PABAC

Palo Alto Pedestrian and Bicycle Advisory Committee

Tuesday, November 3, 2015
6:00 P.M.

SOUTH ADOBE ROOM, MITCHELL PARK COMMUNITY CENTER
3700 Middlefield Road, Palo Alto, CA
Agenda

1.	CALL TO ORDER	6:00
2.	APPROVAL OF ACTION MINUTES	6:05
3.	AGENDA CHANGES	6:10
4.	VTA BPAC REPORT	6:15
5.	SAFE ROUTES TO SCHOOLS UPDATE	6:20
6.	MEET & GREET WITH JOSH MELLO, CHIEF TRANSPORTATION OFFICIAL	6:30
7.	DISCUSSION OF PABAC MEETING LOCATION	6:45
8.	TRANSITION TO PALO ALTO 311 SYSTEM*	6:50
9.	PROJECT UPDATES a) *Concept Planning for Section 130 project (At-Grade RR Crossing) & Churchill Avenue Phase II project and Report on 10/22 Community Meeting b) *Report on 10/8 Community Meeting for Park-Stanford Ave c) *Report on 10/26 Council Study Session	7:00
10.	TRAFFIC ENGINEERING LEAD RECRUITMENT (VISION ZERO STAFFING)	7:40
11.	SPOT IMPROVEMENTS a) *Bulb out and yield control on Georgia Avenue b) *Striping improvements on Palo Alto Ave approaching El Camino Real and Sand Hill	7:45
12.	ECO-COUNTERS REPORT	7:55
13.	ADJOURNMENT	8:00

* Attachment Enclosed
**Attachment to be delivered

PABAC

Palo Alto Pedestrian and Bicycle Advisory Committee

Tuesday, October 6, 2015
6:00 P.M.

MITCHELL PARK – SOUTH ADOBE ROOM
3700 Middlefield Road, Palo Alto, CA

SUMMARY

Members Present: Eric Nordman (Vice Chair), Jane Rothstein, Paul Goldstein, Cedric de la Beaujardiere, Rob Robinson, Bill Zauman, Richard Swent, Steve Rock, Ann Crichton, Ken Joye

Members Absent: Robert Neff (Chair) and Bill Courington

Staff Present: Diana Tamale, Sarah Syed, and Sylvia Star-Lack

Guest: Bruce Arthur and Penny Ellson

1. CALL TO ORDER at 6pm

2. APPROVAL OF ACTION MINUTES

3. AGENDA CHANGES: None

4. VTA BPAC REPORT:

Paul requests a list of recommended projects for the VTP to come from staff so he knows what we are proposing. He listed some of the projects proposed. Dan Collen is retiring from County Roads. Loyola Bridge is being repaired. Mathilda/101 overcrossing is being reviewed again due to unsatisfactory bike improvements. Paul is asking for a volunteer to attend the project meeting at VTA Headquarters at 6:30pm tomorrow. VTA BAC is reviewing it, now at NOP/scoping stage.

5. SAFE ROUTES TO SCHOOLS UPDATE

Sylvia Star-Lack updated the Committee on the Safe Routes to Schools projects including the completion of 3rd grade bike rodeos, parked bicycle counts, and classroom tallies.

6. PROJECT UPDATES

a) Churchill Improvements, October 22, 2015 – PALY Media Arts Atrium 6 – 8 pm

- Meeting 10/22, Paly MAC Atrium, 6-8pm to get community consensus on conceptual plans for Churchill. How to improve the Churchill crossing?
- City and Caltrain need conceptual agreement at staff level by November 15th on what to do here.
- Staff will ask for input on Phase 2 and update on phase 1. Also, will discuss changing stop control at Coleridge and Churchill.
- Currently a two-way stop, considering converting to a four-way stop and changing existing four-way stop at Cowper.
- Giving priority to Coleridge rather than Churchill when crossing Cowper. Sarah showed plans for potential Alma/Churchill improvements.
- Ann C.: What if Churchill went one-way for cars but two-ways for bikes? Sarah: significant impacts for residents getting into their neighborhood.
- Steve R.: Students cross on the wrong side in PM. This will encourage them to do that. Sarah: We will create facility on other side of Alma to facilitate this movement and give them space to wait. The new facility would be a two-way cycle track on Churchill.
- Ann C.: Will cycletrack have a barrier? Sarah: No.
- Rob R: Will we be talking about the other side of Churchill on 10/22? Sarah: We need to fast-track the Alma/Churchill crossing plans.
- Ann C.: This looks like a great improvement over existing conditions. Will crossing surface be improved? Sarah: yes. Concrete will be better for cyclists.

b). Bicycle Boulevard Projects Update: Park Boulevard/Stanford Ave/Cal Ave Meeting October 8, 2015 - Escondido Elementary 6 – 8 pm

- Park BB/Stanford Ave/Cal Ave Meeting – 10/8/2015 at Escondido Elementary, 6-8pm. City staff will present new ideas for consideration.
- Letter from Ventura neighborhood will help us design improvements. Requested pedestrian-scale lighting, flashing beacon, new sidewalks.
- We are trying to create lowest-stress bikeways. Can we do more here? With new developments, we will have more traffic here.
- Ken discussed the letter. Neighborhood association wants less for bicycles and more for pedestrians.
- Eric: Is the pedestrian movement the concern with removing stops at Cal Ave and Park? Sarah: We need to see pedestrian counts.
- City is looking to remove gates in the Cal Ave tunnel and improve the lighting.
- Cedric: Boundary of Park project goes south to the industrial area? Sarah: yes.

b-1).Nita Ave connection to Mackay Drive

- Nita Ave Connection to Mackay Drive: Alta is the consultant on this.

c). Midtown Connector Study update

- Midtown Connector study update: Project team has found significant constraints along the corridor that will constrain our ability to put a path along the creek. Access control structures, part of the flood wall, are put in seasonally.
- Limits trail to a seasonal trail. This is a game-changer from the staff perspective. Grades are also a significant issue. Trail would be a roller coaster. Concerns about student safety due to grades.
- To Council: Alt. 1: Explain complex challenges, modification of the ramps, assumptions of liability, City resources for rain events, higher costs.
- Alternative 2: redirect resources from this to other projects in the City.
- Alt 3: continue feasibility study and study alternative alignment in order to retain County money, by creating a trail-like facility on another corridor, like Loma Verde.
- Option 2 or 3 could include prioritizing a connection across Caltrain/Alma.
- Steve R.: some residents weren't happy with this trail idea. Could be a nature-experience trail.
- Rob R: The creek is not very nature-y. The Creek path concept died at the last CAC meeting.
- Paul G: There was some neighborhood support. If the obstacles have dampened the enthusiasm, then ok. An ABC across Alma/Caltrain would be wonderful. We would probably lose the money, but that would be ok.
- Paul: Motion: Creek alignment presents obstacles that were overly expensive.
- Ann C.: A crossing would be great. A nature trail would have been a nice addition. I'm sorry there are snags.
- Cedric & Eric discuss ramps along the creek – pinch points at ramps for machinery to get down into the creek for cleaning. Sarah: There was an opportunity in 2004/2005 to construct this trail but this was not pursued.
- Sarah: There is some sentiment that a cycletrack should be created on Colorado or Loma Verde.
- Bruce Arthur: What would this look like?
- Rich: Clarify the motion.

Motion: Paul Goldstein moved, seconded by Eric Nordman, in recognition of the Matadero Creek alignment being too costly and infeasible, the City should discontinue study of that alignment.

Vote: 6 "yes", 2 "no", and 2 abstain.

Motion: Paul Goldstein moved, seconded by Ann Crichton, to support giving high priority of grade separated crossing (bike/ped only) between Oregon and Meadow.

Vote: 9 "yes" and 1 "no"

7. FUTURE PROJECT DEVELOPMENT

Middlefield Repaving – potential cycle track connection between N. California Ave legs

- Sarah said that staff will see if the Cal Ave. dogleg can be made better operationally.

Alma/High St Study

- Waiting on Hexagon study. Potential for bike lanes on Alma Street downtown. Study from Embarcadero Rd to train station. All options will include closing the sidewalk gap between the Caltrain station and the Homer tunnel.

N. California Ave Repaving – suggestion lanes or bicycle lanes with parking removal

- What should limits of bike lanes be?

8. SPOT IMPROVEMENTS

Bulb out and yield control on Georgia Avenue

- Bulb out and yield control on Georgia Avenue – Sarah showed plan of proposed improvements. Eric concerned with pedestrian/bike conflict. Ann: How to clarify to drivers that they're not a priority here?
- Sarah: we are proposing to change the control here. If the volumes are greater on the trail than the road, then you can require the road to yield to the trail. Proposal to install speed tables before and after this.
- Ann: I encourage the city to make it clearer here.
- Cedric: fix R1=5 mismatch with R5-1 on plans. Can crosswalk be raised here? Can the crosswalk be moved to the other side of the driveway? Sarah: Yes, but that's not the desire line.
- Eric: Can we tilt the crosswalk?

Striping improvements on Arastradero Road approaching Miranda and Foothill

- Needs double right arrow on sign and on pavement here. There is PABAC support for a bike box at Miranda to facilitate left turns at Foothill Expwy.

Striping improvements on Palo Alto Ave approaching El Camino Real and Sand Hill

- Striping improvement there. Maybe greenback sharrows?
- Curb ramp from El Palo Alto Park needs to be fixed.
- Bol Park Path and Adobe Creek undercrossing bollard removals might happen!

9. **DRAFT COMPLETE STREETS RESOLUTION Not Covered 7:40

10. INFORMATION REPORTS 7:50
    a) Report from Bike Palo Alto

- Bike Palo Alto – 658 participants signed in! Great publicity everywhere.
- Frequent rider card innovation.
- Sarah showed the photo stream from the t-shirt station.
- If you want to get involved in next year's event, the committee is still meeting.

City Council Study Session on Bicycle and Pedestrian Program October 26, 2015 was announced.

Adult Bicycle Education update – VTA funding

- VTA will fund adult bike education in this part of the county.
- We are working with them to make it happen.

Announcements:

- Jane: Stanford is having a bike class for Safe and Confident Autumn/Winter Cycling, 10/27, 5:30pm. Also, Jane is teaching a class on electric vehicles on 10/8, 5:30pm.
- Staff confirmed Bruce's eligibility/membership in PABAC. He is a member as of today's meeting.
- Cedric: Bol Park Path – some sentiment about bike/ped conflicts on the path. There is interest in what else can be done here? Sarah: Can we widen to meet current standards? Signage alone won't fix this.
- Josh Mello will come next month and do a Meet n Greet.

11. ADJOURNMENT 8:00

CITY OF PALO ALTO

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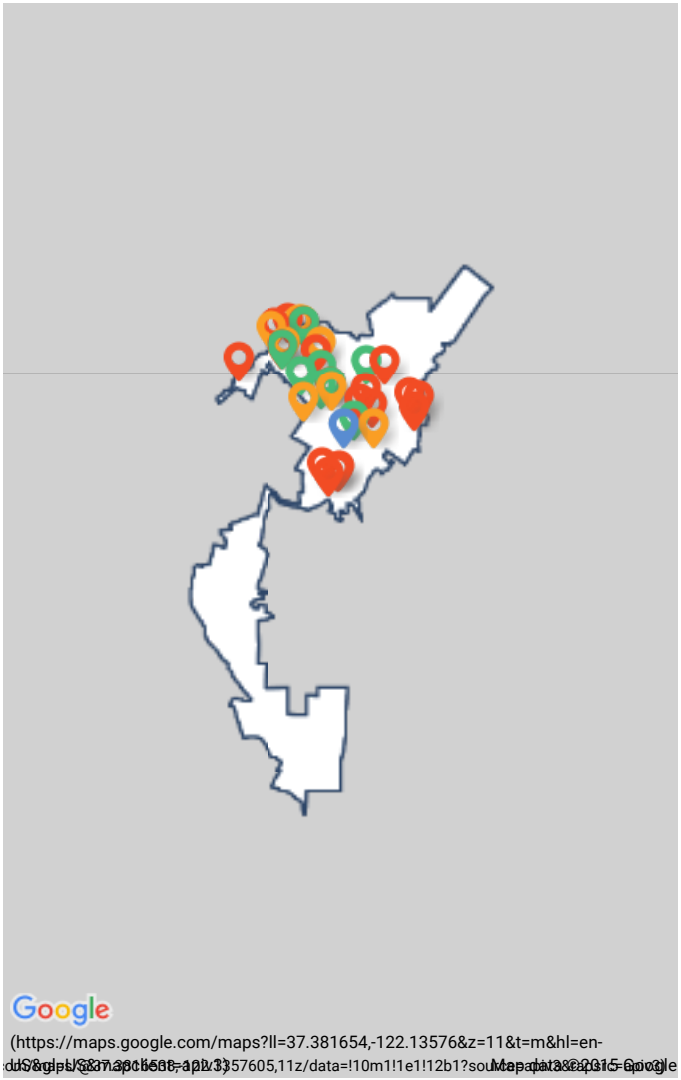
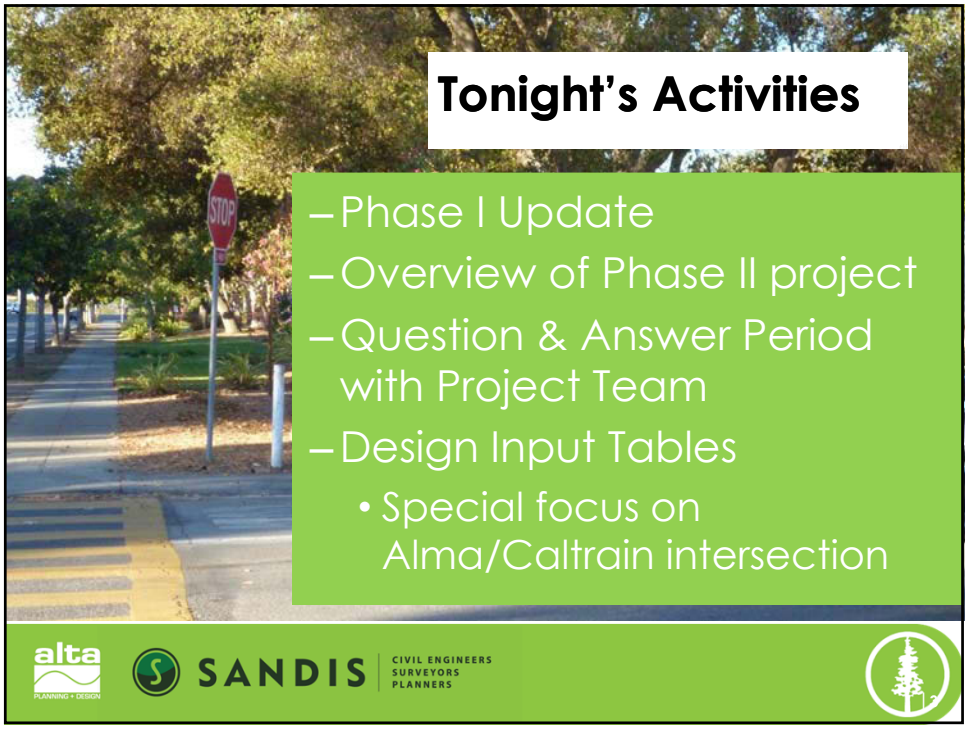
  For emergencies, please contact Palo Alto Communications (650) 329-2413.
- **Bicycles**
  Bicycles
- **Missed Street Sweeping Route**
  To report that sweeping was not done on your scheduled day.
- **Graffiti Removal**
- **Drought/Water Waste**
  Report Water Waste
- **Streets and Roadways**
  Report maintenance needs for City owned streets.

Map List Keyword



Last Updated: Mar 18, 2015

Thank you for being here! Please help us reach others.
After the meeting, please tell your friends and neighbors to check out project plans online and send us their thoughts.
Don't forget to sign in tonight so we can circle back with you.



Tonight's Activities

- Phase I Update
- Overview of Phase II project
- Question & Answer Period with Project Team
- Design Input Tables
  - Special focus on Alma/Caltrain intersection

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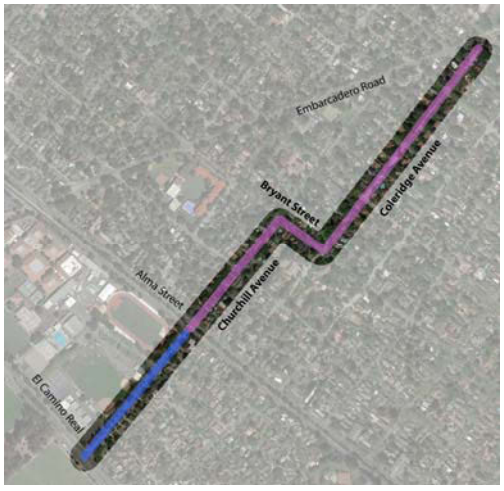
Churchill – Coleridge Corridor Phase I and Phase II



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Churchill Avenue Challenges

- El Camino Real and Alma Street crossings
- Caltrain crossing
- Crossing or turning onto Churchill Avenue at Castilleja Avenue
- **Caltrain Bike Path** ends at Castilleja Avenue
- Bike Boulevard jogs on Bryant St and continues onto Coleridge Ave

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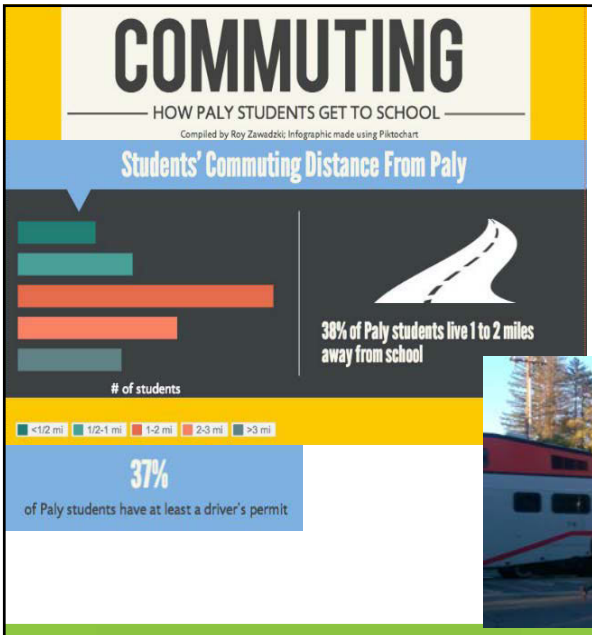

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Churchill Avenue: Alma Street and Caltrain




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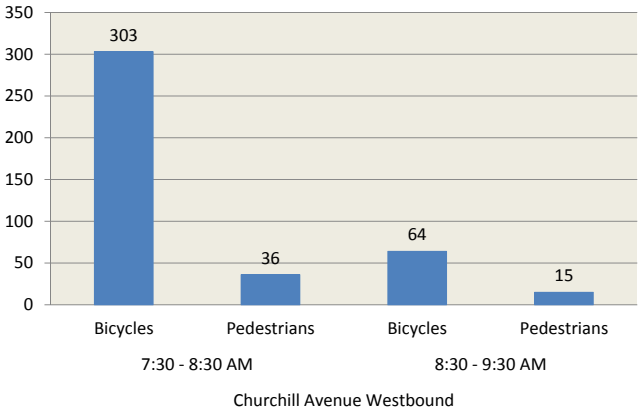
Bicycle & Pedestrian Counts
Churchill Avenue at Alma Street, AM Peak



Note: 1 hour snap shot during peak hour to inform Concept Planning. Further counts to be conducted with larger sample size to generate a representative sample. Count conducted 10/21/2015 on a clear, fall morning. Spirit Week at Palo Alto High School may impact arrival mode.

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Churchill Phase 1- Approved Design Solutions

- **New crosswalk** across El Camino Real would allow for easier crossing and eliminate the need for crossing two legs
- **New right turn lane** on Churchill approaching El Camino Real will increase vehicle capacity
- **Raised crosswalks at Madrono Avenue and Castilleja Avenue**
- **Caltrain Bike Path extension** from Castilleja Avenue to Stanford Perimeter Trail
- **Fencing and landscaping modifications to promote safe bicycle behavior**

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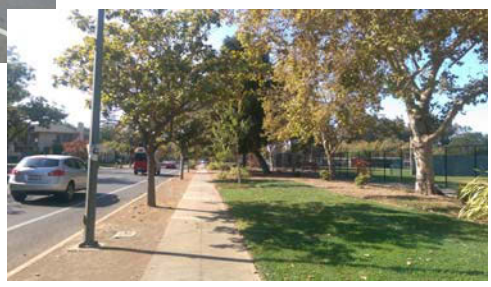
Churchill: El Camino Real to Alma, Existing



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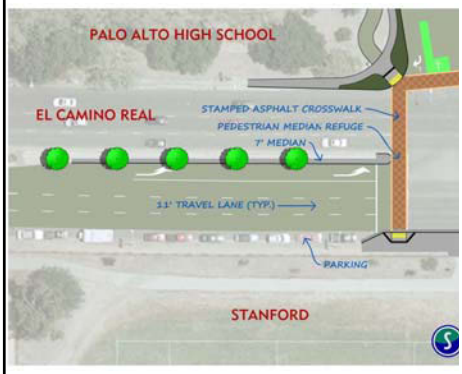
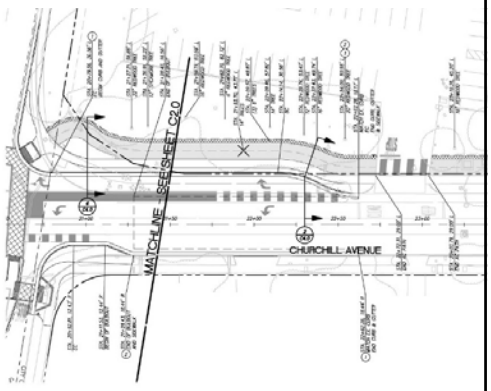
Churchill – El Camino Real intersection





El Camino Real at Churchill Ave

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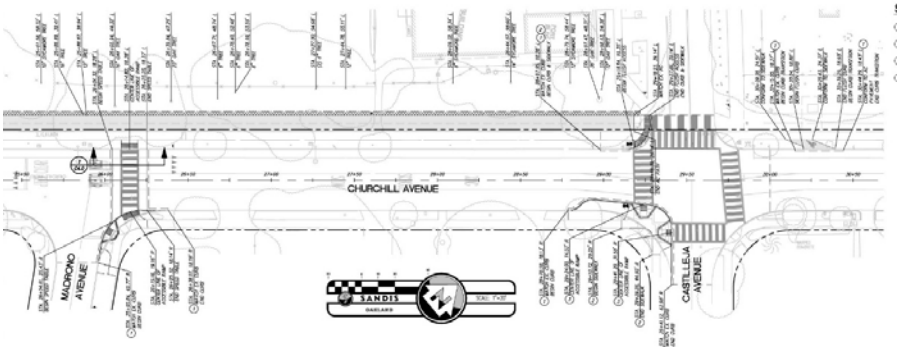
Churchill – Madrono and Castilleja



Churchill Ave at Castilleja

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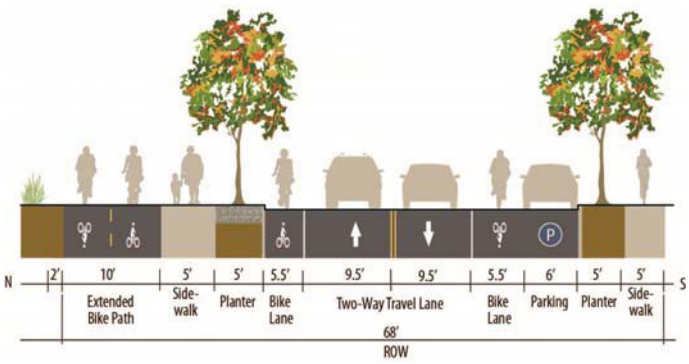
Churchill (Madrono to Castilleja)
Approved Concept- Sidewalk & Bike Path



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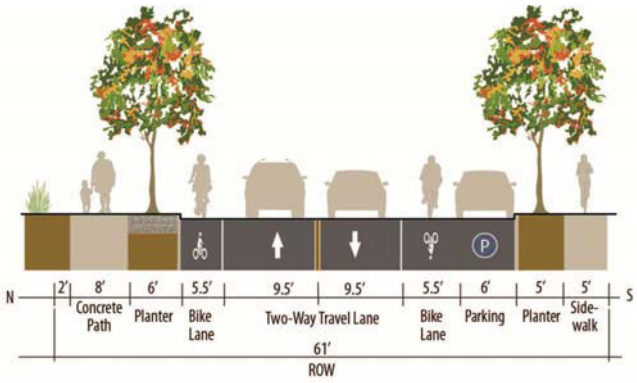
Churchill (Madrono to Castilleja)
Alternate Concept – Shared use path replaces sidewalk



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Churchill Avenue: Paving Concepts

Crosswalks at El Camino Real

Concrete Path on Churchill Ave

Concrete Pavers along Parkway

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Churchill Ph 1: Street Lighting Concept

Add pedestrian scaled street lighting to match the South side of Churchill Ave

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Churchill Phase 1:
Plant Concepts

Along Path near PALY

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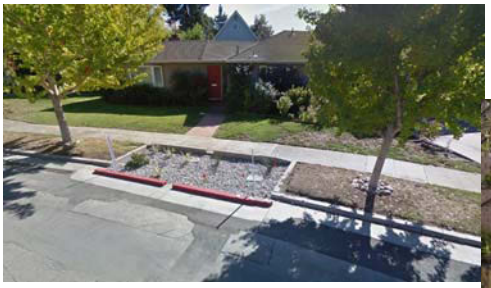
Churchill Phase 1:
Green Infrastructure concepts



Add areas to capture and treat stormwater, similar to the Southgate Neighborhood

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Churchill Phase 2 - Design Concepts

- **Direct off street connection** from the Caltrain Bike Path and sidewalk to crossing of the Caltrain tracks
- **Widened and separated crossing** for bicyclists and pedestrians of the Caltrain tracks
- **Crossbike markings** across Alma to provide bicyclists guided crossing to a proposed cycle track on the North side of Churchill
- **Cycle track** provides a protected connection for high volumes of bikes
- New Pre-Signal improves rail crossing safety for all users

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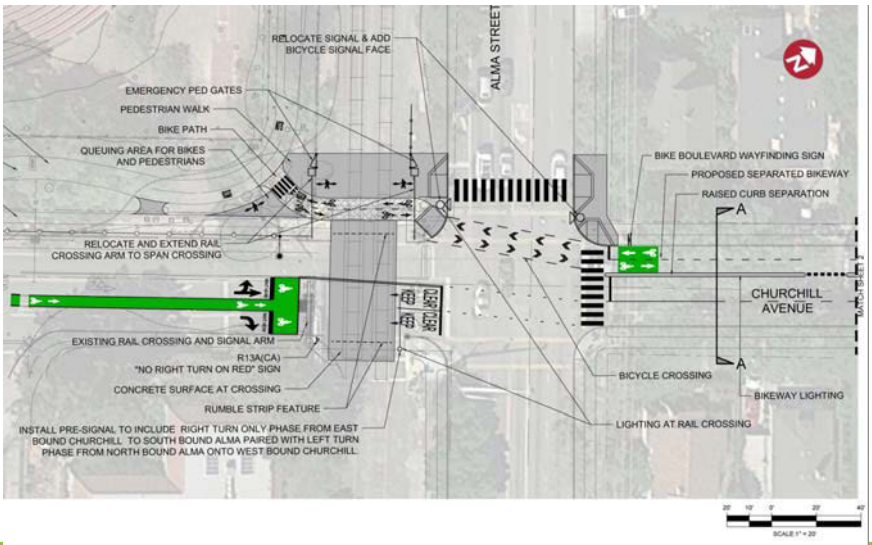
Churchill Phase 2- Design Concepts



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Churchill Phase 2: Alma Street Photo Simulation

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Cycle Tracks (Separated Bikeways)

A cycle track is an exclusive bike facility that combines the user experience of a separated path with the on-street infrastructure of a conventional bike lane.

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NACTO

Applications

- Places with lots of bicyclists
- Places where you want to attract bicyclists
- Place where you want to **REDUCE** stress
- **Downtowns and main streets**
- **On-street trail connections**
- Streets with **high motor vehicle speeds**
- Streets with **multiple travel lanes**
- Streets with **double parking or heavy loading**
- Streets with **high parking turnover**

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Cycle track design variation

Design dictated by local conditions

Source: The Green Lane Project

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Two-Way Protected Bikeways - Street Level

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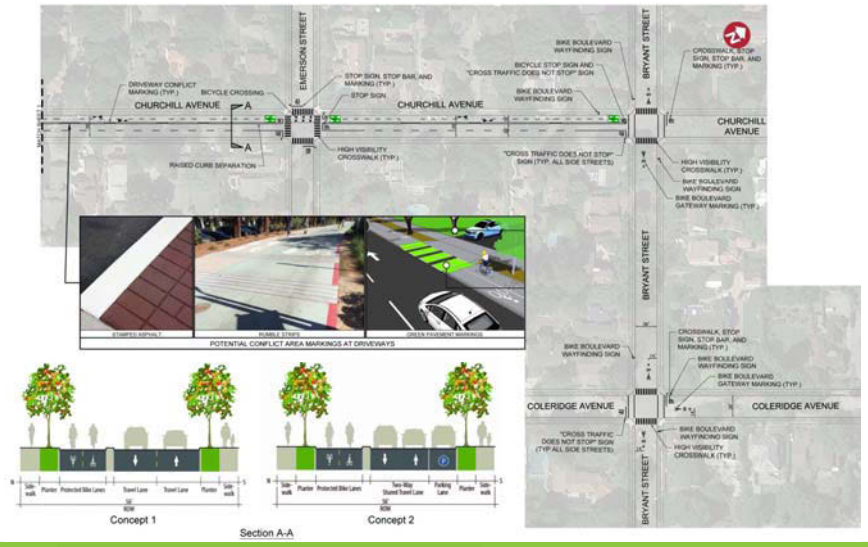
Churchill: Alma-Bryant Early Concept



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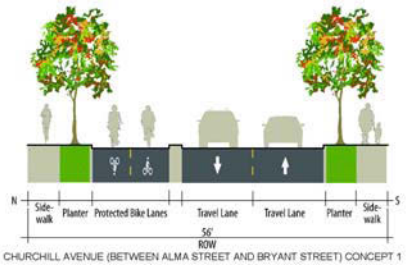
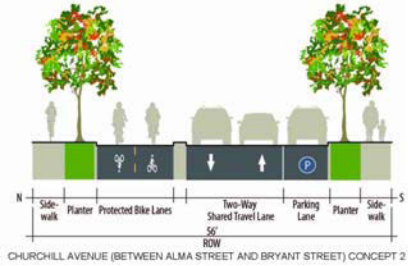
Churchill: Alma-Bryant Early Concepts



CHURCHILL AVENUE (BETWEEN ALMA STREET AND BRYANT STREET) CONCEPT 1



CHURCHILL AVENUE (BETWEEN ALMA STREET AND BRYANT STREET) CONCEPT 2

BOTH CONCEPTS:

1. Create two-way protected bikeway on north side of Churchill Ave
2. Remove east bound bike lane on south side of Churchill Ave

Concept 1

- Wider lanes than exist today (increase from approx. 9.5' to 11' lanes)
- Removes existing parking

Concept 2

- Narrow, shared two-way travel lane, approximately 15 – 16'
- Preserves existing parking; relocates parking from north to south side

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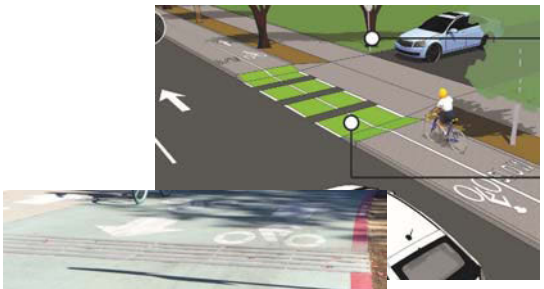
Churchill (Alma-Bryant)- Design Solutions



Driveway Treatments along Bikeway

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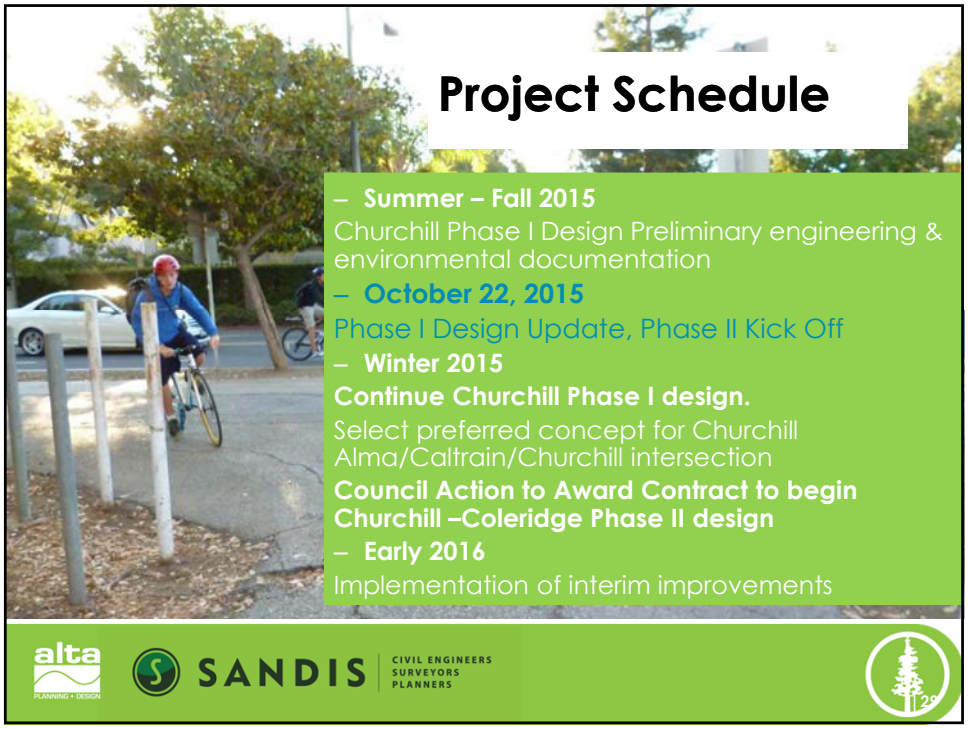
Project Schedule
– Summer – Fall 2015
Churchill Phase I Design Preliminary engineering & environmental documentation
– October 22, 2015
Phase I Design Update, Phase II Kick Off
– Winter 2015
Continue Churchill Phase I design.
Select preferred concept for Churchill Alma/Caltrain/Churchill intersection
Council Action to Award Contract to begin Churchill –Coleridge Phase II design
– Early 2016
Implementation of interim improvements
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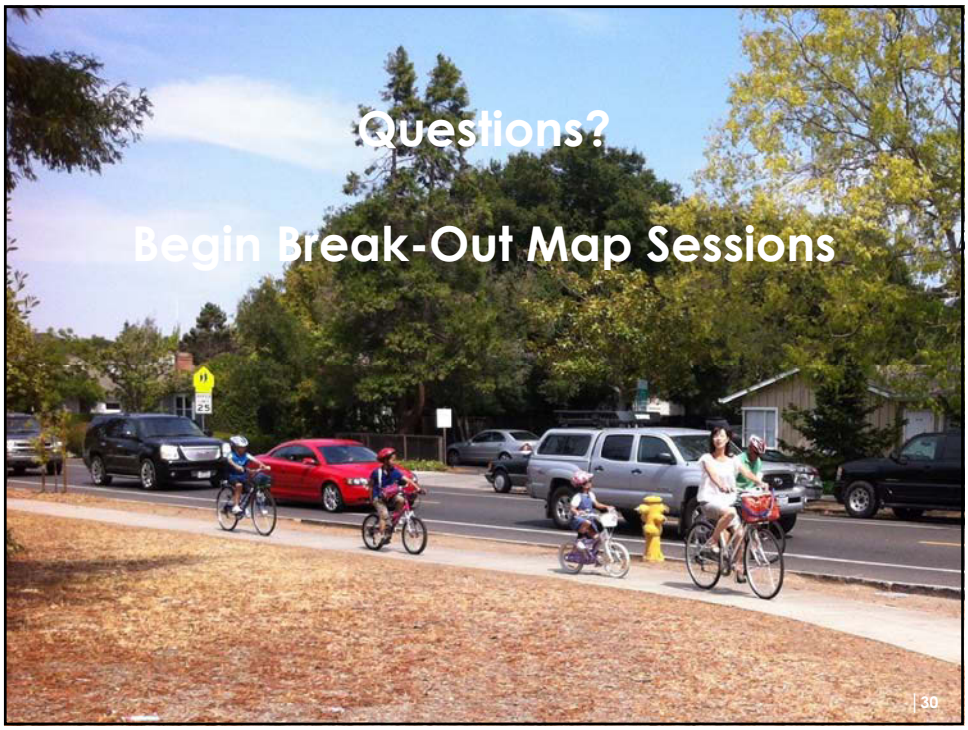
Questions?
Begin Break-Out Map Sessions
30

Thank you for being here! Please help us reach others.
After the meeting, please tell your friends and neighbors to check out project plans online and send us their thoughts.
Don't forget to sign in tonight so we can circle back with you.

Pocket Slides

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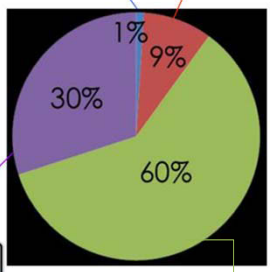
Targeting the "Interested But Concerned"

Strong and fearless

Enthused and confident



"No way, no how"

Interested but concerned

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Focus Area:
Bicycle Blvds

Image: LA Bicycle Working Group

Bicycle Route Wayfinding Guidelines (Proposed)

Signs and/or pavement markings will be posted on designated roadways and trails to direct bicyclists to major destinations throughout Palo Alto. Customized signs and markings will be used on designated bicycle boulevards and integrated into the citywide system, where appropriate. Signs and markings should follow Manual on Uniform Traffic Control Devices (MUTCD) standards for installation, such as minimum height of signs above ground and horizontal placement from edge of the roadway or trail.

Identification / Confirmation Signs

Castilleja-Park-Wilkie BICYCLE BOULEVARD

Confirmation signs should be placed at the beginning of designated bikeways and repeated at appropriate locations, such as where two bikeways intersect or every one-third to one-half mile depending on length segment, sight distance, and need for confirmation. Destination "blade" signs may be used in conjunction with confirmation signs to provide additional information. For bicycle boulevards, identification signs shall be customized to include the specific corridor or roadway names.

BIKE ROUTE
Baylands/Bybee Park
Bryant St Bike Blvd

Destination / Route Blade Signs

California Ave / Caltrain
Bol Park / Gunn HS
Downtown via Bryant Blvd

"Blade" signs provide route or destination information at major decision points along a designated bikeway. Closest destinations should be listed on top, and no more than three blade signs should be used for any one location/pole.

Destinations can include common neighborhood names, major parks, schools/universities, important roads/bikeways, general commercial areas, and adjacent communities. If a sign is for a destination on or to a bicycle boulevard, it shall be differentiated by its (purple) color. Generally speaking, blade signs should be independent from each other to maximize flexibility of assembly and be replaced/installed along the full length of a designated corridor.

Street Signs

Matadero Ave

Along designated bicycle boulevards, additional route confirmation and wayfinding will be achieved through integrated street name signs that carry the bicycle boulevard marker symbol and color. Installation can occur as part of the city's non-conforming street sign upgrade program, or in conjunction with other bikeway or roadway maintenance projects.

Route Guidance Pavement Markings

Along designated bicycle boulevards a customized pavement marker (left) can be used in addition to or in lieu of repeated confirmation signage. Additional markers and arrows can be used to provide route guidance through jogs or roadways changes, and at off-route locations leading toward a bicycle boulevard. These markings should generally be placed in the center of the travel lane. Through higher traffic areas of bicycle boulevards, or wherever lane positioning and route confirmation are desirable on Class III facilities, shared lane markings (right) may also be used.

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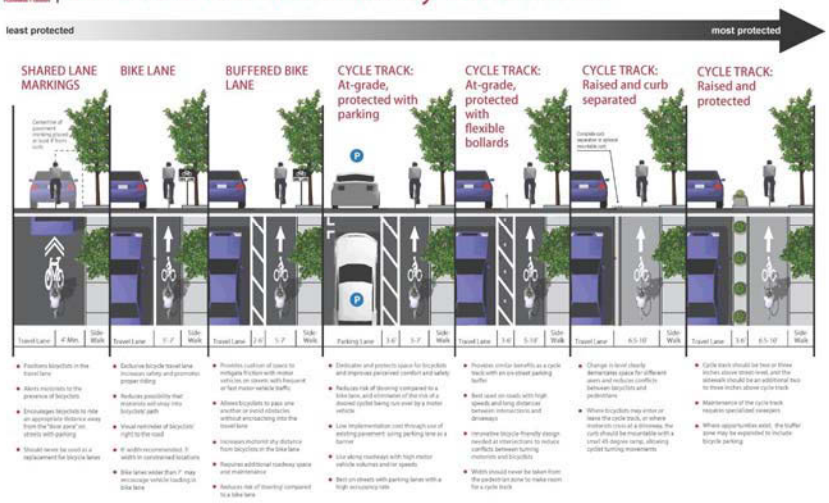
Protection from Traffic

On-Street Marked Bikeway Continuum



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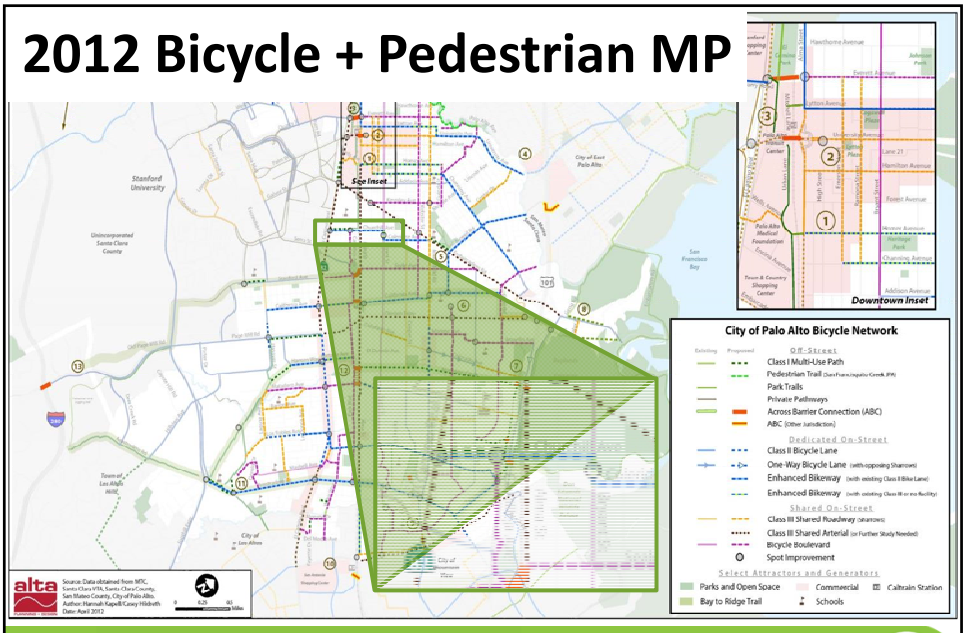
2012 Bicycle + Pedestrian MP



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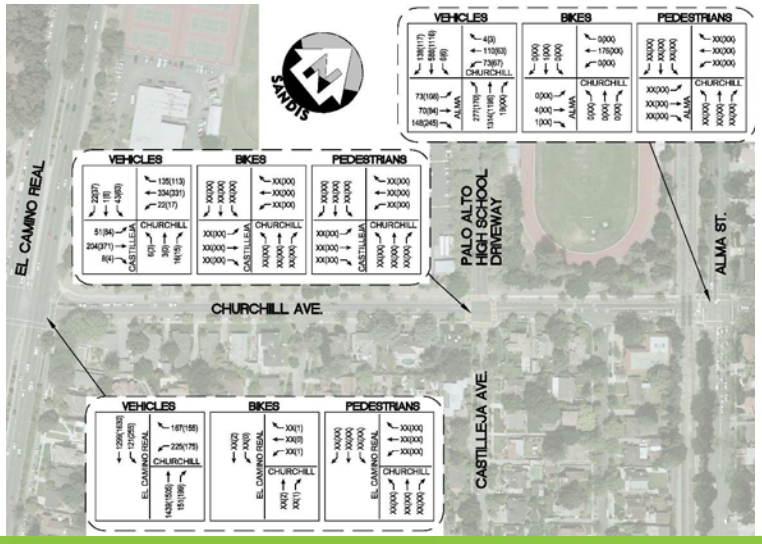
Approach: Data Collection



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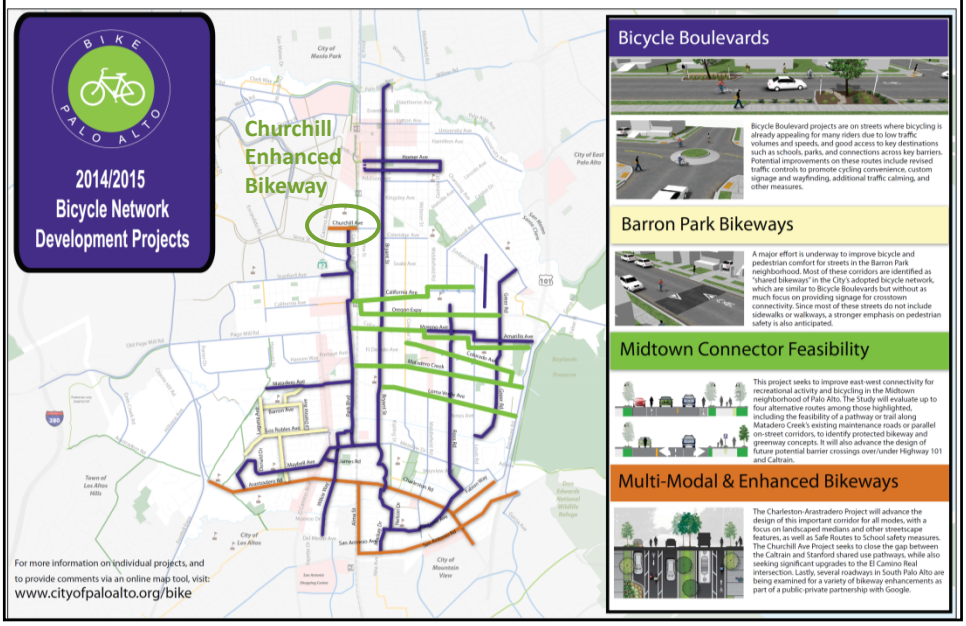
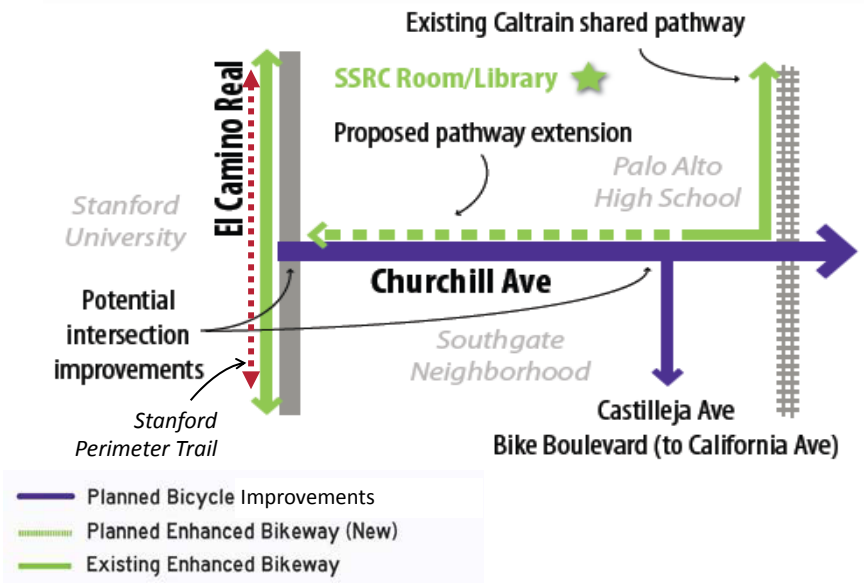
2014 Bike Plan Implementation Projects



Downtown Corridors



Finding the sweet spot

NACTO

Minimize Delay — **Maximize Safety**

- Uncontrolled intersections
- Traffic circles
- Stop-control the cross-street

- Supplemental signs and markings
- Geometric design

- Medians
- Beacons
- Signals

Increasing Cross Street Complexity

Increasing speed, volume, number of lanes and decreasing number of crossing gaps.

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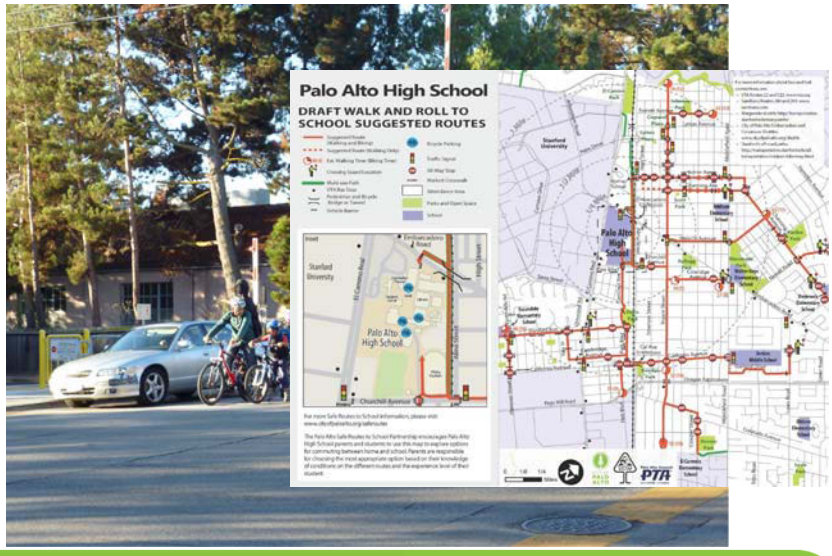
Safe Routes to School



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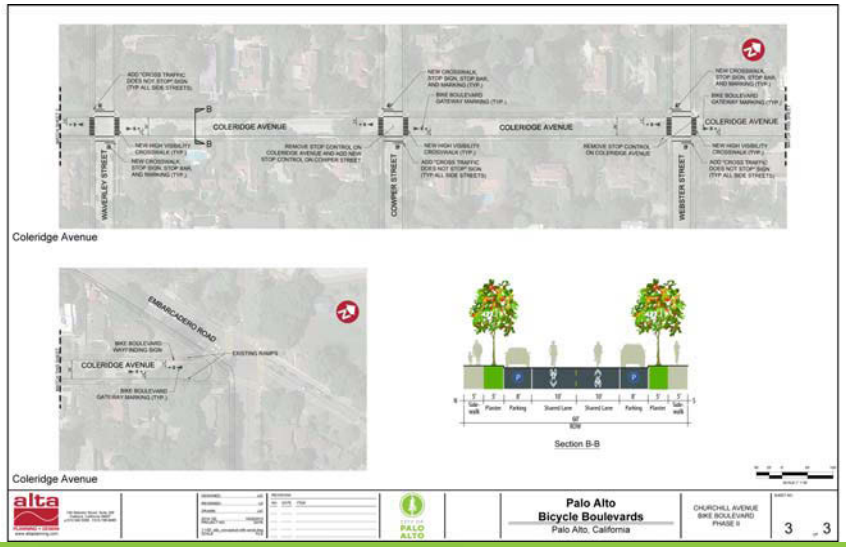
Coleridge- Design Solutions



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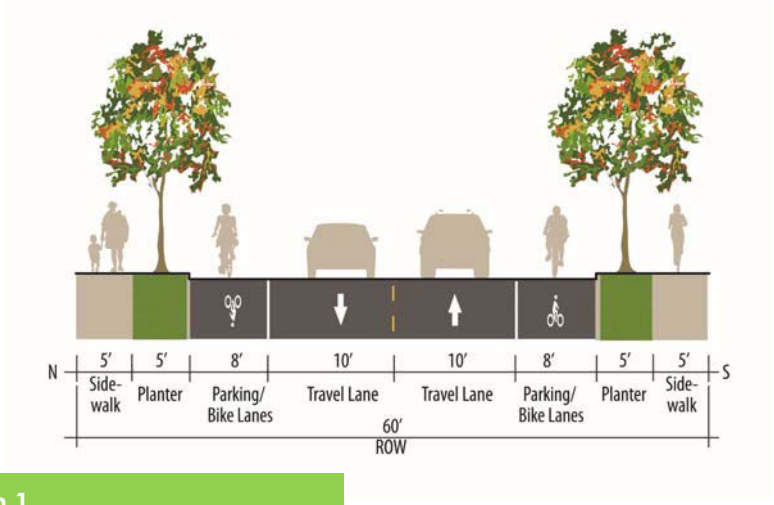
Coleridge - Design Solutions



Option 1

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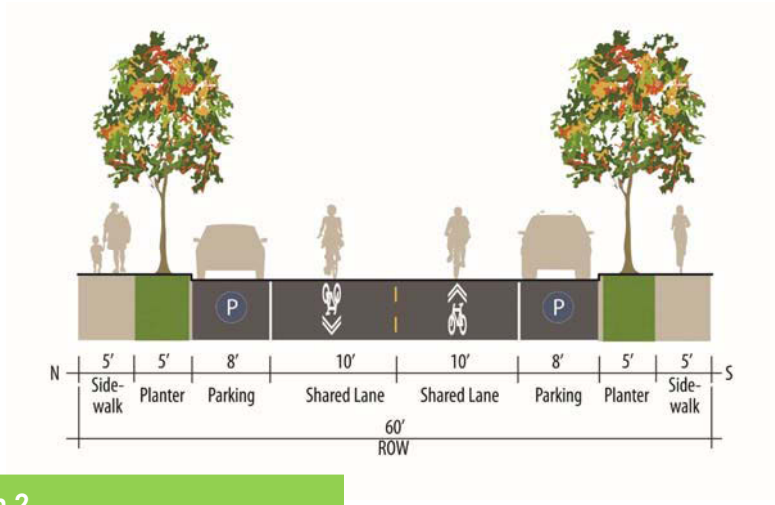
Coleridge - Design Solutions



Option 2

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Bikeways and Traffic Calming

Park Boulevard, Stanford Avenue, California Avenue and Tunnel

Escondido Elementary School
October 8, 2015

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Tonight's Meeting

1. Welcome
2. Background
3. Review project purpose and methodology
4. Update on progress since Spring 2015
5. Break out to review and discuss plans
6. Closing, Project Timeline

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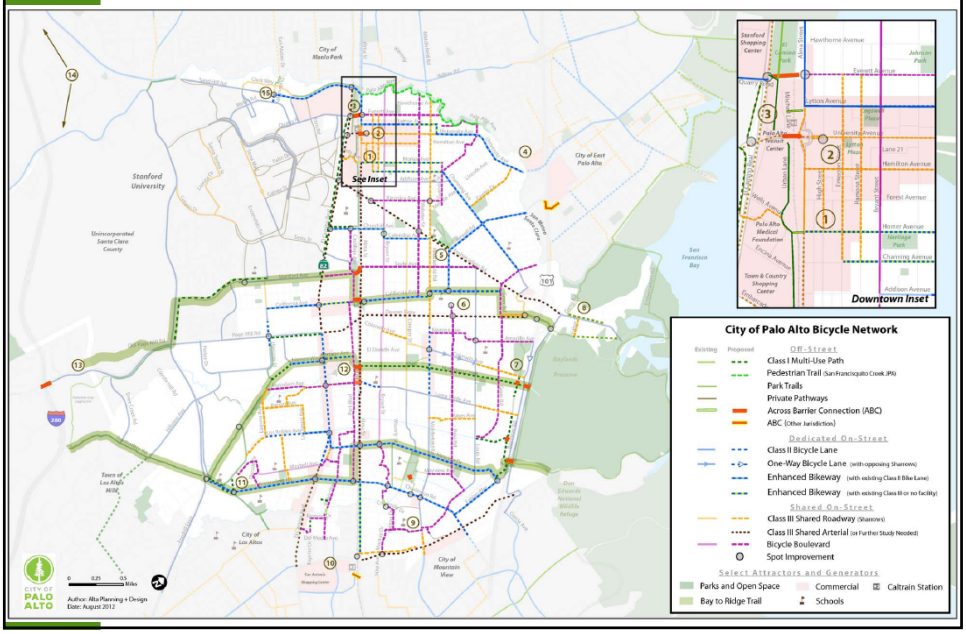
City of Palo Alto Bike + Ped Network 2012 Plan



Park Boulevard Corridor

- 2.5 mile North - South Corridor
- Most Used Bicycle Corridor
- High Walk Trips

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Community Connector

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Methodology

1. Outreach and Data Collection
   - Farmers Market Tabling
   - Ride-A-Long Tour
   - Interactive Website
   - Counts and Speed Surveys
2. Community Meetings to gather input, develop concept plans
3. Concept Plan Policy Approval
   - Planning and Transportation Commission June 10, 2015
   - City Council August 31, 2015
4. Final Design
   Fall 2015 – Summer 2016
5. Construction
   2016 – 2017 (anticipated)

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Speed and Count Data

Segment	85th Percentile Speed	Vehicle ADT	Bicycle ADT	Pedestrian ADT
Castilleja Avenue /Manzanita Avenue	25	246	632	147
Stanford Avenue/Ash Street	35	N/A	414	273
Park Boulevard /Cambridge Avenue	N/A	N/A	**1804**	**533**
Park Boulevard/Sherman Avenue	30	2000	**1547**	**1185**
Park Boulevard North of Meadow	30	1129	**652**	**273**

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Data collected May 13th-27th, 2014

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Community Outreach

Project Kick-Off and Community Bike Ride

- Advertised in Website, Newspapers, Farmers Markets
- Bike – Along Ride April 26, 2014

Community Meetings

- Meeting # 1: June 5, 2014
- Meeting # 2: October 28, 2014
- Meeting # 3: March 24 and March 31, 2015

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Summary of Input from Community Meetings

- Community generally supportive of concepts & traffic calming improvements
- Positive feedback for stop sign removal combined with speed tables, islands, and circles to control vehicle speeds
- Support for wider bicycle lanes, slower speeds, improved lighting, flashing beacons in commercial district
- Concern about cumulative traffic impacts to neighborhood from new developments along Park Boulevard. Support for measures that discourage through automobile traffic from bicycle boulevards.

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Elements of Concept Plan

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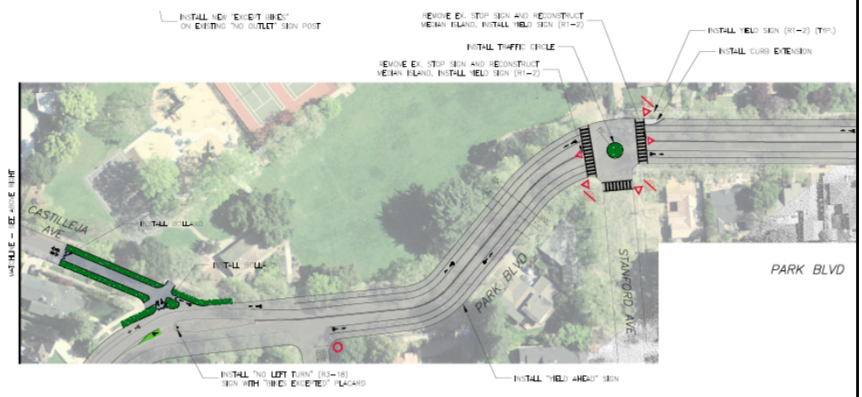
Park and Castilleja

Park and Stanford



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Concept Plans Approved

City Council
August 31, 2015

Planning and Transportation Commission
June 10, 2015

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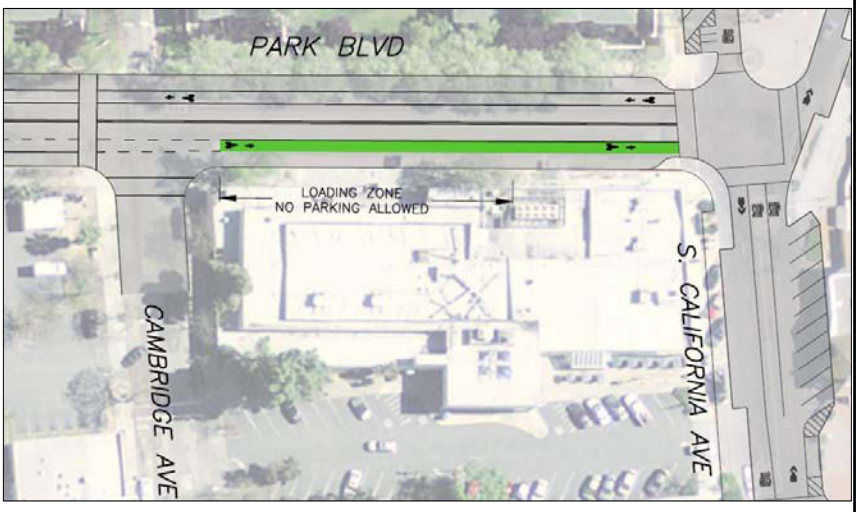
Park Blvd – California Ave to Lambert Ave



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Opportunities and Challenges

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Opportunities and Challenges

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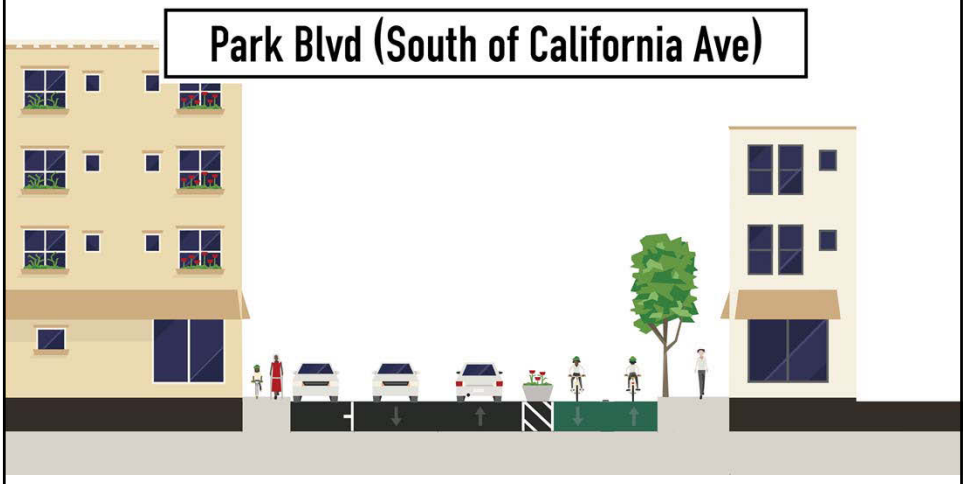
Preliminary Concept: Separated Bikeway

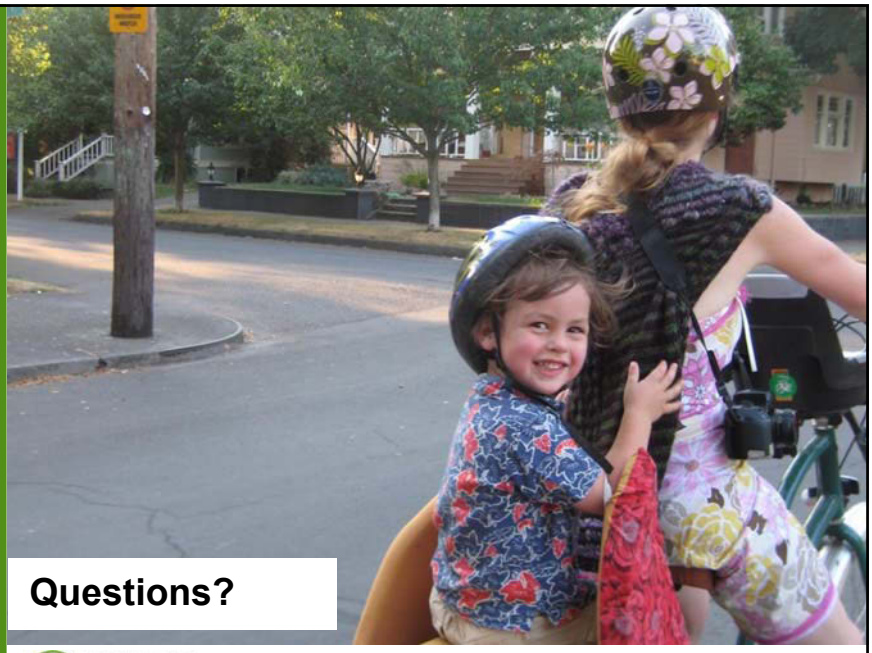


Preliminary Concept: Tunnel Improvements

Rumble strips

Better Lighting, Signage

Bollards in lieu of gates



Questions?

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Wrap Up

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Study Session on Status of Palo Alto Bicycle and Pedestrian Program



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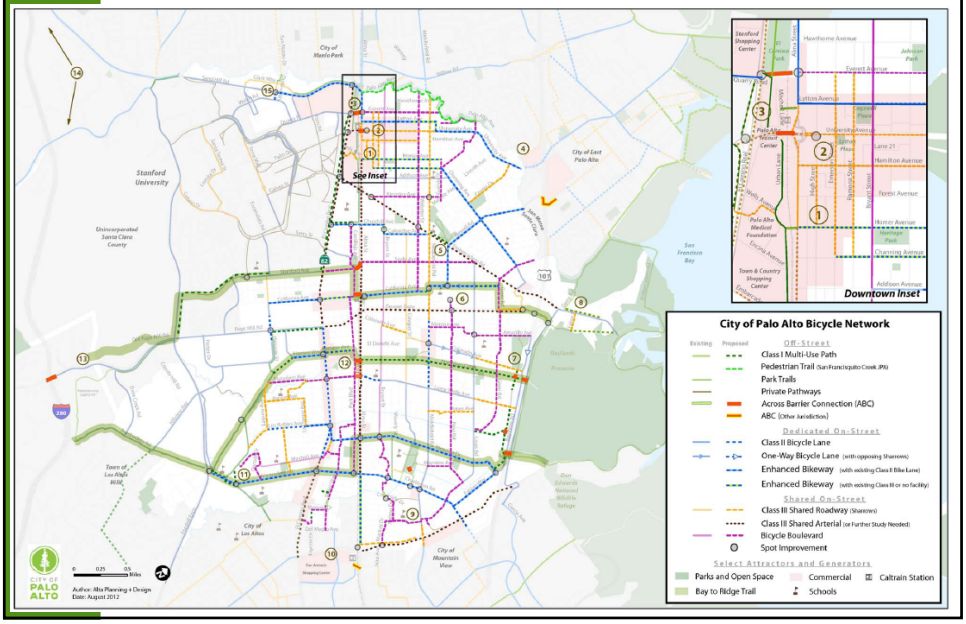
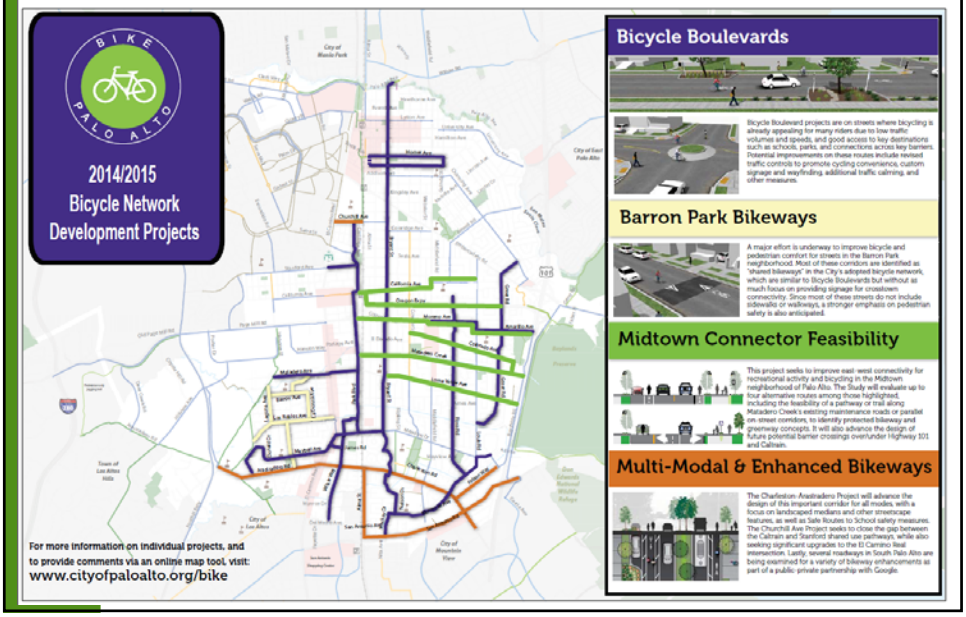
Palo Alto City Council
October 26, 2015

Bicycle and Pedestrian Program
2012 Bicycle + Pedestrian Transportation Plan



Bicycle and Pedestrian Program
2014 Bicycle Boulevards + Enhanced Bikeways



Bicycle and Pedestrian Program
Program Schedule

- Spring 2014
  - Bicycle ride-alongs/public meetings
  - Farmer's Market tabling
  - Online interactive GIS map
- Summer 2014
  - Concept Plan development
- Fall 2014-Fall 2015
  - Introduce Concept Plans to community
  - Refine Concept Plans

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Bicycle and Pedestrian Program
Program Schedule

- 2015 Accomplishments
  - Churchill Ave Phase I - Concept Plan approved and began final design
  - Park Blvd/Wilkie Wy/Stanford Ave - Concept Plan approved
  - Maybell Avenue - Concept Plan approved
  - Implementation of portions of Maybell Ave and Matadero Ave through DPW resurfacing project
  - Charleston Rd/Arastradero Rd - Concept Plan approved

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Bicycle and Pedestrian Program
Sample Concept Plan Line – Bryant St Extension

Bicycle and Pedestrian Program
Early Implementation

- Maybell Ave Bicycle Boulevard
  - Wider pathway between Georgia Ave and Gunn High School
  - Southbound bicycle lane on El Camino Wy
- Matadero Ave/Margarita Ave Bicycle Boulevard
  - Removal of centerline and addition of sharrows on Matadero Ave
- Enhanced pavement markings and signal timing changes

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Bicycle and Pedestrian Program
Early Implementation

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Bicycle and Pedestrian Program
Early Implementation

Terman Park Path
Palo Alto - Los Altos connection

El Camino Way
Maybell – Meadow connection

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Bicycle and Pedestrian Program
Early Implementation

Georgia Ave path to Gunn HS

Embarcadero Rd Path to Paly

Los Robles Ave
path to Gunn HS

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Bicycle and Pedestrian Program
Challenges

- Bryant St Bicycle Boulevard Update
  - Concerns around signing and marking plan
  - Questions about on-street parking changes
  - Lack of downtown business involvement

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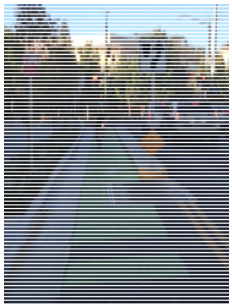
Bicycle and Pedestrian Program
Challenges

- Homer Ave/Channing Ave Enhanced Bikeway
  - Lack of downtown business and resident involvement
  - Additional concepts need to be studied



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Bicycle and Pedestrian Program
Opportunities

- Park Blvd Bicycle Boulevard
  - Post-concept-planning community comments have supported additional alternatives including separated bikeways

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Bicycle and Pedestrian Program
Interagency Coordination

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Bicycle and Pedestrian Program
Goals

- 2015 Goals
  - Finalize scope for Section 130 at Churchill crossing
  - Launch final design phase for Park Blvd/Wilkie Wy/Stanford Ave, Maybell Avenue and Churchill Ave Phase II
  - Concept Plan approval for Bryant St Extension
- 2016 Goals
  - Concept Plan approval and begin final design for Moreno Ave/Amarillo Ave, Ross Rd and Bryant St Upgrade
  - Undertake Downtown Bicycle + Pedestrian Mobility Strategy

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Bicycle and Pedestrian Program
Related Developments

- Midtown Connector Project (Matadero Creek Trail)
  - Citizens Advisory Committee established
  - Major challenges identified
  - Council presentation on November 9
- Assembly Bill 1193 – Separated Bikeways
  - Cities can adopt alternative design guides such as NACTO *Urban Bikeway Design Guide*
  - Serving on Caltrans Class IV Bikeway External Advisory Committee
- Palo Alto is newest affiliate member of NACTO

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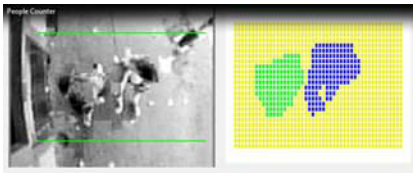
Bicycle and Pedestrian Program
Evaluation

- VIMOC bicycle and pedestrian counters being installed
- Thinking about how to better organize and report all of our transportation data
- Data can support grant applications/ identify trends in Safe Routes to School and bicycling
- Transitioning to Palo Alto 311 system to better track service requests and identify areas of concern
- Preparing Bicycle-friendly Community application to advance our pursuit of Platinum status

TOP 25 CITIES WITH HIGHEST SHARE OF BICYCLISTS

CITY	TOTAL COMMUTE BY BIKE	TOTAL POPULATION
BOULDER, CO	11.1%	103,163
PALO ALTO, CA	8.4%	66,638
BERKELEY, CA	8.4%	116,774
SOMERVILLE, MA	7.8%	78,814
MOUNTAIN VIEW, CA	7.6%	77,839
EUGENE, OR	7.6%	15,9161
FORT COLLINS, CO	7.4%	152,056
GAINESVILLE, FL	6.6%	127,493
CAMBRIDGE, M	6.5%	107,276
PORTLAND, OR	5.9%	611,134
ANN ARBOR, MI	5.5%	117,034
MIAMI BEACH, FL	5.3%	91,019
CHICO, CA	5.1%	88,075



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Questions & Comments

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Item 9c

City of Palo Alto
City Council Staff Report

(ID # 6194)

Report Type: Study Session **Meeting Date: 10/26/2015**

Summary Title: Bicycle and Pedestrian Program Study Session

Title: Study Session on Status of Palo Alto Bicycle and Pedestrian Program

From: City Manager

Lead Department: Planning and Community Environment

Recommendation
This is a study session intended to provide information and to permit discussion regarding Palo Alto's bicycle and pedestrian program. No City Council action is requested.

Executive Summary
The Bicycle & Pedestrian Transportation Plan (hereinafter "Plan") was adopted by the City Council in July 2012. The Plan includes a proposed bikeway network of off-street multi-use paths, bicycle boulevards, bicycle lanes, and enhanced bikeway facilities. The plan has stated goals of increasing bicycle traffic for local and total work commutes by 100% by 2020 by providing improved facilities along the proposed bike network, which facilitates both north-south and east-west connectivity throughout Palo Alto.

With the Council's leadership, City staff is advancing the City's bicycle and pedestrian program through individual projects and programs that promote healthy transportation. Palo Alto is also integrating best practices from cities and private entities that are leading the way in increasing trips by foot and bicycle into local projects.

Implementation of the Plan started in 2013 with City Council authorization of up to $1.2M per year over five years as part of the Capital Improvement Program (CIP). With this commitment of funds, 18 projects are currently being studied and designed for implementation. A map of current projects is provided in Attachment A.

Since award of consultant contracts in April 2014, bike network implementation has focused primarily on Bicycle Boulevards and Enhanced Bikeways, although transportation staff has also been coordinating with Public Works and Community Services staff to deliver transportation projects through public works and parks contracts for street resurfacing and park improvements. Staff has also been working to implement data-driven spot improvements in response to customer requests, and seeks to ensure provide ongoing rehabilitation and

maintenance of the bicycle and pedestrian network and incorporation of green infrastructure and storm water treatment where feasible.

The City's nationally-recognized Safe Routes to Schools program is the centerpiece of the City's programs to support active transportation. The program reduces risk to students on school commutes through education, encouragement, enforcement, and engineering. By working closely with the Safe Routes to School program, staff has been able to identify small spot safety projects that improve existing school commute routes. Many of these spot safety projects are along identified Bicycle Boulevard and Enhanced Bikeway corridors.

Emerging trends that staff is pursuing include new outreach technology, safe routes for seniors, rethinking Bike Share, a new ride app to provide data to enhance planning, and new infrastructure such as protected intersections and cycle-tracks. In November, Council will be considering the adoption of the NACTO Urban Bikeway Design Guide and the NACTO Urban Street Design Guide. These documents provide valuable guidance on the planning, design and operation of protected bikeways and complete streets. By adopting these guides, the City will be able to incorporate more innovative treatments into the design of bike boulevards, enhanced bikeways, and local streets.

Background

In 2013 the City Council prioritized implementation of the Plan through an infusion of funding in the Capital Improvement Program (CIP) in the amount of $1.2M each year for five years not including individually funded projects. The City is utilizing the implementation models in Table 1 and Table 2 to deliver Bicycle Boulevard, Enhanced Bikeway, Multimodal Corridor, and Spot improvement projects.

Table 1
Palo Alto Bicycle & Pedestrian Transportation Plan
Capital Project Implementation Model

1A. Preliminary community outreach • Bicycle ride-alongs and walk-alongs, farmers market outreach, online interactive maps
1B. Planning • Concept Plan development and community outreach • Concept Plan policy approval by Planning and Transportation Commission and City Council
1C. Environmental Assessment

1D. Design • Implementation Plan community outreach • Implementation Plan approval by Planning and Transportation Commission and City Council • Final design
1E. Construction (award of construction contract by Council)

Table 2
Palo Alto Bicycle & Pedestrian Program
Process for Spot Improvements

2A. Request received or staff identify need
2B. Feasibility analysis • If request is related to a current project, coordinate response with project plans • Analyze to determine whether improvement is warranted and feasible
2C. Close out, defer or advance design • If need not justified, explain rationale to requestor • If need justified, but planned project overlaps, defer and incorporate into future project • If need justified, design project
2D. Implementation • If striping and signage, issue on-call work order • If more significant work, community outreach, design, obtain bids and/or incorporate into Capital Improvement Program project (PTC and City Council approval)
2E. Construction

Discussion

Table 3 shows the status of each project currently active and also includes projects led by other agencies in which the city is actively involved.

Many projects have completed the concept planning phases and are advancing for review by the Planning and Transportation Commission and City Council. Other projects have approved concept plans and are in the final design phase. Staff is seeking to reprogram cost savings from the first round of projects to begin a small handful of new projects. With Council direction, staff anticipates rethinking some of the more complex projects based on community input and professional judgement. These projects will require additional time and resources to ensure successful project delivery.

Table 3, and the narrative that follows, provides a summary of current project activities and staff recommendations for next steps. Concept Plans for each project are not included within this report due to file size but are available within the Bicycle and Pedestrian Program website that can be accessed from www.cityofpaloalto.org/bike.

Table 3

Palo Alto Bicycle + Pedestrian Project Status Summary

(See narrative below for details.)

Status		Project	Project Phase
City-led projects			
3A	On track (detailed Council update being prepared)	Adobe Creek Highway 101 Overcrossing	Design (Public Works)
3B	Recommend rethinking	Barron Park Neighborhood Bicycle and Pedestrian Routes	Planning
3C	Recommend rethinking	Bryant Street Bicycle Boulevard Update	Planning
3D	On track	Bryant Street Bicycle Boulevard Extension	Planning
3E	On track	Charleston Rd/Arastradero Rd Corridor	Design (Public Works)
3F	On track	Churchill Avenue Phase 1 (Caltrain to El Camino Real)	Design
3G	On track	Churchill Avenue Phase 2 (Bryant Street to Caltrain)	Planning
3H	Recommend holding	Fabian Way Enhanced Bikeway	Environmental
3I	Recommend holding	Greer Road Bicycle Boulevard	Planning
3J	Recommend rethinking	Homer/Channing Avenue Enhanced Bikeway	Planning
3K	On track	Matadero/Margarita Avenue Bicycle Boulevard	Construction
3L	On track	Maybell Avenue Bicycle Boulevard	Design
3M	On track	Moreno/Amarillo Avenue Bicycle Boulevard	Planning
3N	On track	Park Boulevard Bicycle Boulevard	Design
3O	On track	Ross Road Bicycle Boulevard	Planning
3P	On track	Wilkie Way Bicycle Boulevard	Design
	South Palo Alto Partnership Projects with Google		
3Q	On track	Alma Street Enhanced Bikeway	Planning
3R	On track	Louis-Montrose-Cubberley Bicycle Boulevard	Planning
3S	On track	Middlefield Road Enhanced Bikeway	Planning
3T	On track	San Antonio Road Enhanced Bikeway	Planning
	Stanford/Palo Alto Trail Program		
3U	Recommend rethinking (detailed Council update being prepared)	Midtown East-West Connector (City Lead)	Planning

3V	On track	Stanford Perimeter Trail	Construction (Stanford)
3W	Completed	Arastradero Road Trail Upgrade (City Lead)	Construction
	County of Santa Clara Expressway Study 2040 Program (County Lead)		
3X	On track	Foothill Expressway/Arastradero Road Intersection	Concept
3Y	On track	Page Mill Road Plan Line Study	Concept
3Z	On track	Page Mill Road & I-280 Interchange	Concept

Table 4 provides a summary of spot improvements completed in partnership with Palo Alto Unified School District (PAUSD) and new initiatives under development in late 2015 and 2016.

Table 4
Bicycle and Pedestrian Spot Improvements

Status	Project
Constructed	Terman Park Path - repaving
Constructed (PAUSD)	Gunn High School Path - Georgia Avenue access widening; Los Robles Avenue access improvement
Constructed (PAUSD)	Palo Alto High School at Embarcadero Road driveway - new parking lot path near
Implementation	Georgia Avenue at Gunn High School Path – bulb-outs and crosswalk
Feasibility Analysis	Arastradero Road at Miranda Avenue – striping improvements
Feasibility Analysis	East Meadow Drive and Cowper Street - striping and signal improvements
Feasibility Analysis	Bol Park Path - safety improvements
Feasibility Analysis	Palo Alto Avenue at El Camino Real - striping improvements between bicycle lane and bicycle left turn pocket

Barron Park Neighborhood Bicycle and Pedestrian Routes (3B)

The Barron Park Neighborhood Bicycle and Pedestrian Route project includes concepts for "suggestion lanes" and shared-lane pavement markings on streets in Barron Park including:

- Barron Avenue, Laguna Avenue to El Camino Real
- Los Robles Avenue, Laguna Avenue to El Camino Real
- La Donna Avenue, Barron Avenue to Los Robles Avenue
- Amaranta Avenue, Los Robles Avenue to Maybell Avenue
- Laguna Avenue, Matadero Avenue to Los Robles Avenue

Resident input focused on pedestrian safety due to the lack of sidewalk facilities within the Barron Park Neighborhood. In response, the current Concept Plans include options for the use

of stamped asphalt treatments to delineate and highlight roadway space for bicycle and pedestrian use without construction of sidewalk facilities. The City has also considered options for the use of innovative "suggestion lane" pavement marking treatments. "Suggestion lanes" designate roadway space for bicycle/pedestrian use and leave the remaining width available for motor vehicle travel. Opposing motor vehicles may have to encroach into the bicycle/pedestrian space to pass each other, if no bicyclists or pedestrians are present.

Based on community input, staff recommends refocusing resources on improvements near Barron Park Elementary and on resurfacing improvements on Laguna Avenue. Staff believes that more extensive corridor projects throughout Barron Park neighborhood should be placed on hold as the layout of Barron Park streets effectively discourages regional traffic on the local streets. Staff has identified a potential location outside Barron Park with more appropriate characteristics to pilot "suggestion lanes."

Bryant Street Bicycle Boulevard Update (3C)

The Bryant Street Bicycle Boulevard Update project includes upgrades to the existing bicycle boulevard segment between Palo Alto Avenue and East Meadow Drive. The Bryant Street Bicycle Boulevard is the country's first bicycle boulevard facility. Conditions have changed, especially downtown, and an update is needed.

Based on extensive community input, staff is recommending rethinking the proposed treatments for the Downtown section between Lytton Avenue and Addison Avenue and would like to return to Council in the future with a recommendation to advance improvements on this section of Bryant Street as part of a greater Downtown circulation plan.

North of Downtown, within the Old Palo Alto segment of Bryant Street, and south of Oregon Expressway to East Meadow Drive, final concept plans were developed following the community workshop held in April 2015. Based on community input, the high-visibility green sharrow markings have been removed from the concept plans for Bryant Street and other corridors. Many residents requested that the City limit use of intensive green pavement markings due to their aesthetic impacts. Staff has also reduced the number of high-visibility white crosswalks proposed on Bryant Street, based on resident feedback. Crosswalks are still included on school commute routes.

While recognizing that high-visibility green pavement markings do not fit the context of many residential neighborhoods, staff recommends the continued use of high-visibility green pavement markings along arterials and collector streets and on a site-specific basis across the City in high-conflict areas.

Based on community input and analysis of the current operation of the intersection, staff recommends a new traffic circle with all-way YIELD traffic control at the Bryant Street and North California Avenue. This intersection is currently controlled by an all-way STOP. Additional outreach to the neighboring church and others in the vicinity is required, as well as a parking

utilization survey in order to identify and mitigate any potential on-street parking impacts. The final concept plan presentation to Council will include this information.

Staff will be conducting additional school-based outreach and hosting one more neighborhood meeting to finalize concept plans for the Bryant Street Update. Staff anticipates bringing Concept Plans for approval to the Planning and Transportation Commission and City Council in spring 2016.

Bryant Street Bicycle Boulevard Extension (3D)

This project aims to extend the Bryant Street Bicycle Boulevard from East Meadow Drive to the city's southern limits near San Antonio Road and Nita Avenue. The project currently proposes a new traffic signal at East Meadow Drive & Bryant Street, traffic calming measures through the "Circles" neighborhood including bulb-outs and chicanes on Redwood Circle, along with sharrow roadway marking treatments and enhanced crosswalks. At Nelson Drive and the rear entrance to Cubberley Center, the current Concept Plans include a raised intersection to calm traffic. In response to community input, staff recommends the extension of bikeway treatments on Nelson Drive to Charleston Road. Staff also recommends the City continue working with Google on "The Rails" project in Mountain View to advance implementation of the Nita Avenue improvements in Palo Alto. The Concept Plan for the Bryant Street Bicycle Boulevard Extension is scheduled for representation to the PTC and City Council this winter.

Charleston Road-Arastradero Road Corridor (3E)

The Charleston-Arastradero Corridor project enhances a heavily-used, 2.3 mile roadway servicing 11 schools, several parks, shopping and community centers. This project has been under development since 2003. Trial projects were implemented using pavement striping and markings to reduce the road from four lanes to two and were approved in 2008 for Charleston Road and 2012 for Arastradero Road. On September 28, 2015, City Council reviewed and unanimously approved the concept plan line for the corridor project. The final improvements include landscaped medians, pedestrian and bicycle enhancements and traffic operation improvements. Final design will begin in 2016 with phased construction starting in 2017. The project is fully funded at $10.0 million including $1.45 million in grant funding.

Churchill Avenue Phase 1 (Caltrain to El Camino Real) (3F)

The Churchill Avenue Phase 1 project received City Council policy approval of Concept Plan in January 2015. This project received quick community consensus on proposed improvements due to early coordination with the Southgate neighborhood and Palo Alto High School staff as part of the planning work on the Castilleja Avenue Green Street project.

Proposed improvements include extension of the multi-use path to El Camino Real where a new westbound right turn lane would be added to improve capacity of the intersection. Bicycle and pedestrian safety at the El Camino Real intersection would also be enhanced through traffic signal modifications, the introduction of a new crosswalk on the north leg of the intersection and new bicycle lane markings and ramps to support connections to the Stanford Perimeter

Trail project. The El Camino Real intersection requires Caltrans approval, coordination is in progress. The multi-use path extension requires right-of-way from PAUSD, coordination is ongoing. The project also includes raised speed tables that double as crosswalks at Castilleja Avenue and Madrono Avenue and lighting improvements.

Staff is also working to implement near-term minor improvements to create additional bicycle queuing area and bicycle ramps near the Caltrain grade crossing. Construction bids were solicited for the work through the Department of Public Works, but the proposed fees exceeded the engineer's estimate. Staff recommends re-scoping these interim improvements and rebidding this small project, due to the urgent nature of the safety improvements at this location. Staff also recommends piloting an all-red pedestrian scramble traffic signal phase at the intersection of Churchill Avenue and Alma Street during the afternoon dismissal period for Palo Alto High School. This will allow cyclists traveling eastbound along the north side of Churchill Avenue to cross diagonally and ride on the proper side of the roadway as they approach Bryant Street. Staff has discussed the issue with the Police Department and we recommend that a new crossing guard be on-site during the traffic signal pilot period.

Churchill Avenue Phase 2 (Bryant Street to Caltrain) (3G)

Recently, the at-grade crossing of the Caltrain corridor at Churchill Avenue was identified for possible funding of hazard elimination and safety improvements through the Section 130 program. Section 130 funding can reimburse the actual and direct costs of the design and construction of the recommended improvements which are done subsequent to Caltrans executing a contract and issuing the notice to proceed. On September 1, 2015, staff from the City of Palo Alto, Caltrain, Caltrans Division of Rail (Caltrans), and the California Public Utilities Commission (CPUC) met to review the Churchill Avenue at-grade crossing (CPUC No. 105E-31.00 / SCL-1191, DOT No. 754998E) and begin a diagnostic study of the safety issues at the crossing. After completing the diagnostic study, the CPUC will conclude its analysis and finalize the list of projects for funding by the Section 130 program. Those projects on the final list will then advance into the next phases of project development, which include finalization of a scope of work, design, permitting and construction. The certainty of securing funding and a timeline for construction is undetermined at this time.

Churchill Avenue is currently a three-lane collector traveling east-west. Westbound Churchill Avenue consists of a single through lane. Eastbound Churchill Avenue consists of a shared through/left-turn lane and a dedicated right-turn lane. There are bicycle lanes traveling through the crossing on both north and south sides. There are an estimated 11,362 average motor vehicle daily trips, and an average of 96 trains, including 92 Caltrain commuter trains, per day. The immediate area around the crossing is residential. Palo Alto High School is located in the northwest quadrant. Churchill Avenue forms a four-legged intersection with Alma Street, approximately 25 feet to the east of the track. The intersection is controlled by a traffic signal and is interconnected with the crossing with advanced preemption. Safety issues identified by the CPUC diagnostic include: (1) high bicycle and pedestrian traffic due to the adjacent high

school, and (2) regular queuing on the tracks by eastbound motorists due to short storage space.

Staff recommends that the following improvements be included in the scope of work submitted to the CPUC for the Section 130 program: widening and realigning the Churchill Avenue crossing for bicycles and pedestrians, installation of a pre-signal west of the Caltrain crossing, installation of bicycle signal heads and use of an all-red pedestrian and bicycle scramble phase at the Alma Street intersection, replacement of the crossing surface, and installation of additional street lighting.

The existing crossing surface consists of rubber inserts within the roadway and asphalt on the sidewalks, with a concrete panel crossing surface covering both the roadway and sidewalks. Replacement of the rubber/asphalt crossing surface with a concrete panel crossing surface would mitigate concerns of the asphalt deteriorating, creating tripping hazards on the sidewalks. Caltrain has also had several instances of motorists becoming confused turning onto the tracks from the crossing instead of the appropriate intersection. Rumble strips or speed humps between the roadway and sidewalk could mitigate this concern.

Staff has scheduled a neighborhood meeting for October 22, 2015 at Palo Alto High School Media Arts Building from 6:00 to 8:00pm to update the community on both this and the Churchill Avenue Phase 1 project.

Fabian Way Enhanced Bikeway (3H)

The current Concept Plan for the Fabian Way Enhanced Bikeway project includes a lane reduction on Fabian Way from four lanes to three lanes to support the installation of a two-way left turn. Bike lanes already exist on Fabian Way but would be widened to support anticipated demand in bicycle activity from the planned Adobe Creek/Highway 101 Bike/Ped Overcrossing project currently in the design phase. The project also proposes the reconfiguration of existing mid-block crosswalks along the street. A traffic impact analysis was prepared in 2013, but the project was delayed due to negotiations with adjacent property owners. Those discussions will be relaunched in 2016. The use of green bicycle lane markings at conflict zones are also recommended to improve the visibility of bicycle lane facilities.

Greer Road Bicycle Boulevard (3I)

The current Concept Plan for the Greer Road Bicycle Boulevard project includes minor traffic calming measures including the installation of speed humps and shared-lane pavement markings to highlight bicycles path of travel on the street. Select intersections include traffic circle improvements with enhanced crosswalk markings or bulb-out improvements to reduce crossing distances including the intersections of North California Avenue, Amarillo Avenue, Moreno Avenue, Colorado Avenue, Maddux Drive, and Loma Verde Avenue. On Greer Road through the Midtown neighborhood the installation of short landscape median islands is also recommended to visually reduce the width of the roadway in efforts to encourage lower vehicle

speeds. Due to limited staff resources, staff recommends placing the Greer Road project on hold in order to prioritize implementation of Ross Road improvements, a parallel corridor.

Homer Avenue-Channing Avenue Enhanced Bikeway (3J)

The Homer Avenue-Channing Avenue Enhanced Bikeway was conceived as a means of providing safe bicycle access between the Homer Tunnel at Alma Street and downtown. Currently, eastbound bicyclists exiting the tunnel who wish to travel to downtown and points east use an existing one-block-long contraflow bicycle lane along Homer Street, turn right onto High Street, which is one-way southbound, turn left onto Channing Avenue and then head north via Emerson Street, Ramona Street or Bryant Street. This awkward diversion encourages many bicyclists to ride the wrong way down either High Street or Homer Avenue.

The current Concept Plan for the Homer Avenue-Channing Avenue Enhanced Bikeway includes the extension of the contraflow bicycle lane east to Emerson Street and the conversion of the existing right lanes on Homer Avenue and Channing Avenue to right-turn only at intersections, with bicycles exempted. On-street parking would remain, but traffic operations may be negatively impacted. This would create a semi-dedicated east-west bikeway from the tunnel at Alma Street to Guinda Street. Based on the magnitude of the proposed changes and the lack of community input from residents and property owners along Homer Avenue and Channing Avenue, staff recommends rethinking this project.

Refocusing the concept planning on the connection between the tunnel and downtown could create a more seamless connection to downtown for eastbound bicyclists exiting the tunnel. Alma Street in this area is currently scheduled to be resurfaced in FY 2017, offering an opportunity to modify the roadway at a low cost.

Matadero Avenue-Margarita Avenue Bicycle Boulevard Project (3K)

The City Council approved an implementation plan and Concept Plan for which construction started in 2014. A slurry seal of Matadero Avenue was completed in September 2015 and new markings and speed tables have been installed on the street. A focused traffic study will evaluate the opportunities to install a traffic circle at Margarita Avenue and Orinda Street in 2016. The intersection is currently an all-way STOP, but removal of the Margarita Avenue stop signs will be evaluated along with appropriate mitigations, such as the installation of a traffic circle. Staff will pursue the preparation of a Caltrans-required Project Study Report for improvements at the El Camino Real and Matadero Avenue-Margarita Avenue intersection as staff resources become available.

Maybell Avenue Bicycle Boulevard (3L)

Existing bicycle boulevard facilities on Maybell Avenue between El Camino Real and Amaranta Avenue are limited to speed tables and bicycle route signage. The Maybell Avenue Bicycle Boulevard includes El Camino Way (West Meadow Drive to El Camino Real), Donald Drive (Terman Middle School to Georgia Avenue), and Georgia Avenue (Donald Drive to Arastradero Road). Final design is anticipated in spring 2016 with construction later in 2016.

The project responds to requests for delineated bicycle and pedestrian space on Maybell Avenue without the installation of sidewalk facilities to comply with the Barron Park Neighborhood Design Guidelines. A combination of stamped colored asphalt treatments with signage and roadway markings will delineate roadway space in a context sensitive manner to the surrounding community. Time-of-Day parking restrictions are proposed to support large queues of student bicyclists and pedestrians accessing local schools.

At Georgia Avenue and Gunn High School Spur Trail, an enhanced crosswalk facility with bulb-outs and a combination speed table/crosswalk are proposed along with trail alignments to improve pedestrian/automobile visibility. Additional speed tables on Georgia Avenue are planned to reduce motor vehicle speeds approaching the trail intersection with Georgia Avenue.

This fall, the pavement markings and signage for El Camino Way segment of the Maybell Bicycle Boulevard are being installed as part of a slurry seal project. With the preventative maintenance project, a southbound bicycle lane was added between West Meadow Drive and just south of James Road, while sharrows were installed in the northbound direction.

Moreno Avenue-Amarillo Avenue Bicycle Boulevard (3M)

The Moreno Avenue-Amarillo Avenue Bicycle Boulevard provides an east-west connection route across the northern periphery of the Midtown neighborhood. The current Concept Plan starts at West Bayshore Road and includes traffic calming measures to moderate motor vehicle speeds entering the residential neighborhood. At Ohlone School the Concept Plan includes a new raised crosswalk and sidewalk widening from the school to Louis Road. At Louis Road, the Concept Plan includes a raised intersection treatment between Moreno Avenue and Amarillo Avenue. Shared lane pavement markings along the corridor are recommended to highlight the bicycle route with focused intersection improvements at Ross Road and Greer Road where intersecting Bicycle Boulevards meet.

Staff will be conducting additional school-based outreach and scheduling one more neighborhood meeting to before finalizing the Concept Plans. Staff anticipates presenting the Concept Plan for approval to the Planning and Transportation Commission and City Council in spring 2016.

Park Boulevard Bicycle Boulevard (3N), including Stanford Avenue connection

The Park Boulevard Bicycle Boulevard project received City Council policy approval of the Concept Plan in August 2015. Final design is anticipated to be completed in spring 2016, with construction beginning later in 2016. Park Boulevard is the City's most traveled bicycle route. The approved Concept Plan includes traffic calming such as traffic circles, median islands, and speed tables, wider bicycle lanes, crosswalk improvements, and stop sign removal. The project is being coordinated with the Charleston Road-Arastradero Road Corridor improvements for intersection treatments at Park Boulevard and Charleston Road. In response to comments

received from the Planning and Transportation Commission and City Council, staff conducted an additional neighborhood meeting on October 8 at the Escondido School to further refine the concept plan before advancing into final design. It is estimated that about 20 residents attended. There was widespread support for the proposed traffic calming along Park Boulevard and Stanford Avenue, however there was a great deal of concern surrounding the section of Park Boulevard between California Avenue and Lambert Avenue. Generally, attendees did not feel that the approved Concept Plan offered sufficient comfort and safety for cyclists in this stretch. As we move into final design, staff recommends considering some type of Class IV separated bikeway facility in this section, due to the heavy traffic and large number of turning conflicts in the vicinity of Page Mill Road.

Ross Road Bicycle Boulevard (3O)

Ross Road has some existing traffic calming measures, including speed humps between Oregon Expressway and Colorado Avenue. The current Concept Plan includes sharrows and new slotted speed humps south of Colorado Avenue. Pedestrian safety is a big concern for local residents so new crosswalk markings parallel to Ross Road are included in the current Concept Plan, along with curb extensions and focused intersection improvements at Colorado Avenue, Clara Drive, Loma Verde Avenue, Talisman Drive, East Meadow Drive, and Louis Road. The current Concept Plan includes traffic circles with yield controls and pedestrian crosswalks at both Moreno Avenue and East Meadow Drive.

Early implementation of this project started in 2014 with the construction of a new bicycle-priority traffic signal at Oregon Expressway. The traffic signal allows bicyclists to travel across Oregon Expressway while automobiles are forced to turn right.

Staff plans to conduct additional school-based outreach and schedule one more neighborhood meeting to finalize concept plans for Ross Road. Staff anticipates presenting the Concept Plan for approval to the Planning and Transportation Commission and City Council in spring 2016.

Wilkie Way Bicycle Boulevard (3P)

The Wilkie Way Bicycle Boulevard project received City Council policy approval of the Concept Plan in August 2015. Final design is anticipated to be completed in spring 2016 with construction to begin later in 2016.

Wilkie Way connects to Park Boulevard via Maclane Street and provides a connection to Mountain View via Miller Avenue and Del Medio Avenue. The street currently provides wide motor vehicle travel lanes and residents have expressed concerns regarding motor vehicle speeds between Maclane Street and Charleston Road. Intersection improvements including bulb-out treatments and traffic circles are proposed in this section in response and offer opportunities to transform the streetscape of the neighborhood into a more walkable community with large tree canopies. Similar improvements were initially considered south of Charleston Road but residents expressed concern regarding the benefit of larger improvements in this neighborhood given the existing end-of-street condition south of Whitclem Drive. South

of the Wilkie Way Bridge, traffic calming with median islands in the Monroe neighborhood are proposed in the Concept Plan. These would help to slow motor vehicle speeds.

South Palo Alto Google Partnership Projects (3Q-3T)

Google is funding the concept planning work for several corridors in south Palo Alto. The projects will create a network of facilities around the Cubberley Community Center and tie directly into Google's "The Rails" project, located at San Antonio Road and Nita Avenue. The following corridors are included in the South Palo Alto Google Partnership Projects:

- Alma Street Enhanced Bikeway, Charleston Road to San Antonio Avenue
- Louis-Montrose-Cubberley Bicycle Boulevard, East Meadow Circle to Nelson Drive
- Middlefield Road Enhanced Bikeway, Charleston Road to South City Limit

San Antonio Avenue Bicycle Route, Charleston Road to Alma Street Improvements vary from sharrows on low-volume residential streets to reconfiguration of arterial streets and side streets to create new shared-use paths connecting residents, regional transit, shopping, and employment destinations. After reviewing input from recent community meetings, staff identified the following next steps for each project to wrap up the concept planning phase.

Alma Street Enhanced Bikeway

The current Concept Plan includes a new shared-use path that incorporates the existing sidewalk between East Meadow Drive and San Antonio Avenue. Innovative intersection treatments (i.e. bicycle boxes, two-stage queue-boxes, bicycle traffic signals, etc.) are also included at East Meadow Drive and Charleston Road. Staff recommends developing more detailed landscaping plans in order to determine which of the existing trees will be impacted and identify opportunities to mitigate the impacts through the installation of additional trees and landscaping. Staff also recommends more focused outreach to the religious institutions along the corridor, as their driveways may see increased bicycle traffic after the bikeway is constructed.

Louis-Montrose-Cubberley Bicycle Boulevard

The current Concept Plan includes two alternatives for Louis Road: 1) removal of one part-time on-street parking lane and the installation of all-day bicycle lanes in both directions (one all-day parking lane would remain), or 2) designation of two all-day on-street parking lanes and the installation of sharrows in the travel lanes. Staff recommends that a parking utilization survey be conducted along the corridor to calculate the existing parking demand and determine whether this demand can be satisfied with one on-street parking lane. The current Concept Plan recommends a shared-lane condition along Montrose Avenue and a newly striped parking lot drive aisle and widened shared-use path through the Cubberley Community Center. Staff is working with other departments and agencies to include these improvements in any project being planned for the community center property.

Middlefield Road Enhanced Bikeway

The current Concept Plan includes the installation of buffered bicycle lanes between Charleston Road and Mountain View city limits. In order to accommodate the enhanced bikeway, the plan includes a lane reduction north of San Antonio Road and roadway widening at the intersection of San Antonio Road. Staff recommends the completion of a traffic study to determine whether the lane reduction will function well for other roadway users and also analyze the operation of the San Antonio Road intersection with and without the proposed roadway widening.

San Antonio Avenue Enhanced Bikeway

The current Concept Plan includes a shared-use path on the north side of San Antonio Road between Charleston Road and Byron Street, where the enhanced bikeway then continues along a bicycle boulevard on the San Antonio Avenue service road to Alma Street. The shared-use path is currently proposed to terminate at Charleston Road, rather than extend over US 101, due to the investment in the Adobe Creek Overcrossing and the alternate crossing available at North Rengstorff Avenue. Additional outreach is planned to residents near a proposed roundabout at Briarwood Way, San Antonio Avenue, and San Antonio Road. Staff recommends that a parking utilization survey be conducted in the area around Charleston Road and Fabian Way to calculate the existing parking demand and determine whether the angled parking on San Antonio Road can be modified.

Stanford-Palo Alto Trails Program (3U-3W)

The Stanford-Palo Alto Trails Program was a partnership between Stanford University and Palo Alto designed to access Santa Clara County trails funding to create a set of hiking and biking trails connecting recreational areas in the foothills to those in the Palo Alto Baylands. The plan, called "Stanford and Palo Alto Trails Program: Connecting the Bay to the Ridge," was proposed in 2012. Since then, Stanford has pursued design and construction of their perimeter trail, and Palo Alto has pursued a trail along Matadero Creek.

Stanford Perimeter Trail

The Stanford Perimeter Trail will be an easily accessible, 3.4 mile-long, multi-use recreational amenity, built along Junipero Serra Boulevard, Stanford Avenue, and El Camino Real. It will be a high-quality facility for walkers, joggers, and bicyclists. The trail provides an important connection to Palo Alto and County trails, local parks, schools, and other destinations.

Stanford completed construction of a new multi-use trail along Junipero Serra Boulevard from Stanford Avenue to Page Mill Road in September 2015, including Dish entrance improvements and new bicycle parking. Stanford is currently reconstructing the Stanford Avenue roadway from Junipero Serra Boulevard to Escondido Road through October 2015. Enhanced bicycle lane striping and construction of on-street back-in angle parking on Stanford Avenue near Junipero Serra Boulevard has been completed.

Construction along El Camino Real between Stanford and Quarry is currently underway through November 2015. Additional updates on construction activities are available at: https://perimetertrail.stanford.edu/construction-updates

Midtown Connector Project
The City is leading the planning phase of the Midtown Connector Project (formerly known as Matadero Creek Trail). The Midtown Connector Project seeks to identify routes on and parallel to the Matadero Creek between Highway 101 and Alma Street that serve to connect community facilities for use by bicyclists and pedestrians of all ages.

A preliminary constructability review indicates that constraints along the Matadero Creek alignment limit the feasibility of a public access trail on a majority of the Matadero Creek corridor. Constraints include access closure structures constructed by the Matadero Creek Long-Term Remediation Project and steep trail gradients required for maintenance access to the creek channel. Staff presented preliminary findings to the Midtown Connector Citizen's Advisory Committee on September 8, 2015 for discussion.

The magnitude of the constraints identified raise important policy questions for the City and staff will be returning to the City Council for direction before the end of the year.

Arastradero Trail
The Arastradero Trail is an important component of an integrated pedestrian and bicycle network that connects mixed-use areas in Central Palo Alto with recreational areas both near San Francisco Bay and up in the Palo Alto hills. The Arastradero Trail skirts the southern edge of the Stanford University campus and the Stanford Research Park, providing a convenient, uncongested route that improves travel time and safety for community residents, workers, and visitors. The trail provides connections to Gunn High School and the VA Clinic, and several major employers located along Arastradero Road. The trail also reaches up into the hills southwest of Palo Alto, providing connections to highly popular recreational bicycling roads and trails.

In spring 2015, the City rebuilt the Arastradero Trail along Arastradero Road west of Foothill Expressway as part of the Capital Improvement Program. The project widened and repaved the trail to bring it to current design standards for a multi-use path.

County of Santa Clara Expressway 2040 Program (3X-3Z)
The proposed Bikeway Network of the Bicycle & Pedestrian Transportation Plan identifies Page Mill Road as an existing Class II Bike Lane but notes the area in and around El Camino Real as requiring additional improvements. The City of Palo Alto funded the Concept Plan Line work for Page Mill Road between Birch Street and Interstate 280 to support the planning activities of the County of Santa Clara Expressway

2040 Program. The study also included focused analysis of spot intersection improvements identified in the Plan including the Page Mill Road and I-280 intersection, Foothill Expressway and Arastradero Road intersection, Foothill Expressway and Page Mill Road intersection, and connections of Old Page Mill Road to Junipero Serra Boulevard. The City Council considered the plans and provided feedback to the County in summer 2015 that expansion of Page Mill Road should only be studied for dedicated carpool lanes, not single-occupancy vehicle lanes. Council members also provided specific comments regarding the alignment of bicycle facilities immediately east of I-280.

POLICY, PROGRAMS, AND EMERGING TRENDS

The City's bicycle and pedestrian program seeks to continue Palo Alto's leadership in promoting healthy transportation by advancing policy and program initiatives to support and complement Plan implementation projects. Some examples are described below, and constitute current "best practices" from other cities and private entities that are similarly committed.

Improved outreach with new technology and commitment to transparency

A central challenge of planning is creating informed discussions about the past, present, and potential future. Traditional community outreach strategies are failing to reach a large proportion of our community.

Evening community meetings, noticed via snail mail, are successful at engaging a segment of the community, but many more are left out of the process. Citizens are eager for opportunities to learn and comment on concepts, on their own time, when it is convenient for them.

Staff is taking steps to increase opportunities for community input. In the past, concept plans have not always been posted online in advance of community meetings and individuals who have attended previous meetings have not always been properly noticed. Going forward, all concept plans will be posted online in advance of community meetings. Those who cannot attend will be encouraged to provide written comment. Staff has implemented new checks to ensure proper noticing of the community.

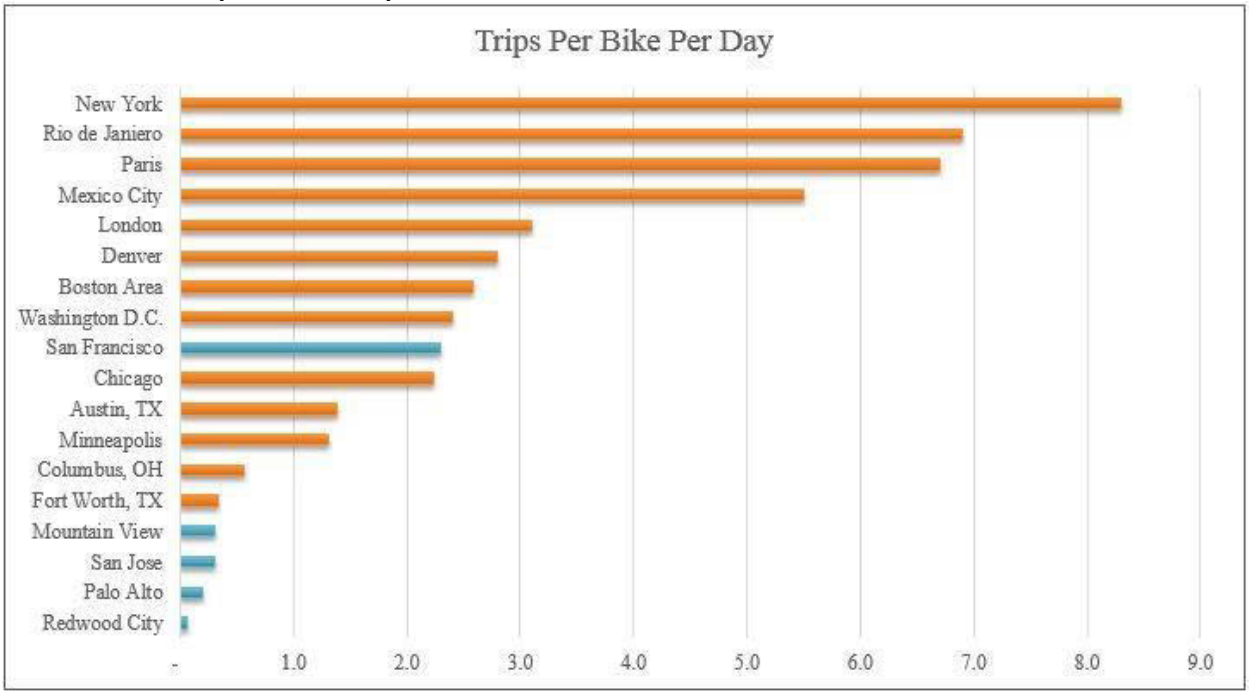
Staff is also interested in advancing a pilot program to test a new model for robust community engagement using virtual reality kiosks to show 360-degree visualizations of design options right from the street. Participants will be able to visualize the present and future of the area surrounding them, respond to survey questions, and leave audio comments. In San Francisco, a similar outreach strategy was tested recently for the Better Market Street project. In a single week test, 500 people participated through a virtual reality kiosk installed at the corner of 6th and Market Street. That is compared to 272 people who attended the City of San Francisco's official workshops in 2 days in 2014. 33% of participants indicated they had never before heard of the Better Market Street project. In addition to the multiplier effect on participation, the virtual reality kiosk also ensured that a sizeable portion of the participants were for the first

time included in the democratic process. As a result, many new members of the community learned about the project, and citizens had a much clearer picture of design implications for the community.

Bay Area Bike Share

Bike share continues to be a hot trend in transportation. In 2014 the number of bike share stations nationwide increased about 20%, from 1,925 in 2013 to 2,345 in 2014. Fourteen new bike sharing systems opened nationwide, and four existing ones closed, bringing the United States total up to 50 active systems. Table 5 compares trips per bicycle per day on U.S. and international bike share systems. Most successful systems are in urban areas with high population and employment density. Successful systems invest in a significant build-out of the bike share network, with station density far higher than the Bay Area pilot program.

Table 5: Bike Share System Efficiency around the World



Bike share in Palo Alto debuted in August 2013 as part of the San Francisco regional bike share pilot program, Bay Area Bike Share. Bay Area Bike Share allows customers to rent out bikes and return them at other stations. In Palo Alto, the Bike Share program currently includes 37 bikes at five stations: three in downtown, one near the California Avenue Caltrain station and one on Park Boulevard.

The small number of bike share stations and lack of station density in Palo Alto has limited its ability to provide efficient first and last mile connections. Without Stanford University and other large employers' participation, bike share is unlikely to play a significant local role in transportation demand management. According to MTC data, a Palo Alto bike has a usage rate of 0.21 trips per day, fewer than both Mountain View (0.48) and San Jose (0.39). In San

Francisco, which has 380 bikes, the rate is 2.6 daily trips per bike. Since the program launched in 2013, Palo Alto has experienced fewer than 5,000 total trips. This includes about 500 between October 1 and December 31, 2014, MTC data shows.

Bike Share's managing agency, the Metropolitan Regional Transportation Commission (MTC), has evaluated the pilot program in preparation for a major regional expansion. The evaluation recommends discontinuing the pilot program in cities with underwhelming ridership numbers, including Palo Alto. In May 2015, the MTC Board of Directors authorized a term sheet for contract negotiations between MTC and Motivate, the selected Bike share operator, which includes withdrawal of ongoing financial support for bike share in Palo Alto, Mountain View, Redwood City, and San Mateo beginning June 1, 2016. As things currently stand, the existing Bike Share will continue to June 2016 at no cost to the city. Under the initial terms of the agreement with Motivate, there will be a cost to the City after next June to maintain and/or expand the service. The City could also elect to discontinue participation or go with another approach. Cities wishing to continue must notify Motivate by May 31, 2016. For cities that decide not to continue by this time, Motivate plans to relocate the equipment in July 2016.

MTC has tentatively agreed to make available consulting resources to support a focused strategic planning effort to investigate options for the Mid-Peninsula cities. This study would look at alternative bike share options, costs and financing strategies and inter-operability with the Bay Area Bikes Share system. The Peninsula Pilot Cities would like to explore a common approach for the Mid-Peninsula that could be a key component of the Caltrain last-mile strategy. A more flexible and cost-effective bike share system, in which each bike contains a lock, so that stations are not required on both trip ends, may better serve the mid-Peninsula area. Regional compatibility for members and occasional users is also an important consideration, as many Palo Alto trips have regional origins and destinations. This planning study will need to get underway soon to support decision-making in early 2016.

New Ride app selected through Multi-City Innovation Challenge

The City of Palo Alto has partnered with 25 cities to participate in an App Challenge for developers to create technology which improves community health. The partner cities selected one finalist with a project related to bicycle route planning. Staff is looking at deploying the Ride app as part of our portfolio of experimental, innovation activities in 2016. The Ride app has been successfully deployed in Portland, Oregon and can be previewed at https://ride.report/

The app has two primary uses:

1) First, bike riders get an easy-to-use app that anonymously tracks bike routes around the city. With one click, users can offer valuable feedback about what it's like to ride those routes. The app runs in the background on low power, so it does not drain your battery.
2) For the city, the company has created a dashboard that pulls in data from the Ride app and other sources into a visual map. The idea is to make it as easy as possible for city leaders and staff to see what bike routes are popular during different times of day and incorporate that information into better city planning.

Timeline

Each of the Bicycle and Pedestrian projects will follow the Project Implementation Model as shown in Table 1. Projects will advance for policy approval of Concept Plans during 2015 and 2016, following two to four community outreach meetings to help refine and respond to neighborhood concerns prior to approval. The Park Boulevard Bicycle Boulevard, Wilkie Way Bicycle Boulevard, and Maybell Avenue Bicycle Boulevard are already in the Final Design phase. The Churchill Avenue Phase 1 project is already in the Final Design phase and City Council consideration of the award of the construction contract is anticipated in spring 2016.

Following the Concept Plan policy approvals, staff will bring forward additional contracts for completion of Final Design and Environmental Assessment, followed by contracts for construction. Staff recommends the pursuit of grant funds for construction to leverage local funding in the CIP.

Resource Impact

As part of the approval of the City's Infrastructure Plan, the City Council allocated $20.0 million towards bicycle and pedestrian plan implementation. For Fiscal Year 2014 and 2015, $0.8 million has been expended in the Bicycle & Pedestrian Transportation Plan Implementation Project (PL-04010). The 2016-2020 Adopted Capital Improvement (CIP) includes a total of $7.9 million in funding for this project. Additionally, the CIP set aside $11.6 million in a reserve for the Bicycle and Pedestrian Transportation plan. As part of future CIPs, projects will be identified for use of the reserve. Staff seeks to apply for grant funding to offset resources identified for bicycle and pedestrian plan implementation. As grant funds are secured or low-cost project improvements identified Transportation staff will coordinate with Public Works for implementation as part of the Street Resurfacing Program.

Policy Implications

Implementation of the Bicycle & Pedestrian Transportation Plan and its associated projects is supported by the goals, policies and programs included in the Comprehensive Plan, including:

> GOAL T-3: Facilities, Services, and Programs that Encourage and Promote Walking and Bicycling
>
> POLICY T-1: Make land use decisions that encourage walking, bicycling, and public transit use.
>
> POLICY T-14: Improve pedestrian and bicycle access to and between local destinations, including public facilities, schools, parks, open space, employment districts, shopping centers, and multi-modal transit stations.
>
> POLICY T-15: Encourage the acquisition of easements for bicycle and pedestrian paths through new private developments

POLICY T-18: Support the development of the Santa Clara County Countywide Bicycle System, and other regional bicycle plans.

POLICY T-19: Improve and add attractive, secure bicycle parking at both public and private facilities, including multi-modal transit stations, on transit vehicles, in City parks, in private developments, and at other community destinations.

POLICY T-22: Improve amenities such as seating, lighting, bicycle parking, street trees, and interpretive stations along bicycle and pedestrian paths and in City parks to encourage walking and cycling and enhance the feeling of safety. POLICY T-23: Encourage pedestrian-friendly design features such as sidewalks, street trees, on-street parking, public spaces, gardens, outdoor furniture, art, and interesting architectural details.

PROGRAM T-5: Work with private interests, such as the Chamber of Commerce and major institutions, to develop and coordinate trip reduction strategies.

PROGRAM T-19: Develop, periodically update, and implement a, bicycle facilities improvement program and a pedestrian facilities improvement program that identify and prioritize critical pedestrian and bicycle links to parks, schools, retail centers, and civic facilities.

PROGRAM T-22: Implement a network of bicycle boulevards, including extension of the southern end of the Bryant Street bicycle boulevard to Mountain View

PROGRAM T-23: Develop public sidewalks and bicycle facilities in Stanford Research Park and other employment areas

Other policies in the Comprehensive Plan speak to the aesthetics of street improvements and the need to balance the needs of all modes of transportation, for example:

POLICY T-25: When constructing or modifying roadways, plan for usage of the roadway space by all users, including motor vehicles, transit vehicles, bicyclists, and pedestrians.

These policies and those supporting bicycle and pedestrian improvements must be balanced as individual project decisions are made.

Environmental Review

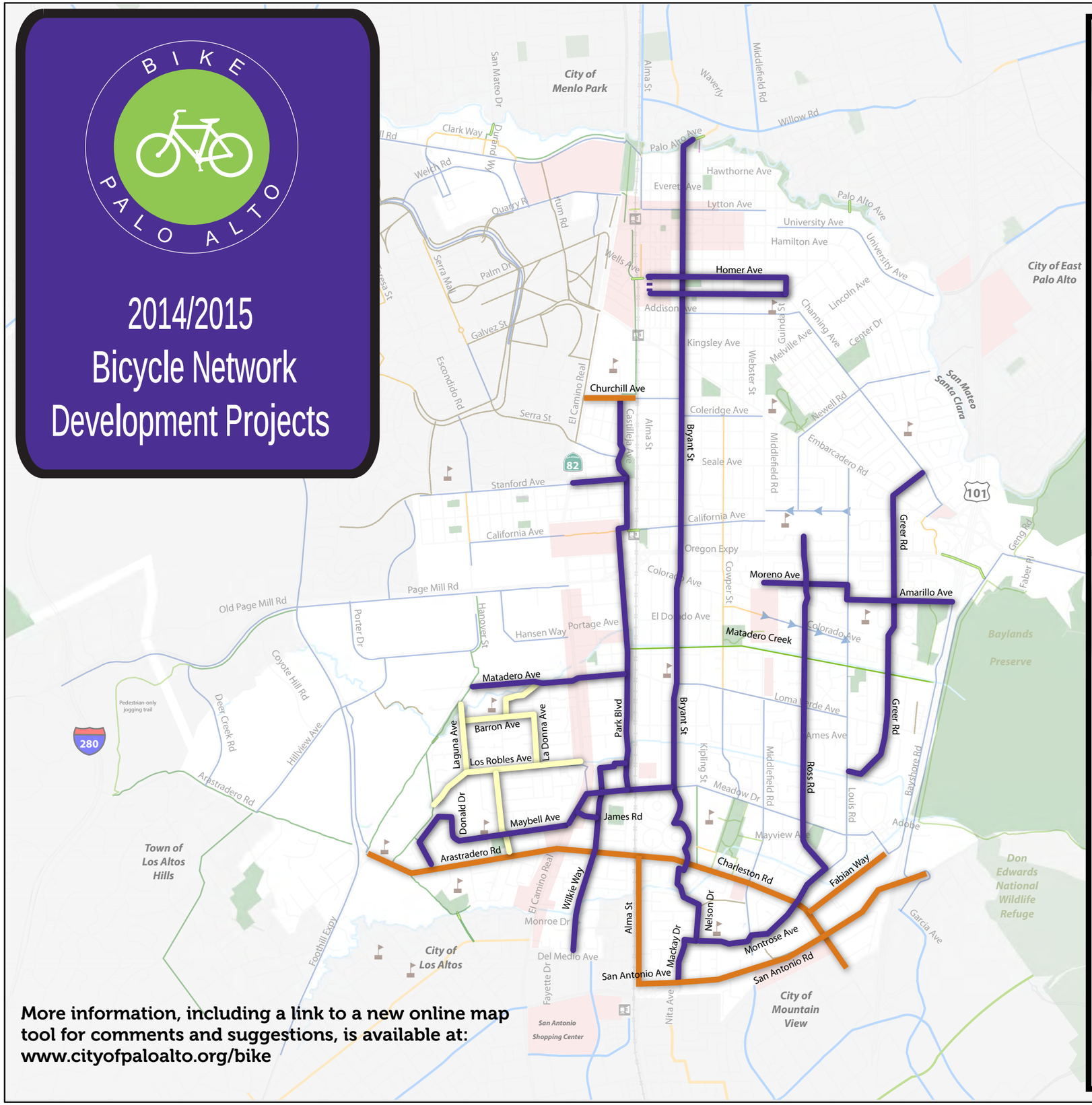
A Negative Declaration for the City Bicycle Plan was adopted on September 4, 2012. Each individual capital improvement project is subject to environmental assessment following the policy approval of Concept Plan Lines for each project. This staff report intends to provide only an update on each project, no environmental assessment is discussed or approval requested.

Attachments:

- Attachment A: Current Bike/Ped Network Projects (PDF)

BIKE PALO ALTO

2014/2015 Bicycle Network Development Projects



More information, including a link to a new online map tool for comments and suggestions, is available at: www.cityofpaloalto.org/bike

Bicycle Boulevards

Bicycle Boulevard projects are on streets where bicycling is already appealing for many riders due to low traffic volumes and speeds, and good access to key destinations such as schools, parks, and connections across key barriers.
Potential improvements on these routes include revised traffic controls to promote cycling convenience, custom signage and wayfinding, additional traffic calming, and other measures.

Barron Park Shared Bikeways

A major effort is underway to improve bicycle and pedestrian comfort for streets in the Barron Park neighborhood. These corridors are identified as "shared bikeways" in the City's adopted bicycle network, which are similar to Bicycle Boulevards but without as much focus on providing signage for crosstown connectivity. Since most of these streets do not include sidewalks or walkways, a stronger emphasis on pedestrian safety is also anticipated.

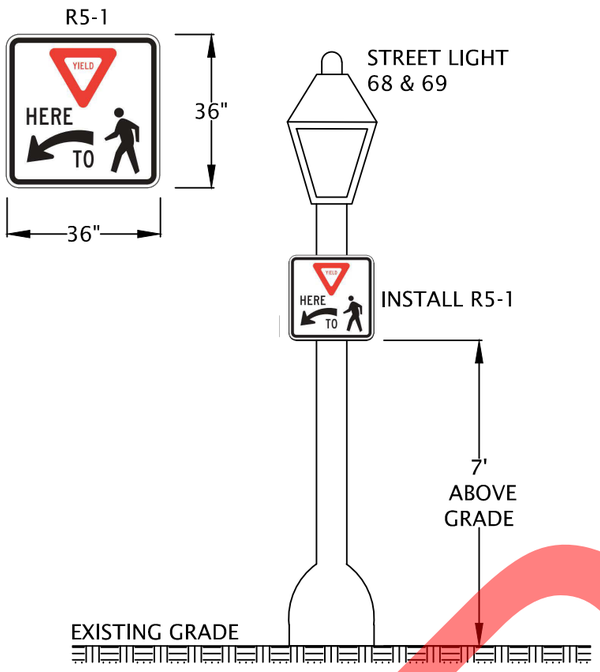
Matadero Creek Trail Feasibility

This project seeks to improve east-west connectivity for recreational activity and bicycling in the Midtown neighborhood of Palo Alto. With an emphasis on determining the feasibility of a pathway or trail along the creek's existing maintenance roads, the project will also look at parallel on-street corridors for protected bikeway and greenway concepts, as well as advance the design of future potential barrier crossings over/under Highway 101 and Caltrain.

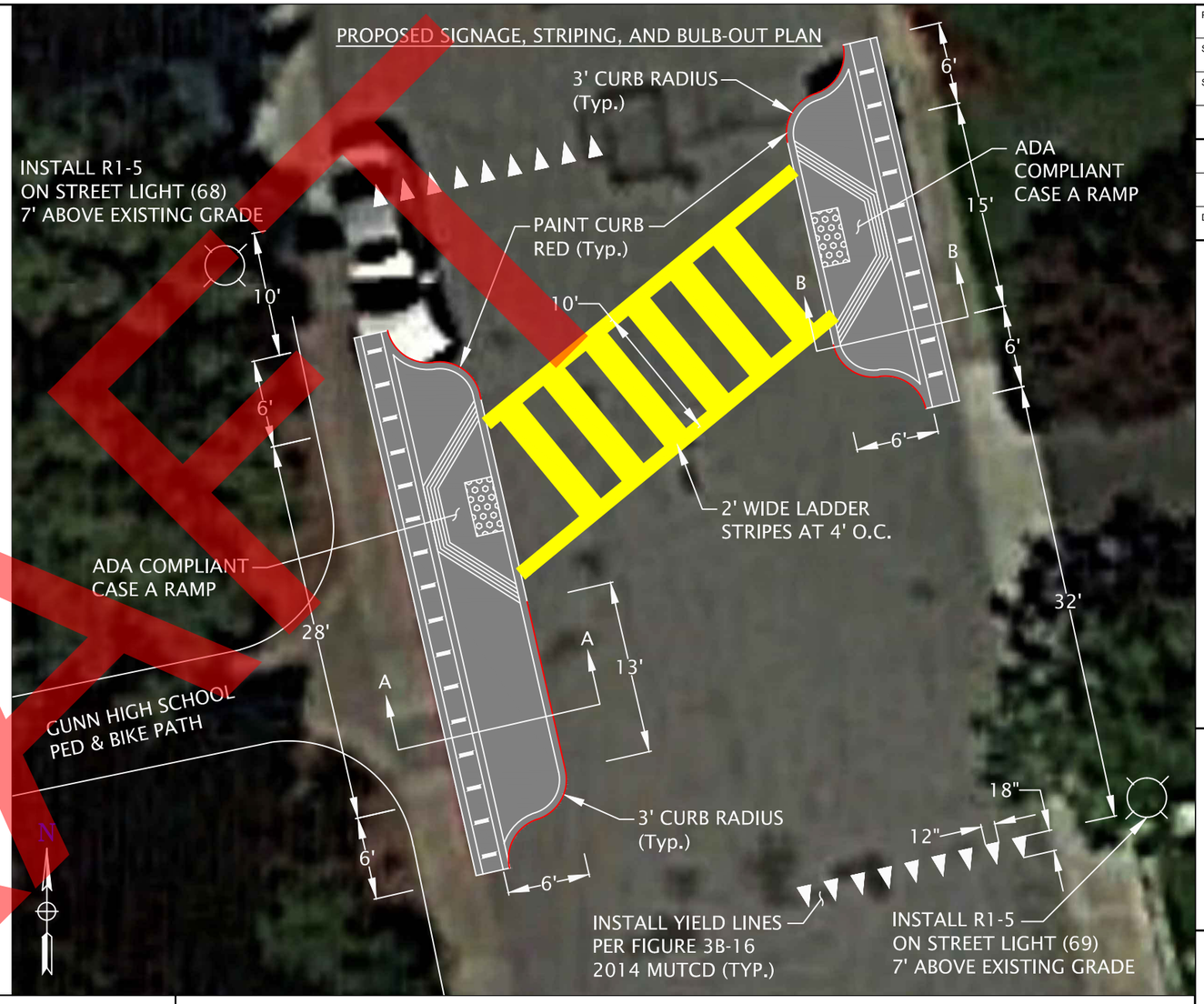
Multi-Modal & Enhanced Bikeways

The Charleston-Arastradero Project will advance the design of this important corridor for all modes, with a focus on landscaped medians and other streetscape features, as well as Safe Routes to School safety measures. The Churchill Ave Project seeks to close the gap between the Caltrain and Stanford shared use pathways, while also seeking significant upgrades to the El Camino Real intersection. Lastly, several roadways in South Palo Alto are being examined for a variety of bikeway enhancements as part of a public-private partnership with Google.

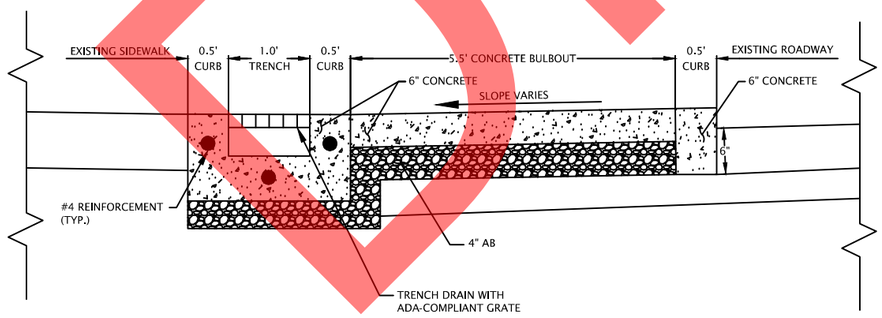
SIGN INSTALLATION DETAILS



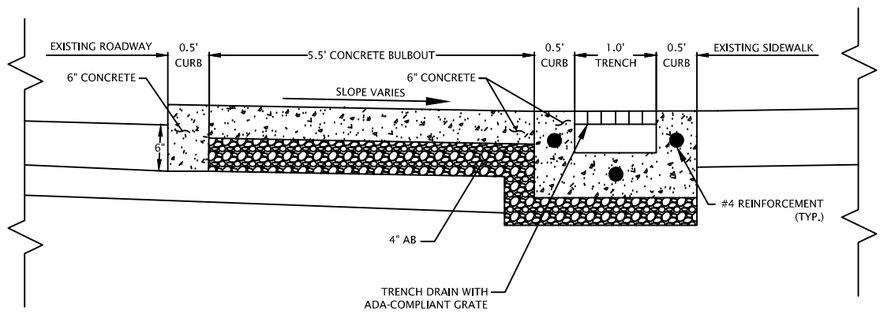
PROPOSED SIGNAGE, STRIPING, AND BULB-OUT PLAN



SECTION A-A



SECTION B-B



PROJECT NO.	
SCALE:	NONE
SHEET NO.	1 OF 1
DRAWN BY:	R. PATEL

CITY OF PALO ALTO

PROPOSED SIGNAGE, STRIPING, AND BULB- OUT PLAN

GEORGIA AVE NEAR GUNN HIGH SCHOOL
PEDESTRIAN & BIKE PATH

REVISIONS

NO.	DESCRIPTION	DATE

City of Palo Alto
Planning & Community Development Dept.
Transportation Division
250 Hamilton Avenue
Palo Alto, CA 94301
O: (650) 329-2441
F: (650) 329-2154

Work Order

PALO ALTO AVENUE BETWEEN EL CAMINO REAL AND ALMA STREET.

1. INSTALL R4-11 BIKE SIGNAGE IN PLANTER SECTION.
2. INSTALL SHARROW WITH GREEN BACKGROUND AT LOCATIONS SHOWN.
3. INSTALL 50' OF GREEN BIKE BOX AT LOCATIONS SHOWN.
4. INSTALL BIKE LANE SYMBOL OVER FRESHLY INSTALLED GREEN BIKE BOX AND NEAR INTERSECTION AS SHOWN BELOW.

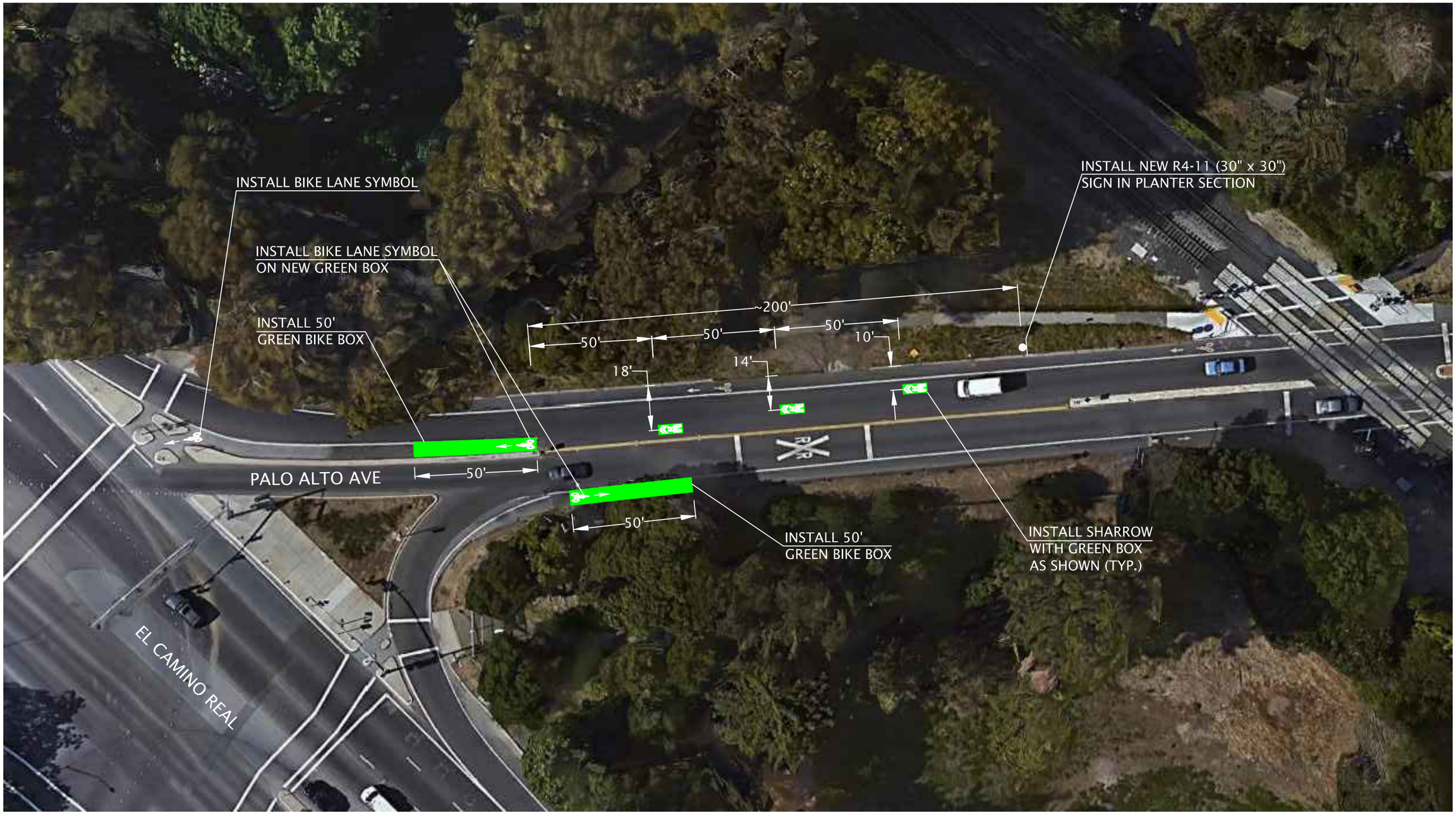
R4-11

(30" x 30")

SHARROW WITH GREEN BOX DETAIL

PER REVISEED CALTRANS
STANDARD PLAN A24C

Item 11 b



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