



August 5, 2013

Sam Shelton
Associate Planner
Sacramento Area Council of Governments
1415 L Street Suite 300
Sacramento, CA 95814

Dear Mr. Shelton:

The City of Davis is pleased to submit our application to SACOG requesting \$1,912,000 for the 'Mace Blvd Complete Street' project under the 2014 Regional / Local Funding Program.

Mace Blvd is a four-lane north-south arterial in southeast Davis connecting south Davis residential neighborhoods with Pioneer Elementary School, the El Macero shopping center, Interstate 80

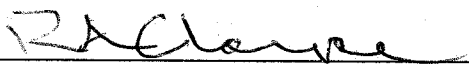
The primary purpose of this project is to increase bicycling and walking to Pioneer E.S., which has the highest percentage of students driven to school in the Davis Joint Unified School District at 80%. A 2013 Safe Routes to School audit determined that a perceived lack of safety when traveling on or crossing Mace Blvd is a major barrier to parents allowing their children to walk or bike to school. Furthermore, a June 2013 Open House for this project revealed neighborhood residents would walk or bike on Mace Blvd if speed concerns were addressed and bicycling safety and comfort were improved.

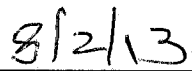
Mace Blvd also needs rehabilitation. The average Pavement Condition Index score for the project is 31, compared to a citywide average of 62.

The proposed project addresses many of the stated safety concerns in a cost effective manner, "bundling" pavement rehabilitation needs with substantive upgrades to bicycle and pedestrian facilities to achieve objectives within the Regional/Local funding program.

We thank the Committee for its consideration of this project. We are available to answer any questions; please contact Michael Mitchell, Principal Civil Engineer at 530-757-5686 or mmitchell@cityofdavis.org.

Sincerely,


Robert A. Clarke, PE
Public Works Director


Date



K. Project Application

This is intended to be an overall summary of your project and applies to General and Rehabilitation Projects.

<u>Project Title</u>	Mace Blvd Complete Street Project
SACOG ID number (if available)	Not applicable
PPNO and/or EA number (if applicable) Federal ID number (if applicable)	Not applicable
<u>Responsible Project Manager/Contact</u> Name: Position: Address: Phone: E-mail:	Michael Mitchell, Principal Civil Engineer Public Works Department 23 Russell Blvd, Suite 5 Davis, CA 95616 530-757-5686 mmitchell@cityofdavis.org
<u>Co-sponsor/Partner Agencies</u>	Not applicable

<p><u>Project Location</u> (Also attach a map)</p>	<p>.5 mile segment of Mace Blvd (north/south arterial) between Blue Oak Place and Cowell Blvd.</p>
<p><u>Project Scope/ Description (Snapshot)</u></p>	<p>The Mace Blvd Complete Street project aims to accomplish two objectives:</p> <ol style="list-style-type: none"> 1. Rehabilitate the street. PCI score varies from 16 to 45 and deteriorates at a rate of 2-3 points per year. 2. Increase non-motorized transportation along the corridor and between the neighborhoods east and west of Mace Blvd, particularly increasing levels of bicycling to Pioneer Elementary School. <p>Project Scope:</p> <ol style="list-style-type: none"> 1. Resurface and restripe, entire corridor. Reconstruct where needed. 2. Improve Mace/Cowell intersection for bicycles and pedestrians (e.g. remove free right turns/extend pedestrian refuge islands, install bike boxes). 3. Two-way protected, buffered cycle track on east side (protected, buffered bike lane if cycle track is infeasible). 4. Reconfigure lanes from four to two plus turn lanes. 5. Buffered bike lane on west side. 6. Install signal control (RRFB or HAWK) at San Marino.
<p><u>What planning documents or other sources describe the need for your project (Snapshot)?</u></p>	<ol style="list-style-type: none"> 1. Mace Blvd identified in General Mobility Element for a “corridor plan”. 2. 2010 Street Smarts school travel-mode surveys. 3. 2013 Safe Routes to School audits. 4. 2013 Pavement Management Report.
<p><u>Summarize the need for the project based on these documents (Snapshot).</u></p>	<ol style="list-style-type: none"> 1. Average PCI score 31 out of 100. 2. The real and perceived safety concerns over riding/walking along or across Mace Blvd deter multi-use and especially deter elementary school students to use the corridor.

<p><u>Describe the project area’s current transportation facilities, by mode (Snapshot).</u></p>	<ol style="list-style-type: none"> 1. Four lane arterial with center median/ turn pockets. 2. Sidewalks on both sides of street. 3. Bicycle lanes. 4. Unitrans Routes P/Q north of Cowell Blvd (two stops, one on east side, one on west) Yolobus turns left at Cowell and Mace Blvd intersection.
<p><u>Once your project is built, how will users benefit from your project (Snapshot)?</u></p>	<ol style="list-style-type: none"> 1. Increased multi-modal access and greater sense of security and comfort. 2. Pioneer will have increased walking and bicycling to school. 3. Increased multi-modal access and greater sense of security and comfort. 4. Pioneer will have increased walking and bicycling to school. 5. Slower speeds and safer crossings.

<p><u>Project Schedule (estimated month and year) (Part L):</u></p> <ol style="list-style-type: none"> 1. Start environmental/preliminary engineering 2. Final EC approved – Start engineering/design 3. Start R/W acquisition & utilities 4. Complete plans, R/W, & permits – Ready to advertise for construction/procurement 	<ol style="list-style-type: none"> 1. January 2014 2. May 2014 3. March 2015 4. January 2016.
<p>Total Project Cost (Part Q)</p>	<p>\$2,160,000</p>
<p>Total Funding Request</p>	<p>\$1,912,000</p>
<p><u>Funding committed from other sources</u></p> <ol style="list-style-type: none"> 1. Environmental/preliminary engineering 2. Engineering/design 3. R/W acquisition & utilities 4. Construction/procurement <p>TOTAL</p> <p>Describe any other potential funding sources</p>	<ol style="list-style-type: none"> 1. In-kind 2. \$155,000 3. Not applicable 4. <u>\$93,000</u> <p>TOTAL: \$248,000 (11.47%)</p>
<p>Can you build a usable partial stage of this project? If so, describe scope and cost.</p>	<p>The City could separate this project into two phases:</p> <p>Phase 1: Concrete & Flatwork: \$738,000 Phase 2: <u>Paving & Striping: \$1,422,000</u> TOTAL: \$2,160,000</p> <p>This phasing would result in usable improvements to pedestrians and the disabled, while delaying bicycle improvements.</p>

<p><u>Have you identified any significant and reasonably likely risks to the project? Describe: (150 words maximum total)</u></p> <ul style="list-style-type: none"> ▪ Risks that would change scope ▪ Risks that would change schedule ▪ Risks that would change cost 	<ul style="list-style-type: none"> ▪ Scope: Lane reduction from four to two lanes to facilitate two-way cycle track on east side was received favorably by attendees at the June 2013 Open House. If infeasible, a buffered protected bike lane would be constructed. ▪ Schedule: None foreseen at this point. ▪ Cost: <ul style="list-style-type: none"> ○ ADA compliance: Possible increase or decrease depending on Caltrans interpretation of compliance at specific locations. <p>Cowell & Mace Intersection. An allowance has been included for relocating traffic signals. Costs could potentially increase if bicycle / vehicle detection technology is upgraded.</p>
<p><u>Project Study Report or equivalent completion date (if PSR completed, attach electronic file to CD of application packet)</u></p>	<p>Not applicable</p>

<p><u>Environmental Justice: Include a brief response to the following:</u></p> <p><u>Pre-Construction Phase Projects:</u> What kind of outreach to the community, low-income and/or minority residents of the project area, and/or to other stakeholders do you plan to undertake?</p> <p><u>Construction Projects:</u> What kind of outreach have you conducted with community, low-income or minority residents of the project area, or other stakeholders in the process of planning this project?</p> <p>What will be key benefits or burdens of this project for any low income and/or minority members of the community?</p> <p>(150 word limit)</p>	<p>Not applicable. This project does not reside within a half-mile of the designated areas on SACOG’s Environmental Justice map. However, community outreach was conducted for this project (see Performance Outcomes section).</p>
<p><u>TAP Eligible Projects:</u> Will you be working with a community conservation corps or the California Conservation Corps (yes/no)? Please explain (50 word limit).</p>	<p>The City is receptive to working with the California Conservation Corps on scope that can be efficiently addressed outside of the primary contracts.</p>

Mace Blvd Complete Street Vicinity Map



Basic Tool: Cost and Schedule Summary

For use with 2013 Funding Round Community Design & Bike/Ped applicants only

Fill in **BLUE SECTIONS** where appropriate. Edit the formula cells at your own risk.

Project Sponsor

City of Davis

Project Title

Mace Blvd Complete Street

Project Description (scope and limits)

Road rehabilitation and extensive complete street upgrades for .5 mile

SUMMARY	Start	End	Costs	Requests
Non-capital Activities	Jan-13	Aug-13	\$ -	\$ -
Environmental & Design	Jan-14	Mar-15	\$ 155,000	\$ -
Right-of-Way	Mar-15	Jun-15	\$ -	\$ -
Construction	Jan-16	Jul-16	\$ 2,005,000	\$ 1,912,000
TOTAL	Jan-13	Jul-16	\$ 2,160,000	\$ 1,912,000

88.52%

Applicant Comment Summary

TASKS	Begin	End	Cost Estimate	Requested Funding
NON-CAPITAL ACTIVITIES				
Authorization to Proceed	NA		NA	NA
Planning Studies	Jan-13	Aug-13	\$ -	\$ -
Non-capital staff activities	Jan-13	Aug-13		
Non-capital materials	Jan-13	Aug-13	\$ -	\$ -
Miscellaneous	Jan-13	Aug-13	\$ -	\$ -
Totals	Jan-13	Aug-13	\$ -	\$ -

Applicant Comments

Planning, outreach, and design concepts complete, in-kind.

ENVIRONMENTAL & DESIGN

Authorization to Proceed	Jan-14		
	NEPA	CEQA	
Environmental Document Type	EA	IS	
Environmental Decision Type	FONSI	Neg Dec	
For more information, visit the Caltrans Standard Environmental Reference webpage			
Environmental Clearance	Apr-14	Apr-14	
Final Design (Plans, Specs, & Est)	May-14	Mar-15	
Totals	Jan-14	Mar-15	

Reflects expected outcome of Initial Study for circulation / traffic analysis.

TASKS	Begin	End	Cost Estimate	Requested Funding	Applicant Comments
RIGHT-OF-WAY					
Authorization to Proceed	Mar-15	Jun-15			
Need ROW Acquisition?	Mar-15				
Need Utilities Relocation?	Mar-15				
Totals	Mar-15	Jun-15			
CONSTRUCTION					
Authorization to Proceed	Jan-16	Jul-16			Anticipate April 2016 construction start
Totals	Jan-16	Jul-16		\$ 1,912,000	

R. ENGINEER'S ESTIMATE

MACE BLVD. RESURFACING AND IMPROVEMENTS

CITY OF DAVIS

ITEM NO.	ITEM DESCRIPTION	UNIT	QTY	UNIT PRICE	AMOUNT \$
1	Mobilization and SWMP	LS	1	\$25,000.00	\$25,000
2	Traffic/Pedestrian Control	LS	1	\$90,000.00	\$90,000
3	Tree Trimming	LS	1	\$5,000.00	\$5,000
4	Demolition of Curb/Gutter, Sidewalk, Ramps, Asphalt Path, Sawcut.	SF	1,599	\$3.75	\$5,997
5	Concrete Flatwork (Sidewalk & Ramps)	SF	1,386	\$12.00	\$16,634
6	Additional Concrete Flatwork and Demolition out of ADA complianc	SF	11,109	\$15.75	\$174,971
7	Concrete Curb & Gutter	LF	125	\$40.00	\$5,000
8	Concrete Curb for Pedestrian Islands	LF	700	\$40.00	\$28,000
9	Drain Inlet	EA	5	\$3,700.00	\$18,500
10	12" Drain Pipe	LF	300	\$180.00	\$54,000
11	Asphalt Concrete Conform	SF	200	\$15.00	\$3,000
12	Place Decomposed Granite (4")	SF	90	\$20.00	\$1,800
13	Truncated Dome Panel (Detectable Warning Surface)	EA	8	\$300.00	\$2,400
14	New 26-4-100 Signal Poles, Mace & Cowell with luminaire mast arm	EA	2	\$15,000.00	\$30,000
15	New 19-3-100 Signal Poles, Mace & Cowell with luminaire mast arm	EA	2	\$12,000.00	\$24,000
16	45-ft Mast Arm, Across Mace	EA	2	\$12,750.00	\$25,500
17	25-ft Mast Arm, Across Cowell	EA	2	\$11,250.00	\$22,500
18	Detector Loop	EA	16	\$1,000.00	\$16,000
19	Ped Push Button and post	EA	4	\$1,200.00	\$4,800
20	Misc. Electrical, Labor and Incidentals	LS	1	\$10,000.00	\$10,000
21	Bus Stop Shelter Improvements (Widen Opening, Remove Part of Be	LS	1	\$2,000.00	\$2,000
22	Expand Bus Stop Slab	SF	195	\$15.75	\$3,071
23	Replace Bus Stop Bike Parking	EA	4	\$360.00	\$1,440
24	Crack Fill / Seal	LS	1	\$15,000.00	\$15,000
25	1.5" Asphalt Overlay - Rubberized Asphalt Concrete, 1/2" Maximum	TON	1,201	\$125.00	\$150,125
26	Road reconstruction (El Macero to San Marino)	SY	8,558	\$80.00	\$684,664
27	Asphalt Patching - 6" Depth (Dig Out)	CY	172	\$400.00	\$68,712
28	Full Pavement Planing	SY	14,724	\$5.00	\$73,620
29	Adjust Maintenance Holes	EA	16	\$1,150.00	\$18,400
30	Adjust Monuments, Valves, and Cleanouts	EA	13	\$750.00	\$9,750
33	Detail 23 - Double yellow (Std. A20A)	LF	2,890	\$1.50	\$4,335
34	Detail 38 - 8" White "Channelizing Line" with Reflectors (Std. A20)	LF	540	\$1.05	\$567
35	Detail 39/39A - 6" White "Bike Lane Line" Solid/Skip (Std. A20D)	LF	3,070	\$0.70	\$2,149
36	Hatched Bike Buffer	LF	3,570	\$1.05	\$3,749
37	Protected Bike lane -- flexible Bollards	LF	3,275	\$3.33	\$10,917
38	White " Triple Quad" Crosswalk - with Reflectors	EA	11	\$715.00	\$7,865
39	Pavement Markings - Legends	EA	36	\$77.00	\$2,772
40	HAWK Pedestrian warning light system	EA	2	\$50,000.00	\$100,000
41	Bike Boxes - Colored/Painted Pavement	SF	260	\$12.00	\$3,120
42	12" Solid White "Crosswalk and Limit Line" (Std. A24E)	LF	732	\$3.10	\$2,269
	SUBTOTAL				\$1,727,628

	Contingency (10%)				\$172,763
	Planning/Environmental				\$0
	Engineering & Design	9%			\$155,487
	Municipal Arts Fund	1%			\$17,276
	Construction Management/Contract Administration	5%			\$86,381
	TOTAL PROJECT COST				\$2,159,535
	Federal Funds				1,911,836
	Local Funds				247,699

Please circle current status of project: Feasibility Study, PSR, Environmental, 30% Design, 60% Design, 90% Design, 100% Design

If you have questions about how to complete this form, please contact Sam Shelton at sshelton@sacog.org or at 916.340.6251.

N. Local/Regional Program Specific Questions

1. Project Screening Criteria- Self Screen

Please respond yes/no (if no, please explain); one half page maximum; applies to General and Rehabilitation Projects:

1. Is the project listed in the MTP or a lump sum project category? **Yes.**
2. Will the project be able to begin construction no later than FFY 2017 with preliminary engineering and environmental analysis scheduled within three years? **Yes.**
3. Are the project costs and schedule estimate for environmental, engineering, ROW and startup construction believable, based on standards for similar projects? **Yes, based on proposals from projects in construction funded by the 2011 Regional/Local cycle (First Street, B Street).**
4. Does the project sponsor have a track record that demonstrates technical capacity and reliability for similar projects? **Yes. The City is currently constructing the B Street rehab and First Street Complete Street project funded in the last Regional/Local cycle.**
5. A request for construction funding must demonstrate that environmental, engineering and ROW will be ready by the time funds are requested and the financial ability for ongoing operations and maintenance. Can this be demonstrated? **Yes, see response to Question #4.**
6. Is the project consistent with complete streets requirements, as applicable; see: <http://www.sacog.org/complete-streets/toolkit/START.html>

Yes.

2. Overall Policy Considerations- Self Screen

Please respond yes/no (if yes, please explain); on half page maximum; applies to General and Rehabilitation Projects:

1. Honor Prior Funding Commitments: **See response to Question #4.**
2. Emphasize Cost-Effective Programming Decisions: **Identified from the beginning corridors that needed both resurfacing and complete street upgrades.**
3. Fix it First, or Maintain Facilities in a State of Good Repair: **As a road rehab project, the Mace Blvd Complete Street project supports this policy consideration through street resurfacing, a primary project objective.**
4. Focus on Small or Medium-Sized Capital Projects: **The City considers this project small or medium size, relative to other types of projects in the region.**
5. Support Project Development Phases for Future Funding Opportunities: **The City is exploring to improve connectivity between Blue Oak and Montgomery Ave as a second project phase, perhaps in coordination with future development of a large vacant parcel at the corner of Mace Blvd and Montgomery Ave.**

Performance Outcome 1- Supports fewer vehicle trips

Mace Blvd comprises part of the route to school for 50% of Pioneer Elementary School students who must travel on or across this street to get to school each day. Mace is a main north-south corridor for established neighborhoods in southeast Davis. Adjacent to Mace Blvd, development is characterized by mixed use and residential units ideal for bicycling and walking, yet as discovered through SACOG mapping data, the southeast area has the greatest concentration of high VMT per capita¹ in the city. There is great potential to eliminate short automobile trips in exchange for bicycling or walking to nearby destinations. A majority of the students live within walking or bicycling distance to the elementary school (less than two miles) yet Pioneer Elementary has the highest percentage of students arriving by car (80%). In early 2013, the city conducted Safe Routes to School Walk and Bike Audits and determined that a perceived lack of safety when traveling on or crossing Mace Blvd is a major barrier to parents allowing their children to walk or bike to school. Furthermore, at an Open House in June of 2013, neighborhood members expressed great concern over the speed of drivers along the corridor, explicitly noting they would walk or bike on Mace Blvd if speed concerns were addressed and bicycling safety and comfort were improved. While the posted speed limit is 35 mph, the absence of visual cues invites drivers to exceed the speed limit. The combination of fast vehicles approaching and an absence of traffic calming limits the opportunity to cross safely. Parents identified the San Marino/ Mace Blvd T-intersection as an important crossing point due to its connectivity to other south Davis neighborhoods. This helped the City identify San Marino as an underused bicycle tributary to Mace Blvd that would facilitate more use. To achieve citywide policy objectives promoting travel choices, sustainability, complete streets, and bicycling requires strategic, cost-effective infrastructure upgrades such as those proposed in the Mace Blvd Complete Streets project. An important goal for the City of Davis is to increase the numbers of families biking and walking to school in addition to providing viable and safe alternatives for adjacent neighborhoods to access nearby shopping centers and restaurants in the corridor by bicycling or walking. Following are the proposed improvements:

- **Two-Way Cycle Track.** On the east side of Mace Blvd a protected, buffered, double-striped cycle track will provide a wide separation between motorists and bicyclists. The east side of the corridor has few driveways or curb cuts, and no parking, which makes a cycle-track an appropriate facility for this segment.
- **Install a Pedestrian Warning Light System.** Install a HAWK at Intersection of Mace & San Marino. The FHWA identified both high intensity activated crosswalk (HAWK) as a low-cost pedestrian engineering countermeasure to improve safety. In an FHWA study, the safety effectiveness of the HAWK device was tested at 21 intersections and it was found that there was a statistically significant reduction in total crashes after the installation of a HAWK device.²

¹ SACOG VMT per capita data 2008.

² [*Evaluation of Pedestrian and Bicycle Engineering Countermeasures: Rectangular Rapid-Flashing Beacons, HAWKs, Sharrows, Crosswalk Markings, and the Development of an Evaluation Methods Report*](#). U.S. Dept. of Transportation Federal Highway Administration. April 2011.

- **Install Buffered Bike Lane.** From San Marino to Red Bud install a protected, buffered bike lane on the east side and a buffered bike lane on the west side.
- **Reduce Travel Lane Widths.** Restripe corridor with narrower travel lanes to reduce vehicle speeds, increase bicycle/vehicle separation, and improve bicycling comfort/perceptions of safety.

The Mace Boulevard Complete Streets project will create viable non-motorized transportation choices for the neighborhoods adjacent to the corridor. The El Macero neighborhood was established prior to

Performance Outcome 3- The project supports an increase in multi-modal/alternative travel/choice of transportation options

the rest of south Davis. Bicycle connectivity is deficient with only two entrances for all traffic onto Mace and no surrounding bike paths connecting with adjacent neighborhoods. Mace Blvd provides access to the El Macero Shopping Center, restaurants, and schools. However, the arterial is wide with basic bike lanes and sidewalks that deter families, as well as other residents, from walking or biking along the corridor. Pioneer Elementary, just east of Mace Blvd, has the highest percentage (80 percent) of children driven to school³. Recent Safe Routes to School Audits and feedback from families reveal that parents resist allowing their children to bike or walk to school because they consider the corridor unsafe. Those who do ride were observed on the sidewalk rather than the bike lanes. Additionally, numerous comments identified the intersection at Cowell and Mace as dangerous to cross. During peak hours (coinciding with school start and end times) this intersection sees significantly more bicycle traffic than Mace and Chiles just to the north.⁴ We also identified the inefficient allocation of space within the roadway. The four-lane segment between Cowell and San Marino has significantly lower travel volumes than the design capacity. Travel volumes at the northern end of Mace Blvd are approximately 13,200 vehicles per day with a current 4-lane capacity of 32,400 veh/day. The two-lane segment has a capacity of 15,350 veh/day; enough to accommodate existing travel volumes. There is potential to more efficiently use the space to improve bicycling and walking access along the corridor through the following:

Entire Corridor

- Repair broken, lifted sidewalk where needed.
- Construct ADA-compliant curb ramps at intersection corners, where missing.
- Reduced travel lane widths.

³ *Safe Routes to School Arrival and Departure Tally* (Fall 2011) conducted the City of Davis using the National Center for Safe Routes to School tool at all K-9th classrooms in DJUSD. Approximately 50% response rate.

⁴ Bicycle Counts Conducted by ECI 162 Students at UC Davis from 5/16/2013 to 6/4/2013. Mace Blvd South of Chiles Rd during AM Peak Hour (7:30 – 8:30am) 31 bicyclists compared to 76 for Cowell and Mace, and for the PM Peak Hour of 5- 6pm, saw 5 and 44 bicyclists, respectively.

Mace and Cowell Intersection

- Remove free right movement for vehicles to reduce bicycle and pedestrian-vehicle conflicts.
- Install protected bike lane at intersection approaches (including painted buffer and flexible bollards).
- Install bicycle boxes at east-west intersection approaches to facilitate left turns.
- Improve visibility of crosswalks.

Cowell Blvd to San Marino

- Lane reconfiguration: reconfigure from four to two vehicle lanes from Cowell to San Marino.
- Two-way cycle track (See Performance Outcome 1).

Mace Blvd at San Marino

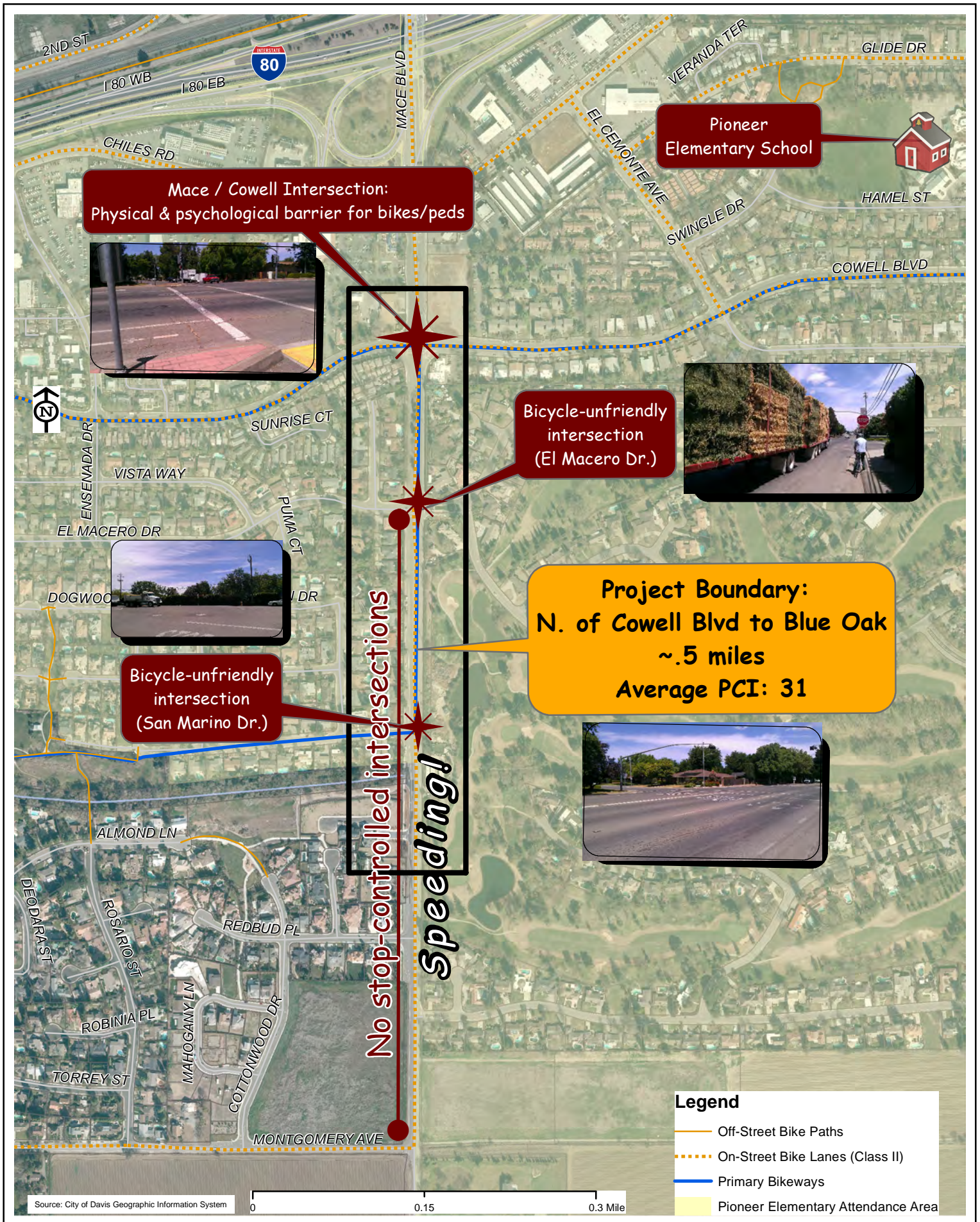
- HAWK signal at San Marino (See Performance Outcome 1).

Performance Outcome 7- Demonstrate “state of good repair” benefits that improve the efficiency of the existing transportation system.

When selecting a corridor for the Regional/Local program, the City’s baseline criteria were to identify federally eligible streets most in need of resurfacing, as well as those with substantial potential for improving multi-modal access. More than any other corridor, Mace Blvd met both requirements. City staff evaluated the need for repair and maintenance of streets based on a recently completed Pavement Condition Index update. Mace Blvd has a below city average PCI score, 31 compared to the jurisdiction average of 62. Recent geotechnical coring on Mace Blvd reveal several areas where the street needs to be reconstructed. Mace Blvd is a main route for many families who would like to walk or bike to Pioneer Elementary School. Due to incomplete sidewalks and poor pavement quality, however, in addition to safety and security issues, residents aren’t able to utilize the corridor to its full capacity. Key elements of rehabilitating Mace Blvd include:

- Repair broken, lifted sidewalk where needed.
- Restripe street pursuant to complete street upgrades proposed.
- Construct ADA-compliant curb ramps at intersection corners, where missing.

Mace Blvd Problem Identification Map



Mace Blvd Complete Street Proposed Improvements

Mace / Cowell Intersection:

1. Remove Free-right turn lanes
2. Create free-right bicycle channels
3. Install bike boxes
4. Extend pedestrian refuge islands



Buffered Bike Lane (Cowell to San Marino)



Two-way Cycle Track or Protected, Buffered Bike Lane (Cowell to San Marino)



Bike / Ped Actuated HAWK Signal (High Intensity Activated Crosswalk Signal) (@ San Marino Dr.)



Resurface Street, Reduced Lane Widths

Pioneer Elementary School



Legend

- On-Street Bike Lanes (Class II)
- Off-Street Bike Paths
- Pioneer elementary Attendance Area

BICYCLE FACILITIES

County:

Federal Number:

Approval Date:

Caltrans DIST-EA:

Short Description: Mace Blvd Complete Street

Project Scope: Class I facility, .5 mi.:
 1. Resurface and restripe entire corridor.
 2. Improve Mace/Cowell intersection for bicycles and pedestrians (e.g. remove free right turns/extend pedestrian refuge islands, install bike boxes).
 3. Two-way protected, buffered cycle track on east side (protected, buffered bike lane if cycle track is infeasible).
 4. Reconfigure lanes from four to two plus turn lanes.
 5. Buffered bike lane on west side.
 6. Install signal control (RRFB or HAWK) at San Marino.

Project Sponsor: City of Davis

Private Agency: No

CMAQ Funding: \$126,000 **Annual Auto Trips Reduced:** 44,804

Local Match: \$16,000 **Annual Auto VMT Reduced:** 33,603

Capital Recovery Factor: 0.07

Project Analysis Period: 20 years

Days (D): 365 days of use/year

Average Daily Traffic (ADT): 13,199 trips per day

Adjustment (A) on ADT: 0.0073

Credit (C) for Activity Centers near project: 0.0020

<i>EMISSION FACTORS:</i>	Auto Trip End Factor	Auto VMT Factor
ROG :	0.488 <i>grams per trip</i>	0.180 <i>grams per mile</i>
NOx :	0.260	0.189
PM10 :	0.009	0.222

<i>EMISSION REDUCTIONS:</i>	Pounds per Year	Kilograms per Day
ROG:	61	0
NOx:	40	0
PM10:	17	0
Total:	<u>118</u>	<u>0</u>

COST-EFFECTIVENESS OF:

CMAQ Funds: \$71.50 per pound \$143,001 per ton

BICYCLE FACILITIES

All Funding Sources: \$80.58 per pound 3161,160 per ton