720	520	840	500	720
WB Through	1,920	320	520	380	660	760	1,480
<u>Ravenswood/Alma Street</u>							
EB Through	400	360	440	360	440	360	460
WB Through	680	220	560	380	800	680	880
<u>Ravenswood/El Camino Real</u>							
EB Through	1,120	1,120	1,960	1,200	2,100	780	1,440
WB Through	360	340	520	360	540	280	480
NB Right	580	540	1,040	560	1,020	460	920
SB Left	240	320	340	300	340	300	360

Notes:-

XXX - Bold indicates queue length exceeds storage.

¹ Under Concept Plan A, the existing merge (from 2 travel lanes to 1 travel lane) on eastbound Ravenswood that currently exists east of Noel Drive would be offset approximately 175 feet to the west.

² Under Concept Plan B, travel lanes on westbound Ravenswood between Noel Drive and Alma Street would be reduced from two lanes to one lane. The location of the existing merge (from 2 travel lanes to 1 travel lane) on eastbound Ravenswood would not change.

- The queueing analysis takes into account extended queue from the downstream intersection.

- The average and 95th percentile queue lengths reported are limited by the link distance. Any queue spill over is reflected in the queue lengths reported at the upstream intersection.

- Under Concept Plan B, where there would be only 1 lane on westbound Ravenswood between Alma and Laurel Street, the throughput across the rail crossing would be reduced resulting in fewer vehicles arriving at the El Camino Real intersection. As the El Camino Real intersection is actuated, due to fewer number of cars arriving on the westbound approach, the signal green time is redistributed resulting in shorter queue lengths for the eastbound approach compared to the other two scenarios.

Year 2040 Conditions PM Peak Hour Queues

Intersection		Storage	Year 2040 Conditions - PM Peak Hour Queues					
			No Bike Lane Improvements		Concept Plan A ¹		Concept Plan B ²	
			Avg	95th	Avg	95th	Avg	95th
<u>Ravenswood/Laurel</u>								
NB	Left	1,700	2,240	2,880	2,220	2,900	2,220	2,920
SB	Left/Through/Right	1,000	580	1,100	720	1,360	780	1,480
EB	Through	680	660	800	660	860	700	820
WB	Through	1,920	400	680	400	740	600	1,320
<u>Ravenswood/Alma Street</u>								
EB	Through	400	360	440	360	440	360	440
WB	Through	680	280	680	300	720	560	920
<u>Ravenswood/El Camino Real</u>								
EB	Through	1,120	1,480	2,260	1,460	2,280	1,560	2,280
WB	Through	360	220	400	220	380	220	400
NB	Right	580	2,200	3,520	2,180	3,440	2,180	3,460
SB	Left	240	320	340	320	320	300	340

Notes:-

XXX - Bold indicates queue length exceeds storage.

¹ Under Concept Plan A, the existing merge (from 2 travel lanes to 1 travel lane) on eastbound Ravenswood that currently exists east of Noel Drive would be offset approximately 175 feet to the west.

² Under Concept Plan B, travel lanes on westbound Ravenswood between Noel Drive and Alma Street would be reduced from two lanes to one lane. The location of the existing merge (from 2 travel lanes to 1 travel lane) on eastbound Ravenswood would not change.

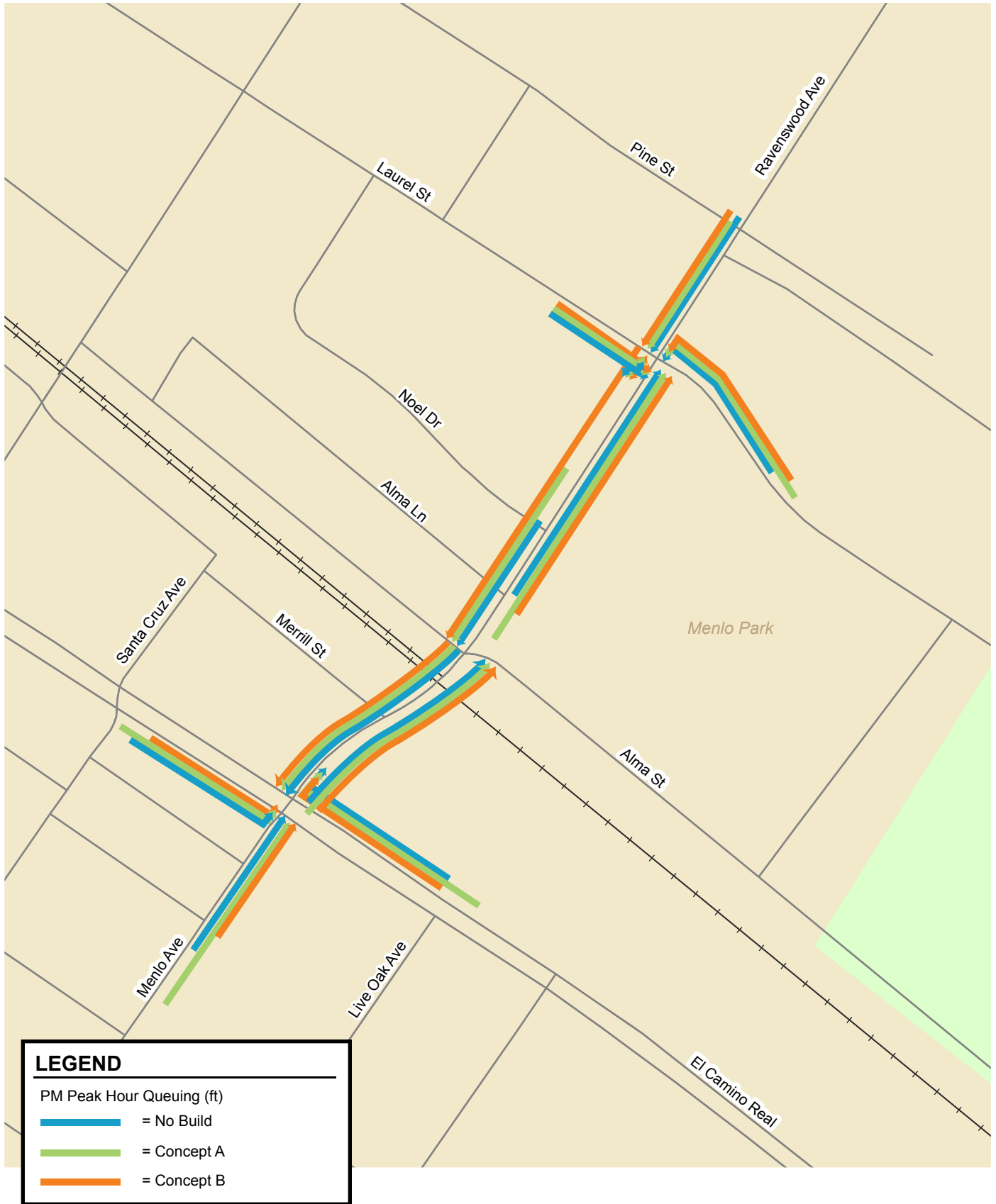
- The queueing analysis takes into account extended queue from the downstream intersection.

- The average and 95th percentile queue lengths reported are limited by the link distance. Any queue spill over is reflected in the queue lengths reported at the upstream intersection.

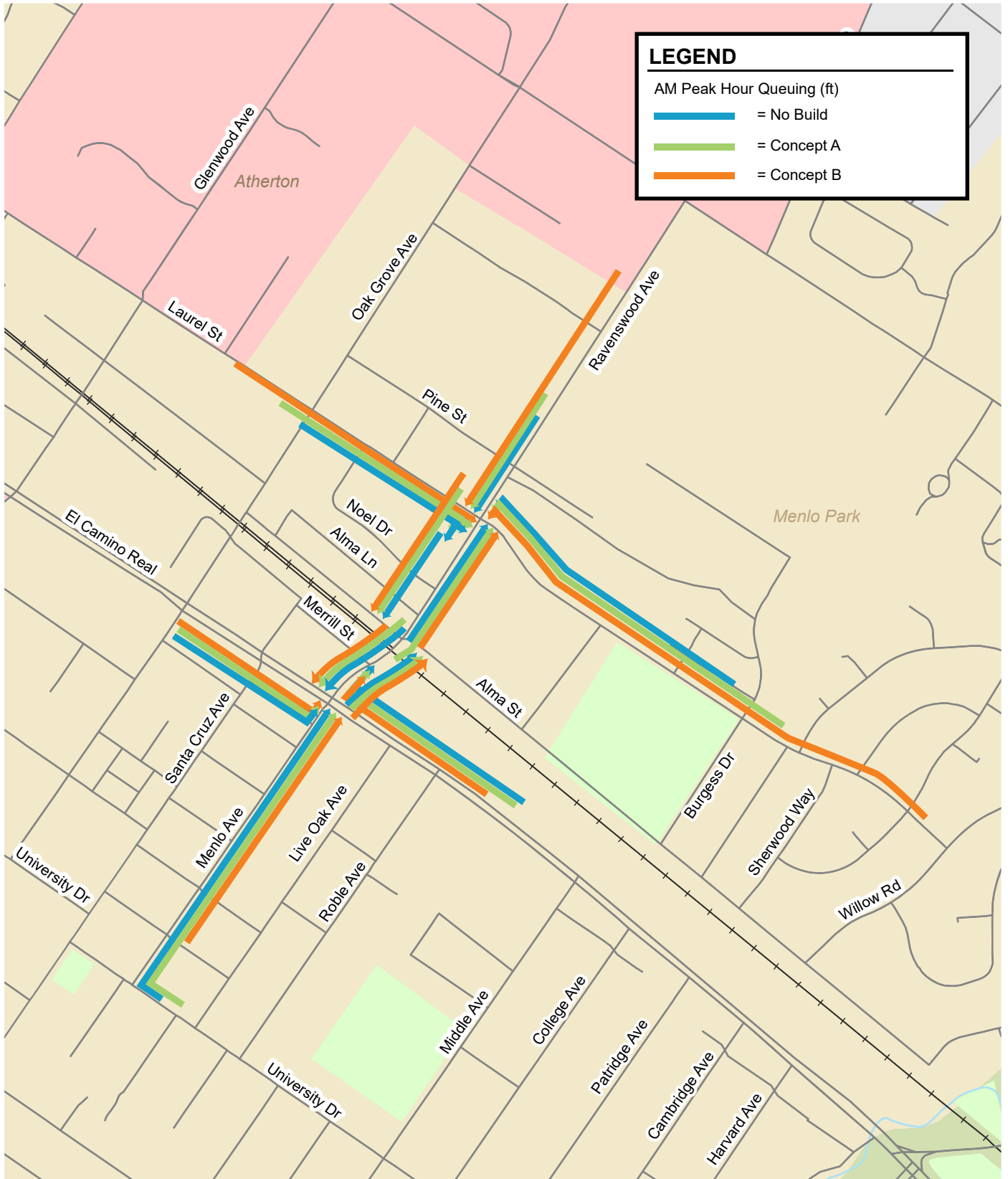
Ravenswood Bike Lane Improvements



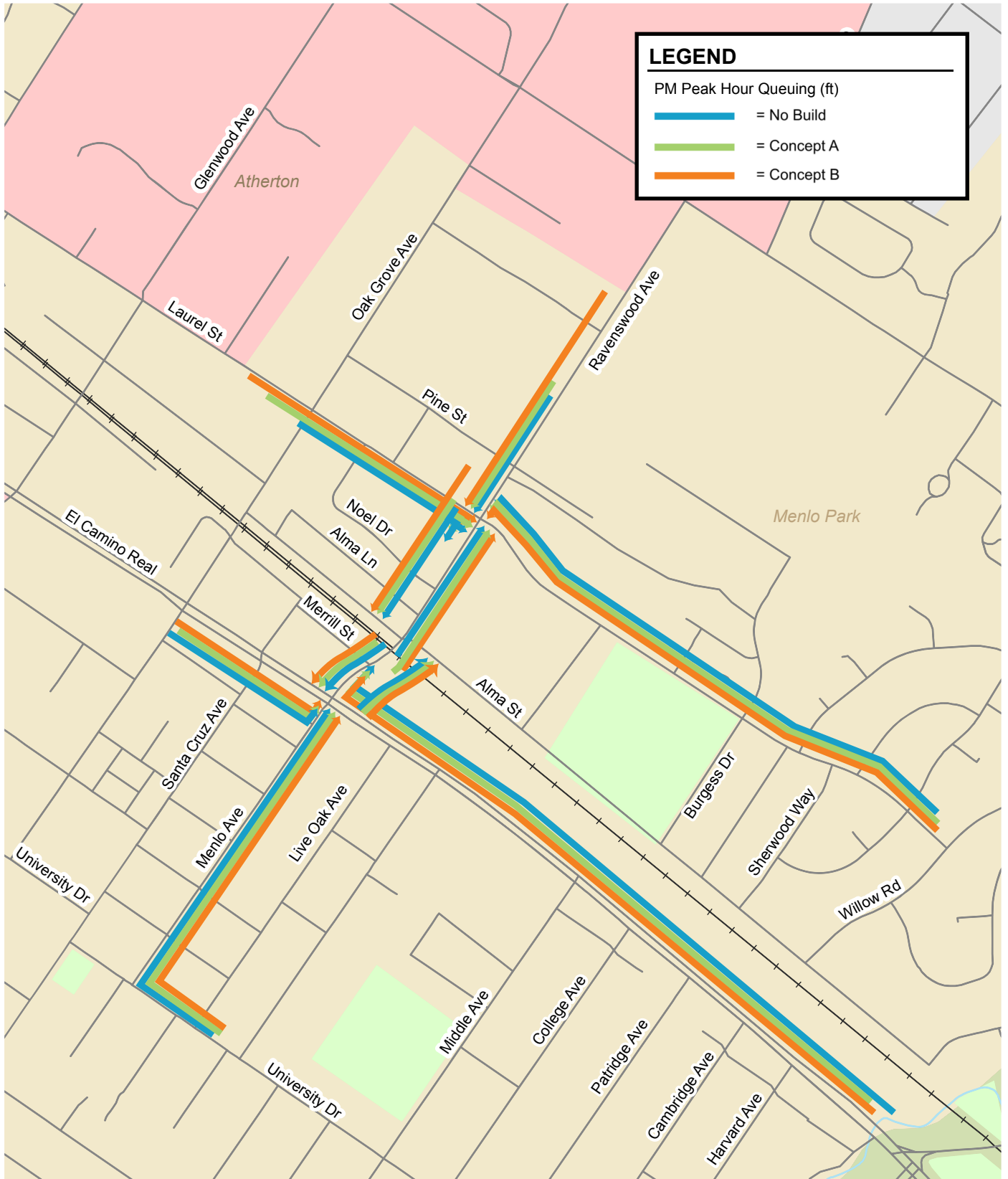
Existing Volumes AM Peak Hour Queue - 95th Percentile Queue



Existing Volumes PM Peak Hour Queue - 95th Percentile Queue



2040 Volumes AM Peak Hour Queue - 95th Percentile Queue



2040 Volumes PM Peak Hour Queue - 95th Percentile Queue

Menlo Park TMP Implementation Recommendations

The Complete Streets Commission has created a TMP (Transportation Master Plan) Implementation Plan subcommittee¹ to provide insights to the City Council on how to prioritize transportation projects in ways most likely to support our city's goals, with special focus on:

- 1) Eliminating traffic fatalities (Vision Zero) and
- 2) Reducing driving miles (AKA "VMT reduction"—a key strategy in our recently adopted Climate Action Plan).

City Council Process

The City Council's process includes several steps

- 1) Priority-setting. The City Council sets its goals and priorities for the upcoming fiscal year (July 21-June 22). These are a limited set of projects and programs that the Council considers its highest priorities for the year. There are other projects and programs that will be included in the city's workplan, but that are not considered Priorities
- 2) Capital Improvement Plan and Budget. The City Council approves a multi-year Capital Improvement Plan and a budget that funds the capital and operating expenses of the city for the coming year.

Subcommittee Process

The subcommittee is working on developing recommendations for these elements of the Council's process: the Priorities for the city, as well as the CIP and budget.

As reference material, the subcommittee reviewed the Transportation Master Plan, last year's Capital Improvement Plan (CIP), and recent staff reports on 2021-22 Council goal setting. To focus on projects most likely to address key safety issues, the subcommittee reviewed the city's collision heat map in Appendix III of the TMP and cross-referenced it against projects in the goals list and the CIP pipeline. For reducing driving mileage (VMT), staff suggested that we prioritize projects that connect a variety of local destinations and provide practical alternatives to driving.

Recommended Council Priorities

In reviewing staff reports for 2021/2 goal setting, the TMP, and last year's Capital Improvement Plan, our subcommittee finds that the city currently has a pipeline of projects that are well-aligned with the complementary goals of VMT reduction and safety improvement.

As carryover from the previous year, the Council's Priority list already includes a pair of projects that the Complete Streets Commission has supported in previous years.

- **Middle Avenue pedestrian/bicycle crossing and traffic calming.** This pair of projects is listed on the Council's current priority list, and we recommend that they remain. They are timely, since construction of the undercrossing prior to Caltrain electrification will reduce the cost of the project, and the opening of 500 El Camino Real mixed use development will bring many more people to the location. The Middle Avenue route that connects to and from the bike/ped crossing

¹ Members include Adina Levin, Jacquie Cebrian, and ad hoc contributor Katie Behroozi

is valuable for local trips to many common destinations in both directions such as schools, parks, the Burgess campus, the San Mateo Bike Boulevard to Stanford, Safeway and downtown.

In previous years, the Complete Streets Commission has voted to support the bicycle/pedestrian crossing project, and complete streets treatments for Middle Avenue that enable slower driving and improve safety.

This year, the Subcommittee strongly supports retaining Middle Avenue improvements as a Council priority, and would recommend that council commit to implementing the full bike and pedestrian improvements described in the TMP instead of focusing more narrowly on speed reduction and traffic calming. (Recent projects on Oak Grove and Santa Cruz have demonstrated that narrowing driving lanes and adding bike lanes and sidewalks has a natural traffic calming effect while adding additional benefits of VMT reduction.)

- **Transportation Management Association.** The staff recommends keeping this program in the Council priority list. This project has the potential to prevent and reduce the resurgence of congestion when the pandemic eases and to help reduce VMT for longer commute trips. We support retaining this project, pending the results and recommendations from consultants and staff that are expected to come forward soon.

Additional recommendations for Capital Improvement Plan and Budget

In addition to the above Priorities, the following projects are in the CIP and budget queue, and we recommend retaining them in the city's near future plans.

- **Middlefield Road–Woodland to Ravenswood.** This is a CIP project with spending proposed for 2021/22 and 2022/23. The Middlefield corridor includes several intersections at Ravenswood, Ringwood, and Linfield/Santa Monica that are categorized as Tier 1 projects in the TMP and are relative hot spots in the city's collision map. This corridor and its intersections are important for many local trips to common destinations such as schools, food shopping, transit, and downtown, and workplaces. This is not called out as a Council Priority but has a well-merited spot in the CIP for 2021-3. Please keep it in the queue.
- **Willow and Newbridge bicycle and pedestrian improvements.** This is a CIP project with spending proposed for 2022/3. This hazardous intersection is a major hotspot in the city's collision map and enables connections to valuable local destinations such as food stores, bus stops, and schools. The Willow corridor north of 101 has other intersections with Tier 1 projects identified in the CMP including O'Brien and Ivy (Hamilton is identified as a Tier 2 project). Given the increased commercial and residential density in the Bayside area, all of these will merit attention in the coming years.

Our subcommittee strongly recommends keeping these projects on a fast track for implementation and avoiding taking on new projects that would delay or displace them.

If there are alternative transportation projects proposed by City Council, it would be helpful for Council to understand the impacts those projects might have on projects that are already in the queue, as well as their relative impact on our longer term climate and safety goals.

Additional TMP Implementation Recommendations for Capital Improvement Plan

Design Standards and Principles that Further City Safety and Climate Goals. In past discussions of the Transportation Master Plan implementation, Complete Streets Commissioners expressed interest in seeing the city move toward clearly articulated baseline standards for street and sidewalk design.

Currently, engineering staff draw from a set of established technical standards when developing new infrastructure. However, the minimum viable standards with which staff can work are not always the same as the level desirable or optimal for safety.

To improve safety and slow traffic speeds, for example, we should be looking at narrowing travel lanes, especially in residential and mixed use neighborhoods. By the same token, to reduce VMT and encourage alternatives to driving, we should be building sidewalks and bike lanes that are (where possible) wider than the minimum standard and consistently available to all users at all times of day. Because these design principles are implied by our Complete Streets and Vision Zero policies, but not explicit, they are subject to interpretation and can be compromised.

Therefore, the Subcommittee recommends that City Council consider adopting defined goals and standards for sidewalk, bike lane, and repaving projects. Such goals and standards would allow for some discretion around contextual issues such as available right of way, relative level of vehicle traffic, and land uses, but also result in more uniform outcomes throughout the city.

During the Council discussion on Budget Principles on 2/23, multiple council members talked about wanting consistency in public works street projects. Staff suggested at the time that this be taken up in discussions around the Capital Improvement Plan. Therefore, it is a good time to raise this issue in the context of the CIP.

Consider Project Clusters. There are many examples of projects in which an individual project has less impact on its own than it will in conjunction with additional nearby improvements.

Last year's CIP had designated for 2021/22 and 22/23 projects on two important high-injury corridors: Middlefield Road, and Willow Road North of 101. In each case, we believe that completing additional projects along the same corridor in the same general timeframe will greatly enhance the value of each individual project, since having continuous treatments along a route provides stronger safety for all road users especially for people walking and bicycling, and is therefore the most effective at fostering alternatives to driving, which helps alleviate congestion and address climate goals. Were city council to consider adding additional projects to the CIP, we strongly recommend investing in these clusters of improvements:

- **Middlefield Improvements:** On the Middlefield Corridor for 21/22 and 22/23, the CIP identifies street reconstruction from Woodland to Ravenswood, and a single specific intersection project: Linfield Drive / Santa Monica Avenue Crosswalk Improvements. However, the TMP also

identifies multimodal safety improvements at the Ringwood and Ravenswood intersections as Tier 1 projects. Collectively these projects create a new Safe Routes to School corridor.

- **Willow North of 101 Corridor Improvements:** Along the Willow corridor, the CIP currently includes one project slated for 2022/23 (bicycle and pedestrian improvements to the Willow and Newbridge intersection). But the TMP includes additional Tier 1 projects on the same segment of Willow, including intersection improvements at O'Brien and Ivy (Hamilton is identified as a Tier 2 project). Given the increased commercial and residential density in the Bayside area, making that section of Willow Road a safer, more comfortable thoroughfare for cyclists and pedestrians should be a major quality of life improvement for local residents.

Key Insights

Our Vision Zero and VMT reduction goals are highly symbiotic. If we want more people to feel comfortable biking and walking to destinations outside of their immediate neighborhoods (e.g. offices, schools, parks, downtown), we need to invest in infrastructure projects that *complete networks* by safely connecting popular neighborhood cycling and pedestrian routes along and across high-traffic corridors (e.g. Willow, Ravenswood, Middlefield, Santa Cruz, and El Camino Real).

These network gaps are also often collision hotspots, for drivers and for cyclists. The Menlo Park collision heat maps (Appendix III in the TMP) show that the majority of collisions happen along these high-traffic corridors, particularly at intersections. So adding well-designed bike and pedestrian improvements in key hotspots should both incentivize cycling and walking and reduce the likelihood of serious injury accidents, e.g. by creating separate and predictable pathways for each mode, or by slowing traffic to safer speeds (which reduces the likelihood of traffic fatalities).

Well-executed Complete Streets projects can have a traffic calming effect. We have seen this happen already along two major corridors, Oak Grove and Santa Cruz Avenue. In our 2012 speed survey, the 85th percentile speed on Oak Grove between El Camino Real and Middlefield was 32 mph. In 2019, the 85th percentile speed on the same segment dropped to 24 mph. What changed between 2012 and 2019? Not the posted speed limit, which was always 25 mph. But in 2017, the city added buffered bike lanes along that segment, which necessitated a slight narrowing of the driving lanes. We saw a similar (although smaller effect) along Santa Cruz Avenue between University and Olive, where the measured 85th percentile speed dropped from 34 to 30 mph).

Resources

<https://www.menlopark.org/DocumentCenter/View/25974/Draft-Transportation-Master-Plan>
<https://menlopark.org/DocumentCenter/View/24331/2-Att-A-CIP-2019-2024>