RECOMMENDATIONS TO IMPROVE PEDESTRIAN & BICYCLE SAFETY FOR THE CITY OF BLUE LAKE

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California Walks
Stepping Up for Health, Equity, & Sustainability

Berkeley SafeTREC
SAFE TRANSPORTATION RESEARCH AND EDUCATION CENTER

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Introduction

At the invitation of the City of Blue Lake's City Manager and City Engineer and the Blue Lake Union Elementary School District, the University of California at Berkeley's Safe Transportation Research and Education Center (SafeTREC) and California Walks (Cal Walks) facilitated a community-driven pedestrian and bicycle safety action-planning workshop in the City of Blue Lake to improve pedestrian safety, bicycle safety, walkability, and bikeability across the City. Cal Walks facilitated the workshop on May 18, 2017, which consisted of: 1) an overview of multidisciplinary approaches to improve pedestrian and bicycle safety; 2) two walkability and bikeability assessments along two key routes; and 3) small group action-planning discussions to facilitate the development of community-prioritized recommendations to inform Blue Lake's active transportation efforts. This report summarizes the workshop proceedings, as well as ideas identified during the process and recommendations for pedestrian and bicycle safety projects, policies, and programs.

Background

Community Pedestrian and Bicycle Safety Training Program

The Community Pedestrian and Bicycle Safety Training (CPBST) program is a joint project of UC Berkeley SafeTREC and Cal Walks. Funding for this program was provided by a grant from the California Office of Traffic Safety (OTS) through the National Highway Traffic Safety Administration (NHTSA). The purpose of the CPBST program is to train local neighborhood residents and safety advocates on how to improve pedestrian and bicycle safety and to strengthen their collaboration with local officials and agency staff to make communities safer and more pleasant to walk and bike. For each training, the program convenes a multi-sector, multi-disciplinary local planning committee to tailor and refine the training's curriculum and focus to meet the community's needs. Additionally, Cal Walks staff conduct pre-training site visits to collect on-the-ground observations of existing walking and biking conditions to inform the training's scope and focus.

The half-day training is designed to provide participants with both pedestrian and bicycle safety best practices and a range of proven strategies (the 6 E's: Empowerment & Equity, Evaluation, Engineering, Enforcement, Education, and Encouragement) to address and improve pedestrian and bicycle safety

conditions and concerns. Participants are then guided on a walkability and bikeability assessment of nearby streets before setting pedestrian and bicycle safety priorities and actionable next steps for their community.

For more information about the CPBST program, please visit https://californiawalks.org/projects/cpbst and https://safetrec.berkeley.edu/programs/cpbst

Selected Pedestrian & Bicycle Safety Conditions in the City of Blue Lake

Discontinuous, Narrow Sidewalks & Missing Sidewalks

Sidewalks provide physical separation for people walking from vehicle traffic and are a critical component for pedestrian safety, especially for students walking to/from Blue Lake Elementary School and residents walking their dogs, traveling to downtown businesses, or going to city parks. During our site visit, Cal Walks staff observed areas throughout Blue Lake with missing or discontinuous sidewalks, including sections of Railroad Avenue, South Railroad Avenue, the north side of Blue Lake Boulevard (which is County-owned), Chartin Road, H Street, 1st Street, and Hatchery Road. Where sidewalks were present, they were often narrowed by utility poles or encroaching vegetation and ranged from various widths. Lack of drainage along roadways with no sidewalks also narrows the road shoulder used by pedestrians and bicyclists, forcing them further into the roadway and increasing the potential for conflicts with motorists.

Missing Sidewalks around the City of Blue Lake.

Wide Residential and Downtown Streets

Research has demonstrated that wide streets and wide travel lanes are associated with higher vehicle speeds,[1] which affect safety for people walking and bicycling**.** During our site visit, Cal Walks staff observed high speeds on Blue Lake Boulevard, Railroad Street, Hatchery Road, and multiple residential streets. Hatchery Road is a particularly challenging road as it is often used by pedestrians, cyclists, motorists, and equestrians. Streets with discontinuous or missing sidewalks often force pedestrian and bicyclists to use the road shoulder travel, which is especially unsafe on higher speed roads. Traffic calming measures such as rightsizing, the reconfiguring of a street to better serve all road users, including pedestrians and bicyclists, should be considered. Other measures include the addition of sidewalks and on-street bicycle infrastructure to allow for safe access for pedestrians and bicyclists.

[1] *See* Kay Fitzpatrick, Paul Carlson, Marcus Brewer, and Mark Wooldridge, "Design Factors That Affect Driver Speed on Suburban Arterials": Transportation Research Record 1751 (2000):18–25.

A small light reflector on the side of the road.

Lack of Adequate Street Lighting & Pedestrian-Scale Lighting

Proper street lighting improves access and safety for all road users, especially pedestrians and bicyclists. A lack of streetlights and pedestrian-scaled lighting was observed throughout the City during the site visit. Existing lighting is located at large intersections and oriented towards the roadway, while areas where pedestrians and bicyclists are likely to travel are not well lit.

Faded markings along Greenwood Road near Blue Lake Elementary.

Missing, Worn & Faded Street Markings

Worn and faded street markings, including lane markings, crossings, stop bars, centerlines, and signage were observed. Visible lane markings are critical for areas with no sidewalks and where pedestrians and bicyclists must use the shoulder of the road to travel. Clearly delineating the space for vehicles, bicyclists, and pedestrians is recommended. Restriping of faded road markings, including lane lines, bike lanes, directional signage is recommended as well as crosswalk and high-visibility crosswalks near the School and major pedestrian routes. Many residential streets in Blue Lake are heavily used by pedestrians to access various amenities. Cal Walks staff observed a lack of crossings along streets with pedestrian activity generators, such as the Del'Arte International building, downtown amenities, and Mad River Brewery.

Lack of Bicycle Facilities

Bicyclists were observed riding in the middle of the roadway during the site visit and walk assessment. Due to the lack of bike lanes, roadside drainage, and overgrown vegetation, bicyclists are sometimes forced to move further into the travel lanes, including along arterials like Blue Lake Boulevard and Greenwood Boulevard that host heavy truck traffic.

Traffic during school arrival at Blue Lake Elementary.

Conflicts between Vehicle Traffic and Students Walking & Biking during Arrival/Dismissal

During the site visit, Cal Walks staff observed student arrival at Blue Lake Elementary School on Thursday, April 13, 2017. Blue Lake Elementary is located at the intersection of Blue Lake Boulevard and Greenwood Road. Morning rush hour traffic and freight truck traffic cause numerous conflicts with students' arrivals. Cal Walks staff observed parents repeatedly making illegal U-turns at B Street and C Street, entering/exiting school parking lots without due care, and students and parents crossing outside the crosswalk at B Street. A significant point of conflict is the kindergarten parking lot located near the Blue Lake Boulevard/Greenwood Road intersection where drivers turn from Blue Lake Boulevard onto Greenwood Road at high speeds and where drivers exit/enter the parking lot without due care.

Overgrown Vegetation

Vegetation, including shrubs and trees can add to the aesthetic of a streetscape, but unmaintained vegetation can reduce visibility of and for road users, as well as limit the usability of existing sidewalks. In several instances, Cal Walks staff observed overgrown vegetation reducing visibility around corners and reducing the traveling space for pedestrians.

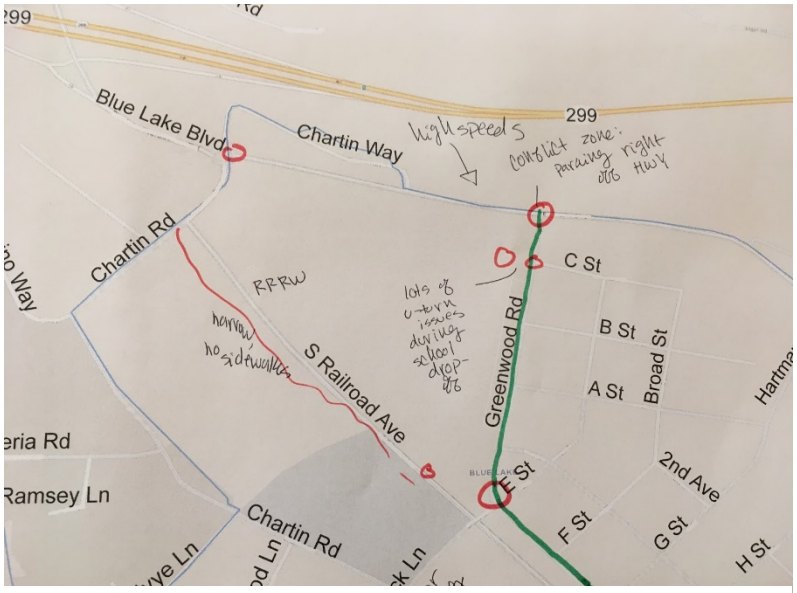
Overgrown vegetation and an electricity pole create sidewalk obstructions.

Pedestrian & Bicycle Collision History

As part of the workshop, participants were asked to identify their pedestrian and bicycle safety concerns throughout Blue Lake on a large map. The results of the crowdsourcing exercise echoed concerns identified by parents in the Fall 2016 Safe Routes to School survey, including concerns with high traffic speeds on Blue Lake Boulevard and the turning traffic from Blue Lake Boulevard onto Greenwood Road that greatly contributes to unsafe crossing conditions for students.

Blue Lake is located in Humboldt County, which has one of the highest pedestrian fatality rates not just in California, but in the entire country: in 2013, Humboldt County recorded 4.44

pedestrian fatalities per 100,000 residents compared to California's pedestrian fatality rate of 1.83 and the national pedestrian fatality rate of 1.34.[2]



Data crowdsourcing activity.

Of the available data from the Statewide Integrated Traffic Records System (SWITRS), records show that there have been no reported pedestrian or bicycle collisions in Blue Lake between 2011 and 2015. However, the lack of documented pedestrian or bicycle collisions within the City of Blue Lake does not imply that there are not hazardous conditions or that residents' safety concerns are not valid. It is well established that people may choose to avoid or prohibit their children from walking if they perceive there to be a great risk to their physical safety or personal security.[3] Further, addressing safety in rural areas means that numbers in these areas might be lower than in more populated cities and urban areas, but the percentage of collisions per population are higher. To address geographic equity, we worked with Blue Lake as we address regional issues in Humboldt County.

The Humboldt County Safe Routes to School (SR2S) Task Force does collect qualitative data through parent surveys on an annual basis. According to the Fall 2016 parent survey,[4] only 2% of students walk to school and 4% bike to school, despite 44% of students living less than 1 mile from the school. 5% of students walk home from school, and 5% bike home from school. For those parents that do not allow their child to walk or bike to/from school, 55% of respondents cited distance and the speed of traffic along the route as having affected their decision.


Participants gather for data crowdsourcing activity.

[2] T. Greenson, "Humboldt has one of the highest vehicle fatality rates in the country. Is it the roads or us?", North Coast Journal. Available at https://www.northcoastjournal.com/humboldt/crash/Content?oid=3249172
[3] See Methorst R, et al. Pedestrians' quality needs: final report. Cheltenham, Walk21, 2010.
[4] Available at http://www.hcaog.net/sites/default/files/blue_lake_10.pdf

MAY 18 WORKSHOP

Participants learning the 6 E's approach to pedestrian and bicycle safety.

The City of Blue Lake and the Blue Lake Union Elementary School District requested a workshop to 1) provide City/County staff, community organizations, parents, and other residents with a toolkit for promoting pedestrian and bicycle safety to inform future active transportation projects including a an application to the statewide Active Transportation Program for a trail; 2) strengthen working relationships between the various agencies working on promoting walkability and bikeability to ensure the best outcomes for students and their families; and 3) develop consensus regarding pedestrian and bicycle safety priority and actionable next steps.

The workshop was hosted on May 18, 2017 from 1:00 pm to 5:00 pm. Ten (10) individuals attended the workshop, including members of the Humboldt County Public Health Department, Safe Routes to School advocates, the Blue Lake Resource Center, the City Manager, the City Engineer, the Public Works Department, the Redwood Community Action Agency, Councilmember Jean Lynch, and the Blue Lake Elementary School Superintendent. The representative from Redwood Community Action had been to previous workshops that have taken place in Humboldt County to promote continuity in planning. Additionally, most of the city personnel were also residents of the community.

Participants during walk/bike audit next to Blue Lake Elementary School.

Reflections from Walkability & Bikeability Assessment

Two walkability assessments were conducted along routes used by residents, students, bicyclists, and visitors and which experience high volumes of freight truck traffic. One route consisted of a loop from Blue Lake Elementary School along Greenwood Road to A Street, Hartman Avenue, and back to Blue Lake Elementary along Blue Lake Boulevard. The other route followed Greenwood Road to Railroad Avenue and the intersection with H Street and Hatchery Road, then up H to 1st Avenue back to Greenwood Road.

Participants were asked to 1) observe infrastructure conditions and the behavior of all road users; 2) apply strategies learned from the 6 E's presentation that could help overcome infrastructure deficiencies and unsafe driver, pedestrian, and bicyclist behavior around Blue Lake; and 3) identify positive community assets and strategies which can be built upon. Following the walkability and bikeability assessment, the participants shared the following reflections:

Decorative crosswalks and curb extensions in Downtown Blue Lake

Building Upon the Enhanced Streetscape in Downtown Blue Lake: Participants complemented that improvements made in and around downtown Blue Lake, centered at the intersection of 1st Avenue and Railroad Avenue, were aesthetically pleasing and marked a standard for the City to achieve elsewhere. These streetscape improvements included wider sidewalks than other parts of the community, curb extensions, and decorative crosswalks.

- **Maintenance & Accessibility Challenges:** Participants remarked on the numerous maintenance and accessibility challenges during the walk assessments. Challenges included sidewalks that were not wide enough for participants to navigate as a group, sidewalks that appeared too narrow for individuals using mobility assistance such as wheelchairs and walkers, sidewalk obstructions (such as utility poles), and a lack of ADA-compliant curb ramps. Some participants also commented on the predominance of overgrown vegetation on private property that frequently obstruct sidewalks.

- **Freight Truck Traffic and Speeding on Rural Roads:** Participants were very concerned about the high volume of freight truck traffic during school hours and drivers speeding through the community. Participants noted that speeding drivers could primarily be found on roads that transition from very rural settings to city streets abruptly—such as Hatchery Road, Blue Lake Boulevard, and Greenwood Road—as well as on Railroad Avenue, where residents have observed more drivers utilizing the street as a shortcut through the City.

Freight truck traveling along Greenwood Road during school hours.

- **Ambiguous & Inadequate Bicycle Infrastructure:** The purpose of the edge striping along Greenwood Road is ambiguous, with participants believing the space to be designated as either a parking lane or a bicycle lane. Participants agreed that clarifying the lane's purpose as either a bicycle lane or parking lane is a low-cost action step the community should take. Additionally, participants noted that the City's single clearly marked bicycle lane on Hatchery Road is inadequate given the high level of conflict between weekend bicyclists and freight trucks that frequently cut across the bicycle lane.

Participants analyzing conditions during walk/bike assessment.

- **Focus on Additional Visibility and Signage:** Participants expressed a strong interest in utilizing low-cost engineering treatments, such as painted curb extensions with temporary soft-hit posts or bollards, to address poor pedestrian/bicycle-driver visibility issues throughout town. Participants agreed that a temporary treatment with paint and bollards at the intersection of Hatchery Road, Railroad Avenue, and H Street could help to simplify the intersection for all road users and increase the visibility of pedestrians and bicyclist. Participants also voiced strong support for deploying more crossing guards in the morning for the elementary school, as well as signage near the intersection of Hatchery Road and West End Road south of town to caution drivers to slow down as they enter the city.

Community Resident Recommendations

Following the walkability and bikeability assessment, Cal Walks facilitated small group action-planning discussions. Workshop participants discussed two sets of questions: the first focused on identifying and prioritizing non-infrastructure activities that could be implemented by the City to educate and encourage residents to walk and bike and the second focused on prioritizing infrastructure improvements in order to increase safety.


Participants engaged in small group action-planning discussions.

Workshop participants provided the following recommendations to improve pedestrian and bicyclist safety in the City of Blue Lake:

Infrastructure Concerns & Priorities

- **Traffic Calming Measures to Reduce Speeds**: Participants repeatedly identified high traffic speeds as a priority issue. Participants identified a suite of traffic calming measures to explore to improve safety for students and families walking and biking around town, and especially to and from Blue Lake Elementary, including: reducing speed limits to 15 MPH around the school; installing temporary infrastructure improvements such as paint, signage, and soft-hit posts/bollards on Greenwood Road and Blue Lake Boulevard; pursuing road diets to narrow lanes with road resurfacing projects; and installing a gateway feature on West End Road to communicate to drivers that they are entering the City of Blue Lake.
- **Reduce Point of Conflicts at Greenwood Road and Blue Lake Boulevard**: Participants

expressed the need to address conflicts in the loading and unloading zones around Blue Lake Elementary between through traffic and parents/students. Specifically, participants requested that the school zone and parking zone be defined more clearly. Additionally, the wide turn radius of Blue Lake Boulevard at Greenwood Road induces drivers to turn at very high speeds at the exact place where there is a lot of pedestrian and driver traffic during school arrival and dismissal hours. Participants expressed a desire to work with the County Public Works Department to study how to tighten the turning radius at this intersection, as well as with the school to devise a more structured arrival/dismissal area for parents and students that would help minimize conflicts.

- **Implement Low-Cost Solutions in Identified Problem Areas around the City:** Community members prioritized implementing low-cost solutions such as paint, signage, and soft-hit posts/bollards in other areas of town that also need some safety improvements. Participants identified the need to repaint crosswalks along designated truck routes to increase the visibility of pedestrians. City staff shared that new high-visibility crosswalks and flashing beacons are planned and will be shortly implemented along Greenwood Road, including the crossing in front of City Hall.

Non-Infrastructure Concerns & Priorities

Participants also identified the following policies, plans, education, and encouragement programs for the City to implement:

- **Changes in Policies and Plans**
  - Adopt a 15 MPH speed limit ordinance across the City.
  - Develop a Safe Routes to School (SRTS) map and/or walking school bus map.
- **Educational Campaigns**
  - A youth-led campaign via the student government to assist in engaging and educating truck drivers and the larger community on pedestrian and bicycle safety.
    - Participants emphasized the importance of youth engagement and youth-led activities.
  - Educational campaign materials could include signs for yards, billboards, banners and sandwich boards focused on school safety.
  - Borrow speed feedback signs from Humboldt County.
  - Organize monthly/quarterly traffic safety events/campaigns organized via the Blue Lake Public Safety Commission with different/changing safety messaging.
  - Develop a recognition program for trucking companies and/or drivers that drive through the community safely.
- **Encouragement Activities**
  - Continue to host Bike Rodeo events where safety and driver awareness information is distributed during Bike Month (May), as well as integrate the hands-on Safety City educational program. These events can also be used to educate parents of participating students.
  - Host walk/bike to school days more regularly.
  - The City Public Works Department committed to engage Public Safety Commission to work with school regarding a crossing guard program. In the meantime, community

volunteers could take on this role during the morning arrival times, when there are no cross guards present.
- Explore a walking school bus with a remote drop-off.

California Walks/SafeTREC Recommendations

California Walks and SafeTREC also submit the following recommendations for consideration by the City of Blue Lake:

Example of enhanced shoulder for pedestrians and bicyclists using temporary materials in McKinleyville, CA. Photo Credit: Jenny Weiss

- **Conduct Citywide Sidewalk and Lighting Audit:** California Walks and SafeTREC recommend the City conduct a citywide sidewalk audit to assess the presence and condition of sidewalks and to help prioritize the construction of infill sidewalks. Temporary low-cost solutions like stripping or temporary bollards can be used to designate a pedestrian area along the road shoulder until funding is available for construction. Sidewalk infill and construction should be prioritized along major pedestrian corridors like Greenwood Road and Blue Lake Boulevard.

  A citywide lighting audit should be performed to identify all under-lit and improperly lit areas and potential lighting solutions. The installation of roadway and pedestrian-scale lighting throughout with special attention on areas with high pedestrian activity, including transit stops, downtown, Blue Lake Elementary, Mad River Brewery, and Del'Arte International buildings. Lighting design can also be used to highlight the City's history and contribute to a citywide theme, and could be implemented with dark sky-friendly lighting technologies to help maintain the City's character.

- **Develop & Implement a Bicycle Network:** Currently, there is only one marked bicycle lane in the community; accordingly, we recommend the City to identify priority bicycle corridors that connect to community destinations and work to identify and implement appropriate bicycle infrastructure treatments. Where road widths allow, the installation of bike lanes would provide a space for bicyclists to travel away from vehicles and trucks, thereby reducing road conflicts. Due to Blue Lake's rural nature with no signalized intersections in the City, the City could consider creating bicycle boulevards on the identified priority bicycle corridors, where traffic calming measures and green infrastructure projects could be paired with sharrows and wayfinding signage.

- **Reduce and/or Eliminate Conflict Zones near Greenwood Road and Blue Lake Boulevard:** The Blue Lake Elementary School parking lot is at the corner of Greenwood Road and Blue Lake Boulevard. California Walks and SafeTREC recommend restricting use of the parking lot to school staff and relocating parent/student arrival/dismissal area further down Greenwood

Road. The school could set up traffic cones in the current parking lane to designate a clearly delineated arrival/dismissal lane to encourage parents to use the full length of Greenwood Road instead of concentrating near the kindergarten drop-off gate. This could be paired with a student-led Safety Patrol Valet Program, where the older students under the supervision of a school staff member could help usher parents and students through the arrival/dismissal zone. We also recommend relocating the kindergarten drop-off area to the secondary parking lot, which is currently well set up to maximize circulation with a circular drop-off zone. Combined with the installation of a new pedestrian gate, the secondary parking lot would enhance direct access to the cafeteria, where all the students gather prior to instruction.

In the long-term, we recommend that the City work with the School and the County Public Works Department to secure funding to redesign and reconstruct the intersection to reduce the turning radius of Blue Lake Boulevard onto Greenwood Road.

- **Organize a Community Clean Up Program:** California Walks and SafeTREC recommend that the City organize a Community Clean Up Program to address overgrown vegetation on City sidewalks. Visibility of and accessibility of sidewalks for pedestrians can be maintained by limiting shrubs to a maximum height of 3 feet, while lower tree branches should be maintained to a minimum of 6 feet. Other communities that have organized a Community Clean Up Program have, for example, met weekly and alternated clean ups with community building activities, such as Zumba, yoga, or other physical activity in parks, themed walks (e.g., historical walks, art walks, etc.), "walk and talks" (where residents discuss an issue of importance to the community while walking), and meditation walks (where participants walk and observe in silence and discuss their experiences after the walk).

- **Engage Truck Driving Companies and Truck Drivers:** The City of Blue Lake has 3 main roads that are designated trucking routes: Greenwood Road, Railroad Avenue, and Hatchery Road. Cal Walks observed the various roads with high truck traffic both during our site visit and the training. We strongly recommend the City of Blue Lake establish a stronger working relationship both with the truck driving companies and the actual drivers to improve the safety of all road users especially along Greenwood Road, Railroad Avenue, and Hatchery Road. During the workshop reflections, the City Manager committed to work more intentionally with the trucking businesses to address residents' concerns, and we strongly support her renewed commitment to strengthening these relationships, which could lead to a joint educational campaign focused on pedestrian and bicycle safety. The City could also explore contacting web-based mapping services; e.g., Google Maps, to inquire about changing recommended truck routes so they minimize truck routes in residential areas.

- **Installing Gateway Treatments at City Entry Points:** We recommend that the City explore installing gateway treatments not only on West End Road but also at the main City entry points (Blue Lake Boulevard/Chartin Road; Hatchery Road at the Mad River Bridge; and Railroad Avenue/Raymar Avenue) as a traffic calming measure. Gateways can be used as a visual cue to drivers that they are entering a different environment that will require them to drive more

slowly. Additionally, gateways are often used to convey a sense of neighborhood identity and sense of place. Generally, gateway treatments alone cannot discourage speeding traffic without additional traffic calming measures, so we recommend that if the City pursues this strategy, they pair it with other traffic calming measures, such as road diets, bulb outs, high visibility signage and markings, and pedestrian safety islands. Gateway treatments can vary from simple monument signs to more elaborate street spanning arches. Potential funding sources include future cycles of the Highway Safety Improvement Program (HSIP) and the state Active Transportation Program (ATP).

- **Establish a Neighborhood Speed Watch Program:** California Walks and SafeTREC recommend that the City establish a Neighborhood Speed Watch Program to increase community participation in traffic enforcement efforts rather than relying on traditional law enforcement agencies. The City could model its program after a successful program in Sacramento County,[5] where the Sacramento County Department of Transportation provides speed radar equipment, a recording spreadsheet, and training to residents to identify speeding drivers. The County evaluates the data collected by residents, secures vehicle owner information from the Department of Motor Vehicles (DMV), and then issues an awareness letter to encourage drivers to obey the speed limit when traveling on neighborhood streets.

ACKNOWLEDGMENTS

We would like to thank the City of Blue Lake for inviting us into their community and for hosting the Community Pedestrian and Bicycle Safety Training. We would like to especially express our gratitude to the Planning Committee members: Mike Foget, City of Blue Lake Engineer, Amanda Mager, City of Blue Lake City Manager, DeAnn Waldvogel, Blue Lake Elementary School Superintendent, Kit Mann, Public Safety Commissioner and Jennifer Weiss, Planner with the Natural Resource Services, for their full commitment to transportation planning and meaningful engagement with community residents.

We would like to acknowledge the many community members whose attendance at the workshop and dedication to pedestrian and bicycle safety meaningfully informed and strengthened the workshop's outcomes.

Funding for the Community Pedestrian and Bicycle Safety Training program was provided by a grant from the California Office of Traffic Safety through the National Highway Traffic Safety Administration.

[5] See Sacramento County, Care About Neighborhoods (CAN) Program, www.sacdot.com/Pages/CareaboutNeighborhoods.aspx