

# RECOMMENDATIONS TO IMPROVE PEDESTRIAN & BICYCLIST SAFETY IN LOS ANGELES CHINATOWN



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**Berkeley SafeTREC**  
SAFE TRANSPORTATION RESEARCH AND EDUCATION CENTER

# Recommendations to Improve Pedestrian & Bicyclist Safety in Los Angeles Chinatown

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## INTRODUCTION

In collaboration with the Asian and Pacific Islander Obesity Prevention Alliance (APIOPA), the Chinatown neighborhood of Los Angeles was identified as a site for the Community Pedestrian and Bicyclist Safety Training program based on the residents' interest in and need for technical assistance and resources to improve pedestrian safety, bicyclist safety, walkability, and bikeability, particularly as it relates to safe routes for seniors.

Following planning conversations with the AARP Los Angeles Chapter, American Heart Association/American Stroke Association, Chinatown Service Center, Los Angeles Walks, and the Southeast Asian Community Alliance (SEACA), the community invited the University of California at Berkeley's Safe Transportation Research and Education Center (SafeTREC) and California Walks (Cal Walks) to the Chinatown neighborhood to facilitate a community-driven pedestrian and bicyclist safety action-planning workshop.

Cal Walks facilitated the workshop on September 24, 2016, which consisted of: 1) an overview of multidisciplinary approaches to improve pedestrian and bicyclist safety; 2) three walkability and bikeability assessments along two key routes where residents, visitors, and seniors walk and bike to/from home, businesses, and other community services; and 3) a voting exercise to identify residents' top priorities to inform the City's active transportation efforts. This report summarizes the workshop proceedings, as well as ideas identified during the process and recommendations for pedestrian and bicyclist safety projects, policies, and programs.

## BACKGROUND

### Community Pedestrian & Bicyclist Safety Training Program

The Community Pedestrian and Bicyclist Safety Training (CPBST) program is a joint project of UC Berkeley SafeTREC and Cal Walks. Funding for this program is 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 is to train local neighborhood residents and safety advocates on how to improve pedestrian and bicyclist safety and to educate them on how to collaborate effectively with local officials and agency staff to make communities safer and more pleasant to walk and bike. The half-day training is designed to provide participants with both pedestrian and bicyclist 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 bicyclist safety conditions and concerns. Participants are then guided on a walkability and bikeability assessment of nearby streets before setting pedestrian and bicyclist safety priorities and actionable next steps for their community.

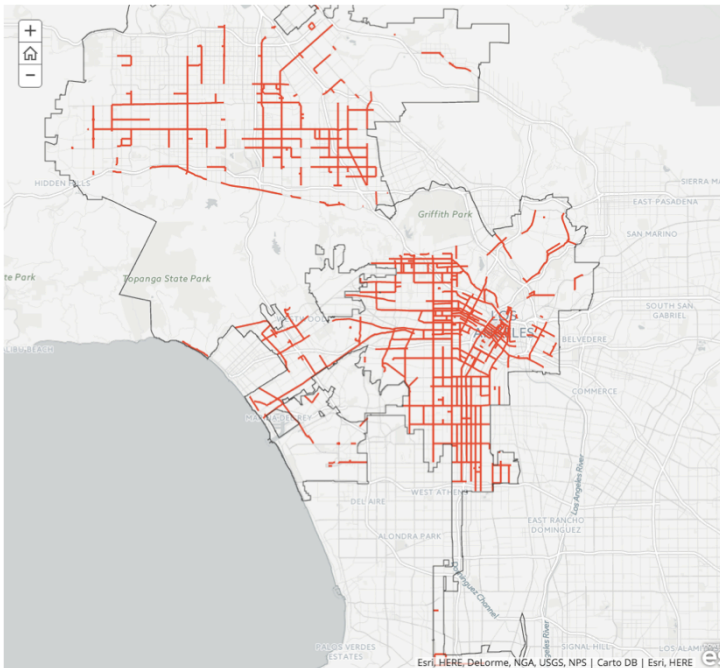
For a summary of outcomes from past CPST workshops, please visit:

[www.californiawalks.org/wp-content/uploads/2016/05/CPST-Annual-Report-2015.pdf](http://www.californiawalks.org/wp-content/uploads/2016/05/CPST-Annual-Report-2015.pdf)

[https://safetrec.berkeley.edu/sites/default/files/cpst\\_annual\\_report\\_2015\\_nov20\\_1.pdf](https://safetrec.berkeley.edu/sites/default/files/cpst_annual_report_2015_nov20_1.pdf)

## Selected Pedestrian & Bicyclist Safety Conditions in the Los Angeles Chinatown Neighborhood

### High Traffic Speeds & Wide Streets



LOS ANGELES HIGH-INJURY NETWORK, SOURCE: LOS ANGELES DEPT. OF TRANSPORTATION



LOS ANGELES HIGH-INJURY NETWORK STREETS WITH CHINATOWN NEIGHBORHOOD, SOURCE: LOS ANGELES DEPT. OF TRANSPORTATION

N. Broadway Street and N. Hill Street are the main thoroughfares that traverse the neighborhood. Both streets are 4-lane arterials with parking lanes on both sides and an occasional fifth lane that dedicated for left or right turning traffic at intersections. Both streets have been identified as part of the City of Los Angeles' High Injury Network<sup>1</sup> by the LA Department of Transportation Vision Zero initiative. Streets that comprise the High Injury Network represent only 6% of the City of Los Angeles' streets but account for 65% of the City's severe and fatal traffic collisions. Traffic speeds along both streets present challenges to pedestrian and bicyclist safety in the area; particularly N. Hill Street, which acts as a feeder to/from the CA-110 highway.

<sup>1</sup> See Los Angeles Department of Transportation, High Injury Network, Available at [http://geohub.lacity.org/datasets/4ba1b8fa8d8946348b29261045298a88\\_0](http://geohub.lacity.org/datasets/4ba1b8fa8d8946348b29261045298a88_0)





**DRIVERS RECORDED TRAVELING AT 49 MPH AFTER ENTERING CHINATOWN NEIGHBORHOOD FROM THE CA-110 OFF-RAMP**

Research has demonstrated that wide streets and wide travel lanes are associated with higher vehicle speeds,<sup>2</sup> which affect safety for people walking and bicycling. In addition to encouraging higher vehicle travel speeds, wide streets create longer crossing distances for pedestrians. Portions of both streets where the occasional fifth turning lane exists create extra-long crossing distances for pedestrians in the neighborhood, particularly senior residents and visitors. During our site visit, we observed numerous seniors who were unable to complete crossing the street within the allocated time due to the width of the street.



**SENIOR UNABLE TO COMPLETE CROSSING N. BROADWAY IN ALLOTTED TIME**

<sup>2</sup> 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.



### Lack of Curb Ramps



HIGH CURB AND LACK OF CURB RAMP AT N. BROADWAY AND CESAR CHAVEZ AVENUE

While the sidewalks in the neighborhood are generally level, numerous intersections lacked curb ramps, which create challenges for people attempting to cross the street, particularly seniors and those with disabilities. Where curb ramps did exist, the ramps were generally the older-style corner apex ramps rather than the two directional ramps per corner that are recognized as current best practice. Furthermore, we observed particularly high curbs coupled with the lack of curb ramps that created especially challenging crossing conditions for those with mobility issues.

### Aggressive Driver Behaviors & Turning Conflicts

During our site visit and walkability assessment, we observed drivers frequently encroaching into crosswalks at intersections, as well as failing to yield to pedestrians while making left and right turns. Though dedicated turn lanes exist at intersections, most intersections along Hill and Broadway lacked dedicated turning signal phases, which may encourage more aggressive turning behavior by drivers.

### Crowded Sidewalks & Vendor Encroachment

The Chinatown neighborhood enjoys a high level of pedestrian activity throughout the day; accordingly, the current sidewalk width may not be sufficient to accommodate the high number of people walking, particularly at bus stop locations. Additionally, the majority of vendors along Broadway display goods and wares on the sidewalk, creating cramped conditions for residents and visitors traversing the sidewalks. At bus stops, the high number of people waiting to board combined with vendors' use of sidewalk creates challenging walking conditions given the current sidewalk width.



DRIVERS FREQUENTLY ENCROACH IN CROSSWALKS AT INTERSECTIONS





**CROWDED BUS STOP DUE TO VENDOR USE OF SIDEWALK AND SIDEWALK WIDTH**

## Lack of Bicycle Facilities



**PERSON BICYCLING ON SIDEWALK ON A STREET THAT LACKS ON-STREET BICYCLE FACILITIES**

Marked bicycle facilities do not exist within the core of the neighborhood, though bicycle facilities skirt the edge of Chinatown on N. Spring Street, N. Main Street, and Cesar Chavez Avenue. Many older adult visitors and residents riding bicycles in the neighborhood were observed riding on the sidewalk, which can cause conflicts with people walking particularly in the more crowded portions of the neighborhood.



## LA Chinatown's Pedestrian Collision History

Between 2006-2015<sup>3</sup>, there were 136 pedestrian collisions, including 2 fatalities and 8 severe injuries in the LA Chinatown neighborhood, with collisions concentrated on Alpine, College, and Main streets, as well as on Broadway. Over half (55.1%) of pedestrian collisions can be attributed to drivers' failure to yield to a pedestrian with the right-of-way in a crosswalk.<sup>4</sup> While a majority of collisions involved pedestrians crossing in a crosswalk at an intersection (62.5%), 14% of pedestrian collisions involved a pedestrian crossing not in a crosswalk<sup>5</sup> and 10.3% involved a pedestrian walking on the roadway.

One-third of pedestrian collisions in the Chinatown neighborhood involved adults aged 65 and older, while older adults aged 65 and older accounted for half of the pedestrian fatalities and 37.5% of severe pedestrian injuries between 2006-2015. For pedestrian collisions involving adults 65 and older, the majority of collisions (60.6%) can be attributed to drivers' failure to yield to a pedestrian with the right-of-way in a crosswalk.

## SEPTEMBER 24 WORKSHOP



**PRESENTATION ON PEDESTRIAN AND BICYCLIST SAFETY BEST PRACTICES VIA SIMULTANEOUS INTERPRETATION IN CANTONESE AND MANDARIN**

Community-based organizations requested a workshop to 1) provide City/County staff, community organizations, and residents with a toolkit for promoting pedestrian and bicyclist safety to inform current and future active transportation efforts for the Chinatown neighborhood; 2) strengthen the open and collaborative relationship between community-based organizations, residents, and City/County agencies; and 3) develop consensus regarding pedestrian and bicyclist safety priorities and actionable next steps

<sup>3</sup> Please note that 2014 and 2015 collision data is provisional and not yet final.

<sup>4</sup> Pedestrian Right-of-Way Violations are defined as instances where a driver fails to yield to a pedestrian in a marked or unmarked crosswalk when the pedestrian has the right of way (e.g., when the pedestrian has a "Walk" signal at a signalized intersection).

<sup>5</sup> Pedestrians have the right-of-way in marked and unmarked crossings, and drivers are legally required to yield to pedestrians in these instances. However, when pedestrians cross outside of marked or unmarked crossings, pedestrians must yield the right-of-way to drivers. This is not the same as the term "jaywalking," which refers to crossing outside of a marked or unmarked crossing between two signalized intersections. A pedestrian is legally able to cross outside of a marked or unmarked crossing between two intersections where one or none of the intersections is signalized but only if the pedestrian yields the right-of-way to oncoming drivers.

for the Chinatown neighborhood.

The September 24 workshop was hosted from 9:30 am-2:30 pm at the Chinatown Service Center with breakfast, lunch, and translated workshop materials in Chinese (Traditional) provided to encourage community resident participation. The workshop was facilitated in English with simultaneous interpretation provided in Cantonese and Mandarin by four interpreters via headsets. Fifty-two (52) individuals attended the workshop, representing a wide variety of organizations, City/County agencies, and the community-at-large, including:

- AARP California;
- American Heart Association/American Stroke Association
- Asian and Pacific Islander Obesity Prevention Alliance (APIOPA)
- California Highway Patrol;
- Chinatown Service Center;
- City of Los Angeles Council District 1 Office;
- LA Department of Transportation—Vision Zero Initiative;
- LA Metro;
- Los Angeles Walks; and
- Local Resident Seniors.

### Reflections from Walkability & Bikeability Assessment



**PARTICIPANTS DISCUSSING WALKING CONDITIONS DURING WALKABILITY ASSESSMENT VIA CANTONESE AND MANDARIN INTERPRETERS**

Walkability assessments were conducted along N. Broadway and N. Hill Street, two key routes where residents, visitors, and seniors walk and bike to/from home, businesses, and other community services. 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 in and around the Chinatown neighborhood; and 3) identify positive community assets and strategies which can build upon these assets. Following the walkability assessment, the participants shared the following reflections:

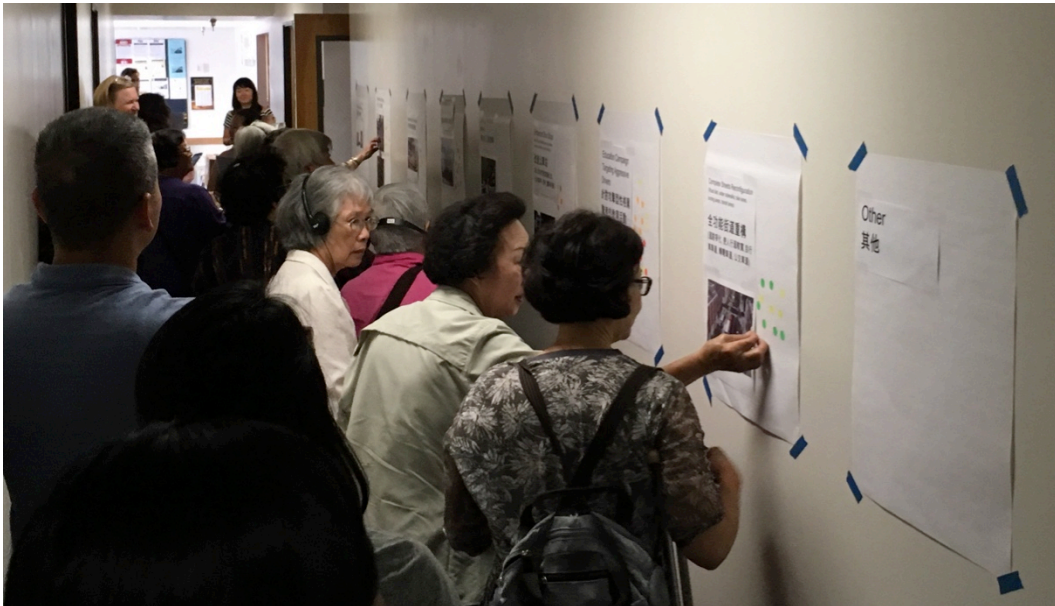
- **Traffic Speeds & Turning Conflicts:** Workshop participants repeatedly highlighted their discomfort with the speed of traffic on Broadway and Hill Street, as well as their personal experiences with being hit or nearly hit by turning traffic. Participants identified the



intersections of Ord and Broadway and Ord and Hill Streets as particularly unsafe. The seniors recounted numerous stories of themselves, friends, or family members being hit or nearly hit at both intersections. Participants also reported that the bus stop at Broadway and Ord is frequently crowded due to the sidewalk width and vendor encroachment, pushing waiting bus riders toward the curb and uncomfortably close to fast-moving traffic.

- **Vendor Use of Sidewalks:** Participants reiterated the challenges of navigating sidewalks obstructed by merchant stalls, merchandise, and wares throughout the neighborhood. Participants identified Broadway, Ord Street, and bus stop locations to be particularly difficult to navigate.
- **Trees & Benches:** Participants voiced appreciation for the shade trees and benches that exist throughout the neighborhood and strongly supported installation of more shade trees/structures, as well as benches.
- **Insufficient Crossing Time:** Participants shared that it was difficult to cross the major streets (Broadway and Hill) in the time currently provided by the pedestrian signal.
- **Trash/Blight Concerns:** Numerous participants voiced concerns with littering and other trash/blight in the neighborhood. Some participants also expressed concerns with the homeless population in the neighborhood as a challenge to feeling safe walking.

## Voting Exercise



PARTICIPANTS IDENTIFYING PRIORITY STRATEGIES TO IMPROVE WALKING AND BIKING IN CHINATOWN

Following the walkability assessment debrief, residents were then asked to prioritize the strategies they would like to see the City pursue to improve pedestrian and bicyclist safety in Chinatown.

Residents were provided with 3 voting stickers and asked to vote on

the following strategies identified as most appropriate for Chinatown by the workshop planning committee members:

- Implementing Pedestrian Scramble(s)
- Installing Dedicated Turn Signals for Vehicles
- Installing High-Visibility Crosswalks
- Implementing Leading Pedestrian Intervals at Intersections
- Extending Walking Times

- Enhancing Existing Bus Stops: Creating a bus bulb out/boarding area, installing bus shelters, benches, and real-time arrival information
- Developing an Education Campaign Targeting Aggressive Driver Behaviors
- Implementing a Complete Streets Reconfiguration: Implementing a road diet with wider sidewalks, bike lanes, turning lanes, and transit lanes)
- Other?



**PARTICIPANTS IDENTIFYING PRIORITY STRATEGIES TO IMPROVE WALKING AND BIKING IN CHINATOWN**

The top 3 strategies prioritized by residents were: 1) pedestrian scramble; 2) education campaign targeting aggressive drivers; and 3) complete streets reconfiguration.

Strategy	Votes
Pedestrian Scramble	26
Education Campaign Targeting Aggressive Driver Behaviors	24
Complete Streets Reconfiguration	15
Dedicated Turn Signals for Vehicles	13
High-Visibility Crosswalks	11
Extended Walking Times	8
Enhanced Bus Stops	8



Leading Pedestrian Intervals	6
Other	0

During the debrief of this prioritization exercise, community members identified specific locations they would like explored for a pedestrian scramble (Broadway/Ord; Broadway/Bernard; and Broadway/Alpine) and voiced support for an educational campaign focused on yielding the right-of-way to pedestrians (modeled after San Francisco’s “It Stops Here” Campaign).

The Asian and Pacific Islander Obesity Prevention Alliance (APIOPA) has committed to continuing to work with the Chinatown Service Center, Chinatown residents, and visitors to disseminate the results of the workshop and to facilitate additional action planning sessions to implement the participants’ identified priorities.

### California Walks/SafeTREC Recommendations

California Walks and SafeTREC submit the following recommendations for consideration by community advocates, the City of Los Angeles, and LA Metro:

- **Implement Bus Bulb Outs along N. Broadway:** To reduce crossing distances for pedestrians while also providing more space for patrons to wait for Metro buses, Cal Walks and SafeTREC recommend LA Metro work with the City of Los Angeles to prioritize implementation of curb extensions at bus stop locations along N. Broadway. The bus bulb outs may help alleviate the crowded sidewalk conditions for Metro customers and improve bus boarding/alighting by eliminating the need to weave in and out of traffic at bus stops.
- **Evaluate & Adjust Pedestrian Signal Timing on N. Broadway and N. Hill Street:** Due to the high proportion of older adult residents and visitors to the Chinatown area, Cal Walks and SafeTREC recommend the LA Department of Transportation evaluate existing pedestrian signal timing along N. Broadway and N. Hill Street to determine whether additional crossing time is needed for older adult pedestrians. The latest California Manual on Uniform Traffic Control Devices (CA-MUTCD) allows for the use of the slower 2.8 feet per second crossing speed in locations with high concentrations of seniors, persons with disabilities, and children.
- **Explore Dedicated Turn Signals and/or Leading Pedestrian Intervals along N. Broadway and N. Hill Street:** Due to the high incidence of pedestrian collisions arising from conflicts with turning vehicles, Cal Walks and SafeTREC recommend the LA Department of Transportation prioritize the implementation of dedicated turn signals and/or leading pedestrian intervals along N. Broadway and N. Hill Street as part of the Department’s Vision Zero program. These interventions are relatively low-cost and are effective strategies for reducing turning conflicts between drivers and pedestrians.
- **Implement Hill Street Gateway Treatment at CA-110:** 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. A gateway treatment at Hill Street at the CA-110 on/off ramp could provide some minor traffic calming benefits and could be designed to mirror the existing Chinatown gateway at Broadway and Cesar Chavez Avenue. The gateway treatment could be used as a supplemental traffic calming strategy to complement the existing speed feedback signs.

- **Install Bike Lanes Along Broadway:** Currently, there are no bike lanes in Chinatown, and bicyclists were observed riding on the sidewalk. To avoid additional conflicts with the high number of pedestrians and to further connect Chinatown with other parts of the City, the LA Department of Transportation should accelerate installation of bike lanes as part of a larger road diet project along N. Broadway. Bike lanes in Chinatown along Broadway and Alpine Street have already been studied in LA Metro’s Connect US Action Plan.<sup>6</sup>
- **Follow-up Education and Empowerment of Residents’ on Road Safety Improvements:** During the workshop when asked how pedestrian safety in the neighborhood could be improved, residents reported that improvements were out of their control and when asked why, they responded with “this is just how it is.” The community is not disengaged with the issues, but rather needs to be educated and empowered to advocate for themselves. We commend the Asian Pacific Islander Obesity Prevention Alliance (APIOPA) for committing to continue this dialogue with residents and recommend that LA Metro and City staff continue to meet with residents to refine implementation of strategies identified within the Connect US Action Plan, as well as the priorities identified by participants during the workshop.

## ACKNOWLEDGMENTS

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We would like to acknowledge the community members and City, County, and State agency staff whose attendance at and participation in the workshop and dedication to pedestrian and bicyclist safety meaningfully informed and strengthened the workshop’s outcomes.

Funding for the Community Pedestrian and Bicyclist Safety Training program was provided by a grant to the University of California at Berkeley Safe Transportation Research & Education Center (SafeTREC) from the California Office of Traffic Safety through the National Highway Traffic Safety Administration.

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<sup>6</sup> Los Angeles Metro, Connect US Action Plan, Available at <https://www.metro.net/projects/linkages/>