

Outreach & Engagement Summary



Burlingame Safety Action Plan Outreach and Engagement Summary



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Overview

The City of Burlingame **Safety Action Plan** (which serves as the City’s Vision Zero Action Plan, Comprehensive Safety Action Plan, and Local Road Safety Plan) was developed from December 2024 through July 2026. The plan reflects the City’s shift toward a “Vision Zero” approach, a strategy focused on improving roadway safety and preventing traffic-related deaths and serious injuries through proactive planning and design.

The Safety Action Plan included a comprehensive outreach and engagement effort with City stakeholders, community stakeholders, and the citywide public. Outreach and engagement for the Plan was guided by three goals:

1. People who live or work in Burlingame are aware of the Safety Action Plan and its purpose.
2. People who live or work in Burlingame provide feedback to inform Safety Action Plan development.
3. Documentation tells a clear and comprehensive story about engagement opportunities, participation, and feedback received.

These goals were met through in-person and digital events, promotions, and reporting, as detailed below.

The outreach and engagement effort included two key phases:

- Phase 1 occurred during Spring 2025 and focused on the community’s vision for safer streets in Burlingame.
- Phase 2 occurred during Spring 2026 and focused on sharing and receiving input on the draft Safety Action Plan.

Outreach and Engagement Activities

The project team conducted **24** outreach and engagement activities throughout the project, including:

- **4** meetings with City Council
- **5** meetings with the Traffic, Safety & Parking Commission
- **4** public-facing project information displays at key locations throughout the City
- **3** meetings with the Task Force (assembled for this project)
- **3** meetings with the Community Advisory Committee (assembled for this project)
- **2** in-person pop-up events
- **1** interactive online map survey
- **1** draft plan public review survey

The outreach and engagement process generated nearly **600** project touchpoints, with each touchpoint representing an individual at a distinct event or participating in a distinct activity. This included over **200** individuals through in-person engagements, over **350** individuals through online engagements, and nearly **30** individuals through stakeholder meetings.

Phase 1 – Spring 2025			
Date	Activity Detail	Audience	Known Touchpoints
February 3, 2025	City Council Meeting #1	City stakeholders	5 Councilmembers
March 5 – June 8, 2025	Interactive Online Map Survey	Citywide public	251 people contributed 654 survey responses
March 5, 2025	Community Advisory Committee Meeting #1	Community stakeholders	13 CAC members
March 10, 2025	Task Force Meeting #1	City stakeholders	7 Task Force members
May 4, 2025	Fresh Market Pop-up	Citywide public	110 community members placed 43 dots on the map
May 7, 2025	Burlingame High School Pop-up	Citywide public	95+ students engaged
May 19 – mid-June, 2025	Project Information Displays placed in Community Center, Main Library, and Easton Branch Library	Citywide public	Unknown
June 11, 2025	Community Advisory Committee Meeting #2	Community stakeholders	13 CAC members
June 12, 2025	Traffic, Safety & Parking Commission Meeting #1	City stakeholders	4 Commission members
June 16, 2025	Task Force Meeting #2	City stakeholders	7 Task Force members
September 2, 2025	City Council Meeting #2	City stakeholders	5 Councilmembers

Phase 2 – Spring 2026			
Date	Activity Detail	Audience	Known Touchpoints
February 2, 2026	City Council Meeting #3	City stakeholders	5 Councilmembers
February 9, 2026	Community Advisory Committee Meeting #3	Community stakeholders	13 CAC members
February 26, 2026	Task Force Meeting #3	City stakeholders	7 Task Force members
March 12, 2026	Traffic, Safety & Parking Commission Meeting #2	City stakeholders	4 Commission members
April 9, 2026	Traffic, Safety & Parking Commission Meeting #3	City stakeholders	4 Commission members
April 9 – May 5, 2026	Draft Plan Public Review Online Survey	Citywide public	42 people contributed 100 comments
April 17 – mid-May, 2026	Project Information Displays placed in Community Center, Main Library, Easton Branch Library, and on roving sandwich board	Citywide public	Unknown
May 14, 2026	Traffic, Safety & Parking Commission Meeting #4	City stakeholders	4 Commission members
June 11, 2026	Traffic, Safety & Parking Commission Meeting #5	City stakeholders	4 Commission members
July 6, 2026	City Council Meeting #4	City stakeholders	5 Councilmembers

Promotion Tactics

A variety of digital and in-person promotion tactics were used throughout both phases of the project to increase awareness of the Safety Action Plan, encourage participation in engagement activities, and direct community members to the project website and online surveys.

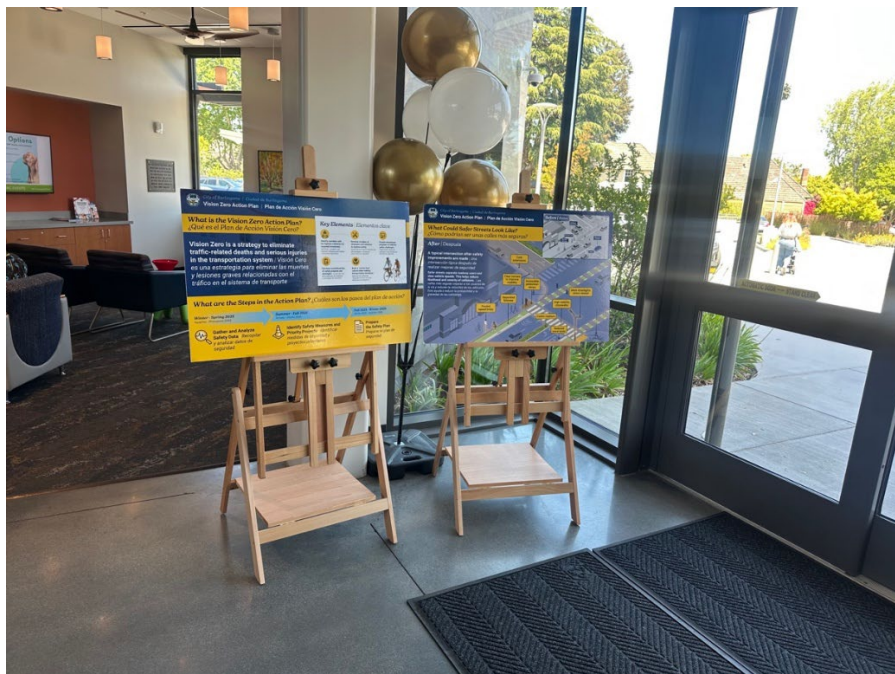
Phase 1 Promotion

Phase 1 promotion focused on increasing awareness of upcoming pop-up events and encouraging participation in the interactive online map survey.

Promotion was conducted digitally through the project website and City communication channels, including the Burlingame eNews. Digital promotion related to the Burlingame High School pop-up event also was shared through the BHS Bulletin distributed to students and staff. Community Advisory Committee (CAC) members supported Phase 1 digital outreach by sharing information about the online map survey through their networks. This included distributing the survey through Principal newsletters sent to families across the seven schools within the Burlingame Elementary School District.

Promotion was conducted in-person through public-facing project information displays and printed project factsheets at two libraries and the community center. The displays introduced the Safety Action Plan, explained the project goals, and provided a QR code and website link to encourage participation in the online survey and upcoming pop-up events.

Project Information Display at Burlingame Community Center during Phase 1



Phase 2 Promotion

Phase 2 promotion focused on sharing the Draft Safety Action Plan and encouraging the community to participate in the public review process through the project website.

Digital information about the Draft Plan was shared through the project website and City communication channels, including the Burlingame eNews. In-person information was shared through public-facing project information displays and printed project factsheets at two libraries, at the community center, and on a roving sandwich board.

Digital Promotion Blurb in Burlingame eNews (April 16, 2026)

The graphic is a vertical rectangle with a dark blue background. On the left side, there is a circular seal for 'THE CITY OF BURLINGAME CALIFORNIA' with 'INCORPORATED 1908' at the bottom. The seal features a tree and a building. To the right of the seal, the text 'Burlingame' is in white, 'Vision Zero' is in large yellow letters, and 'Action Plan' is in white. Below this, the website 'burlingamevz.com' is written in white with a yellow underline. At the bottom, there is a white box containing text about providing feedback on the plan, with a deadline of May 1. The text includes a link to 'www.burlingamevz.com' and mentions 'Vision Zero' as a goal.

Burlingame
Vision Zero
Action Plan

burlingamevz.com

Provide Feedback on Burlingame's Vision Zero Action Plan
Submit your comments by May 1

The City of Burlingame Comprehensive Safety Action Plan is an important milestone in the City's commitment to safer streets for everyone. A Comprehensive Safety Action Plan is an analysis and strategy document that provides the City with a clear path forward to improving roadway safety and achieving our Vision Zero goal. This plan serves as the City's Comprehensive Safety Action Plan, Vision Zero Action Plan, and Local Road Safety Plan. Community input has heavily shaped the draft plan! Please take this opportunity to review the draft plan and provide any comments you may have at www.burlingamevz.com May 1.

With this plan, Burlingame commits to [Vision Zero](#), a goal of reaching zero fatalities and serious injuries on local roadways.

Project Information Display at Burlingame Main Library during Phase 2



Project Website

The project team developed and maintained a project website to support ongoing outreach and engagement efforts throughout the project. The website was regularly updated with project information, materials, schedule updates, and engagement opportunities as work progressed. To improve accessibility, the website was available in 12 major languages, including Spanish and simplified Chinese.

From February 27, 2025, to May 18, 2026, the website saw **4,583** visits by **3,056** unique visitors. Of those visits, **77%** of traffic came through direct visits such as links from emails, QR codes, or typing the website URL directly. **13%** of website traffic came from other websites, with the majority referred by the City of Burlingame website. The remaining traffic came from search engines (**6%**), and social media (**4%**).

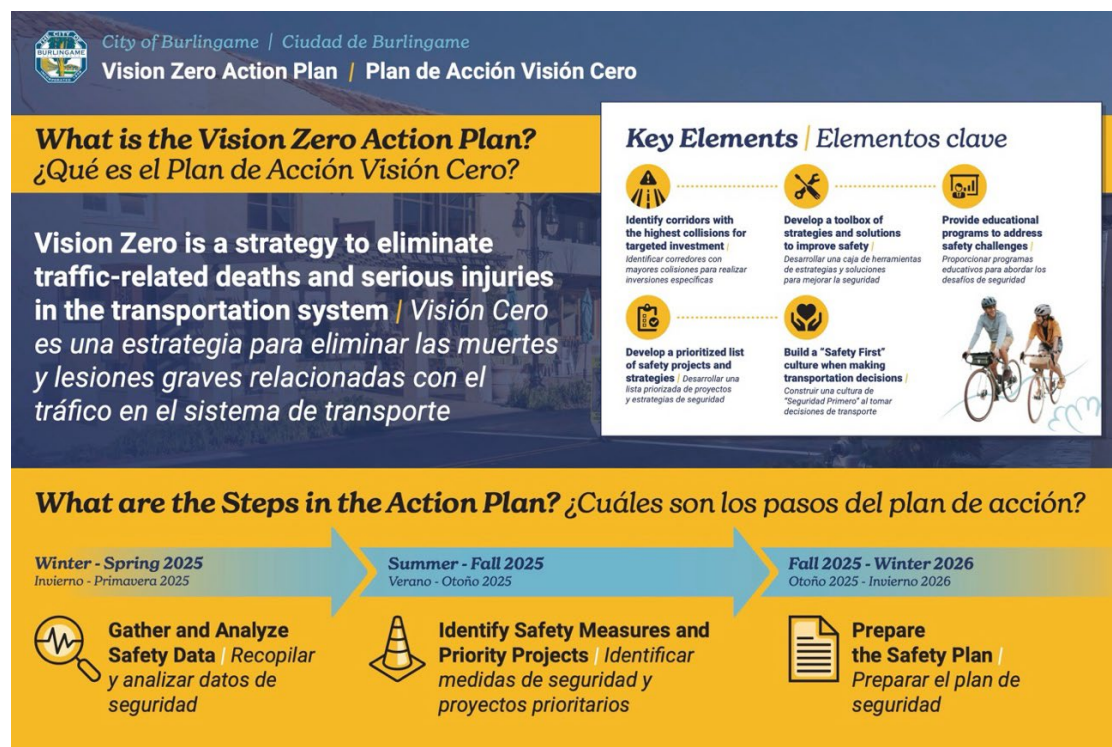
In-person Pop-up Events

The pop-up events, performed as part of Phase 1, featured a consistent set of bilingual English and Spanish materials to inform the public about the Safety Action Plan and encourage participation.

Pop-up materials included the following.

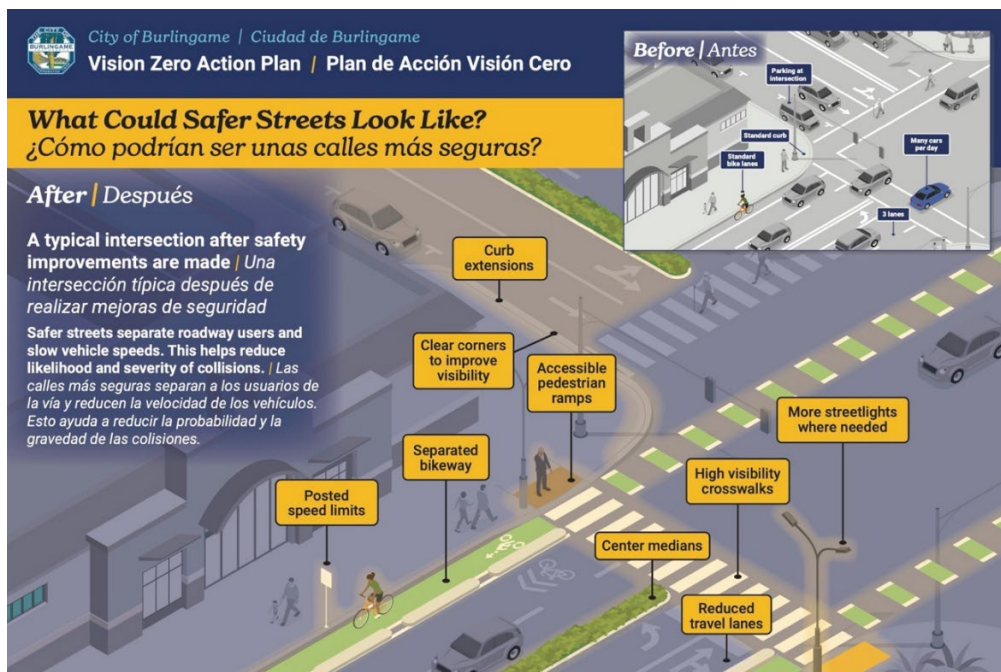
Board 1: What is the Safety Action Plan?

This information board gave a brief overview of the City’s Safety Action Plan, including its purpose, key elements, and timeline.



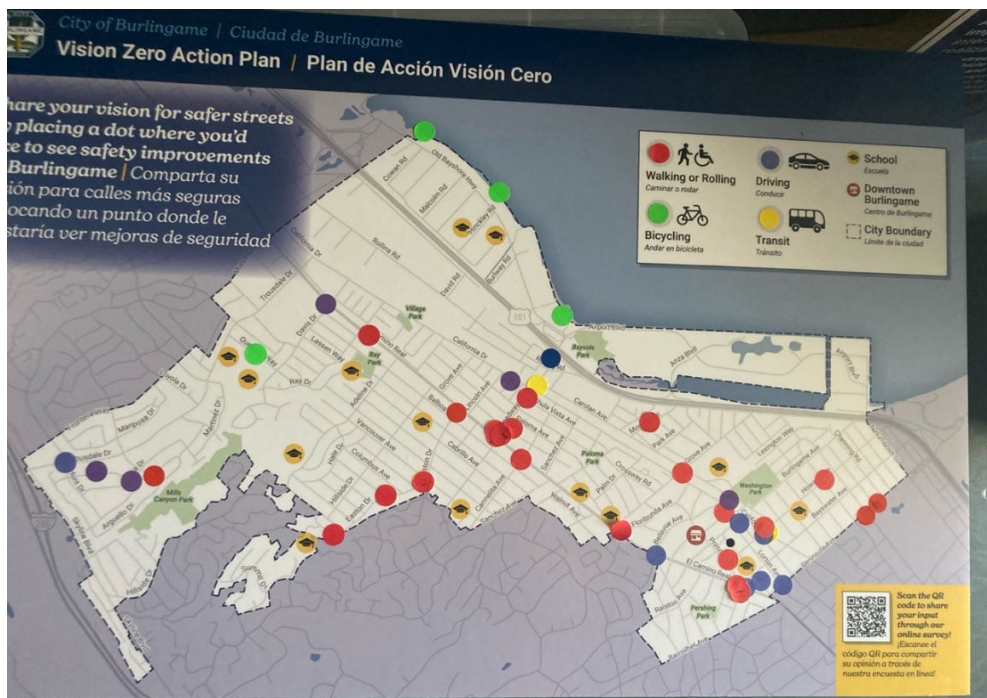
Board 2: What Could Safer Streets Look Like?

This information board showed potential street treatments to make streets safer. A “before” graphic of an example roadway included features such as parking at intersections, standard bike lanes, and standard curbs. An “after” graphic showed the same roadway with potential safety improvements such as curb extensions, accessible pedestrian ramps, center medians, separated bikeways, reduced travel lanes, and more.



Board 3: Interactive Map Board

This activity board invited attendees to share their vision for safer streets by placing a dot where they desired safety improvements in Burlington. Participants matched dot colors to the type of transportation issues they noticed. This board also included a QR code to the online map survey.



Project Factsheet: City of Burlingame Safety Action Plan

This project factsheet was a one-paged handout designed for participants to take with them, with information in English on one side and Spanish on the other side. It provided the same information as the boards, including a brief overview and timeline of the Burlingame Safety Action Plan, the before/after graphic of street treatments, and the QR code for the interactive map survey.

Below is a selection of images from the in-person pop-up events.

Attendees Sharing Feedback with the Project Team at the Fresh Market Pop-up



Students at Burlingame High School Visiting the Project Booth



Student at Burlingame High School Adding Dots to the Interactive Map Board



Phase 1 Findings: Vision for Safer Streets

Across Phase 1 of outreach and engagement, community members shared their feedback in person at engagement events and online through the interactive map. Below is a high-level summary of the main themes and highlights from outreach and engagement with the citywide public.

Pedestrian Safety

Pedestrian safety was the most common theme that arose during in-person engagement and made up 35% of comments in the web survey. Overall, commenters expressed a desire for safe experiences walking and rolling throughout the City. Below are major themes from these comments.

Safe Crossings: Commenters often shared feedback around existing crosswalks that posed safety challenges. They noted locations where they had uncomfortable walking experiences, near misses, concerns about speeding, poor visibility for drivers and pedestrians, and/or uncompliant driver behavior. Commenters shared their suggestions to improve safety, for example adding pedestrian warning signals like Rectangular Rapid Flashing Beacons (RRFBs). Many commenters shared locations that they identified as in need of crosswalks or other improvements for crossing safely.

Traffic Calming: Many commenters shared thoughts related to traffic calming measures, especially on residential roads and roads near schools. Most comments supported reducing car speeds, but commenters held differing opinions on infrastructure solutions. For example, some commenters asked for stop signs at key locations, while other commenters shared concerns that stop signs were ineffective as they were regularly disregarded.

Schools: Many commenters shared concerns about the safety of students and parents walking to local schools. They noted challenging experiences crossing roads, locations for sidewalk improvements, and infrastructure changes to improve safety.

Sidewalks: Some commenters shared desired locations for new sidewalks and locations of sidewalks that needed repair or maintenance. There were also some accessibility concerns including comments about visibility of curbs and sidewalk ramps.

Driving Safety

Driving safety was the second most common theme in both in-person and online comments, making up 25% of comments in the web survey. Below are major themes from those comments.

Speeding and Traffic Violations: Many commenters shared concerns regarding drivers speeding above posted limits and making traffic violations like rolling stops. Commenters noted locations particularly prone to these violations. They suggested infrastructure changes such as traffic calming or traffic signals to improve safety in these locations, and some commenters suggested more traffic enforcement.

Turning Challenges: Many commenters shared locations where they had challenges making turns while driving. The most common turning challenges were turning left with cross-traffic and poor visibility. Commenters provided a variety of suggestions for reducing turning challenges, such as prohibiting left turns on some roads, adding left turn lanes and/or signals, and daylighting intersections.

Congestion: Some commenters noted roads and areas with high levels of traffic congestion during rush hour and school traffic during school start and end times. Commenters noted general frustrations with traffic congestion as well as safety concerns due to congestion.

Parking: Some commenters shared comments about locations where parking made visibility challenging for drivers and pedestrians crossing roads. There were also some comments about locations where parked cars blocked sidewalks and bike lanes. A few comments about parking in the downtown area suggested methods to disincentivize parking for long periods of time.

Biking Safety

Biking safety was also a significant theme during in-person engagements and made up 19% of map survey comments. Below are major themes from these comments.

Bike Lanes: Many comments about bike safety centered around bike lanes. Commenters shared the challenges of sharing roads with drivers while biking. They highlighted challenging locations and expressed a desire for infrastructure that makes bike lanes and crossings safer and reduces the number of conflict points with vehicles.

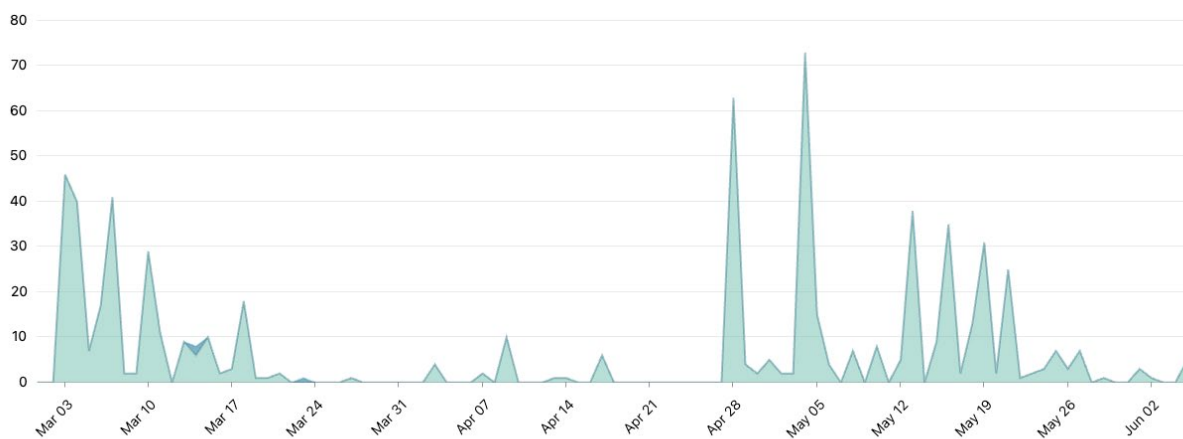
Connectivity: Some commenters shared locations where connectivity could be improved. They noted appreciation for the protected bike lane on California Drive but noted that certain extensions would greatly improve connectivity. A few commenters also shared other destinations like the Bay Trail and commuter routes that would improve bike connectivity throughout the City.

Safe Routes to School: Some commenters highlighted the need for students to have safe biking routes to school. They noted safety concerns about young people sharing roads with drivers and noted that students could not utilize biking on the sidewalk as it was prohibited. They expressed a desire for infrastructure that would allow students to bike safely to school.

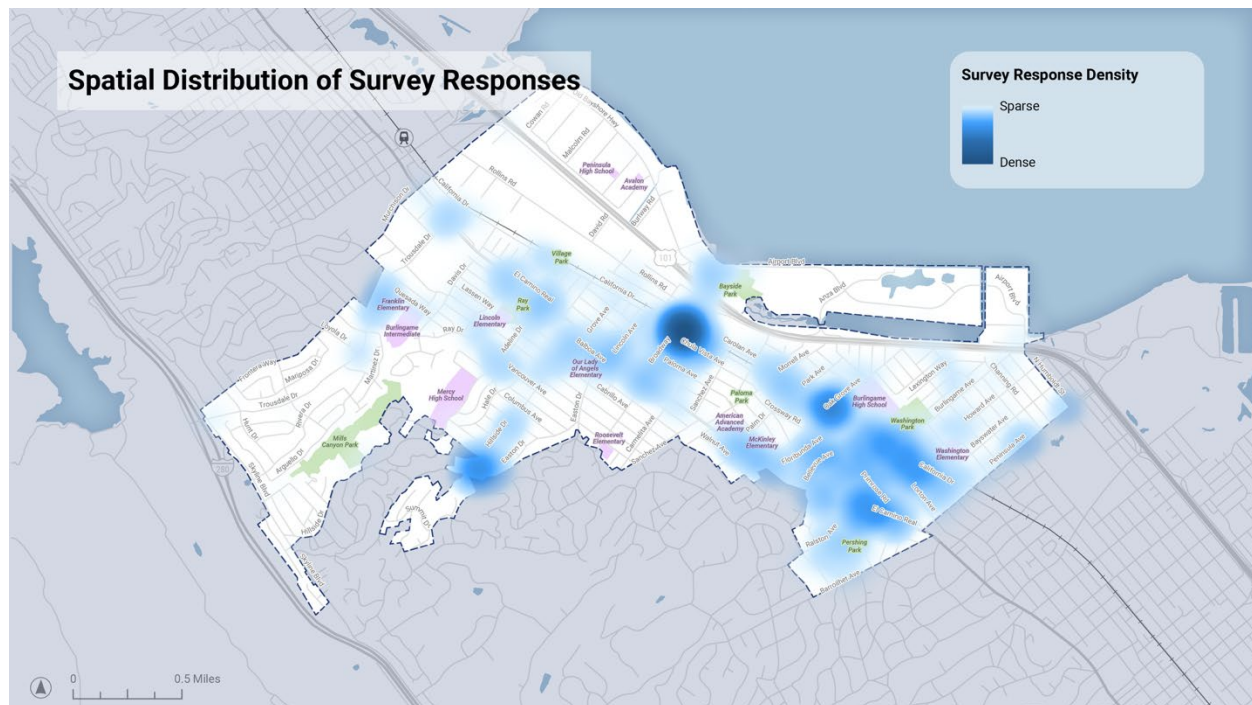
Transit

Transit comments did not make up a large portion of comments for in person engagement and made up less than 3% of online map comments. Most transit comments referred to safety concerns at Caltrain crossings. A few transit comments expressed a desire for more SamTrans bus amenities like bus shelters along El Camino Real.

Number of Phase 1 Online Map Survey Responses by Date



Spatial Distribution of Phase 1 Survey Responses



Phase 2 Findings: Draft Plan Public Review

During Phase 2 of outreach and engagement, community members shared their feedback on the draft Safety Action Plan through an online public review survey. Each survey response was grouped by theme and action category for next steps. Some survey responses included more than one unique comment, and these comments were differentiated in the assessment.

Overall, the public review survey generated **100 unique comments from 42 unique contributors**.

With each survey response, a contributor could identify one or more themes that best described their comment. Contributors indicated that over one third of comments (36%) relate to the **Priority Projects** included in the draft plan and 33% of comments relate to **speed management**. These two themes were the two most selected. Next, contributors indicated that 17% of comments relate to **current safety conditions**, 13% relate to **Action Plan strategies**, and another 13% relate to **enforcement**. Contributors could select more than one theme for each comment.

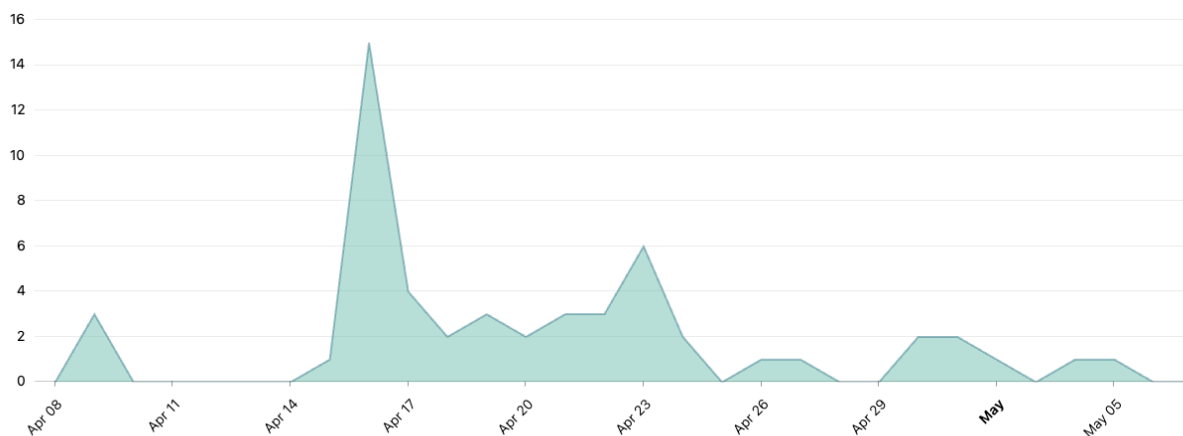
The project team categorized each comment based on the action taken in response. Over one third of comments (35%) expressed agreement with elements of the draft Safety

Action Plan. Nearly one out of five comments (18%) led to a specific revision to the Safety Action Plan. Less than half (47%) of comments included a recommendation or concern for which there was no applicable plan revision, but which the City may consider as part of a separate effort.

Public Review Comments by Action Category

Action Category	Description	Percent of Comments
Agreement with Elements of the Plan	Comment supports or expresses agreement with elements, strategies, or recommendations included in the draft plan.	35%
Informs Revision to the Plan	Comment provides recommendations that were incorporated into the final plan.	18%
Other Recommendation or Concern	Comment includes a recommendation or concern that does not lend itself to a plan revision. City may consider the suggestion as part of a separate effort.	47%

Number of Phase 2 Public Review Survey Responses by Date



A photograph of a public review activity taking place outdoors at a school. Several students are gathered around a table, looking at and discussing large white sheets of paper that are part of a display. The background shows a school building with a red-tiled roof and large trees under a clear blue sky. The scene is bright and sunny.

Public Review Comment Responses

Burlingame Safety Action Plan Public Review Comments and City Responses

June 2026

Comment	Action Category	Draft Comment Response (F&P)
[California Drive, between Trousdale and Mills] Unbuffered Bicycle Lanes - the bike lanes are narrow and are right up against the traffic lanes, with no buffer. There is no margin of error for neither bicycle riders nor driver. One slight move or avoidance of a pebble or pavement imperfection or protruding branch or opening car door will result in serious injury or fatal.	Agreement with Elements of the Plan	Agreement with Plan elements noted. No change made to Plan.
[California Drive, between Trousdale and Mills] Recent improvements – Millbrae a number of years ago already reduced the speed limit on their part of California Dr from 35 to 30 MPH in the northern end. In the southern end, a new protected two-way bikeway is now in place on California south of Broadway. That has positively increased bicycle commuting and use of the corridor. However, the safety of the protected bikeway is now leading riders into this unprotected, unbuffered section.	Agreement with Elements of the Plan	Agreement with Plan elements noted. No change made to Plan.
2. The crosswalk, on Primrose at the library, is being ignored or given only a slow down by a significant number of drivers. The involved traffic circulation, library comings and goings and trees lend to the confusion.. All of this is good reason for the sign to be observed. With an understanding of staffing constraints, the increased presence of law enforcement would be valuable.	Agreement with Elements of the Plan	Agreement with Plan elements noted. No change made to Plan.
E-micromobility and enforcement: no matter what age group anyone using E-micromobility should follow all the safety rules. I have encountered both young and old people going through red lights, and luckily did not get hit. Some form of enforcement should be made which might includes a form of licensing for all age groups.	Agreement with Elements of the Plan	Agreement with Plan elements noted. No change made to Plan.
2 - Require that ALL - regardless of age - drivers of motorized vehicles be AT LEAST safety class certified before being eligible to drive ANY motorized vehicle, including e-bikes, e-scooters, e-unicycles, Onewheels, etc. And get people riding on regular bicycles OFF city sidewalks, regardless of location. Have them ride in the street or WALK their bicycles.	Agreement with Elements of the Plan	Agreement with Plan elements noted. No change made to Plan.
Speed management improvements on Oak Grove between El Camino and California Dr. should be a very high priority for the city, especially since this is route heavily traveled by students at McKinley Elementary and Burlingame High School.	Agreement with Elements of the Plan	Agreement with Plan elements noted. No change made to Plan.
Nothing was mentioned here about the Broadway train tracks, this is a HUGE safety issue in burlingame and has been for years. Why don't we FINALLY do something about that, the longer you wait it just keeps getting more expensive. Also we need to STOP people from making u turns on downtown streets to park on opposite side of street they are driving. I see this ALL THE TIME!! Very dangerous!!	Agreement with Elements of the Plan	Agreement with Plan elements noted. No change made to Plan.
I appreciated the graphic showing how deadliness of a collision increases exponentially when speed increases. My understanding is that the most sure way to achieve vision zero is by reducing speed limits. I don't think anyone should be going more than 20 mph in downtown or residential areas.	Agreement with Elements of the Plan	Agreement with Plan elements noted. No change made to Plan.
I support the recommendation in the document to make California Dr. from Oak Grove to Peninsula into one through lane each way, with a left turn pocket in the center.	Agreement with Elements of the Plan	Agreement with Plan elements noted. No change made to Plan.
I also support the proposal to improve the bike lane on California between Broadway & Murchison. Even though parking spaces will be lost, those spaces are already unsafe: car doors can easily open and knock off a bicyclist with the current setup.	Agreement with Elements of the Plan	Agreement with Plan elements noted. No change made to Plan.
Burlingame residents see blatant speeding, running of very red lights, and running of stop signs daily. They talk about distracted and selfish driving and its dangers, but that we do not see any evidence of police enforcing the laws. This is demoralizing for law-abiding drivers and pedestrians, and everyone I know has been clamoring for more enforcement to increase safety. A squad of police officers doing this could easily fund their own salaries by the fines collected, plus we would make everyone safer. Please start enforcing the traffic laws in our city!	Agreement with Elements of the Plan	Agreement with Plan elements noted. No change made to Plan.
please finish the California drive bike route that goes from Oak Grove to the downtown Broadway. This bike route should be connected from Oak Grove to Burlingame Avenue.	Agreement with Elements of the Plan	Agreement with Plan elements noted. No change made to Plan.
Please build on what's already been built from Oak Grove and finish this connector.	Agreement with Elements of the Plan	Agreement with Plan elements noted. No change made to Plan.
Good comprehensive effort. You have identified some good methods to slow traffic down but basic to any speed reduction is enhanced enforcement. Speed enforcement is best done by using Lidar and officers should be trained to use it and actually use it! Your plan has clearly identified streets where speed is a concerning issue in Burlingame and Lidar should be used on those streets as an effective measure to reduce speeding.	Agreement with Elements of the Plan	Agreement with Plan elements noted. No change made to Plan.
Broadway between El Camino and Vancouver (Roosevelt Elem.) is very unsafe. The speed limit is currently 25 right at the corner of the school, yet the speeds are routinely abused. It would be great to lower the speed limit to 15 within a block of the school. Perhaps a stop sign at Broadway @ Drake or Bernal would solve the problem. There is never police-based speed enforcement in the area, despite multiple requests.	Agreement with Elements of the Plan	Agreement with Plan elements noted. No change made to Plan.
I hope your plan also takes into account self-driving cars and ride share/food delivery. Ride share and companies like Door Dash routinely block lanes on Broadway, often just leaving their cars in the roadway as they wait for orders. As for Waymo, I hope your plan takes into account what to do when self-driving cars block streets and traffic. It routinely happens in San Francisco.	Agreement with Elements of the Plan	Agreement with Plan elements noted. No change made to Plan.
Thank you for putting this plan together, although just heard about it today.	Agreement with Elements of the Plan	Agreement with Plan elements noted. No change made to Plan.
More needs to be done regarding kids on e-bikes. Not wearing helmets and 2 riding on an e-bike illegally.	Agreement with Elements of the Plan	Agreement with Plan elements noted. No change made to Plan.
Traffic control at stop signs. Vehicles have not been making a complete stop, just slowing down and continuing. Caroline Ave at Oak Grove is an accident waiting to happen. Person crossing the street is in danger of being hit.	Agreement with Elements of the Plan	Agreement with Plan elements noted. No change made to Plan.

Burlingame Safety Action Plan Public Review Comments and City Responses

June 2026

Reducing auto speed is such a win. Great to see it given priority. Thank you.	Agreement with Elements of the Plan	Agreement with Plan elements noted. No change made to Plan.
Also PLEASE PLEASE PLEASE focus on the Broadway train crossing. Every year there are major accidents where cars are hit by the trains. I know there was a plan to do a grade separation there and we need to prioritize that. It will benefit the safety and also the congestion if the cars don't have to cross the at-grade level tracks like they do currently.	Agreement with Elements of the Plan	Agreement with Plan elements noted. No change made to Plan.
On El Camino next to McKinley Elementary, there is a crossing which kids use at dropoff and pickup, which has flags for people to use, but which drivers frequently miss or ignore. Can we have a proper crossing light there? Else us parents have to frequently risk accidents to cross.	Agreement with Elements of the Plan	Agreement with Plan elements noted. No change made to Plan.
It is so important to provide safe infrastructure that slows traffic and saves lives. Thank you, City Council, for prioritizing these improvements. Please be bold in your implementation and prioritize the safety of humans over the convenience of cars. To my family this means slower roadway speeds, protected pedestrian crossings, improved visibility and lines of site for all travelers, safe pathways to board the bus, and more protected bike lanes -- even when that means removing parking spaces to make it possible. Slowing speeds of cars and sharing the limited roadway space in new ways we can make it more appealing and safer for people who are willing and able to walk or "roll" where they need to go, and drivers will appreciate keeping bicycles, e-bikes, and scooters safely out of automobile lanes. I also think these improvements will help reduce parking demand around Broadway, Burlingame Station, and Burlingame Avenue when people feel like its safe and efficient to go places without a car. Burlingame has been an amazing place to live and raise our family for the past nearly 20 years. Thanks for all you do to help our community thrive.	Agreement with Elements of the Plan	Agreement with Plan elements noted. No change made to Plan.
Getting drivers to drive slower is an excellent idea but must be executed with effective traffic policy in order to actually work. Many of the suggestions in the draft vision zero action plan simply suggest just lowering speed limits. This isn't an actual solution for many roads. The fact is that drivers drive at whatever speed they feel comfortable doing. Many of our roads in Burlingame are significantly wider than they need to be, which implicitly encourages speeding. In these cases, just lowering the speed limit isn't enough to actually slow down drivers. Burlingame needs physical traffic calming measures to slow down drivers, whether its a road diet, speed bumps, or other measures. Something like a road diet can even increase biking accessibility by incorporating a bike lane into the road diet like the road diet done on California Dr.	Agreement with Elements of the Plan	Agreement with Plan elements noted. No change made to Plan.
EMICROMOBILITY: - BRAVO....FINALLY.....TOOK WAY TOO LONG..." expand existing e-micromobility legislation to allow Burlingame to enforce additional age and facility restrictions for e-micromobility usage" GIVE TICKETS TO PARENTS (or FINES) if their kids break the law in any way re: biking. - ALLOW ABSOLUTELY NO EBIKES ON ANY TRAILS...ACCIDENT WAITING TO HAPPEN...eg. already ebike/pedestrian accident on Sawyer Camp Trail.	Agreement with Elements of the Plan	Agreement with Plan elements noted. No change made to Plan.
2.3 TARGETTED ENFORCEMENT = MUST DO, AND YOU HAVE TAKEN TOO LONG TO DO THIS, TOO, WHICH IS WHY PEOPLE DRIVE AND BIKE WITH SUCH DISREGARD TO STOP SIGNS AND SPEED SIGNS IN BURLINGAME. How about ticketing youth for doing ebike wheelies on Burlingame Ave...where are the police???	Agreement with Elements of the Plan	Agreement with Plan elements noted. No change made to Plan.
The plan looks very thorough. I walk on our streets at least 5 days a week, and nearly every time I see drivers rolling through stop signs - sometimes right by playgrounds or close to schools. I have seen driver behavior in the past few years that never have seen before, like making a left turn from a right turn lane against a red light! I've seen that behavior twice at Oak Grove, turning onto El Camino. I'm all for traffic calming, but I'd really like to see work on driver mindsets regarding these dangerous behaviors.	Agreement with Elements of the Plan	Agreement with Plan elements noted. No change made to Plan.
These bikes are becoming huge hazard to operators and pedestrians. Often driven by children, rules aren't being followed and often completely ignored. Kids drive at high speeds, don't wear helmets and sometimes carry passengers on back or handlebars. Check Ralston at dismissal time from Crocker - they are speeding thru roads and ignoring stops at intersections. Do we have to wait for more fatalities?	Agreement with Elements of the Plan	Agreement with Plan elements noted. No change made to Plan.
As someone who has worked in a personal injury law office and seen the results of many, many crashes (most of which occurred in an extremely pedestrian and bike friendly city), I think that these are all great ideas. However, the biggest area I see lacking in Burlingame is presence and enforcement by the city's police department. My young daughter and I have personally been nearly hit in crosswalks, at red lights, and even in front of police officers who did nothing. I feel that holding drivers accountable for their actions is one of the only ways to improve pedestrian and driver safety because, without repercussions, people learn that their bad actions can continue. You can add in all the physical safety measures you want, but they often are still not enough to deter bad driving habits, nor protect the people doing everything the correct way. The drivers in the Burlingame area are the worst I've seen, and are often making illegal u-turns, not yielding to pedestrians, running stop signs and red lights, etc. If the city's police department made a more dedicated effort to specifically enforcing traffic violations in high pedestrian area (like downtown and on Broadway), it would make people feel safer and teach drivers that they will be held accountable. I also want to be able to trust that the police will hold people accountable because, as of right now, I don't feel that they do. I also feel that bad driving has become such an issue that people don't report it as they should, which also leads to the problem persisting.	Agreement with Elements of the Plan	Agreement with Plan elements noted. No change made to Plan.
The intersection at Bellevue Ave and Primrose RD is quite confusing and, as a result, somewhat precarious. That intersection would be better designed as a roundabout.	Agreement with Elements of the Plan	Agreement with Plan elements noted. No change made to Plan.
Hi ! I would like to provide some feedback on a crosswalk that I use daily. The pedestrian crossing at Primrose and Donnelly is very dangerous. I work in the area and I have to be so careful crossing there. I have almost been hit by cars several times crossing there, and have witnessed other pedestrians have some pretty close calls as well. Drivers drive right through the crosswalk, sometimes even as you are crossing since there are no stop signs or indicator lights. There are often delivery trucks that block the view of the crosswalk as well, making it difficult to see vehicles and pedestrians. Thank you!	Agreement with Elements of the Plan	Agreement with Plan elements noted. No change made to Plan.

Burlingame Safety Action Plan Public Review Comments and City Responses

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Thank you very much for removing the first 2 oleander bushes. It has been an improvement. However, this is still a dangerous condition. I was incorrect to imply that a bicyclist could be traveling at only 5-20 MPH. In fact e-bikes can now go 20-28 legally and they travel right up against the curb. They definitely do not have sufficient visibility to be able to stop for a pedestrian, or another bicycle rider, entering the crosswalk. They need to be able to see nearly 200'. You can see that from 85', there is barely any visibility. I think you're aware of the significant amount of ebike usage on this bike lane by BHS and others. If not e-bikes, then drivers going 35-40 are also dangerous. At these kinds of speeds, the city cannot afford to skip on visibility and take preventable liability. I can understand the hesitation about removing another oleander bush. What might help is if both the bike lane and traffic lane are narrowed to minimize the risk of a crash, and channelized to be farther away from the curb. That would also help slow users down before arriving at the crosswalk. I hope you will consider before someone is hurt again. Please observe from the east sidewalk and see the near hits in the mornings 8:00-8:30.	Other Recommendation or Concern	Comment noted. No change made to Plan, but City staff will look into the suggestion in the near term.
I'm not sure if an evaluation has been done to avoid another tragedy. But compared to the subject crosswalk at Carolan, there is no line for drivers to stop for in advance of the crosswalk. Such that there is on the other side of the train tracks at California and Morrell – where drivers stop at the line for the red light there. That signal is red-yellow-green unlike the flashing yellow light that requires drivers' discretion to stop. The other new flashing crosswalks on California Dr also have these advance stop lines. The Morrell crosswalk should have the same consideration.	Other Recommendation or Concern	Comment noted. No change made to Plan, but City staff will look into the suggestion in the near term.
[California Drive, between Trousdale and Mills] High speeds - the current speed limit is 35 MPH, and it appears the recommendation is to lower to 30 MPH. However, lowering the posted speeds won't necessarily change the speeds at which people drive. Indeed, drivers routinely drive 35-40 MPH here. The last data collected showed average/median speeds around 35, and 85th percentile speeds close to 40	Other Recommendation or Concern	Comment noted. The City is currently exploring speed limit reductions, which will be made in compliance with state laws and guidelines.
[California Drive, between Trousdale and Mills] Long stretch with no stop signs or signals - This is the longest stretch of road in Burlingame at ~1.5 mi without any traffic controls. That in combination with the high speeds create the greatest potential for an injury or fatal crash. No other HIN street or Priority Project corridor has such a combination.	Informs Revision to the Plan	Change incorporated into Plan (see California Drive project on page 21).
On the subject of safety, here are my specific and geographically limited concerns regarding the neighborhood in which we regularly travel: 1. Jaywalkers on Primrose between Burlingame Avenue/Fox Lane and the driveway to Safeway create an unsafe condition. The entire block does not have a crosswalk. My guess is there must be an obscure traffic principle that dictates no crosswalk! My recommendation would be to put one in anyway, it's dangerous as is.	Informs Revision to the Plan	Change incorporated into Plan (see Primrose Road project on page 20).
The intersection of Park Ave and Carolan Ave has very poor visibility at night, making it particularly dangerous. There has also been a hit-and-run incident there.	Other Recommendation or Concern	Comment noted. No change made to Plan, but the City will explore the lighting recommendation as part of a future Lighting Master Plan.
Other: I have lived in Burlingame since 1961 and I've seen a lot of changes. I no longer visit Burlingame Avenue because of the changes they made and do not wish the same to be done on Broadway. Broadway should be left as is with no changes to the sidewalk or to the diagonal parking. I often walk down Broadway and there's no need to widen any sidewalks. There's plenty of room for people to walk. In regards to the changes made on California Drive I seldom see any bicyclists using the specified bike lanes and I've even encountered bicycles going down the road right in front of my car for several miles instead of going specifically into their own designated bike lanes. Again, you did not have any community input and I would've had other suggestions of where the bike lane could have been installed and not change California Drive.	Informs Revision to the Plan	Change incorporated into Plan (see Broadway project on page 19).
1 - Start to paint ALL curbs red at crosswalks & intersections to "daylight" the required 20 foot no parking zones: As of January 1, 2025, California's AB 413 (Vehicle Code 22500(n)) prohibits parking within 20 feet of the approach side of any marked or unmarked crosswalk/intersection, regardless of whether the curb is painted red. Cities are actively painting these areas red (daylighting) to improve visibility.	Informs Revision to the Plan	Change incorporated into Plan (see Strategy 3.10 on page 42).
Just something to be mindful about for the lighting enhancements - the lighting can be extremely disruptive for residents in their homes at night time. Please do not make the lights so bright that it disrupts people's sleep schedules. There is a balance between safety and how bothersome lights can be.	Informs Revision to the Plan	Change incorporated into Plan (see Citywide Lighting Enhancements on page 45).

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I think the City has developed a good plan to address the safety of our streets. The one area I would encourage an active pursuit of is Automated License Plate Readers (ALPRs). This technology has the ability with AI to issue warning and tickets to vehicles that perform unsafe stops and turns. In particular, I walk daily in Burlingame and probably see at least one vehicle during my 45 minute walk make an illegal right turn onto ECR from Chapin. On several occasions I have almost been hit by a driver who was checking the traffic and not looking out for pedestrians crossing Chapin. The technology could make a big impact if practical.	Informs Revision to the Plan	Change incorporated into Plan (see Strategy 1.3 on page 30).
Respondents to your original survey said they were concerned about traffic congestion and back ups at intersections, and vehicles cutting through residential neighborhoods, yet your summary states this means that 70% of respondents feel there should be "fewer vehicles on the road". That's not really accurate. They said they want better traffic management. I think it is insane to propose adding bicycle lanes to Broadway from ECR to California Dr. That is where parking is most needed for local businesses, and traffic is the heaviest to access 101. I can't think of a worse place to put a bike lane, and that is not part of the Bike/Ped Master Plan. Why in God's name would you not put a bike lane on a quieter parallel street like Carmelita, Lincoln, or Grove? These streets feed into the California Drive bike lane. Adding a bike lane on Broadway and taking away parking is insane.	Informs Revision to the Plan	Change incorporated into Plan (see Broadway project on page 19).
The plan approvingly cites quick-build treatments from Lyon-Hoag Phase 1, but the default implementation path for every Tier A project is a full capital process — study, outreach, design, funding — realistically 5+ years before conditions improve!!!!. People are being seriously injured now. The Action Plan should include an explicit commitment to deploy interim quick-build treatments (flexible delineators, paint, temporary curb extensions) on all Tier A corridors within 12–18 months, as the baseline condition while permanent designs are developed. Without this, the plan has no near-term protection mechanism for its highest-priority locations.	Informs Revision to the Plan	Change incorporated into Plan (see Prioritizing our Safety Efforts on page 18).
El Camino Real accounts for nearly 30% of all injury collisions in Burlingame but is excluded from the High Injury Network because Caltrans owns it. The plan notes that reconstruction improvements "are on their way" and commits to continued partnership — but makes no specific, measurable asks of Caltrans and sets no accountability mechanism. A Vision Zero plan should include explicit written requests to Caltrans for protected bike facilities, pedestrian signal timing improvements, and speed limit reductions on ECR, along with a formal coordination schedule. Passive partnership language does not move the needle on the city's single most dangerous corridor.	Informs Revision to the Plan	Change incorporated into Plan (see El Camino Real: A Critical Corridor on page 11).
A Vision Zero plan should include explicit written requests to Caltrans for protected bike facilities, pedestrian signal timing improvements, and speed limit reductions on ECR, along with a formal coordination schedule. Passive partnership language does not move the needle on the city's single most dangerous corridor.	Informs Revision to the Plan	Change incorporated into Plan (see El Camino Real: A Critical Corridor on page 11).
Broadway, California Drive, and Howard Avenue are Tier A priority corridors where the plan's own data shows serious injury and fatal collisions involving cyclists, including youth. Yet every bike facility recommendation on these corridors uses hedging language — "explore," "consider," "may require parking removal" — without committing to a minimum facility type. A Vision Zero plan backed by federal SS4A funding should specify the lowest-acceptable facility standard for each Tier A corridor and treat parking removal as a default tool, not as a disqualifying constraint listed in parentheses.	Other Recommendation or Concern	Comment noted. No change made to Plan, as the Vision Zero Action Plan is intended to serve as a guiding document with high level recommendations for project corridors. All project designs will be developed at a future stage through engineering study, feasibility assessment, and community engagement.
There is nothing about sightlines in the plan and despite telling most Councilmembers about hazardous locations due to vegetation making it difficult for cars to see pedestrians at certain corners, nothing has been done even though the law is clear about plantings at corners. So this is all performative since you don't want to do the simple and inexpensive things to make it safer for pedestrians, especially children. And at the last council meeting Michael admitted that more stop signs don't make it more safer because people start to roll all of them. Same can be said about taking a driving lane on California Dr. I see more road-rage now when someone is driving slow. Thanks.	Informs Revision to the Plan	Change incorporated into Plan (see Priority Projects on pages 19-24).
This plan strikes me as particularly car-centric. Increased access to public transportation that's efficient, affordable, and practical is a no-brainer when it comes to prioritizing safety on our roads. I suggest partnering with SamTrans at the very least to coordinate bus service that would better serve the City of Burlingame.	Informs Revision to the Plan	Change incorporated into Plan (see pages 19, 37, 45).
Many of these problems have to do with speed limits and infrastructure; however, decreasing the amount of cars on the road should also be thoroughly considered. Vision Zero is a great opportunity to bring our public transportation options into the 21st century.	Agreement with Elements of the Plan	Agreement with Plan elements noted. No change made to Plan.
Whether it's city county or state, El Camino needs to be repaved. Yes, some of the trees on El Camino have been pruned/removed (after how many years?) when will this vital local county and state road/highway be paved.	Other Recommendation or Concern	Comment noted. Caltrans is currently undertaking a major reconstruction project of El Camino Real through Burlingame with significant upgrades including wider sidewalks, new crosswalks, improved lighting, and repaving.
Hello, As a regular commuter and a long-time resident, I'd be happy to share some feedback on some of the aspects of the plan that I'm familiar with. **Broadway:** I would recommend against adding bike lanes to Broadway without first looking into the possible effects on parking. Broadway is a key economic center, but it's currently hard to find a parking spot even outside of peak hours, and converting parking from angled to parallel could reduce the number of spots by 30% or more. I'd suggest either looking into alternatives or clearly directing visitors to nearby parking lots. (The same concern applies to Howard Ave, although bike lanes are more understandable here because they would get used more often. I would also strongly endorse traffic circles both here and elsewhere; they're excellent for both accidents and congestion.)	Informs Revision to the Plan	Change incorporated into Plan (see Broadway project on page 19).

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Broadway: Additionally, the stretch of road between the train tracks and the bridge over 101 is possibly the most congested section of road in the entire city. I'm concerned that reducing it from 3 lanes to 2 might increase the pileup during rush hour to the point where cars would get stuck on the bridge and freeway off-ramps, which could lead to heavy traffic jams and potential spillover onto 101. Since the major collisions in this area occurred at either the 101 southbound offramp or the California Dr intersection, something specific to these intersections might be a better option. (I realize that there aren't many good options here, but if change is necessary, I think that traffic cameras or a lower, clearly marked speed limit would be a better choice than a reduction in the number of lanes. 101 spillover could substantially increase accident risk.)	Informs Revision to the Plan	Change incorporated into Plan (see Broadway project on page 19).
More broadly: One issue that I don't think was fully emphasized in the plan was mitigating blind corners on El Camino. This includes, for instance, El Camino and Carmelita (driving eastward from Hillsborough), which has large trees that obstruct vision to the left and make turning right on red dangerous.	Other Recommendation or Concern	Comment noted. Caltrans is currently undertaking a major reconstruction project of El Camino Real through Burlingame with significant upgrades including wider sidewalks, new crosswalks, improved lighting, and repaving.
I think managing speed through street design is very important, and disappointed that it only mentions briefly on two slides without substantial detail on how, whereas a lot of details are provided on which streets and how much lower the speeds should be. Also, while intersection redesign can also help with pedestrian safety, that is only part of the street design, and a lot can be achieved with even simpler changes like narrower lane markings and marked bike lanes, as they make the drive perceive a narrower street and would drive more carefully vs a wide lane. This can also be said about very straight roads, which is easier to speed, vs winding roads. For example, the rotary intersection at California, Bellevue, Lorton I think is great to reduce the speed of California, although I think it also created a speeding into Bellevue and Lorton which was a slower speed street, so care needs to be made into mixing fast and slow streets.	Other Recommendation or Concern	Comment noted. No change made to Plan, as specific project design will be developed at a future stage through engineering study, feasibility assessment, and community engagement.
It is not very clear, which priority projects, especially Tier A projects and within them the sub-projects can get funding from which areas. Without that, it almost feels like there are just too many priority projects even within Tier A, that I am not sure if we are correctly focused. For example, while some of the measures like reducing speed might not cost a lot of money, speed limit on Broadway between El Camino to California is probably not a huge issue already, whereas the very costly but impactful Caltrain grade separation and intersection/traffic light redesign probably is. At the same time, that might be in conflict or is in competition with funding with another project, but it is not very clear from this document.	Informs Revision to the Plan	Change incorporated into Plan (see Prioritizing our Safety Efforts on page 18).
The data showed that the majority of collisions are along El Camino Real, but since the state controls El Camino, there is nothing in this plan about improvements at those intersections. I think there should be mention of what CalTrans will be doing to improve these intersections. I am particularly concerned about the intersection of Ray Drive and El Camino Real. It is a very dangerous intersection. The plan feels like it goes overboard with traffic calming in areas that don't necessarily need it.	Other Recommendation or Concern	Comment noted. Caltrans is currently undertaking a major reconstruction project of El Camino Real through Burlingame with significant upgrades including wider sidewalks, new crosswalks, improved lighting, and repaving.
There is little mention of speed limit enforcement. It does mention speed cameras, which I support for low cost enforcement. But there is nothing better at slowing down traffic than a police officer with a radar gun beside the road!	Other Recommendation or Concern	Comment noted. No change made to Plan, as this suggestion is already incorporated.
In lighting, I did not see any acknowledgement of dark skies. We all need to work to keep the light shining down.	Informs Revision to the Plan	Change incorporated into Plan (see Citywide Lighting Enhancements on page 45).
Broadway = your proposed plans are not necessary, except slower speed between El Camino and California - maybe make car parking MORE angled, so cars don't stick out so far into the road - ABSOLUTELY NO NEW BIKE LANE...COMPLETE WASTE OF TAX MONEY - ADD a speed camera to enforce people running the light and improperly stopping in all directions @Broadway and California, and possibly @Broadway and El Camino.	Informs Revision to the Plan	Change incorporated into Plan (see Broadway project on page 19).
North Ln = narrow to make ONLY 2 lanes = too many cars "squeeze" before/after school drop off/pickup - add ticket light for people who do not stop @sign; MAKE IT RIGHT TURN ONLY onto California at stop sign at the donut shop; add median to keep people from turning left into donut stop.	Agreement with Elements of the Plan	Agreement with Plan elements noted. No change made to Plan.
Oak Grove = all of your proposed plans are not necessary and a waste of money; DO NOT allow trucks to turn from Merchison onto Oak Grove toward California; ADD traffic circle @ Merchison and Oak Grove.	Other Recommendation or Concern	Comment noted. No change made to Plan, but City staff will look into the suggestion in the near term.
If we are going to implement speed bumps, they should be more gradual instead of the harsh bumps that make it difficult for old cars, low riding cars and bicycles.	Other Recommendation or Concern	Comment noted. No change made to Plan, as specific project design will be developed at a future stage through engineering study, feasibility assessment, and community engagement.
Speed management: I disagree with the proposed reduction of speeds for the majority of roads that were listed on the website.	Other Recommendation or Concern	Comment noted. No change made to Plan, as the City's exploration of speed limit reductions is in compliance with state laws and guidelines and reflects community priorities shared by residents and City Council.
So we spent \$480,000 on this report?!? What a huge waste of my tax payer dollars, thank you very much!	Other Recommendation or Concern	Comment noted.
California Ave: The section of road between Burlingame Ave and Peninsula is usually extremely congested. Removing a lane in either direction would be more or less guaranteed to cause severe traffic, especially at Burlingame Ave; I would personally prefer roundabouts, traffic cameras, or the status quo.	Other Recommendation or Concern	Comment noted. No change made to Plan, as specific project design will be developed at a future stage through engineering study, feasibility assessment, and community engagement.
Carmelita Ave: (El Camino to California) It's not clear whether additional safety measures here are necessary - it's a congested section of road, but per the map, there haven't been any major or minor accidents here, likely because the speed bumps and parked cars force drivers to slow down. However, chicanes would be a very nice alternative to the existing speed bumps if it's possible to add them without causing issues for current resident parking.	Other Recommendation or Concern	Comment noted. No change made to Plan, as specific project design will be developed at a future stage through engineering study, feasibility assessment, and community engagement.

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This whole plan is designed to protect the leisure class and work-from-home crowd at the expense of people of all incomes who need to go to work. Unsurprisingly, the protected people are almost entirely rich whites, and are very small in number but comprise our municipality's political elite. Working people are diverse and include all income levels and ethnicities. While the leisure class and the work-from-home crowd are playing on their bicycles, working people are under pressure to complete work and family tasks. Every minute counts and is valuable. I doubt anyone facing a daily pressure of leaving work no earlier than 5:00p to meet a childcare pick-up deadline at 5:30p is amused by a proposal to lower speed limits. This whole program is elitist and racist.	Other Recommendation or Concern	Comment noted.
SPEED MANAGEMENT: - FEW places need speed management; MANY, MANY places need STOP SIGN CAMERAS, AND RED LIGHT CAMERAS. - I AM OPPOSED TO ALL OF YOUR STREET SPEED CHANGES.	Other Recommendation or Concern	Comment noted.
Alvarado = all your proposed plans are not necessary	Other Recommendation or Concern	Comment noted. No change made to Plan, as specific project design will be developed at a future stage through engineering study, feasibility assessment, and community engagement.
Chapin = all of your proposed plans are not necessary and a waste of money; instead, consider a street traffic circle @ Chapin and Primrose - THAT would be safer for pedestrians and cars.	Other Recommendation or Concern	Comment noted. No change made to Plan, as specific project design will be developed at a future stage through engineering study, feasibility assessment, and community engagement.
DONELLY = all of your proposed plans are not necessary and a waste of money	Other Recommendation or Concern	Comment noted.
Farringdon = all of your proposed plans are not necessary and a waste of money	Other Recommendation or Concern	Comment noted.
Howard = all of your proposed plans are not necessary and a waste of money	Other Recommendation or Concern	Comment noted.
Lornton = all of your proposed plans are not necessary and a waste of money	Other Recommendation or Concern	Comment noted.
Primrose = all of your proposed plans are not necessary and a waste of money	Other Recommendation or Concern	Comment noted.
Bayswater = all of your proposed plans are not necessary and a waste of money	Other Recommendation or Concern	Comment noted.
California drive = all of your proposed plans are not necessary and a waste of money	Other Recommendation or Concern	Comment noted.
Carmelita = all of your proposed plans are not necessary and a waste of money; instead, only allow parking on 1 side of street AND give tickets/put cameras on ALL stop signs on side streets that cross Carmelita. IN GENERAL, ALL DRIVERS ON SIDE STREETS ON CARMELITA AND MANY OTHER MORE MAJOR ROADS ARE NOT STOPPING FULLY AT STOP, AND EVEN RUNNING STOP ENTIRELY - ALL SHOULD GET TICKETS; ALSO GIVE BIKERS TICKETS, TOO FOR NOT STOPPING @ STOPS. Enforce existing traffic laws via cameras.	Other Recommendation or Concern	Comment noted. No change made to Plan, as specific project design will be developed at a future stage through engineering study, feasibility assessment, and community engagement.
Magnolia = all of your proposed plans are not necessary and a waste of money	Other Recommendation or Concern	Comment noted.
Merchison = all of your proposed plans are not necessary and a waste of money	Other Recommendation or Concern	Comment noted.
Old Bayshore, Peninsula, Truesdale, Willow = all of your proposed plans are not necessary and a waste of money	Other Recommendation or Concern	Comment noted.
ALL PLAN C ITEMS = all of your proposed plans are not necessary and a waste of money...maybe on Howard, add a NO LEFT TURN when exiting Safeway onto Howard....	Other Recommendation or Concern	Comment noted.
[California Drive, between Trousdale and Mills] Giant Drainage Grates - there are 2 oversized drainage grates (at Oxford & at Cambridge), and 3 other giant grates that are hazards that take up most if not all of the bike lane widths. It's not only hazardous but a clear conflict with established state design standards	Other Recommendation or Concern	Comment noted. No change made to Plan, as specific project design will be developed at a future stage through engineering study, feasibility assessment, and community engagement.

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[California Drive, between Trousdale and Mills] Presence of large trucks – Large trucks, commercial vans, trailers are often parked next to or even on top of the bike lane that forces bike riders out of the bike lane and into the path of traffic	Other Recommendation or Concern	Comment noted. No change made to Plan, as specific project design will be developed at a future stage through engineering study, feasibility assessment, and community engagement.
[California Drive, between Trousdale and Mills] Generators – The Millbrae BART/Caltrain station is at one end, along with newly constructed developments at the northern end. At the southern end is the Broadway commercial and Burlingame Gate neighborhood. In the middle is Village Park, including a preschool	Other Recommendation or Concern	Comment noted.
[California Drive, between Trousdale and Mills] Potential – The El Camino Real construction has compounded the hazards by explicitly diverting more traffic, and thus more conflicts between drivers and bicycle riders.	Other Recommendation or Concern	Comment noted. No change made to Plan, as specific project design will be developed at a future stage through engineering study, feasibility assessment, and community engagement.
3. The sidewalk on the tennis court/pickle ball side of Burlingame Avenue between Carolan and the edge of the parking lot adjacent to the courts is very dark. When the courts are lit, it's great, but when those lights are out, it's quite dark. The sole light on that block is located on the other side of the street. This street is the primary pedestrian route into the neighborhood from downtown and the train station. The illumination level for safety in this area deserves another look.. Modern fixtures can be quite directional so glare to the neighborhood should not be a controlling factor. Thanks for listening!!!! Overall, this city is so well run and the staff and Council very receptive to us all.	Other Recommendation or Concern	Comment noted. No change made to Plan, as specific project design will be developed at a future stage through engineering study, feasibility assessment, and community engagement.
In the last 6 months of living within walking distance to the Bellevue x El Camino intersection, we have witnessed at least 3 vehicle collisions and numerous close calls between cars and pedestrians attempting to cross the street. If there could be more measures put in place to protect the pedestrians that are crossing that street it would be appreciated. Many are caregivers crossing with children in strollers, who reroute due to the unsafe speed and lack of visibility drivers have. Thank you.	Other Recommendation or Concern	Comment noted. Caltrans is currently undertaking a major reconstruction project of El Camino Real through Burlingame with significant upgrades including wider sidewalks, new crosswalks, improved lighting, and repaving.
We still need a safe passage for morning walkers across Mills Ave for those going to Lincoln or BIS or families crossing toward Laguna Park! We need a safe cross walk over Mills Avenue between California and el Camino! Although this area is not around Lincoln, the students need to be able to access Lincoln from home by foot safely. Thank you	Other Recommendation or Concern	Comment noted. No change made to Plan, but City staff will look into the suggestion in the near term.
Community outreach: even though I had been at the first City Hall meeting and I left my email address so they could contact me for further meetings they never did. So there was no real community outreach, nor were any of the local people living near these proposed changes ever contacted which they could have been via several mailed letters.	Other Recommendation or Concern	Comment noted.
In your questions below, you have a section called community involvement - as I stated before the majority of the community was NOT involved because of the lack of communication. I only found out about your survey because of a friend letting me know there was a small sign on Broadway, which I then went to read it.	Other Recommendation or Concern	Comment noted.
We live at the intersection of Oak Grove and Acacia. Since the El Camino roadway work has begun, we have notice a significant uptick in the number of vehicles speeding on both Oak Grove and Acacia Dr. During the El Camino renovation work, Oak Grove will be much more dangerous than it has been historically.	Other Recommendation or Concern	Comment noted.
I also think that right now there is A LOT of road rage in town due to ALL the work going on EVERYWHERE at the same time. Being born and raised here I know all the back ways around BUT it's very frustrating when El Camino is shut down and so are my back roads!! Must everything be worked on at once?	Other Recommendation or Concern	Comment noted.
And one more thing, you guys are BIKE LANE CRAZY!!!! I think we need a count of how many bike are seen riding in the ridiculous bike lanes you put in making parking very dangerous and making it very difficult for the fire trucks to get out of the station on California Dr! I very early see Atlanta bikes on Cal Dr! Fix the train tracks and chill on the bike lanes. Thank you for reading, I can only pray you'll actually listen :)	Informs Revision to the Plan	Change incorporated into Plan (see Priority Projects on pages 19-24).

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Speed in the Easton Addition is a big issue. We continue to have drivers going very fast on streets with many parked cars on the sides. With so many children in the area (near Roosevelt Elementary), I am concerned about the potential for kids being injured. What can be done?	Agreement with Elements of the Plan	Agreement with Plan elements noted. No change made to Plan.
Hi there! Thank you so much for all your work and thoughtfulness in putting this plan together. It feels wonderful to know that this is a priority for our community. I would humbly ask that a speed reduction be considered for the entire length of Bayswater Avenue, from El Camino to Humboldt (if I'm reading correctly, it's currently proposed from only California to Humboldt). My family and I live on Bayswater between Highland and Lorton, and have noticed consistent speeding by cars through our neighborhood over the past few years, especially cars heading east towards California. It would be amazing if we could have a consistent speed limit on the full street. Thanks again, Fiona H	Agreement with Elements of the Plan	Agreement with Plan elements noted. No change made to Plan. As stated in the Plan, the roadways included here are the starting point. The Action Plan includes a strategy to study additional streets to identify future opportunities for safer, more context-appropriate speed limits. If community members are interested in exploring a lower speed on their street, the City can use safety data and information about current roadway conditions to assess whether that location is a good candidate for speed limit reduction.
I would love to see more traffic calming measures in addition to plans to lower speed limits. Lowering the speed limit on Lincoln Ave is great, but drivers need more encouragement than just that.	Agreement with Elements of the Plan	Agreement with Plan elements noted. No change made to Plan.
I've been very disappointed with the changes to California Avenue which implemented a protected bicycle lane and awkward parallel parking on the east side of the road. I'm all for the improved safety of the lane but the reduced traffic flow had been very problematic, especially around commute and school drop off times.	Other Recommendation or Concern	Comment noted. No change made to Plan, but City staff will look into the suggestion in the near term.
Finally, a minor request: Currently, the intersection at Bellevue Ave and El Camino Real (for drivers on Bellevue Ave heading toward Hillsborough/away from California Dr) has a "No left turn" sign. Until recently, this sign was very much needed: trees on the left hand side of the intersection heavily obstructed line of sight to oncoming traffic and made turning left (or right, for that matter) dangerous. However, these trees were recently cleared in both directions, and it's now easy to see both lanes of El Camino for a few hundred feet in both directions. I'd appreciate it if you could look into whether the sign is still necessary; I don't think turning left is dangerous anymore. Thanks for reading this, and thanks for your efforts to make Burlingame safer. Sincerely, Phillip Masterson	Other Recommendation or Concern	Comment noted. No change made to Plan, but City staff will look into the suggestion in the near term.
I can't tell you ONE person in Burl, Hillsb, or San Mateo who think the bike lanes added on California was a good idea, and in fact, I have personally witnessed "near misses" as a result of the changes.	Other Recommendation or Concern	Comment noted.
Transportation accounts for the most carbon emissions in our city and others, and getting people out of cars is a big priority. I like some of the suggestions that the Peninsula Health Care District suggested in their recent "Blue Zones" presentation, like creating walkways connected to green areas and encouraging people to make new friends on scheduled walks. That concept ties in with Burlingame's "Meet 6 Neighbors" campaign.	Other Recommendation or Concern	Comment noted.



Appendix



Collision Trends Summary

Roadway Safety in Burlingame: Collision Trends



Overview of Collision Data

2020-2024

560 total injury collisions on Burlingame streets

Data Sources

Step 1: Burlingame PD Database

Incorporate collision records from local police department



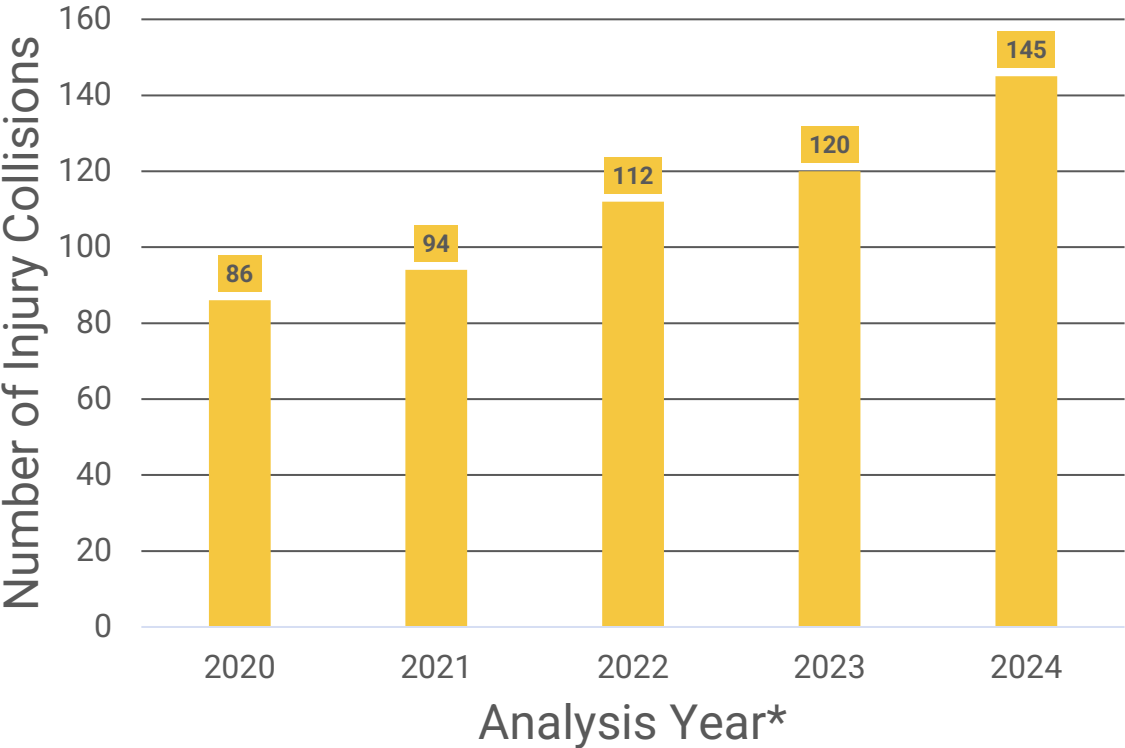
Step 2: Transportation Injury Mapping System (TIMS)

Add collision information from statewide database

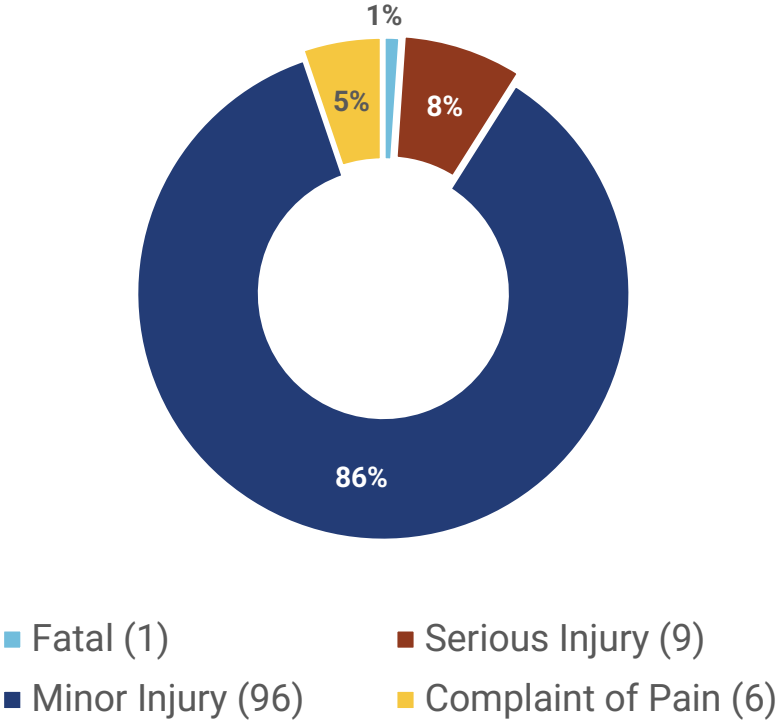
Collision Trends

Every year, on average, 112 people are injured on Burlingame streets

Injury Collisions by Year



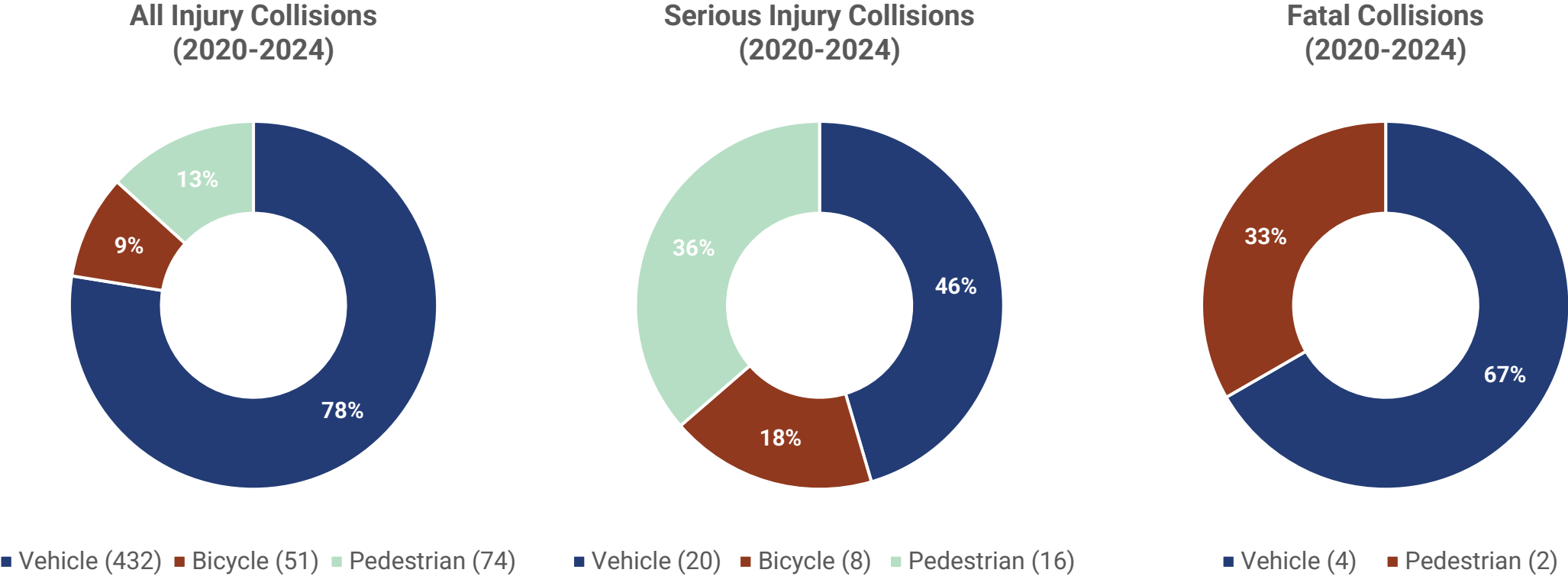
Average Annual Injury Collisions by Severity



Source: TIMS and City of Burlingame, 2020-2024

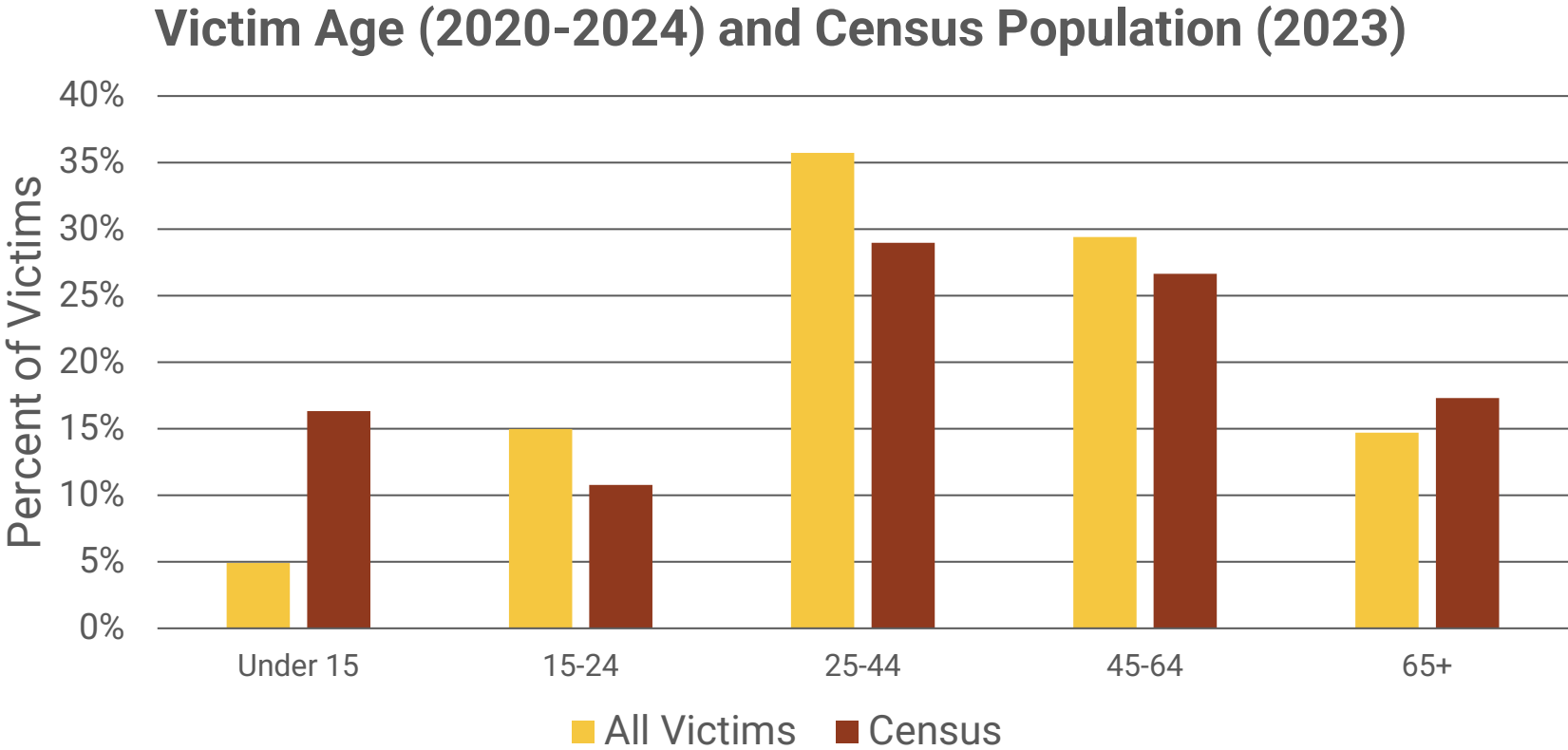
* Year runs from November - October

Pedestrians and Bicyclists are involved in 22% of all injury collisions, over 50% of serious injury collisions, and 33% of fatal collisions



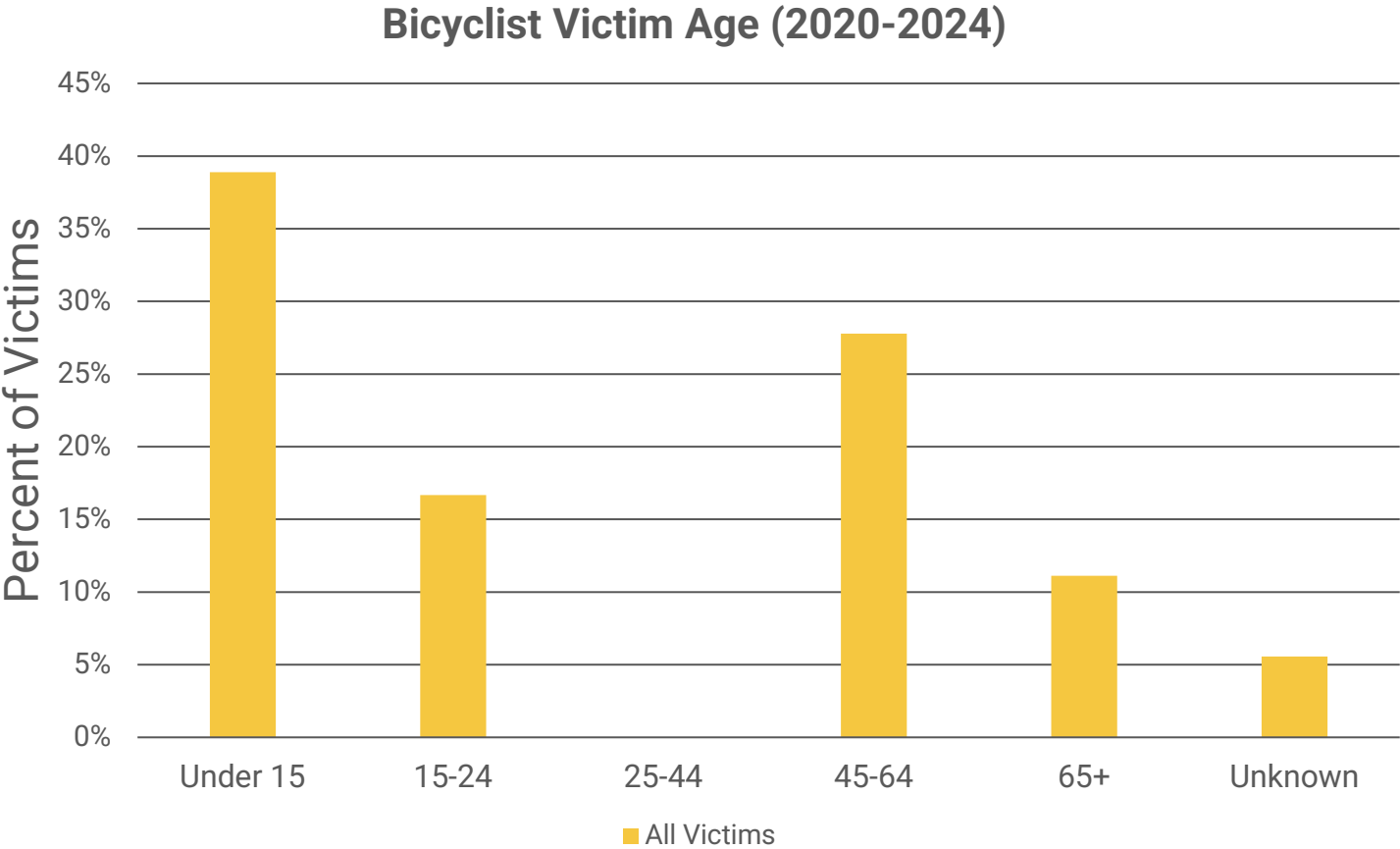
Source: TIMS and City of Burlingame, 2020-2024

Victims aged 25-44 are most represented in all injury collisions



Sources: TIMS, 2020-2024;
Census ACS 2023 5-Year Summary

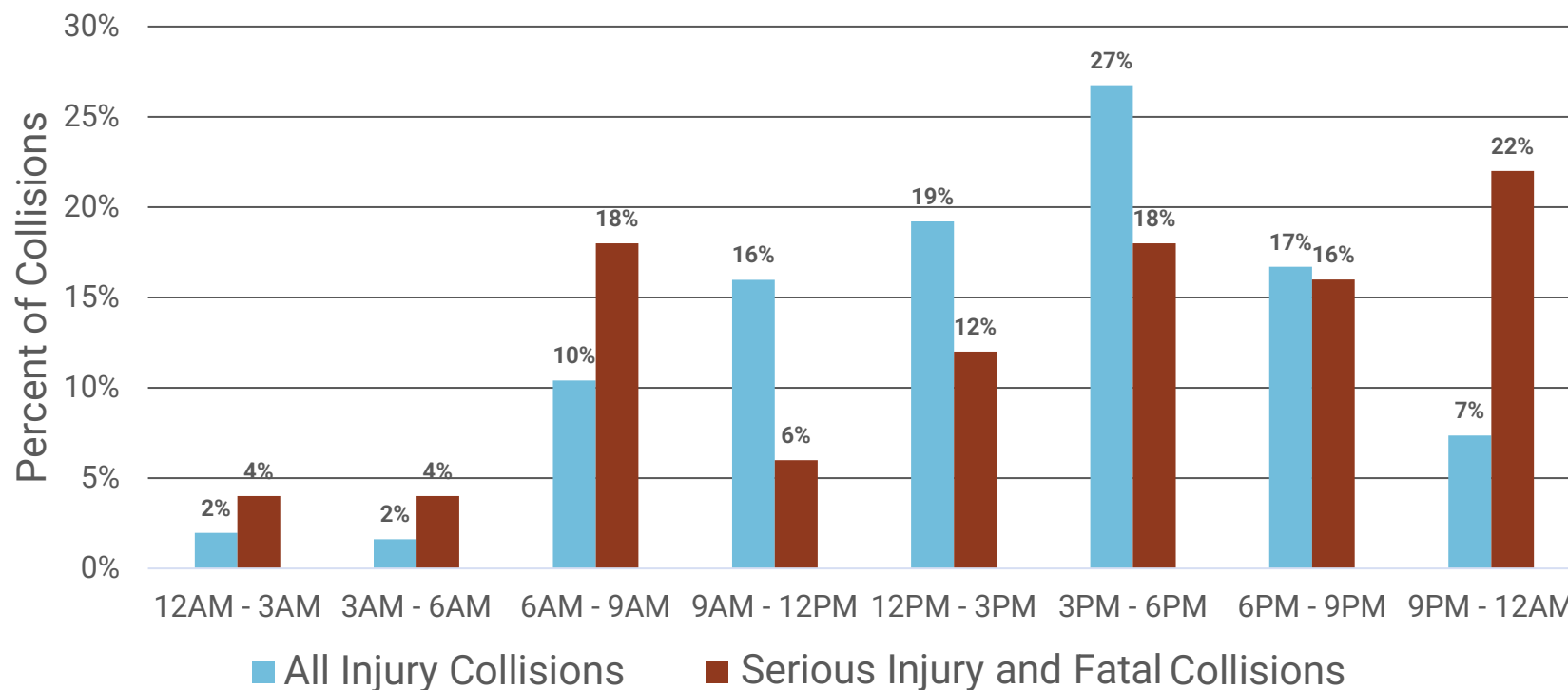
Youth are overrepresented in bicyclist injury collisions



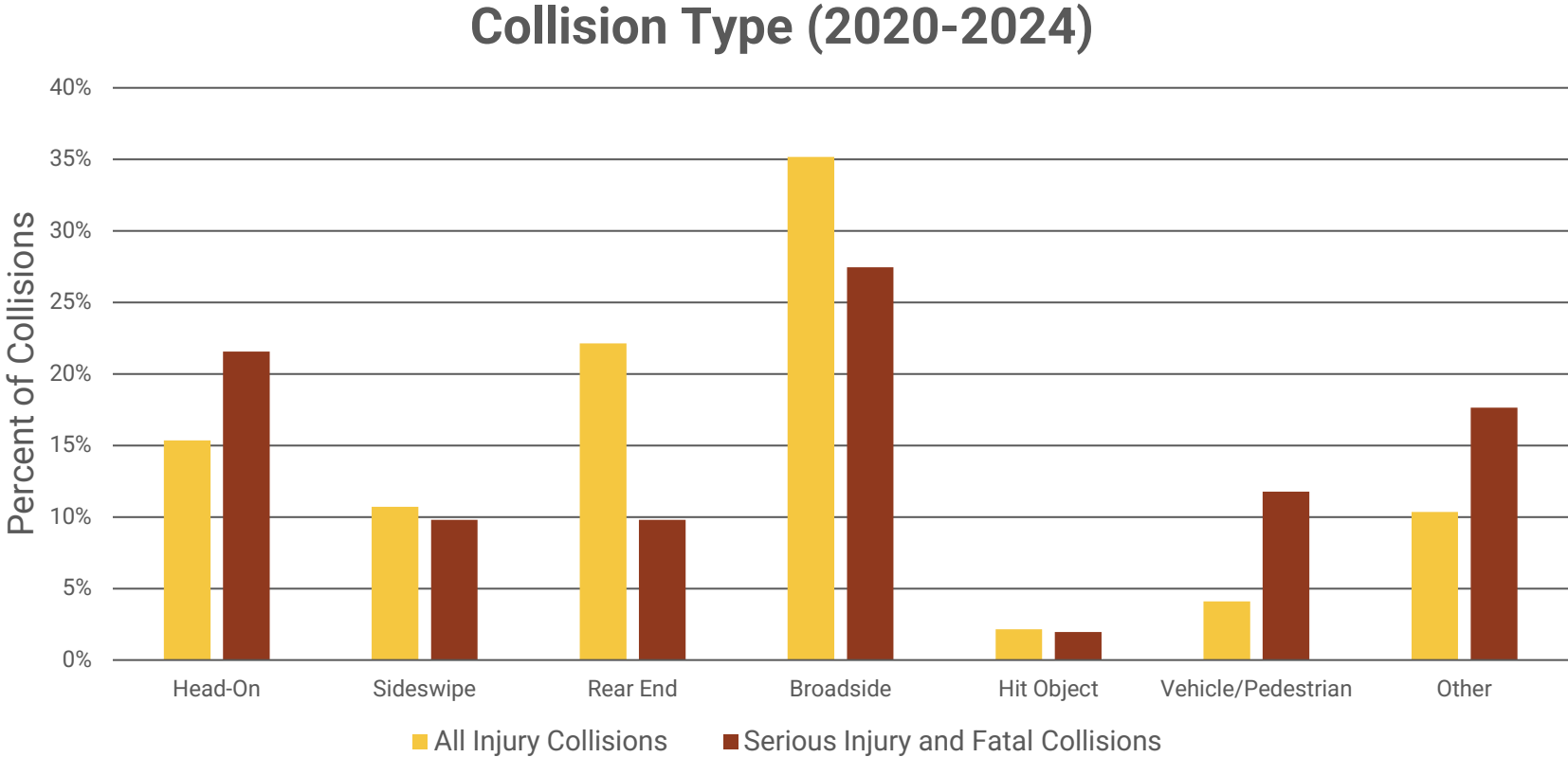
When

All injury collisions peak in the late afternoon, while serious injury and fatal collisions peak late in the night

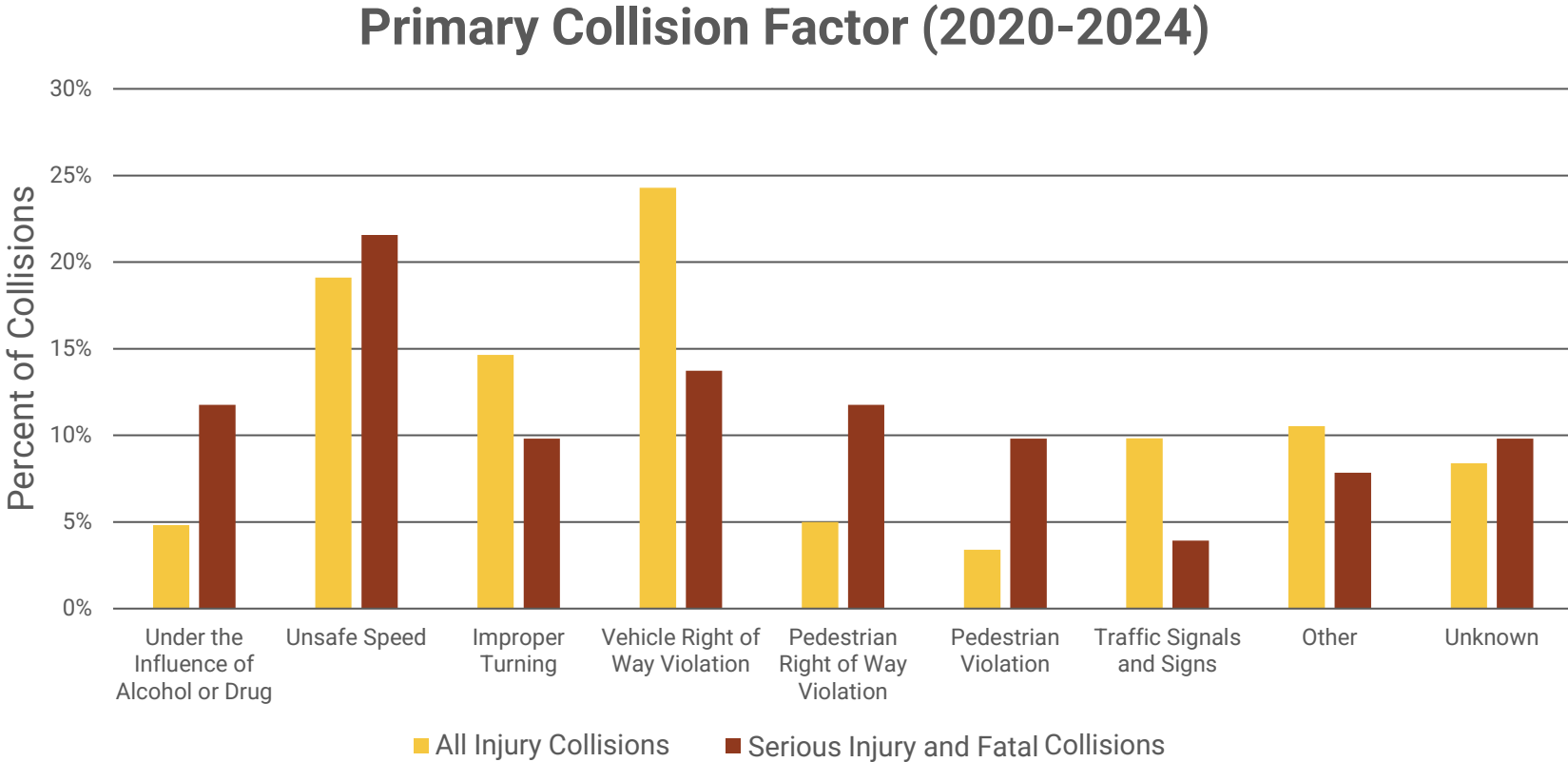
Collisions by Time of Day (2020-2024)



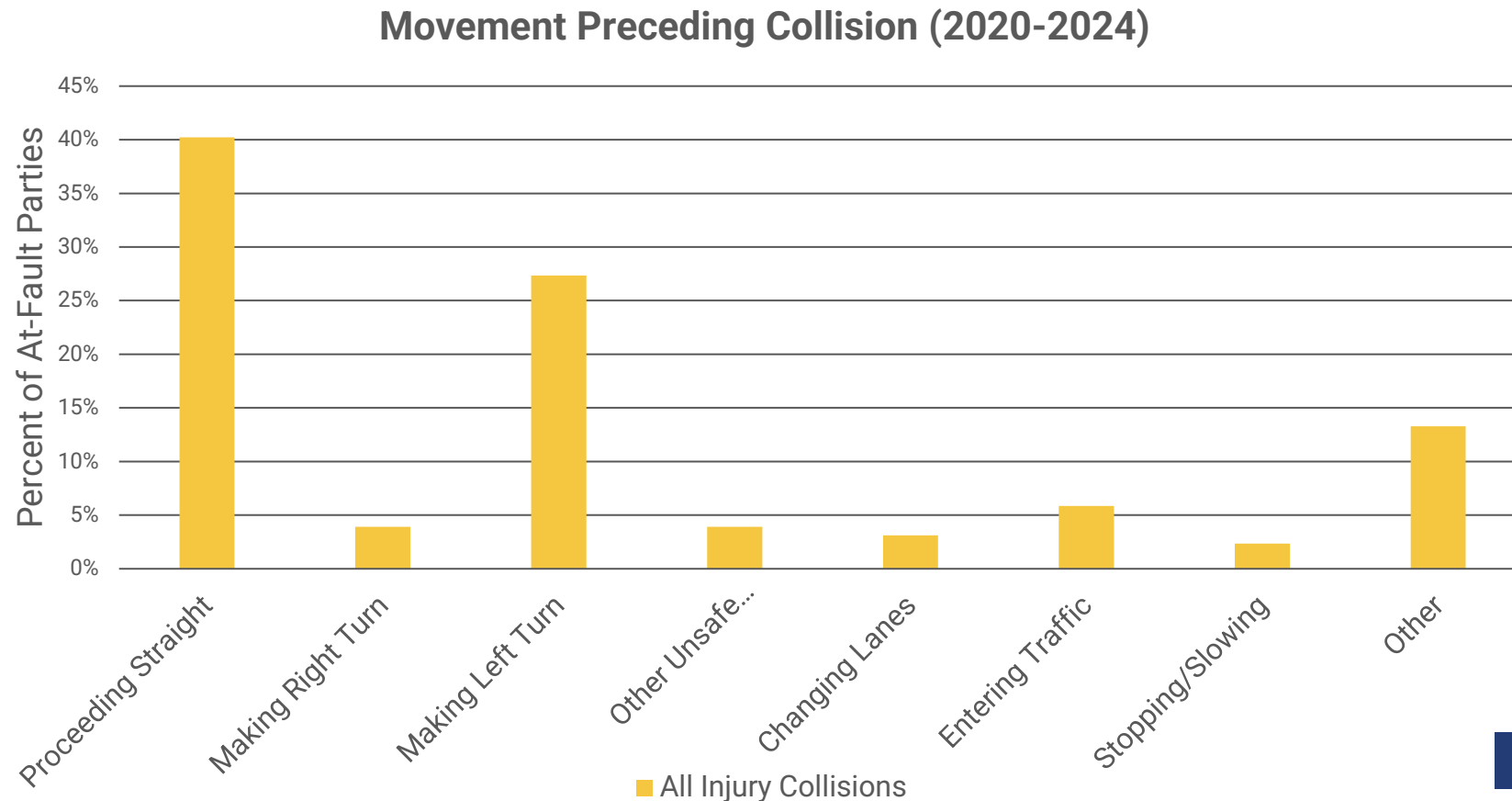
Broadside collisions are the most common and most severe collision type



Unsafe speed and right of way violations are top collision factors



Proceeding straight is the most common movement in 40% of all injury collisions, but left turns also contribute to over 25%



Source: TIMS, 2020-2024

Appendix

D

Countermeasure Toolbox

A group of five children, three girls and two boys, are riding bicycles on a path. They are all wearing helmets and casual clothing. An adult male, likely a coach or parent, stands to the right, holding a clipboard and looking at the children. The background is a lush green forest with mountains visible in the distance. The scene is bright and sunny, suggesting a pleasant day for a bike ride.

Burlingame Safety Action Plan: Countermeasure Toolbox

Introduction

As part of the Burlingame Safety Action Plan (Plan), the project team developed a countermeasure toolbox with recommended engineering and non-engineering safety countermeasures for the City to consider for implementation. The countermeasures included in the toolbox were selected for their effectiveness at addressing the key safety challenges identified through the Plan's collision analysis and public outreach.

The countermeasures included in the toolbox also were selected for their effectiveness at addressing safety challenges at the priority locations identified through the Plan. This includes locations on the City's High Injury Network with a high concentration of historic collisions, as well as safety challenges at locations within the City's four safety emphasis areas with high collision potential: arterial roadways, signalized intersections, areas around schools, and commercial areas. The countermeasure toolbox includes engineering and non-engineering safety countermeasures to help the City respond to recorded incidents of collisions and to proactively intervene before collision occur.

All countermeasures in the toolbox enhance safety through one or more of the components of the Safe System Approach¹ (SSA). The SSA recognizes kinetic energy transfer risk as the primary factor in the number and severity of collisions. As a result, the SSA focuses on managing kinetic energy transfer risk on the roadway network in three ways:

- **Exposure:** Reduce exposure to kinetic energy transfer by reducing how far people travel, the width of roadways, the size of intersections, and the level of separation of modes.
- **Likelihood:** Reduce the likelihood of kinetic energy transfer by reducing the number of potential conflicts along a roadway or at an intersection, specifically the crossing of two or more paths of travel.
- **Severity:** Reduce the severity of kinetic energy transfer by reducing vehicle speeds and vehicle mass.

Countermeasure Toolbox

The countermeasure toolbox equips the City with effective strategies to reduce the number and severity of collisions, helping the City progress towards its goal of achieving zero serious injuries and fatalities. The toolbox is categorized into engineering and non-engineering countermeasures.

Engineering Countermeasures

The project team drew on industry resources, including the Federal Highway Administration (FHWA) Safe System Design Hierarchy, FHWA Proven Safety Countermeasures, Caltrans Local Roadway Safety Manual, and Crash Modification Factors (CMF) Clearinghouse, to identify effective engineering countermeasures for the City of Burlingame. For each countermeasure, the toolbox

¹ An overview of the Safe System Approach is provided on the U.S. Department of Transportation's website: <https://www.transportation.gov/safe-system-approach>

documents applicable implementation contexts, effectiveness considerations, relative cost, and quick build opportunities. **Table 1** details the countermeasure attributes included in the toolbox. The complete engineering countermeasure toolbox is included in **Attachment A**.

Table 1: Countermeasure Toolbox Attributes

Attribute	Description
Name	Countermeasure name
ID	Unique countermeasure identifier in toolbox
Description	Description of countermeasure – what it is and how it improves safety
Intersection/Segment	Applicability on a roadway segment or at an intersection [Note: A combination of segment and intersection countermeasures will be needed on a roadway to realize consistent safety benefits]
Roadway Classification	Applicability on one or more roadway classification: arterial, collector, residential
Intersection/Crossing Control Types	Applicability at one or more intersection control type: signalized, all-way stop, side street stop, yield/uncontrolled
Land Uses	Applicability in areas with specific land uses: Downtown commercial, schools/parks
FHWA Proven Safety Countermeasure	Flag for FHWA Proven Safety Countermeasures ² determined to be effective in reducing roadway fatalities and serious injuries and recommended for widespread implementation
Safe System Hierarchy	Flag for tier in FHWA Safe System Roadway Design Hierarchy ³ , organized from most to least aligned with Safe System Approach: 1. Remove severe conflicts, separating roadway users in space 2. Reduce vehicle speeds, reducing the severity of collisions that do occur 3. Manage conflicts in time, separating roadway users in time 4. Increase attentiveness and awareness, alerting roadway users to conflicts so appropriate action can be taken

² FHWA Proven Safety Countermeasures, <https://highways.dot.gov/safety/proven-safety-countermeasures>.

³ FHWA Safe System Roadway Design Hierarchy, <https://highways.dot.gov/safety/zero-deaths/safe-system-roadway-design-hierarchy>.

Local Roadway Safety Manual (LRSM) ID	Unique countermeasure identifier in Caltrans Local Roadway Safety Manual ⁴⁴ , a resource to help road managers identify appropriate countermeasures
Cost to Implement (L/M/H)	Planning level relative cost category: low, medium, high
Quick Build Opportunity/Option Available	Flag for availability of low-cost, rapid-deployment version of countermeasure using temporary or semi-permanent materials

Non-Engineering Countermeasures

Non-engineering countermeasures outline partnerships, policies, processes, and programmatic strategies to support the City’s Vision Zero goals. These strategies draw on best practice information from FHWA, Safe System Approach, and National Highway Traffic Safety Administration (NHTSA) Countermeasures that Work. The complete non-engineering countermeasure toolbox is included in **Attachment B**.

Conclusion

The countermeasure toolbox includes engineering and non-engineering strategies proven to be effective at addressing the safety challenges identified in the City of Burlingame. They are recommended for consideration at the priority locations identified through the Plan. The countermeasure toolbox is a stand-alone resource for the City to use as it develops safety improvement projects across the City, and it informs the specific recommendations included in the Safety Action Plan.

⁴⁴ Local Roadway Safety Manual, Caltrans, <https://dot.ca.gov/-/media/dot-media/programs/local-assistance/documents/hsp/2024/lrsm2024-v2.pdf>.

Attachment A: Engineering Countermeasure Toolbox

Burlingame Safety Action Plan - Engineering Countermeasure Toolbox

*Denotes Safety Emphasis Area for City of Burlingame

Scores Used for Roadway Classification, Control Type, and Land Use Contexts:

S - Standard practice (consistent across all contexts)

0 - Not recommended/applicable for context

1 - Candidate countermeasure for context

2 - Recommended countermeasure for context

Countermeasures				Roadway Classifications			Intersection/Crossing Control Types				Land Uses		Resources and Deployment							
Name	ID	Description	Intersection/ Segment	Arterial*	Collector	Residential	Signalized*	All-Way Stop	Side Street Stop	Yield/ Uncontrolled	Downtown Commercial Areas*	Areas around Schools/Parks*	FHWA Proven Safety Countermeasure	Safe System Hierarchy - Tier 1	Safe System Hierarchy - Tier 2	Safe System Hierarchy - Tier 3	Safe System Hierarchy - Tier 4	Local Roadway Safety Manual (LRSM) ID	Relative Cost to Implement (L/M/H)	Quick Build Opportunity/ Option Available
Added Sidewalk	1	Sidewalks provide a separated facility for pedestrians along the roadway but outside the traveled way or shoulder.	Segment	2	2	1	0	0	0	0	2	2	Y	Remove Severe Conflicts				R34PB	H	
Added/Upgraded Pedestrian Crossing at Uncontrolled Location	2	Marked pedestrian crossings at intersections or midblock locations give people a clear, designated place to cross. This helps reduce the risk of collisions by making it more likely that motorists will expect and see pedestrians. Features like crosswalk striping and signs alert motorists to slow down and watch for people crossing.	Intersection	S	S	S	S	S	S	S	S	S	Y				Increase Attentivene ss and Awareness	R35PB	L	Y
Advance Stop Bar	3	An advanced stop bar is a transverse pavement marking placed upstream of a crosswalk to indicate the required vehicle stop location. It minimizes crosswalk encroachment and can be widened or set further back at locations with frequent violations.	Intersection	S	S	S	S	S	S	0	S	S					Increase Attentivene ss and Awareness	S20PB	L	Y
Advanced Dilemma Zone Detection	4	The Advanced Dilemma-Zone Detection system detects where vehicles are and how fast they are going, providing this information to the signal controller to help determine whether to activate or delay the yellow light. This helps reduce broadside collisions at signalized intersections by adjusting when the yellow light turns on to reduce the likelihood of motorists getting caught in the challenging situation of not knowing whether to stop or continue through an intersection as the light changes.	Intersection	S	S	S	S	0	0	0	S	S				Manage Conflicts in Time		S04	M	
All-Red Signal Time	5	Including a phase of all-red signals gives motorists and bicyclists a few extra seconds to safely get through an intersection before other traffic is allowed to move. This added time at the end of a signal phase helps reduce the risk of collisions, especially for people who are already in the intersection when the light changes.	Intersection	S	S	S	S	0	0	0	S	S				Manage Conflicts in Time		S03	L	Y
All-Way Stop Control	6	An all-way stop-controlled intersection requires all vehicles to stop before crossing an intersection. This reduces the risk of severe conflicts by eliminating high speed movements through an intersection. The MUTCD (Manual on Uniform Traffic Control Devices) includes information on when and how to implement "All-Way" Or "Multi-Way" stop control intersections.	Intersection	0	1	1	0	0	1	1	1	1				Manage Conflicts in Time	Increase Attentivene ss and Awareness	NS02	L	Y
Audible Push Button Upgrade	7	An upgrade to an audible push button, or accessible pedestrian signal (APS), may include features like audible tones, speech messages, and vibrating arrows that indicate when it is safe to cross. These features help people who are blind or have low vision safely cross a signalized intersection. Pedestrian push buttons at crosswalks must follow accessibility standards set by the Americans with Disabilities Act (ADA) and the Public Rights of Way Accessibility Guidelines (PROWAG). These buttons should be easy to both see and reach for all pedestrians, including those using wheelchairs or with limited mobility.	Intersection	S	S	S	S	0	0	S	S	S					Increase Attentivene ss and Awareness	N/A	L	
Back-In Angled Parking	8	Back-in angled parking requires motorists to reverse into an angled on-street parking spot and drive forward when exiting. This method increases the visibility of passing bicyclists and vehicles when exiting a spot. Additionally, it allows trunk unloading to occur on the curb rather than in the street, reducing exposure.	Segment	1	1	0	0	0	0	0	1	1					Increase Attentivene ss and Awareness	N/A	L	Y
Bicycle Signal/Exclusive Bicycle Phase	9	Bicycle signals and phases direct bicycle traffic across an intersection. They increase safety by separating bicycle movements in time from conflicting vehicle, transit, or pedestrian movements. These are most applicable on separated bikeway facilities or shared-use paths.	Intersection	1	1	1	1	0	0	0	1	1	Y			Manage Conflicts in Time		N/A	H	
Bicycles May Use Full Lane Sign	10	"Bicycles May Use Full Lane" signs are placed on roadways categorized as bicycle routes to indicate that bicyclists may occupy the full travel lane. They encourage motorists to slow and yield to bicyclists until it is safe to pass. They also encourage bicyclists to not ride within the door zone if on-street parking is present.	Segment	0	1	1	0	0	0	0	1	1	Y				Increase Attentivene ss and Awareness	N/A	L	Y
Bike Box	11	A bike box is a designated area (often painted green) between the crosswalk and vehicle stop bar at a signalized intersection where bicyclists can wait during a red signal phase. The bike box places bicyclists in a location where they are more visible to motorists and is typically used to facilitate left turn movements.	Intersection	S	S	S	S	0	0	0	S	S	Y				Increase Attentivene ss and Awareness	S20PB	L	Y
Bicycle Detection	12	Bicycle detection is technology used at signalized intersections—in the form of push buttons, in-pavement loops, or video/infrared cameras—to initiate a green light for bicyclists and reduce delay for bicycle travel. It discourages bicyclists from running red lights and increases the convenience of bicycling.	Intersection	S	S	S	S	0	0	0	S	S	Y			Manage Conflicts in Time		N/A	M	
Bicycle Lane	13	Bicycle lanes designate an exclusive space for bicyclists in the roadway using pavement markings and signage. They are located adjacent to vehicle travel lanes and flow in the same direction as vehicle traffic. Bicycle lanes typically are placed on the right side of the street, between the adjacent travel lane and curb, road edge, or parking lane; however, they can be placed on the left side of one-way streets.	Segment	1	1	1	0	0	0	0	1	1	Y	Remove Severe Conflicts				R32PB	M	Y
Bicycle-Friendly Grate	14	Bicycle-friendly grates are drainage inlets that have transverse or gridded grates to prevent bicycle tires from falling through the grate and causing a collision.	Segment	S	S	S	0	0	0	0	S	S	Y	Remove Severe Conflicts				N/A	M	
Buffered Bicycle Lane	15	Buffered bicycle lanes are bicycle lanes with a designated painted buffer space, creating additional horizontal distance from the adjacent vehicle travel lane and/or parking lane. Buffers provide greater space for bicycling without making the bicycle lane appear so wide that it might be mistaken for a travel lane.	Segment	1	1	1	0	0	0	0	1	1	Y	Remove Severe Conflicts				R32PB	M	Y
Centerline Hardening	16	Centerline hardening places plastic bollards and/or rubber curbs along a roadway centerline. When used at intersections, they encourage motorists to make tighter left-turn movements at angles closer to 90-degrees, thereby slowing vehicle turning speeds and improving motorist visibility of the crosswalks. When used along a roadway segment, they help prevent undesirable left-turns and/or U-turns between intersections.	Intersection	2	1	1	1	0	1	1	2	1		Remove Severe Conflicts			Increase Attentivene ss and Awareness	N/A	L	Y
Closed Slip Lane	17	A closed slip lane modifies the corner of an intersection to remove a sweeping right turn lane for vehicles. This results in shorter crossings for pedestrians, reduced speed for turning vehicles, and better sight lines.	Intersection	1	2	2	1	0	0	0	2	2		Remove Severe Conflicts	Reduce Vehicle Speeds			N/A	H	
Co-Located Bus Stop and Pedestrian Crossing	18	Bus stops located near safe pedestrian crossings facilitate safe access to transit. When crossings are well-designed and close to bus stops, it makes travel more convenient and reduces the risk of collisions involving pedestrians.	Intersection	S	S	S	S	S	S	S	S	S				Manage Conflicts in Time	Increase Attentivene ss and Awareness	N/A	L	Y
Curb Extension	19	Curb extensions are sidewalk widenings at corners or midblock crosswalks that make it safer and easier for people to cross the street. They shorten the distance pedestrians have to walk and improve visibility between motorists and people crossing—especially when parked vehicles might block the view.	Intersection	S	S	S	S	S	S	S	S	S	Y		Reduce Vehicle Speeds		Increase Attentivene ss and Awareness	NS21PB	M	Y
Delineator, Reflector, and/or Object Marker	20	Delineators, reflectors, and object markers are visual cues installed in a roadway to warn motorists of an approaching curve or fixed object that cannot easily be removed. They are generally less costly than signage.	Segment	1	1	1	0	0	0	0	1	1					Increase Attentivene ss and Awareness	R27	L	Y

Burlingame Safety Action Plan - Engineering Countermeasure Toolbox

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1 - Candidate countermeasure for context

2 - Recommended countermeasure for context

Countermeasures				Roadway Classifications			Intersection/Crossing Control Types				Land Uses		Resources and Deployment							
Name	ID	Description	Intersection/ Segment	Arterial*	Collector	Residential	Signalized*	All-Way Stop	Side Street Stop	Yield/ Uncontrolled	Downtown Commercial Areas*	Areas around Schools/Parks*	FHWA Proven Safety Countermeasure	Safe System Hierarchy - Tier 1	Safe System Hierarchy - Tier 2	Safe System Hierarchy - Tier 3	Safe System Hierarchy - Tier 4	Local Roadway Safety Manual (LRSM) ID	Relative Cost to Implement (L/M/H)	Quick Build Opportunity/ Option Available
Directional Median Opening to Restrict Left Turns	21	A directional median opening restricts specific turning movements, such as allowing a left-turn from a major street but not from a minor street. This improves safety by reducing the number of conflict points at an intersection.	Intersection	1	1	0	0	0	1	1	1	1		Remove Severe Conflicts				S14	M	Y
Driveway Consolidation	22	Consolidating driveways reduces the number of conflict points between vehicles entering/exiting the roadway and pedestrians, bicyclists, and vehicles traveling along the roadway. Particular attention should be considered to driveways within 250 feet of intersections.	Segment	1	1	0	0	0	0	0	1	1		Remove Severe Conflicts				N/A	M	
Extended Green Time For Bicycles	23	A longer green phase when bicyclists are present provides additional time for bicyclists to clear the intersection. It can occur automatically in the signal phasing or be prompted with bicycle detection. Topography should be considered in clearance time.	Intersection	1	1	1	1	0	0	0	1	1				Manage Conflicts in Time		S03	L	Y
Extended Pedestrian Crossing Time	24	Extending the pedestrian walk signal time beyond the minimum required by national guidelines gives people more time to cross the street. This is especially helpful for vulnerable road users like children, older adults, people with disabilities, and others who may need extra time to cross safely.	Intersection	S	S	S	S	0	0	0	S	S				Manage Conflicts in Time		S03	L	Y
Extended Time Push Button	25	This special push button provides a way for people to request extra time to cross the street. This is especially helpful for vulnerable road users like children, older adults, people with disabilities, and others who may need extra time to cross safely. These buttons are often placed near trip generators like senior centers, medical offices, or assisted living communities.	Intersection	1	1	1	1	0	0	0	2	2				Manage Conflicts in Time		N/A	L	
Far-Side Bus Stop	26	Far-side bus stops are placed just after an intersection to allow the bus to cross the street before picking up or dropping off passengers. This keeps traffic moving more smoothly, helps buses stay on schedule, and makes it easier for motorists to see pedestrians crossing the street. It also encourages people to cross behind the bus, which tends to be safer.	Intersection	S	S	S	S	S	S	S	S	S		Remove Severe Conflicts			Increase Attentiveness and Awareness	N/A	L	Y
Flashing Beacon as Advance Warning	27	A flashing beacon is a blinking light and signage used as an advanced warning to alert motorists to an upcoming intersection or crosswalk. It increases motorist awareness and provides additional time to slow down or yield to pedestrians.	Intersection	1	1	1	1	1	1	1	1	1					Increase Attentiveness and Awareness	S10	M	Y
Flashing Yellow Turn Phase	28	A flashing yellow turn arrow reminds motorists to wait for a clear gap in oncoming traffic before turning left during a permissive turn phase at a signalized intersection. When pedestrians may be crossing, a protected left turn turn phase should instead be used to separate motorist and pedestrian movements through the intersection.	Intersection	1	1	0	1	0	0	0	1	1					Increase Attentiveness and Awareness	N/A	M	
Floating Transit Island or Bus Boarding Island	29	Transit/boarding islands allow bicyclists to pass between the sidewalk and transit boarding area, thereby avoiding bus-bicycle conflicts at the transit stop. These can be used in combination with a bicycle lane, buffered bicycle lane, or separated bikeway. They can also help reduce vehicle speeds, as the island visually narrows the roadway and calms traffic with in-lane bus stops.	Segment	1	1	1	0	0	0	0	1	1		Remove Severe Conflicts	Reduce Vehicle Speeds			N/A	M	Y
Green Conflict Striping	30	Green conflict striping is a dashed pattern of green pavement markings that extend bicycle lanes across conflict areas with motorists. It is often used through mixing zones at intersection approaches, through intersections to highlight the bicyclist path of travel, or past driveway entrances. It helps improve awareness of other roadway users at bicycle vehicle conflict points.	Intersection	S	S	S	S	S	S	S	S	S	Y				Increase Attentiveness and Awareness	N/A	L	Y
High-Visibility Crosswalk	31	High-visibility crosswalks use bold, striped patterns—often called “ladder markings”—made from durable, reflective materials like thermoplastic. These markings make crosswalks easier for motorists to see, especially at night or in bad weather, and signal that pedestrians may be present crossing the street.	Intersection	S	S	S	S	S	S	S	S	S	Y				Increase Attentiveness and Awareness	S18/NS20	L	Y
Improved Pavement Friction	32	High-friction surface treatments improve motorist ability to stay on the roadway and stop over shorter distances. These treatments can be used to help address roadway departure collisions and collisions on approaches to unsignalized intersections.	Segment	1	1	1	0	0	0	0	1	1		Remove Severe Conflicts				R21	M	
Intersection Lighting	33	Additional lighting at intersections and crosswalks can make it easier for motorists to see people walking, bicycling, and driving—especially at night or in dim conditions. However, it’s important to design the lighting carefully. If it creates glare or lights up pedestrians from behind, it can actually make them harder for motorists to see.	Intersection	1	1	1	1	1	1	1	1	1					Increase Attentiveness and Awareness	NS01	M	
Intersection Reconstruction and Tightening	34	“Squaring up” an intersection involves intersection reconstruction and approach realignment. Skewed intersections have a greater likelihood of collisions due to restricted sight lines and high speed turn movements. Realigning intersection approaches to be as close to 90 degrees as possible reduces collisions by providing better visibility for all road users, slowing vehicle turns, and shortening crossing distances.	Intersection	S	S	S	S	S	S	S	S	S			Reduce Vehicle Speeds		Increase Attentiveness and Awareness	N/A	H	Y
Landscape Buffer	35	Adding a landscaped buffer between a road, sidewalk, and/or bikeway creates more space between motorists and people walking or bicycling. This separation makes road users feel safer and encourages motorists to slow down, which helps reduce the severity of collisions.	Segment	1	1	1	0	0	0	0	1	1		Remove Severe Conflicts	Reduce Vehicle Speeds			N/A	M	
Lane Narrowing	36	Lane narrowing reduces the width of the marked vehicle lane to encourage motorists to travel at slower speeds. Lane narrowing can also help reallocate existing roadway space to other road users.	Segment	S	S	S	0	0	0	0	S	S			Reduce Vehicle Speeds			N/A	L	Y
Larger Warning Signs	37	Upgrading to larger warning signs improves sign visibility and makes the information on signs easier to read—especially for motorists with limited visibility.	Segment	S	S	S	0	0	0	0	S	S					Increase Attentiveness and Awareness	NS06	L	Y
Leading Pedestrian Interval and Pedestrian Recall	38	A leading pedestrian interval (LPI) gives people crossing the street a 3–7 second head start to begin crossing before vehicles get a green light. This often is used at busy intersections with high vehicle turning volumes and pedestrian activity, helping pedestrians become more visible in the crosswalk. Pedestrian recall automatically activates the walk signal during every cycle so pedestrians do not need to press a button at the walk signal.	Intersection	S	S	S	S	0	0	0	S	S	Y			Manage Conflicts in Time		S21PB	L	
LED-Enhanced Sign	39	An LED-enhanced sign integrates flashing or steady LED lights into the border or message of the sign to improve visibility. These signs are especially effective at locations with limited sight distance or a history of motorist non-compliance, such as at STOP signs. The enhanced visibility helps draw motorist attention and improve compliance with traffic control devices.	Intersection	1	1	1	0	1	1	1	1	1					Increase Attentiveness and Awareness	NS08	L	Y
Median Barrier	40	A median barrier is a raised barrier in the center of the roadway that physically separates opposing vehicular traffic. Median barriers can also help control access to and from side streets and driveways, reducing the number of conflict points.	Segment	1	1	0	0	0	0	0	1	1		Remove Severe Conflicts				R03	H	Y
Mixing Zone	41	A mixing zone is a designated area in an intersection where bicyclists and motorists share the same space, often due to a bicycle lane transitioning into a shared lane. Lane markings increase awareness for bicyclists and motorists, indicating the intended shared lane.	Intersection	1	1	1	1	1	1	1	1	1					Increase Attentiveness and Awareness	N/A	L	Y
Neighborhood Traffic Circle	42	Neighborhood traffic circles are small roundabouts, often stop-controlled on some or all approaches. They may supplement existing stop-controlled intersections with a circular island in the center that is designed to slow traffic and reduce conflict points (such as conflicting left-turn movements).	Intersection	0	1	1	0	1	1	1	1	1		Remove Severe Conflicts	Reduce Vehicle Speeds			N/A	L	Y

Burlingame Safety Action Plan - Engineering Countermeasure Toolbox

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Countermeasures				Roadway Classifications			Intersection/Crossing Control Types				Land Uses		Resources and Deployment							
Name	ID	Description	Intersection/ Segment	Arterial*	Collector	Residential	Signalized*	All-Way Stop	Side Street Stop	Yield/ Uncontrolled	Downtown Commercial Areas*	Areas around Schools/Parks*	FHWA Proven Safety Countermeasure	Safe System Hierarchy - Tier 1	Safe System Hierarchy - Tier 2	Safe System Hierarchy - Tier 3	Safe System Hierarchy - Tier 4	Local Roadway Safety Manual (LRSM) ID	Relative Cost to Implement (L/M/H)	Quick Build Opportunity/ Option Available
Painted Centerline and Raised Pavement Markers at Curves	43	Installing a centerline with raised pavement markers on curves provides tactile and visual feedback to improve motorist awareness, especially at night or in low-visibility conditions. The enhanced lane guidance helps reduce the risk of head-on collisions.	Segment	1	1	1	0	0	0	0	0	1					Increase Attentivene ss and Awareness	N/A	L	Y
Partial Roadway Closure/Diverter	44	A partial roadway closure or diverter restricts vehicle through movements, while still allowing bicyclists and pedestrians to proceed through an intersection in all directions.	Intersection	0	1	1	0	1	1	1	1	1		Remove Severe Conflicts				N/A	L	Y
Pedestrian Countdown Timer	45	Pedestrian countdown timers show how many seconds remain for a person to finish crossing the street before the light turns red, helping people walking make safer decisions about when to cross. These timers are now required on all new traffic signals that include signalized pedestrian crossings.	Intersection	S	S	S	S	S	S	S	S	S					Increase Attentivene ss and Awareness	S17PB	M	
Pedestrian Detection	46	Pedestrian detection sensors detect when a person is at an intersection waiting to cross, automatically triggering the "WALK" signal without the person needing to press a button. This helps reduce unsafe crossings and ensures that pedestrians get enough time to cross the street safely.	Intersection	1	1	1	1	0	0	0	2	1				Manage Conflicts in Time		N/A	M	
Pedestrian Hybrid Beacon	47	A Pedestrian Hybrid Beacon (PHB) is a crossing signal used at unsignalized intersections or midblock crosswalks, typically on roadways with high volumes and speeds. It stays off (dark) until a person presses a button or is detected waiting to cross. Then, it lights up with a sequence of yellow and red lights to alert motorists to stop and let the pedestrian cross safely.	Intersection	1	0	0	0	0	1	1	1	1	Y			Manage Conflicts in Time	Increase Attentivene ss and Awareness	NS23PB	H	
Pedestrian Scramble	48	A pedestrian scramble is a pedestrian "walk" phase that stops all vehicle traffic at an intersection. This gives pedestrians an opportunity to cross in any direction, including diagonally, all at once. It removes conflicts by completely separating turning vehicles from crossing pedestrians. It can be especially effective in busy areas with lots of foot traffic.	Intersection	1	1	0	1	0	0	0	1	1				Manage Conflicts in Time		S03	M	
Prohibited Left Turn	49	Left turns may be restricted to remove conflicts at intersections between left turning vehicles and crossing pedestrians or oncoming traffic. These restrictions can be enforced using signs (to manage conflicts in time) or raised center medians (to physically prevent the left turn and remove the conflicts altogether).	Intersection	1	1	1	1	0	1	1	1	1		Remove Severe Conflicts		Manage Conflicts in Time		S15/NS16	L	Y
Prohibited Right-Turn-on-Red	50	Right turns on red may be prohibited to remove conflicts at signalized intersections between right turning vehicles and crossing pedestrians or oncoming traffic. Prohibiting right turns on red are recommended at intersections with unusual layouts, such as skewed intersections, or where there are pedestrian scrambles or leading pedestrian intervals (LPIs).	Intersection	2	1	1	1	0	0	0	2	2				Manage Conflicts in Time		N/A	L	Y
Prohibited Turn During Pedestrian Phase (Blank-Out Sign)	51	Vehicle turning movements may be prohibited during specific phases of a signal cycle, such as when pedestrians are crossing the street. These restrictions are shown using electronic signs, called blank-out signs, that light up only when the restriction is active. Prohibiting left and right turns while pedestrians are crossing an intersection helps prevent conflicts between turning vehicles and people in the crosswalk.	Intersection	1	1	0	1	0	0	0	1	1				Manage Conflicts in Time		N/A	L	
Protected Intersection	52	Protected intersections use corner islands, curb extensions, and colored paint to delineate bicycle and pedestrian movements, and physically separate bicyclists from pedestrians and moving vehicles. The delineations/separations reduce the likelihood of conflicts, reduce driving speeds, and shorten crossing distances for pedestrians.	Intersection	2	1	1	2	0	0	0	2	1	Y	Remove Severe Conflicts	Reduce Vehicle Speeds	Manage Conflicts in Time	Increase Attentivene ss and Awareness	N/A	H	Y
Protected Left Turn	53	Protected left turns give motorists a dedicated green arrow to turn left, avoiding the need for motorists to wait for a gap in oncoming traffic or people crossing the street. Adding a protected left turn phase at an intersections reduces broadside collisions and pedestrian collisions.	Intersection	1	1	0	1	0	0	0	1	1				Manage Conflicts in Time		S06/S07	M	
Raised Crosswalk	54	A raised pedestrian crosswalk elevates the crossing above the roadway, anywhere from a few inches above the roadway to sidewalk level. This type of crosswalk increases pedestrian visibility and slows motorists.	Intersection	0	1	1	0	1	1	1	1	1			Reduce Vehicle Speeds		Increase Attentivene ss and Awareness	R36PB	M	Y
Raised Intersection	55	A raised intersection elevates the entire intersection above the roadway, bringing vehicles up to the sidewalk level as they cross the intersection. This serves as a traffic calming measure by slowing motorists and increasing awareness of crossing pedestrians.	Intersection	0	1	1	0	1	1	1	1	1			Reduce Vehicle Speeds		Increase Attentivene ss and Awareness	N/A	H	
Raised Median	56	A raised median is a curbed section in the center of the roadway that physically separates opposing vehicular traffic. It can also help control access to and from side streets and driveways, reducing conflict points.	Segment	1	1	0	0	0	0	0	1	1	Y	Remove Severe Conflicts			S12/NS14/R08		M	Y
Rectangular Rapid Flashing Beacon	57	A Rectangular Rapid Flashing Beacon (RRFB) is a flashing light that pedestrians can activate when they want to cross the street. It is paired with signs to alert motorists that someone is crossing at an uncontrolled location. The bright, flashing lights make the crosswalk more visible and remind motorists to yield to people walking.	Intersection	1	1	1	0	0	2	2	2	2	Y				Increase Attentivene ss and Awareness	NS22PB	M	
Red Light Camera	58	Red light cameras help enforce traffic laws by taking a photo of any vehicle that drives through an intersection after the light has turned red. These cameras work automatically, and the photos they take are used by authorities to issue tickets to motorists who run red lights.	Intersection	S	S	S	S	0	0	0	S	S					Increase Attentivene ss and Awareness	N/A	M	
Refuge Island	59	A refuge island is a raised, curbed median in the center of the roadway that provides a place for pedestrians to wait until there is a gap in traffic to finish crossing the intersection. This reduces pedestrian exposure to traffic by allowing them to cross the intersection in multiple stages.	Intersection	2	1	1	2	1	1	2	1	1	Y	Remove Severe Conflicts	Reduce Vehicle Speeds		Increase Attentivene ss and Awareness	NS19PB	M	Y
Relocated Hazardous Utility Pole	60	Utility poles that are located close to the roadway should be removed or shifted farther away from the roadway edge to reduce the risk of collisions. This is especially important at curves where vehicles may be more likely to depart the roadway.	Segment	S	S	S	0	0	0	0	S	S		Remove Severe Conflicts				N/A	M	
Removed Crossing Prohibition	61	Removing crossing restrictions and adding marked crosswalks provides clear, designated places for people to cross the street where one previously did not exist. This improves safety and comfort for people walking, reducing the need for pedestrians to take longer, less direct routes and discouraging risky crossing maneuvers.	Intersection	S	S	S	S	S	S	S	S	S					Increase Attentivene ss and Awareness	N/A	L	Y
Removed Obstruction For Sightlines	62	Removing visual obstacles near intersections might include painting red curbs to prevent motorists from parking at intersection approaches (a practice known as "daylighting"), trimming overgrown trees or bushes, or moving signs or other objects that may impede sightlines. This helps motorists and pedestrians see each other more easily.	Segment	S	S	S	0	0	0	0	S	S					Increase Attentivene ss and Awareness	NS11	L	Y
Restriped Crosswalk	63	Crosswalk markings can fade over time due to weather and traffic. Restriping crosswalks helps the markings stay visible to motorists and pedestrians. Using high-visibility designs—like ladder markings—can make crosswalks easier to see and help improve safety for everyone.	Intersection	S	S	S	S	S	S	S	S	S	Y				Increase Attentivene ss and Awareness	N/A	L	Y
Retroreflective Tape on Signal	64	Retroreflective tape can be added to traffic signals to create bright, reflective outlines, making them easier to see, especially for older motorists or those with color vision impairments. They are also useful during power outages, because they reflect headlights and make the signal visible even when it is not working.	Intersection	S	S	S	S	0	0	0	S	S					Increase Attentivene ss and Awareness	S02	L	Y

Burlingame Safety Action Plan - Engineering Countermeasure Toolbox

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Scores Used for Roadway Classification, Control Type, and Land Use Contexts:

S - Standard practice (consistent across all contexts)

0 - Not recommended/applicable for context

1 - Candidate countermeasure for context

2 - Recommended countermeasure for context

Countermeasures				Roadway Classifications			Intersection/Crossing Control Types				Land Uses		Resources and Deployment							
Name	ID	Description	Intersection/ Segment	Arterial*	Collector	Residential	Signalized*	All-Way Stop	Side Street Stop	Yield/ Uncontrolled	Downtown Commercial Areas*	Areas around Schools/Parks*	FHWA Proven Safety Countermeasure	Safe System Hierarchy - Tier 1	Safe System Hierarchy - Tier 2	Safe System Hierarchy - Tier 3	Safe System Hierarchy - Tier 4	Local Roadway Safety Manual (LRSM) ID	Relative Cost to Implement (L/M/H)	Quick Build Opportunity/ Option Available
Road Diet	65	A road diet reconfigures roadway space originally dedicated to vehicle travel lanes to use for bicycle facilities, wider sidewalks, center turn lanes, or other purposes. This reduces vehicle speeds and creates designated space for all road users.	Segment	1	1	1	0	0	0	0	1	1	Y	Remove Severe Conflicts	Reduce Vehicle Speeds			R14	M	Y
Roundabout	66	A roundabout is a circular intersection where traffic flows in one direction around a central island, and vehicles must yield at entrance lanes. Unlike conventional intersections, roundabouts eliminate severe conflicts from crossing and left-turn movements. The design of a roundabout forces motorists to slow down, which narrows the range of vehicle speeds and reduces the severity of collisions. Additionally, pedestrians only need to cross one direction of traffic at a time, minimizing their exposure to vehicles.	Intersection	1	1	0	1	1	1	1	1	1	Y	Remove Severe Conflicts	Reduce Vehicle Speeds			S16/NS04	H	Y
Rumble Strips	67	Rumble strips are grooves added to the roadway surface that produce noise and vibrations inside a vehicle, alerting motorists when they cross the centerline or edge line. This helps motorists stay in their lane, especially if they are distracted or drowsy. Rumble strips also warn motorists of lane boundaries in poor visibility conditions like rain, fog, snow, or dust.	Segment	1	1	1	0	0	0	0	1	1					Increase Attentivene ss and Awareness	R30/R31	L	
Separated Bikeway	68	A separated bikeway, also called protected bicycle lane or cycletrack, provides dedicated street space for bicyclists, typically adjacent to an outer vehicle travel lane, with physical separation from vehicle traffic, designated lane markings and signage. Physical separation may consist of plastic posts, parked vehicles, raised median, or curb (if the separated bicycle lane is raised to sidewalk level). The separation reduces the risk of severe conflicts between bicycles and vehicles on the road, and also reduces conflicts between people bicycling and walking as compared to a shared-use path.	Segment	1	1	1	0	0	0	0	1	1	Y	Remove Severe Conflicts				R33PB	H	Y
Separated Right-Turn Phasing	69	A green arrow for right turns gives motorists a dedicated green arrow to turn right, avoiding the need for motorists to wait for people or bicyclists crossing the street. This reduces conflicts with pedestrians and bicyclists who may be crossing the street on the right side of the intersection.	Intersection	1	1	0	1	0	0	0	1	1				Manage Conflicts in Time		N/A	H	
Shared-Use Path	70	Shared-use paths or trails are off-street facilities that provide exclusive use for nonmotorized travel, including bicyclists and pedestrians. They can be located alongside a roadway (referred to as a Side Path), or exist in a separate right-of-way.	Segment	1	1	1	0	0	0	0	1	1	Y	Remove Severe Conflicts				N/A	H	Y
Shortened Cycle Length	71	The traffic signal cycle length—how long it takes to go through all the green, yellow, and red lights—can greatly affect how easy and pleasant it is to walk, bicycle, drive, or take transit. When signals stay red for too long, especially at several intersections in a row, it can make even short trips feel slow and frustrating. Shorter signal cycles, ideally between 60 and 90 seconds, are better for urban areas because they help keep people moving and make streets more welcoming for everyone.	Intersection	S	S	S	S	S	S	S	S	S				Manage Conflicts in Time		N/A	L	Y
Signal Interconnectivity and Coordination / Green Wave	72	A “green wave” is a coordinated set of signals that enables people driving and bicycling to move smoothly through several intersections without stopping at a red light. Green waves are set at a desired speed, typically at or lower than the speed limit and in line with typical bicycle travel speeds. A slow green wave can be accompanied by signs that alert motorists and help them slow down, which can reduce the risk of severe collisions.	Intersection	1	1	1	1	0	0	0	1	1			Reduce Vehicle Speeds	Manage Conflicts in Time		S03	M	
Slow Turn Wedge	73	A slow turn wedge uses paint and delineators to extend the curb at intersections. This helps slow vehicle turns by tightening the turning radii, expand the field of vision for motorists, and increase the visibility of pedestrians.	Intersection	1	1	1	1	1	1	1	1	1			Reduce Vehicle Speeds		Increase Attentivene ss and Awareness	N/A	L	Y
Speed Feedback Sign	74	A speed feedback sign displays a motorist’s current speed, encouraging voluntary speed reduction. It serves as a real-time visual cue to promote speed awareness and speed limit compliance, particularly in areas with speeding concerns.	Segment	1	1	1	0	0	0	0	1	1	Y				Increase Attentivene ss and Awareness	N/A	L	Y
Speed Hump or Speed Table	75	A speed hump or speed table is a raised area of pavement designed to slow motorist speeds. Typically, speed humps and speed tables are wider and less abrupt than speed bumps, providing a gentler way to reduce vehicle speeds in residential areas or near schools. They help improve safety by encouraging motorists to maintain lower speeds.	Segment	0	1	1	0	0	0	0	1	1			Reduce Vehicle Speeds			N/A	L	Y
Speed Legend on Pavement at Neighborhood Entry	76	Speed legends are numerals painted directly on the roadway surface to indicate the posted speed limit. Typically placed near speed limit signs, they reinforce speed awareness and improve compliance, especially at transistions to slower streets.	Segment	1	1	1	0	0	0	0	2	2					Increase Attentivene ss and Awareness	N/A	L	Y
Speed Limit Reduction	77	Lower speed limits help reduce the risk and severity of collisions. New industry standards for speed limit setting consider factors like roadway characteristics, adjacent land use context, as well as the presence of people walking and bicycling.	Segment	1	1	1	0	0	0	0	2	2			Reduce Vehicle Speeds		Increase Attentivene ss and Awareness	N/A	L	Y
Speed Sensitive Rest in Red Signal	78	At certain times—like late at night—a traffic signal may stay red until a vehicle approaches. If a motorist is going too fast, the light stays red until the motorist comes to a stop. If the motorist is going at or below the speed limit, the light turns green before the vehicle arrives, allowing it to pass through smoothly. This encourages safe speeds and can be combined with electronic speed signs that warn motorists if they are going too fast.	Intersection	1	1	1	1	0	0	0	1	1			Reduce Vehicle Speeds	Manage Conflicts in Time		R26	M	
Splitter Island	79	A splitter island is a raised area that separates the two directions of travel on the minor street approach at an unsignalized intersection or roundabout. It helps channelize traffic in opposing directions and improves the visibility of the intersection for approaching motorists. Additionally, it provides a refuge for pedestrians crossing the street.	Intersection	1	1	1	0	1	1	1	1	1			Reduce Vehicle Speeds		Increase Attentivene ss and Awareness	NS13	M	Y
Straightened Crosswalk	80	An angled crosswalk may be straightened to make pedestrians more visible to oncoming motorists and shorten the crossing distance for pedestrians.	Intersection	S	S	S	S	S	S	S	S	S					Increase Attentivene ss and Awareness	N/A	L	Y
Street Lighting	81	Additional lighting along a street can make it easier for motorists to see other people, vehicles, or objects on the road—especially at night or in dim conditions.	Segment	1	1	1	0	0	0	0	1	1					Increase Attentivene ss and Awareness	R01	M	
Striping Through Intersection	82	Clear pavement markings within complex intersections help guide motorists through lane assignments and turning movements. This treatment is especially effective at locations where lane designations are unclear due to horizontal offsets or multiple turning lanes.	Intersection	1	1	1	1	1	1	1	1	1					Increase Attentivene ss and Awareness	S09	L	Y
Supplemental Signal Head	83	Supplemental signal heads are extra traffic lights placed at intersections to supplement the main signal head. They help motorists see the signal more clearly, especially when the intersection is hard to see—for example, hidden behind a vertical curve or around a horizontal curve.	Intersection	1	1	1	1	0	0	0	1	1					Increase Attentivene ss and Awareness	S02	M	
Through Bicycle Lane at Intersection	84	A through bicycle lane is a striping layout for intersections with a dedicated right-turn pocket, designed to allow for space for bicyclists to travel to the left side of right-turning vehicles.	Intersection	S	S	S	S	S	S	S	S	S	Y	Remove Severe Conflicts			Increase Attentivene ss and Awareness	N/A	L	Y

Burlingame Safety Action Plan - Engineering Countermeasure Toolbox

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Time-Based Turn Restriction	85	Time-based turn restrictions restrict vehicle left turns or right turns during certain time periods. They often are used when there is increased potential for conflict with other road users like during peak periods or school hours.	Intersection	1	1	1	1	1	1	1	1	1				Manage Conflicts in Time		N/A	L	Y	
Traffic Signal	86	Traffic signals at intersections manage traffic flow by assigning right-of-way to different movements at specific times. For instance, protected left-turn signal phasing is more effective at preventing severe left-turn collisions compared to permitted left-turn signal phasing. Additionally, traffic signals significantly enhance safety for pedestrians crossing large intersections.	Intersection	1	1	1	0	1	1	1	1	1	Y			Manage Conflicts in Time		NS03	H		
Two-Stage Turn Queue Bike Box	87	This type of bike box is a designated area painted on the ground on the far side of an intersection. It provides bicyclists with a way to make a left turn at a multi-lane signalized intersection from a bicycle lane or separated bikeway on the far right side of the roadway. In this way, bicyclists are given the option of not having to mix with left-turning vehicles.	Intersection	2	1	1	2	0	0	0	2	1	Y			Manage Conflicts in Time	Increase Attentivene ss and Awareness	N/A	L	Y	
Upgraded Curb Ramp	88	Tactile warning surfaces and properly designed curb ramps are essential for helping people who are blind, have low vision, or are using a mobility device safely navigate street crossings. Curb ramps must meet national standards like the Public Rights-of-Way Accessibility Guidelines (PROWAG) and follow local design rules to ensure they are safe and accessible for everyone.	Intersection	S	S	S	S	S	S	S	S	S		Remove Severe Conflicts			Increase Attentivene ss and Awareness	N/A	M		
Upgraded Intersection Pavement Marking	89	Upgrading intersection pavement markings, such as stop ahead markings, centerlines, and stop bars, improves visibility for motorists approaching and entering intersections.	Intersection	S	S	S	S	S	S	S	S	S					Increase Attentivene ss and Awareness	NS07	L	Y	
Upgraded Lighting to LED	90	LED street lights are brighter and more efficient than older high-pressure sodium lights. Upgrading street lights improves visibility—especially at crosswalks—by providing better color contrast and lighting a wider area. As a result, it becomes easier for motorists to see people walking.	Segment	S	S	S	0	0	0	0	S	S					Increase Attentivene ss and Awareness	N/A	M		
Upgraded Sign with Fluorescent Sheeting	91	Upgrading signs with fluorescent sheeting enhances nighttime visibility by reflecting headlight beams more effectively, making warnings clearer for motorists.	Segment	S	S	S	0	0	0	0	S	S					Increase Attentivene ss and Awareness	R22	L	Y	
Upgraded Signal Head	92	Smaller 8-inch traffic lights should be replaced with larger 12-inch ones, as recommended by the California MUTCD. The larger signal heads are easier for motorists to see, especially from a distance. This helps motorists see signalized intersections sooner and respond more quickly to traffic signals.	Intersection	S	S	S	S	0	0	0	S	S					Increase Attentivene ss and Awareness	S02	L		
Upgraded Striping	93	Restriping lanes with reflective materials such as thermoplastic and pavement markers improves visibility and helps clarify lane assignments, especially where lane configurations change.	Segment	1	1	1	0	0	0	0	1	1					Increase Attentivene ss and Awareness	N/A	L	Y	
Wayfinding	94	Wayfinding is a network of directional signs highlighting nearby destinations and pedestrian or bicycle facilities. This can reduce erratic driving and guide users away from crossings with poor visibility or limited safety features.	Segment	1	1	1	0	0	0	0	2	1					Increase Attentivene ss and Awareness	N/A	L		
Widened Sidewalk	95	Widening sidewalks creates more comfortable and safer spaces for people walking, especially in busy areas. It also provides enough room for people using wheelchairs or other mobility devices. By giving pedestrians more space, it reduces the likelihood of walking in the street, which helps prevent collisions with vehicles.	Segment	S	S	S	0	0	0	0	S	S	Y	Remove Severe Conflicts				N/A	M		
Yield Lines	96	Yield lines, also known as shark's teeth, are pavement markings placed 20 to 50 feet before multi-lane pedestrian crossings. They improve pedestrian visibility and help reduce the risk of multiple-threat collisions, where one motorist stops for a pedestrian but another in an adjacent lane does not.	Intersection	S	S	S	0	0	0	S	S	S					Increase Attentivene ss and Awareness	N/A	L	Y	
Yield To Pedestrians Sign	97	“Yield Here to Pedestrians” signs alert motorists to pedestrian crossings and are required when advance yield lines are used. Additional smaller, flexible warning signs can also be placed on the roadway centerline to enhance visibility.	Intersection	S	S	S	0	0	0	S	S	S					Increase Attentivene ss and Awareness	NS06	L	Y	

Attachment B: Non- Engineering Countermeasure Toolbox

Non-Engineering Countermeasure Toolbox

While engineering countermeasures are essential for creating a safe and accessible transportation network, they are most effective when implemented with complementary non-engineering countermeasures. The strategies included in the non-engineering countermeasure toolbox target the safety challenges identified in the Safety Action Plan.

Automated and Targeted Enforcement

Speed Safety Cameras

Pending state legislation that allows broader use of speed safety cameras, speed safety cameras could be used to help manage vehicle speeds, particularly on arterials streets or where people are often walking and biking, such as downtown and near schools and parks.

Red Light Cameras

Automated enforcement devices such as red-light cameras installed at intersections can help improve motorist compliance with traffic control devices.

High Visibility Enforcement for DUIs

High visibility enforcement for DUIs is led by the City Police Department. Deterrence policies (like DUI checkpoints, stricter enforcement, or public awareness campaigns) are designed to make people less likely to drive under the influence because they believe they will get caught. These policies should be highly visible to increase awareness of the risks of driving under the influence. Publicized sobriety checkpoints, saturation patrol, and other forms of high visibility enforcement are effective for safety outcomes.

Distracted Driving Patrols

Additional officer patrols could participate in the California Statewide Distracted Driving Campaign, which occurs three times per year to look for distracted drivers. These patrols should be deployed at locations where the data indicates that the most traffic safety benefit can be realized. Wherever possible, these patrols should occur in areas with the highest number of past distracted driving violations. Coordinate with public communications staff/public information officers to leverage existing materials prepared by California Office of Traffic Safety.

Education

Targeted Education Near Infrastructure Improvements

Educational materials, dispersed citywide or to residents near an improvement project, can be used to help people become more familiar and comfortable with less frequently used countermeasures, such as chicanes and parking protected bikeways.

Coordinating with public communications staff/public information officers to use existing social media accounts (e.g. Facebook, NextDoor, Instagram, etc.) can help establish an ongoing public education campaign focused on making motorists aware of new infrastructure and how to use it.

Targeted Education for Motorists

Education and public awareness campaigns can focus on increasing motorists' awareness of people walking and biking and on decreasing specific behaviors, such as red light running or speeding. Coordinate with public communications staff/public information officers to help establish ongoing public education on social media.

E-Micromobility

Youth E-Bike Policy and Safety Training Program

School-aged children are among the most vulnerable road users, often lacking formal roadway safety training. To promote responsible riding and reduce crashes, develop a policy that requires students to complete a safety course on traffic laws, helmet use, and safe riding practices before being permitted to ride e-bikes or e-scooters to school. Provide permits upon safety course completion and require all devices parked at school to have a permit.

Enhance Electric Micromobility Devices Ordinance

To address the rise of electric bike (e-bike) use among youth and adults, consider revisions to the existing Chapter 13.56 Electric Micromobility Devices ordinance. Recommendations include clearly defining e-bike classifications, additional prohibitions, age restrictions, and safety training requirements.

Safe Route to School (SRTS) Programs

Work with school districts and non-profits to set-up a SRTS program. Programming could include: Walk & Bike to School Day, Safe Routes to School master plans, safe walking and biking maps, community engagement, parent champion training, and more to promote active transportation and reduce traffic-related injuries and fatalities among school-aged children.

Speed Management

A comprehensive speed management program allows the city to set target speeds and implement strategies to reduce driver speeds where needed. It could include development of a Comprehensive Speed Management Plan, adoption of speed limit reduction, speed safety training programs, and a proactive Residential Traffic Calming Program.

Speed Limit Assessment

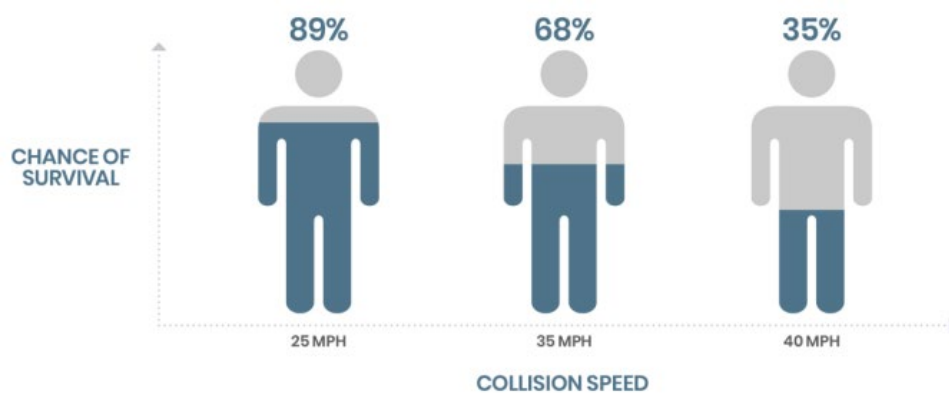
The background image shows a residential street with palm trees and parked cars. In the foreground, a speed limit sign for 25 mph is visible, along with a speed camera unit mounted on a pole. The camera unit has a digital display showing '30' in yellow LED digits. A 'YOUR SPEED' sign is also visible above the camera display. To the right, an 'END SCHOOL ZONE' sign is posted on a pole. The scene is captured during the day with soft lighting.

Burlingame Safety Action Plan: Speed Limit Reduction Assessment & Recommendations

Introduction

Speed is one of the primary factors influencing the severity of traffic collisions. Higher travel speeds not only increase the likelihood of a collision but also intensify the severity of injuries sustained by everyone involved, as illustrated in **Figure 1**.

Figure 1: Relationship between Vehicle Speed and Fatalities



Source: Southern California Association of Governments (SCAG), <https://scag.ca.gov/sites/main/files/file-attachments/cal-guidance-hin-090221.pdf?1633549750>.

For this reason, the City of Burlingame (“City”) and many transportation agencies across the country are adopting the **Safe System Approach**.¹ The Safe System Approach identifies Safe Speeds as one of its five core elements. The Safe System Approach recognizes that reducing travel speeds lowers the force of impact during a collision, thereby decreasing the risk of severe injury or death.

In October 2021, Assembly Bill 43 (“AB 43”) was signed into law, giving local agencies increased flexibility and authority to reduce speed limits on locally controlled, public roadways. AB 43 allows local agencies to consider a wider range of factors when setting speed limits, beyond simply 85th percentile speeds, including roadway classification, land use, crash rates, and bicyclist or pedestrian activity. The law emphasizes the need to consider the roadway context when setting speed limits, especially in urban areas and/or areas where vulnerable road users are present. In March 2023, the California Manual on Uniform Traffic Control Devices (“CA MUTCD”) was updated to incorporate the provisions of AB 43. Subsequent revisions 8 and 9 of the CA MUTCD have retained those updates with minor edits.

As part of the City’s broader Safety Action Plan – an ongoing effort to improve traffic safety citywide – the City applied California’s new speed limit setting guidance to evaluate potential updates to

¹ For more information about the Safe System Approach, see: <https://www.transportation.gov/NRSS/SafeSystem>.

posted speed limits. This memorandum outlines the methodology used to recommend new speed limits based on Engineering and Traffic Surveys (E&TS) and roadway context. The following criteria were assessed, consistent with AB 43 and the CA MUTCD, Revision 9:

- 85th Percentile Speed: Eligible for 5 mph reduction if nearest 5 mph increment requires rounding down
- Safety Corridor Designation: Eligible for 5 mph reduction
- Proximity to Bicyclist/Pedestrian Generators: Eligible for 5 mph reduction

The following criteria were not evaluated as part of this assessment and could be explored by the City in the future:

- Business Activity District Designation: Eligible for 25 or 20 mph prima facie speed limit
- School Zone Designation: Eligible for 15 and 25 mph prima facie speed limits
- Senior Zone Designation: Eligible for 25 mph prima facie speed limit

Engineering and Traffic Surveys (E&TS) Assessment

At the time of this study, the City had existing E&TS speed survey data for 40 locally owned roadways, with data collected between October and December 2023.² All 40 study roadways were assessed for potential speed limit reductions and are listed in **Table 1**.

Table 1: Locally Owned Roadways Assessed for Speed Limit Reduction Opportunities

Study Roadway	From Street	To Street
Adeline Dr	El Camino	Alvarado
Adrian Rd	David	Millbrae City Limit
Airport Blvd	Bayshore Hwy	Lang
Barroilhet Ave	El Camino Real	Elm
Bayshore Hwy	Airport	Millbrae City Limit
Bayswater Ave	California	Humboldt
Bernal Ave	Adeline	Devereux
Bloomfield Rd	Peninsula	Rollins
Broadway	Balboa	Vancouver
California Dr	Peninsula	Burlingame
California Dr	Burlingame	Broadway
California Dr	Broadway	Murchison
Carmelita Ave	California	El Camino
Carmelita Ave	El Camino	Vancouver
Carolan Ave	Oak Grove	Broadway

² Per the CA MUTCD, any existing E&TS that was performed before January 1, 2022, is not required to be updated until due for reevaluation five (5), seven (7), or 14 years from the date of the survey.

Study Roadway	From Street	To Street
Chapin Ave	El Camino	Primrose
Cypress Ave	El Camino	Barroilhet
Easton Dr	El Camino	Alvarado
Floribunda Ave	California	El Camino
Grove Ave	El Camino	California
Hillside Dr	El Camino	Alvarado
Howard Ave	Humboldt	California
Howard Ave	El Camino	Occidental
Lincoln Ave	El Camino	California
Marco Polo Wy	Trousdale	Davis
Mills Ave	El Camino	California
Murchison Dr	El Camino	Sequoia
North Carolan Ave	Rollins	Edwards
Oak Grove Ave	El Camino	California
Oak Grove Ave	California	Rollins
Occidental Ave	Barroilhet	Bellevue
Peninsula Ave	El Camino	California
Peninsula Ave	California	Humboldt
Quesada Wy	Trousdale	Davis
Ralston Ave	El Camino	Hillsborough
Rollins Rd	San Mateo City Limit	Broadway
Rollins Rd	Broadway	Millbrae City Limit
Rosedale Ave	El Camino	California
Trousdale Dr	Skyline	El Camino
Vancouver Ave	Broadway	Adeline

The E&TS assessment takes the following speed limit setting criteria into account: 85th percentile speed, proximity to bicyclist/pedestrian generators, and Safety Corridor designation.

85th Percentile Speed

The E&TS process requires local agencies to first conduct an E&TS to collect vehicular speeds using a calibrated radar or other electronic speed measuring device. Per Section 2B.13, paragraph 27, of the CA MUTCD, speed surveys are to be conducted during off-peak traffic hours on a fair-weather weekday to capture “typical” conditions. Based on the cumulative measured speed data, the 85th percentile speed (i.e., the speed at which 85% of drivers are traveling at or below) is determined, then rounded according to the rules below:

1. If the nearest 5 mph increment of the 85th percentile speed requires **rounding up**, the posted speed limit can be rounded down to the nearest 5 mph increment below the 85th percentile speed, if no further reduction is used.³
2. If the nearest 5 mph increment of the 85th percentile speed requires **rounding down**, the roadway qualifies for an additional 5 mph speed reduction (i.e., the posted speed limit can be reduced by 5 mph from the nearest 5 mph increment of the 85th percentile speed).⁴

Table 2 details sample 85th percentile speeds and the application of the speed limit setting guidelines for locally owned roadways. For more details on rounding 85th percentile speeds, refer to CVC Section 22358.6.

Table 2: Sample Application of Rounding 85th Percentile Speed

85 th Percentile Speed (mph)	Round to nearest 5 mph increment <i>CVC § 22358.6(a)</i>	If rounding to nearest is up, may round down by 5 mph <i>CVC § 22358.6(c)</i>	If rounding to nearest is down, may lower additional 5 mph <i>CVC § 22358.6(b)</i>
47.5-50.0	50	45	–
45.1-47.4	45	–	40
42.5-45.0	45	40	–
40.1-42.4	40	–	35

Source: CA MUTCD 2014 Edition, Revision 9, Chapter 2B, Table 2B-104(CA).

Proximity to Bicyclist/Pedestrian Generators

Proximity to bicyclist/pedestrian generators is one of two new options to reduce the speed limit by 5 mph. The other option is Safety Corridor designation, which will be discussed in the following section. The two options for lowering the speed limit by 5 mph – “Safety Corridor” and “proximity to bicyclist/pedestrian generators” – are presented in tandem in the CA MUTCD, meaning that whether a roadway satisfies one or both criteria, it is eligible for a reduction of no more than 5 mph.

Local authorities can apply a 5 mph speed limit reduction if the roadway is adjacent to any land use or facility that generates high concentrations of bicyclists or pedestrians, especially those from vulnerable groups such as children, seniors, persons with disabilities, and the unhoused.

To meet this criterion, the roadway segment must have one (1) or more bicyclist/pedestrian generator present within 1,320 feet. If the roadway segment is longer than 1,320 feet, a minimum of one (1) generator must be present for every 1,320 feet. A list of qualifying bicyclist/pedestrian

³ Further reductions that preclude this rounding do not include the “Safety Corridor” or “proximity to bicyclist/pedestrian generators” designations as described in the following sections. See CA MUTCD Section 2B.13, paragraph 12l and 12m.

⁴ If the speed limit to be posted has had this 5 mph reduction applied, the corresponding E&TS must document in writing the conditions and justification for the lower speed limit. These conditions should be in compliance with CVC Sections 627 and 22358.5 and approved by a registered Civil or Traffic Engineer.

generators, which includes the presence of bicycle and pedestrian infrastructure, is provided in **Table 2**.⁵ For more details on bicyclist/pedestrian considerations, refer to CVC Section 22358.7(a)(2).

For the City, this criterion is satisfied through existing sidewalk infrastructure (i.e., every quarter mile sub-segment evaluated had a sidewalk present within a quarter mile).

Table 3: Requirements to Determine Land Use or Facility that Generates a High Concentration of Bicyclists or Pedestrians

Category	Generator
Land Use	Employment centers
	Presence of retail
	Parks, multi-use trails, and recreational destinations
	Schools/universities
	Senior centers
	Cultural areas, entertainment space areas, or areas of community significance
	Religious facilities
	Health/medical facilities
Transit Factors	Transit stops
	Transit Oriented Developments/Transit Priority Areas
Presence of Pedestrian/Bicyclist Infrastructure	Sidewalk presence
	Crosswalk presence
	Bikeway presence
	Nearby signalized intersections on four-way intersections
	Presence of micromobility devices such as bicycles or scooters

⁵ Per the CA MUTCD, crash data that demonstrates a roadway segment is within the top 20% of the local jurisdiction's pedestrian and/or bicyclist fatalities or serious injuries over a three to five-year period can be used in lieu of one of the generators listed in **Table 3**. If the roadway segment is longer than 1,320 feet, a minimum of one (1) location within the top 20% of pedestrian and/or bicyclist fatal or serious injury crashes must be present for every 1,320 feet.

Category	Generator
Demographic Factors	Presence of vulnerable groups including children, seniors, persons with disabilities, users of personal assistive mobility devices, and the unhoused
	MPO/RTPA or locally defined disadvantaged community status
	Presence of students (all levels)
Local Data	Need identified in a safety analysis such as a road safety audit or formalized planning document such as a local road safety plan

Source: CA MUTCD 2014 Edition, Revision 9, Chapter 2B, Table 2B-106(CA).

Safety Corridor Designation

Safety Corridor designation is the second of two new options to reduce the speed limit by 5 mph. The CA MUTCD defines a Safety Corridor as “a roadway segment within an overall roadway network where the highest number of serious injury and fatality crashes occur.” Per the CA MUTCD, Safety Corridors should not constitute more than 20% of a local jurisdiction’s overall roadway network.

To inform this assessment, Fehr & Peers leveraged the City’s draft High Injury Network prepared as part of the Safety Action Plan. The draft High Injury Network captures the 20% of the city’s roadway network with the highest concentration of collisions, emphasizing serious injury and fatal collisions and collisions involving people walking and bicycling. A map of the City’s Safety Corridors (i.e., draft High Injury Network) and brief methodology description can be found in **Attachment A**.

Table 4 again details sample 85th percentile speeds and the application of the speed limit setting guidelines for locally owned roadways, now with additional speed reduction due to bicyclist/pedestrian generators or Safety Corridors.

Table 4: Sample Application of Rounding 85th Percentile Speed and Applying Additional Speed Reduction Options

85 th Percentile Speed (mph)	Rounding to nearest 5 mph increment <i>CVC § 22358.6(a)</i>	If rounding to nearest is up, may round down by 5 mph <i>CVC § 22358.6(c)</i>	If rounding to nearest is down, may lower additional 5 mph <i>CVC § 22358.6(b)</i>	If adjacent to high concentration of bicyclists/pedestrians or a Safety Corridor, may lower additional 5 mph <i>CVC § 22358.7</i>
47.5-50.0	50	45	N/A	40
45.1-47.4	45	N/A	40	35
42.5-45.0	45	40	N/A	35
40.1-42.4	40	N/A	35	30

Source: CA MUTCD 2014 Edition, Revision 9, Chapter 2B, Table 2B-104(CA).

Speed Limit Recommendations

Using the 85th percentile E&TS speed data provided by the City, the presence of sidewalks on City streets, and the draft High Injury Network developed as part of the Safety Action Plan, Fehr & Peers identified the maximum allowable potential reduction in speed limit for each study roadway. Fehr & Peers then reviewed the posted speed limits at the termini of each study roadway to identify a recommended posted speed limit for City staff's consideration.

In several instances, Fehr & Peers did not recommend the maximum allowable speed limit reduction to avoid creating a change in posted speed limit greater than 5 mph at the study roadway termini. Per the CA MUTCD, this condition is undesirable in an urban or suburban environment. In accordance with CVC Section 22358.6, paragraph 12c, all recommended speed limits are within 12.4 mph of the 85th percentile speed on their respective roadways.

The Fehr & Peers assessment and recommendations are based on what is feasible given the passage of AB 43 and consideration of adjacent posted speed limits. In reviewing the recommended posted speed limits identified by Fehr & Peers, City staff may decide to make other adjustments to the recommended posted speed limits due to reasons related to land use, functional classification, or physical conditions on the roadway such as limited sight distance.

Recommended posted speed limits for the 40 study roadways are presented in **Table 5**.

Table 5: Recommended Posted Speed Limits and Change in Posted Speed Limits for Study Roadways

Study Roadway	From Street	To Street	Recommended Posted Speed Limit (mph)	Recommended Change in Posted Speed Limit (mph)
Adeline Dr	El Camino	Alvarado	20	-5
Adrian Rd	David	Millbrae City Limit	30	-5
Airport Blvd	Bayshore Hwy	Lang	30	-5

Study Roadway	From Street	To Street	Recommended Posted Speed Limit (mph)	Recommended Change in Posted Speed Limit (mph)
Barroilhet Ave	El Camino Real	Elm	20	-5
Bayshore Hwy	Airport	Millbrae City Limit	30	-5
Bayswater Ave	California	Humboldt	20	-5
Bernal Ave	Adeline	Devereux	20	-5
Bloomfield Rd	Peninsula	Rollins	20	-5
Broadway	Balboa	Vancouver	20	-5
California Dr	Peninsula	Burlingame	25	0
California Dr	Burlingame	Broadway	25	-10
California Dr	Broadway	Murchison	30	-5
Carmelita Ave	California	El Camino	20	-5
Carmelita Ave	El Camino	Vancouver	20	-5
Carolan Ave	Oak Grove	Broadway	30	-5
Chapin Ave	El Camino	Primrose	20	-5
Cypress Ave	El Camino	Barroilhet	20	-5
Easton Dr	El Camino	Alvarado	20	-5
Floribunda Ave	California	El Camino	20	-5
Grove Ave	El Camino	California	20	-5
Hillside Dr	El Camino	Alvarado	25	-5
Howard Ave	Humboldt	California	20	-5
Howard Ave	El Camino	Occidental	20	-5
Lincoln Ave	El Camino	California	20	-5
Marco Polo Wy	Trousdale	Davis	20	-5
Mills Ave	El Camino	California	20	-5
Murchison Dr	El Camino	Sequoia	20	-5
North Carolan Ave	Rollins	Edwards	20	-5
Oak Grove Ave	El Camino	California	20	-5
Oak Grove Ave	California	Rollins	20	-5
Occidental Ave	Barroilhet	Bellevue	20	-5
Peninsula Ave	El Camino	California	25	-5
Peninsula Ave	California	Humboldt	30	-5
Quesada Wy	Trousdale	Davis	20	-5
Ralston Ave	El Camino	Hillsborough	20	-5

Study Roadway	From Street	To Street	Recommended Posted Speed Limit (mph)	Recommended Change in Posted Speed Limit (mph)
Rollins Rd	San Mateo City Limit	Broadway	30	-5
Rollins Rd	Broadway	Millbrae City Limit	30	-5
Rosedale Ave	El Camino	California	20	-5
Trousdale Dr	Skyline	El Camino	30	-5
Vancouver Ave	Broadway	Adeline	20	-5

Several study roadways extend beyond the limits of the roadway sections evaluated for this assessment. Fehr & Peers recommends that the City consider additional E&TS data collection to assess the potential extension of recommended speed limit reductions on study roadways beyond the current E&TS data collection limits.

Fehr & Peers also recommends that the City consider additional E&TS data collection to assess speed limit reduction opportunities for all priority safety project locations identified in the Safety Action Plan that are not already included in the speed limit assessment. These additional priority safety project locations for further evaluation include:

- Alvarado Ave from Hillside Cir to Hillside Dr
- Anza Blvd from Bayshore Fwy to Airport Blvd
- Arc Way from El Camino to Willow
- Bayswater Ave from El Camino to California
- Broadway from Bayshore Hwy to Balboa Ave
- Burlingame Ave from El Camino to California
- Carolan Ave from Oak Grove to Burlingame
- Donnelly Ave from Primrose to Lorton
- Dwight Rd from Rollins to Peninsula
- East Ln from Burlingame to Howard
- Farringdon Ln from Palm to Oak Grove
- Howard Ave from California to El Camino
- Lorton Ave from Peninsula to California
- Magnolia Ave from Trousdale to Murchison
- North Humboldt St from Peninsula to Howard
- North Ln from California to Carolan
- Primrose Rd from El Camino to Bellevue
- Sequoia Ave from Trousdale Dr to Murchison
- Willow Ave from El Camino to Newhall Rd

Full assessment results and recommendations for City staff consideration can be found in **Attachment B**.

Next Steps

After City of Burlingame staff confirm the desire to pursue implementation of the recommended speed limit reductions, staff will need to bring the recommendations to City Council for adoption. This step is required for the new speed limits to be enforceable. Staff will compile the following materials to include in a staff report to support City Council's decision.

Engineering and Traffic Survey (E&TS) Document

The Engineering and Traffic Survey (E&TS) document typically includes a speed zone survey sheet (or strip map) and supporting information relevant to the speed limit setting process, such as crash history, traffic volumes, roadway characteristics, and other conditions not readily apparent to drivers.

It is recommended that each E&TS sheet include the posted speed limit recommendation, a clear rationale for any speed limit reduction, and a citation to the applicable California Vehicle Code (CVC) section supporting the reduction. Based on this assessment, the City will be required to update all Engineering and Traffic Survey (E&TS) sheets for roadways where the new speed limit guidance is implemented.

Justification Memo

The City will need to prepare a memo containing staff's formal speed limit recommendations and the justification for those recommendations. The memo is intended to document the technical methodology used to evaluate study roadways for potential speed limit reductions and any assumptions made. Though it is not required, a map of the Safety Corridor Network (i.e., City of Burlingame's High Injury Network) can be included as an attachment to this memo. All recommendations must be competent, rational, and defensible.

Ordinance Readings

Speed limits established by local jurisdictions must be adopted through a formal ordinance process, as required under the California Vehicle Code (CVC) and local municipal code procedures. Because an ordinance constitutes a law enforceable within the city, the Burlingame City Council must follow the standard legislative process for its adoption, which includes two readings at separate City Council meetings.

Ordinance Readings

During the first 30 days that a lower speed limit is in effect, if the speed limit is exceeded by 10 mph or less, only a warning citation can be issued.⁶

⁶ California Vehicle Code Section 22358.7

Attachment A – Safety Corridors

The Safety Corridors established for the speed limit reduction assessment leverage the City’s draft High Injury Network prepared as part of the Safety Action Plan. To develop the High Injury Network (HIN), Fehr & Peers used our custom HINsight tool, which implements the “sliding window method.” The sliding window method is an established industry approach to collision analysis that smooths discrete collisions into segment-level severity scores.⁷ The sliding window method establishes a segment “window” and shifts that window along a roadway for some distance less than the window length. At each shift, the number of collisions is aggregated to the window, often with weighting.

For the Burlingame Safety Action Plan analysis, Fehr & Peers used 600-foot windows, shifted 200 feet at a time. We used the collision scoring system summarized in **Table 5** and assigned to each window the total score of all collisions up to 100 feet on either side of the street.

Table 5. Collision Scoring for HIN Analysis

Collision Type	Score
Killed or seriously injured (KSI) collision	10
KSI collision + bike/ped involved	13
Non-KSI collision	2
Non-KSI collision + bike/ped involved	5

Source: Fehr & Peers, 2025.

Fehr & Peers used the output of the sliding window analysis as the basis for developing a citywide HIN. Starting with windows in the top 15% of collision scores, we closed gaps between windows and extended windows to the nearest intersection. We also removed stray windows, such as those resulting from isolated severe collisions or those on minor streets that have no reason for inclusion other than intersecting a major street with collisions. We ensured that the entire HIN did not exceed 20% of the locally owned roadway network.

Having identified HIN corridors, Fehr & Peers identified each corridor start and end point, the total number of crashes on each corridor, and the total collision score normalized by corridor length.

⁷ Texas A&M Transportation Institute (2019). *Statewide Implementation of Innovative Safety Analysis Tools in Identifying Highway Safety Improvement Projects: Technical Report*. <http://tti.tamu.edu/documents/5-6912-01-R1.pdf>

Attachment B – Speed Limit Reduction Assessment: Summary of Recommendations

ATTACHMENT B

Burlingame Safety Action Plan – Speed Limit Assessment & Recommendations

Street	From	To	Current Posted Speed Limit	85th Percentile Speed (from E&TS)	E&TS Date	Speed Limit Reduction Criteria			Allowable Posted Speed Limit	Maximum Allowable Posted Speed Reduction	Posted Speed approaching From Street	Posted Speed approaching To Street	Recommended Posted Speed Limit	Recommend ed Change in Posted Speed Limit	Notes
						Meets Rounding Down Criterion	Designated as Safety Corridor (aka High Injury)	Adjacent to Bike/ Ped Generator ¹							
						Nearest 5 MPH + Additional 5 MPH Reduction	Additional 5 MPH Reduction								
Adeline Dr	El Camino	Alvarado	25	26	11/30/2023	X		X	15	-10	End Road	25	20	-5	
Adrian Rd	David	Millbrae City Limit	35	39	11/9/2023			X	30	-5	End Road	End Road	30	-5	
Airport Blvd	Bayshore Hwy	Lang	35	40	10/26/2023		Full	X	30	-5	25	35	30	-5	
Barroilhet Ave	El Camino Real	Etm	25	27	10/25/2023	X		X	15	-10	End Road	25	20	-5	
Bayshore Hwy	Airport	Millbrae City Limit	35	40	10/26/2023		Full	X	30	-5	End Road	35	30	-5	
Bayswater Ave	California	Humboldt	25	30	11/14/2023			X	20	-5	25	25	20	-5	Suggest E&TS data collection to assess extension of speed limit reduction from El Camino to California.
Bernal Ave	Adeline	Devereux	25	29	12/13/2023			X	20	-5	25	End Road	20	-5	Suggest E&TS data collection to assess extension of speed limit reduction from Adeline to Carmelita.
Bloomfield Rd	Peninsula	Rollins	25	28	12/13/2023			X	20	-5	End Road	End Road	20	-5	
Broadway	Balboa	Vancouver	25	27	12/14/2023	X		X	15	-10	25	25	20	-5	Suggest E&TS data collection to assess extension of speed limit reduction from Balboa to Bayshore.
California Dr	Peninsula	Burlingame	25	33	10/25/2023		Full	X	25	0	30	35	25	0	Note that recommendation is to retain existing posted speed limit.
California Dr	Burlingame	Broadway	35	35	10/25/2023		Full	X	25	-10	25	35	25	-10	Recommendation is contingent on speed limit reduction of adjacent corridor from Broadway to Murchison (see row below).
California Dr	Broadway	Murchison	35	38	10/25/2023		Partial	X	30	-5	35	30	30	-5	
Carmelita Ave	California	El Camino	25	28	11/30/2023			X	20	-5	End Road	25	20	-5	
Carmelita Ave	El Camino	Vancouver	25	27	12/14/2023	X		X	15	-10	25	25	20	-5	
Carolann Ave	Oak Grove	Broadway	35	41	10/26/2023	X	Full	X	30	-5	25	End Road	30	-5	Suggest E&TS data collection to assess extension of speed limit reduction from Oak Grove to Howard.
Chapin Ave	El Camino	Primrose	25	29	11/9/2023		Full	X	20	-5	25	End Road	20	-5	Suggest E&TS data collection to assess extension of speed limit reduction from El Camino to Chapin Ln.
Cypress Ave	El Camino	Barroilhet	25	29	11/8/2023			X	20	-5	25	25	20	-5	
Easton Dr	El Camino	Alvarado	25	28	11/30/2023			X	20	-5	End Road	25	20	-5	
Floribunda Ave	California	El Camino	25	27	12/14/2023	X		X	15	-10	End Road	25	20	-5	Suggest E&TS data collection to assess extension of speed limit reduction from El Camino to Eucalyptus.
Grove Ave	El Camino	California	25	30	12/14/2023		Full	X	20	-5	End Road	End Road	20	-5	
Hillside Dr	El Camino	Alvarado	30	35	10/26/2023		Partial	X	25	-5	End Road	End Road	25	-5	
Howard Ave	Humboldt	California	25	30	11/14/2023		Partial	X	20	-5	25	25	20	-5	Suggest E&TS data collection to assess extension of speed limit reduction from El Camino to California.
Howard Ave	El Camino	Occidental	25	27	11/8/2023	X		X	15	-10	25	End Road	20	-5	Suggest E&TS data collection to assess extension of speed limit reduction from El Camino to California.
Lincoln Ave	El Camino	California	25	29	12/14/2023			X	20	-5	End Road	End Road	20	-5	
Marco Polo Wy	Trousdale	Davis	25	29	10/26/2023			X	20	-5	End Road	End Road	20	-5	Suggest E&TS data collection to assess extension of speed limit reduction from Davis to Ray.
Mills Ave	El Camino	California	25	28	11/9/2023			X	20	-5	End Road	End Road	20	-5	
Murchison Dr	El Camino	Sequoia	25	32	10/26/2023	X	Partial	X	20	-5	25	25	20	-5	Suggest E&TS data collection to assess extension of speed limit reduction from El Camino to California.
North Carolann Ave	Rollins	Edwards	25	28	12/14/2023			X	20	-5	End Road	25	20	-5	Suggest E&TS data collection to assess extension of speed limit reduction from Edwards to Nerli.
Oak Grove Ave	El Camino	California	25	30	12/13/2023		Full	X	20	-5	End Road	25	20	-5	
Oak Grove Ave	California	Rollins	25	31	12/13/2023	X		X	20	-5	25	End Road	20	-5	
Occidental Ave	Barroilhet	Bellevue	25	30	11/8/2023			X	20	-5	25	End Road	20	-5	
Peninsula Ave	El Camino	California	30	33	10/25/2023		Full	X	25	-5	End Road	35	25	-5	Recommendation is contingent on speed limit reduction of adjacent corridor from California to Humboldt (see row below).
Peninsula Ave	California	Humboldt	35	34	10/25/2023		Full	X	25	-10	30	35	30	-5	
Quesada Wy	Trousdale	Davis	25	29	10/25/2023			X	20	-5	End Road	25	20	-5	Suggest E&TS data collection to assess extension of speed limit reduction from Davis to Ray.
Ralston Ave	El Camino	Hillsborough	25	27	11/14/2023	X		X	15	-10	End Road	25	20	-5	
Rollins Rd	San Mateo City Limit	Broadway	35	41	10/26/2023	X	Partial	X	30	-5	30	35	30	-5	
Rollins Rd	Broadway	Millbrae City Limit	35	40	10/25/2023		Partial	X	30	-5	35	25	30	-5	
Rosedale Ave	El Camino	California	25	31	10/26/2023	X		X	20	-5	25	End Road	20	-5	
Trousdale Dr	Skyline	El Camino	35	38	10/25/2023		Full	X	30	-5	End Road	35	30	-5	Suggest E&TS data collection to assess extension of speed limit reduction from El Camino to California.
Vancouver Ave	Broadway	Adeline	25	27	12/13/2023	X		X	15	-10	25	25	20	-5	Suggest E&TS data collection to assess extension of speed limit reduction from Broadway to Carmelita.

Appendix

F



E-Micromobility Primer

Burlingame E-Micromobility Primer

Final – 4/24/2026

Introduction

E-micromobility, including electric bikes (e-bikes) and electric scooters (e-scooters), is becoming an increasingly common mode of travel in the City of Burlingame and throughout California. Advances in technology and declining device costs have accelerated adoption among people of all ages for both commuting and recreational trips. This rapid growth, particularly among youth and within a largely auto-oriented transportation system, has underscored the need for targeted strategies that promote safe behavior and clearly delineate space between different types of roadway users.

The e-micromobility primer is intended to provide an overview of existing e-micromobility device classifications and their associated legal requirements, highlight key elements of the City of Burlingame's current e-micromobility ordinance, share examples of e-micromobility policy setting from peer agencies, and present a set of strategies for the City to consider to achieve its e-micromobility goals. Any new e-micromobility regulations based on these recommendations will need to be established through the City's legislative process, partnerships with other agencies, or new state legislation.

The following e-micromobility primer was developed as part of Burlingame's Safety Action Plan and in support of the City's Vision Zero goals through advancement of the Safe System Approach, emphasizing protection of vulnerable road users. Given Burlingame's schools, commercial corridors, Caltrain access, and high pedestrian activity, the primer equips the City to respond consistently to community concerns, support device operators and their families, and improve compliance through clear, accessible guidance. Enhanced e-micromobility safety is a key opportunity for reaching the City's Vision Zero goals.

Defining E-Micromobility Devices

The e-micromobility primer focuses on the types of e-micromobility devices most used within the City of Burlingame, specifically e-bikes and e-scooters. Other devices, such as mobility scooters, golf carts, or neighborhood electric vehicles (NEVs), may also be part of the broader e-micromobility landscape, but they are outside the scope of this document and are not addressed here.

In California, e-micromobility devices are regulated under the California Vehicle Code (CVC) and enforced by the California Department of Motor Vehicles (DMV). The following sections provide the state-law definitions of e-bikes and e-scooters.

E-Bikes

What Is a Legal E-Bike in California?

Under California law, an e-bike is defined as a bicycle equipped with fully operable pedals and an electric motor with a maximum power output of less than 750 watts. E-bikes are regulated differently from mopeds and motorcycles and are not required to be registered with the California Department of Motor Vehicles (DMV).

California has established a three-class e-bike system to clarify how different e-bikes operate and where they may be used:

- **Class 1 E-Bike:** A pedal-assist e-bike in which the motor provides assistance only while the rider is pedaling and stops assisting once the bicycle reaches 20 miles per hour (mph).
- **Class 2 E-Bike:** A throttle-assist e-bike in which the motor can propel the bicycle without pedaling and is not capable of providing assistance beyond 20 mph.
- **Class 3 E-Bike:** A pedal-assist e-bike in which the motor provides assistance only while the rider is pedaling and stops providing assistance once the bicycle reaches 28 mph.

Who Can Operate an E-Bike?

There are no age restrictions for operating Class 1 and Class 2 e-bikes under California law. Operators must be at least 16 years old to operate a Class 3 e-bike. Since e-bikes are regulated like bicycles, there are no license requirements to operate them.

What are the Passenger and Helmet Requirements?

E-bikes designed and equipped to carry passengers are permitted to do so, regardless of e-bike class. Operators and passengers under the age of 18 must wear helmets on Class 1 and 2 e-bikes. All operators and passengers on Class 3 e-bikes, regardless of age, are required to wear helmets.

What is Not a Legal E-Bike?

There is growing discussion in San Mateo County and across California about electric motorcycles (“e-motos”) and other high-powered electric two-wheeled devices. Often these devices are marketed as “e-bikes” and look like bicycles, but they are not legal e-bikes.

Under California law¹, the following devices are not considered legal e-bikes, regardless of how they are advertised or their appearance:

- A [device] with two or three wheels powered by an electric motor that is intended by the manufacturer to be modifiable to attain a speed greater than 20 miles per hour on motor power alone or to attain more than 750 watts of power.
- A [device] that is modified to attain a speed greater than 20 miles per hour on motor power alone or to have motor power of more than 750 watts.
- A [device] that is modified to have its operable pedals removed.

¹ [SB-1271, Electric bicycles, powered mobility devices, and storage batteries \(2025\).](#)

Devices that exceed this power limit, lack operable pedals, or provide motor assistance at higher speeds are subject to different legal requirements, including vehicle registration and driver licensing, and some are not permitted on public streets at all.

For more information on non-legal e-bikes that exceed California's three-class system limits for speed and power, refer to the Mineta Transportation Institute's [Exploring Electric Bicycle Safety Performance Data and Policy Options for California](#).

E-Scooters

What Is a Legal E-Scooter in California?

Under California law, e-scooters are regulated under state law as "motorized scooters," a category that also includes gas-powered scooters. Motorized scooters are generally defined by their design: they have two wheels, handlebars, and either a floorboard to stand on or a seat with footrests in place of a floorboard. Additionally, e-scooters are not permitted to travel faster than 15 miles per hour.

Who Can Operate an E-Scooter?

E-scooter operators must have a valid driver's license or instruction permit.

What are the Passenger and Helmet Requirements?

E-scooters are designed for a single rider, and carrying passengers is not allowed. Operators may not carry packages or items that prevent them from keeping at least one hand on the handlebars. Operators under 18 years old are required to wear a helmet.

Where Can E-Scooters Operate?

E-scooters may only be operated on roads with speed limits of 25 mph or less, unless a bike lane or protected bike facility is present and used. Riding on sidewalks is not allowed, except when entering or leaving adjacent property.

What is Not a Legal E-Scooter?

Devices that may look similar but have different features, such as higher speeds, greater power, or a different overall design, may instead be classified as mopeds or motorcycles and are regulated under different rules.

E-Micromobility Regulatory Landscape

California state law establishes baseline definitions and operating rules for e-micromobility devices while allowing local jurisdictions flexibility to respond to community-specific conditions, such as dense neighborhoods, shared-use paths, and popular recreational corridors, provided local regulations remain consistent with state law.

The City of Burlingame is currently among the few jurisdictions in San Mateo County with a dedicated e-micromobility ordinance. A review of all member agencies within the City/County Association of Governments (C/CAG) of San Mateo County found that Burlingame and Millbrae are the only jurisdictions that have adopted formal e-micromobility ordinances. Many other C/CAG member agencies in San Mateo County are currently discussing potential ordinances and highlighting

emerging e-micromobility challenges and opportunities in the news and at City Council Meetings. C/CAG is also in the process of developing a countywide strategy document focused specifically on e-bikes. This effort will include resources such as template ordinances, design guidance, education and engagement strategies, and support for data collection and ongoing monitoring

In addition to municipalities, school districts and other educational institutions may regulate e-micromobility use for youth users. Because school districts have authority over campus property, they are allowed to adopt policies governing the types of devices permitted on school grounds and parking requirements. Many California school districts, including Menlo Park City School District and Portola Valley School District in San Mateo County, have adopted policies restricting higher-speed e-bike classes on campus as a mechanism for encouraging lower-speed devices among youth. Some school districts, such as in the City of Carlsbad in San Diego County, have implemented permit programs requiring students to complete safety training, register their devices, and display identification tags as a condition of bringing e-micromobility devices to school. These approaches demonstrate how schools can complement municipal regulations by addressing youth use within the school setting.

Figure 1 illustrates current jurisdictions and school districts in San Mateo County with specific e-bike policies that include additional regulations from the CVC.



Figure 1. E-Bike Policy Landscape in San Mateo County (Fehr & Peers, 2025)

Burlingame's Existing E-Micromobility Regulations

Burlingame's current e-micromobility ordinance is grounded in California state law and supplemented by provisions specific to Burlingame's local needs. Understanding this distinction helps both decision-makers and operators identify which requirements apply statewide and which are unique to Burlingame. This framework also highlights opportunities to clarify or expand local regulations to address safety concerns raised by residents.

Where Burlingame Aligns with California State Law

Burlingame Municipal Code Chapter 13.56 references CVC definitions for different e-micromobility device types and requires operators to follow the same traffic laws that apply statewide (stated in **Defining E-Micromobility Devices** section above). E-bikes are also governed outside of this chapter in Municipal Code Chapter 13.52, which references CVC rules for bicycle riding in the City of Burlingame.

Where Burlingame Has Adopted Local-Specific Rules

In addition to state law, Burlingame has adopted the following local regulations that reflect local street, sidewalk, and park conditions:

- **Sidewalk Riding Restrictions:** Burlingame restricts bicycles and, therefore, e-bikes from riding on sidewalks in business districts and limits sidewalk riding in residential areas when pedestrians are present to reduce conflicts in areas with higher foot traffic. The Burlingame Municipal Code does not specifically mention sidewalk riding for e-scooters; however, it requires operators to follow regulations in the California Vehicle Code, which prohibits e-scooters from operating on sidewalks.
- **Parks and Recreational Areas:** Burlingame prohibits the operation of e-micromobility devices in parks and recreational areas, except for the city-owned portions of the San Francisco Bay Trail.
- **Exemptions:** Public Agency Personnel may operate e-micromobility devices at any place in the City in performance of their duties, and the rules do not apply to persons with physical disabilities utilizing an electric micromobility device in accordance with the Americans with Disabilities Act.

Overall, Burlingame's approach reflects a hybrid model: strong alignment with statewide e-micromobility device laws for consistency, combined with targeted local rules that address sidewalk use, parks, and pedestrian safety. A summary of Burlingame's e-micromobility device rules and regulations is provided in **Figure 2**.

Burlingame Electric Micromobility Device Policy

		What can my device do? (1,2)		What do I need to ride? (3,4,5,6)				Where can I ride? (7,8)			
		Pedal Operated	Max Speed (mph)	Minimum Age	Driver's License Required	License Plate Required	Helmet Required	Shared-Use Path	Bicycle Lane	Bicycle Route	Separated Bikeway
Device Type	Bicycle	Yes	N/A	N/A	✗	✗	18 & Under				
	Class 1 E-Bike	Yes	20	N/A	✗	✗	18 & Under	✖			
	Class 2 E-Bike	No	20	N/A	✗	✗	18 & Under	✖			
	Class 3 E-Bike	Yes	28	15 1/2	✗	✗	✓	✖			
	E- Scooter	No	15	16	✓	✗	18 & Under	✖			

- California Vehicle Code § 312.5 (2025)
- California Vehicle Code § 22411 (2000)
- California Vehicle Code § 21212 (2020)
- California Vehicle Code § 21235 (2019)
- California Motorcycle Handbook (2024)
- California Vehicle Code § 24016 (2025)
- California Vehicle Code § 21207 (2023)
- City of Burlingame Municipal Code § 13.52 & 13.56 (2024)

✖ Burlingame prohibits operation of e-micromobility devices within city-owned parked and recreation areas, except city-owned segments of the San Francisco Bay Trail (8)

Figure 2: Existing City of Burlingame E-Micromobility Device Rules and Regulations (Fehr & Peers, 2026)

Burlingame School District Regulation

Both unified school districts serving the City of Burlingame (Burlingame School District and the San Mateo Union High School District) have active bicycle training programs. However, as of March 2026, neither school district has adopted a formal, district-wide policy specifically regulating the use of e-micromobility devices.

Opportunities for Enhancing Burlingame's Regulations

The following section outlines targeted opportunities to strengthen and refine the City of Burlingame's approach to e-micromobility regulation. Recommendations are organized into three categories based on implementation feasibility and jurisdictional authority:

- Actions the City Can Implement Now
- Actions School Districts Can Implement Now in Partnership with the City
- Actions the City Can Implement Only with State Action to Expand Local Authority

Actions the City Can Implement Now

From a legal standpoint, e-micromobility devices are already governed by state law. The City of Burlingame is not required to restate or reiterate CVC provisions within its Municipal Code. However, Burlingame has adopted a dedicated chapter in its Municipal Code that supplements the CVC to meet specific City needs. Because this chapter expands upon state law, it also presents opportunities

for further refinement and clarification to improve usability and effectiveness for residents, device operators, enforcement staff, and decision-makers.

CODE CLARITY AND ORGANIZATION

Recommendation:

Burlingame's e-micromobility regulations currently rely heavily on references to the CVC and include regulations distributed throughout multiple Chapters of the Municipal Code. Improving code clarity by consolidating or clearly cross-referencing all relevant requirements, such as device definitions, speed limits, passenger restrictions, and sidewalk riding rules, would make the ordinance easier for residents, device operators, enforcement staff, and decision-makers to understand and apply consistently.

Example:

While no clear best-practice policy model currently exists, the City may strengthen its current approach to e-micromobility by refining and organizing existing policy language to provide clearer guidance for users and enforcement.

PARK AND RECREATIONAL AREAS ACCESS

Recommendation:

As currently written, Burlingame's ordinance prohibits e-micromobility devices on all city trails and recreational areas except for the city-owned portion of the San Francisco Bay Trail. While this approach simplifies enforcement, it may limit recreational and active transportation opportunities in locations where conflicts can be managed through design or speed management. The City could consider allowing certain lower-speed classes of e-micromobility devices on select trails or shared-use paths while continuing to restrict higher-speed devices, such as Class 3 e-bikes. Whatever the preference is, proper signage should be installed to communicate the regulations.

Example:

Although not included in their formal ordinance, Foster City states on their website that Class 1 and 2 e-bikes are allowed on shared-use paths, while Class 3 e-bikes are restricted. Similarly, the East Bay Regional Parks District allows Class 1 e-bikes on all trails where bicycles are permitted and Class 2 e-bikes on all bicycle permitted paved trails. This approach maintains access for lower-speed devices while addressing safety concerns on facilities with high pedestrian activity and demonstrates a more nuanced alternative to a blanket prohibition.

PARKING REGULATIONS

Recommendation:

While Burlingame's bicycle parking regulations apply to e-bikes, the Municipal Code does not explicitly address parking requirements for e-scooters. The City could clarify where e-scooters may be parked, establish consistency with bicycle parking standards, and proactively address potential pedestrian and transit stop conflicts.

Example:

Most agencies that operate shared e-scooter programs have adopted ordinances or regulatory frameworks that address where dockless devices may be parked. However, there are few examples of municipal codes that explicitly regulate parking for personally owned e-scooters. Los Angeles

County, for example, provides specific parking guidance on its website, but these requirements are implemented through program rules rather than a formally adopted ordinance.²

SPEED MANAGEMENT

Recommendation:

The California Vehicle Code allows Burlingame to establish context-sensitive speed limits for Class I shared use paths. On shared use paths with low pedestrian volumes, people on bikes or other mobility devices are recommended to operate at a target speed of 20 mph.³ However, on shared-use paths intended to serve users of All Ages & Abilities, the target operating speed, regardless of whether a device is electric or non-electric, should be less than 15 miles per hour to support comfort and safety for a wide range of users. On shared use paths with higher pedestrian activity, the City may wish to designate pedestrian-priority zones and establish lower device speed limits, such as 10 or 5 miles per hour, to minimize conflicts.

Example:

The statewide e-scooter speed limit is 15 miles per hour. However, several California jurisdictions apply lower speed limits on shared-use paths through signage, education, or geofencing shared program devices. For example, Foster City currently enforces a bicycle speed limit of 12 MPH on multi-use trails and shared sidewalks.

GRADUATED ENFORCEMENT

Recommendation:

Burlingame currently treats all code violations uniformly, including e-micromobility violations. The City could consider adopting a graduated enforcement approach that emphasizes education over penalties, particularly for youth operators. This may include options such as safety courses in lieu of fines or warning-based enforcement for first-time violations.

Example:

The City of Carlsbad implemented an education-focused enforcement model that allows violations to be resolved through completion of approved safety courses rather than monetary fines. This approach can address safety challenges and reduce punitive impacts on families.

Actions School Districts Can Implement Now in Partnership with the City

SCHOOL-BASED E-BIKE PERMIT PROGRAM

Recommendation:

The school districts could explore the implementation of a school-based e-bike permit program for students who ride e-devices to campus. Under this model, students would be required to complete an approved safety training course to register their e-device with the school and display a visible permit or identification tag as a condition of bringing the device onto school property. A permit program can promote safe riding behavior, improve accountability, and provide schools with better data on student device usage patterns.

Example:

The City of Carlsbad in San Diego County has implemented a student bicycle and e-bike permit

² Los Angeles County, [E-Scooter and Bicycle Users: Parking Guide](#)

³ NACTO, Urban Bikeway Design Guide, User Design Speed

program that links campus riding privileges to safety education. Students who wish to ride and park a bicycle or e-bike on school grounds must obtain a Bicycle Permit by submitting an application and completing an approved safety training course. This structure helps address a core concern regarding youths' limited understanding of basic rules of the road by ensuring they receive foundational safety instruction before riding to campus.

RESTRICTIONS ON HIGHER-SPEED DEVICES ON SCHOOL CAMPUSES

Recommendation:

School districts may consider limiting higher-speed e-bike classes, such as Class 3 devices, on campus while continuing to permit lower-speed Class 1 or Class 2 e-bikes. Given their authority over student conduct and school property, districts can establish device-class restrictions that better reflect the safety needs and operational realities of school environments.

Example:

Several Bay Area school districts have adopted policies restricting higher-speed e-devices on campus, particularly by limiting Class 3 e-bikes while continuing to permit lower-speed Class 1 and Class 2 devices. Menlo Park City School District and Portola Valley School District provide examples within San Mateo County. Marin County school districts and the San Ramon Valley Unified School District are examples from elsewhere in the broader region. For example, Menlo Park City School District prohibits students under 16 from bringing Class 2 and Class 3 e-bikes, e-motos, e-scooters, and e-boards onto school campuses. The Menlo Park City School District also requires that all Class 1 e-bikes parked on campus display a manufacturer-affixed, permanent classification label.

Actions the City Can Implement Only with State Action to Expand Local Authority

Certain policy tools to enhance e-micromobility safety and regulation are limited by state preemption under the CVC. Measures, such as modifying minimum age requirements, could improve youth safety but would require authorization through state legislation.

AGE RESTRICTIONS

Recommendation:

California law currently limits local authority to impose age restrictions on e-micromobility devices beyond existing CVC regulations. Burlingame, along with other San Mateo County agencies, could explore the possibility of advocating for state legislation to allow local flexibility in age limit setting for e-micromobility devices. Establishing minimum age requirements for certain device classes may help address safety concerns related to youth operators. Any such action would require state-level authorization to extend beyond the age requirements currently established in the California Vehicle Code.

Example:

The California State Legislature has authorized two pilot e-bike safety programs in Marin County and San Diego County that expand local authority to adopt youth-focused e-bike regulations. These pilot programs provide precedents for how state-enabled local flexibility can be structured, implemented, and evaluated. While the two programs share a common framework, they differ in several ways. A summary comparison of the two pilot programs is provided in **Table 1** below.

Table 1: Summary of E-Bike Pilot Policies Adopted by the California State Legislature

Policy Component	Marin County (AB 1778)	San Diego County (AB 2234)
Geographic Scope	Allows incorporated and unincorporated agencies in Marin County to adopt local ordinances under the “Marin Electric Bicycle Safety Pilot Program” though January 2029.	Allows incorporated and unincorporated agencies in San Diego County to adopt local ordinances under the “San Diego Electric Bicycle Safety Pilot Program,” though January 2029.
Minimum Age & Devices Included	Prohibits persons under 16 from operating Class 2 e-bikes.	Prohibits persons under 12 from operating Class 1 and Class 2 e-bikes.
Specific Provisions	Expands helmet requirements to all Class 2 e-bike operators regardless of age.	Requires local governments to conduct a public information campaign prior to implementation and to submit usage and enforcement data to the Legislature by 2028. Includes specific enforcement provisions, such as mandatory warning periods following ordinance adoption and the option for low-cost fines or education-based alternatives in lieu of penalties.
Example	City of Corte Madera	City of Coronado

Source: Fehr & Peers, 2026.

E-Micromobility Strategies for Consideration

Aside from local ordinance updates, the City could consider additional e-micromobility strategies to achieve its e-micromobility safety goals. The strategies shown in **Table 2** represent a range of options for Burlingame to consider and provide City staff with guidance for implementation.

The strategies are organized based on anticipated effectiveness. Actions that are built into street design or City policy tend to have the greatest impact because they make safer behavior the default, rather than relying on people to make the right choice every time. When streets and shared-use paths are designed for safety, and when rules and programs are easy to follow, people are more likely to travel safely without having to think about it. Strategies that depend on individual actions, such as education, training, or voluntary behavior changes, play an important supporting role but are generally less effective on their own. These approaches require people to seek out information, choose to participate, and consistently apply what they learn in real-world situations. For this reason, education is most effective when it reinforces clear rules and safe street design, rather than serving as the primary tool for improving e-bike safety.

Table 2: Additional Candidate Strategies for Enhancing E-Micromobility Safety and Operations in Burlingame

Effectiveness	Strategy	Strategy Type	Lead	Actions Required to Implement
Highest Impact	Partner with local retailers to promote selling of compliant Class 1–3 e-bikes and e-scooters and discourage sale/marketing of non-street-legal e-motos as “e-bikes. Provide classification information on devices that is easy for local retailers to display.	Program	Police	Develop a more visual, easy-to-understand version of the Police Department’s micromobility rules and regulations (current version available here). Conduct outreach days where Police Department staff visit local bike shops. Explore partnerships with other San Mateo County police departments to expand outreach and increase regional consistency.
Highest Impact	Implement diversion programs that allow operators to complete approved safety training in lieu of fines, with fee structures designed to avoid disproportionate financial burden.	Policy	Police	Develop program criteria and enforcement protocols, including establishing eligibility for education-in-lieu-of-fine options and defining impoundment procedures for noncompliant e-motos. Adopt implementing policies or ordinances as needed.
Highest Impact	Develop a rebate or voucher program for legal Class 1–3 e-bikes and certified helmets/locks.	Program	Public Works & Police	Identify funding sources (e.g. parking revenue) or pursue grant opportunities. Develop program eligibility criteria, rebate amounts, and administrative procedures.

Effectiveness	Strategy	Strategy Type	Lead	Actions Required to Implement
High Impact	Accelerate construction of protected bike lanes along routes providing access to schools, downtown, and Caltrain.	Infrastructure (Planning & Design)	Public Works	Identify and secure new funding or reallocate existing funding to prioritize protected bike lane projects.
				Advance planning and design for priority corridors serving schools, Downtown, and Caltrain.
				Construct projects using a combination of capital improvements and quick-build treatments where feasible.
High Impact	Assess the City's shared-use path network and apply relevant NACTO design guidance to identify and implement safety improvements, including widening and striping where feasible, separating faster wheeled users from pedestrians in high-volume segments, managing speeds and speed differentials, and enhanced trail crossings.	Infrastructure (Planning & Design)	Public Works	Conduct a comprehensive assessment of shared-use paths to support informed decision-making. The assessment should include data collection, identification of key issues and opportunities, evaluation of potential solutions, and clear articulation of recommended next steps for Council consideration.
High Impact	Implement intersection safety treatments near schools and Downtown, including protected intersections, daylighting, bike signal phases, and hardened centerlines.	Infrastructure (Planning & Design)	Public Works	Identify funding sources or reallocate existing funding sources. Design and construct projects.

Effectiveness	Strategy	Strategy Type	Lead	Actions Required to Implement
High Impact	Improve curb management by installing dedicated loading zones, protected bike parking stalls with charging capabilities, and physical separation treatments to reduce bike-lane blockages and ensure clear pedestrian access.	Infrastructure (Planning & Design)	Public Works, Community Development	Inventory curbside conditions in priority areas and identify locations for loading zones and protected bike parking. Develop design standards for protected and accessible parking with charging. Incorporate improvements into capital and quick-build projects.
Moderate Impact	Use street and path design to naturally slow riding speeds in bike lanes and shared-use paths, especially in areas where people walking, biking, and riding e-bikes are most likely to interact.	Infrastructure (Planning & Design)	Public Works	Identify key priority locations and design elements (e.g. path geometric, sightline management, approach markings, etc.). Identify funding source or reallocate existing funding source.
Low Impact	Coordinate with Burlingame Police Department to separate e-bike and e-scooter operators in citation and crash reporting forms. Publicly track and report out on trends.	Program	Police	Update reporting forms and data systems to distinguish device types. Train staff on updated reporting. Publish periodic summaries of trends to inform policy and infrastructure decisions.
Low Impact	Implement school-based e-bike permit programs and conduct event-based enforcement during peak travel times and locations.	Program	Police, Educational Partners	Develop permit criteria and administrative procedures. Coordinate with schools on implementation and program roll-out.

Effectiveness	Strategy	Strategy Type	Lead	Actions Required to Implement
Lowest Impact	Provide parent-focused education on helmet requirements, age restrictions (especially for Class 3 e-bikes), passenger rules, and appropriate riding locations.	Program	Police, Educational Partners	Develop parent-focused materials and presentations that provide clear guidance on legal requirements and safe riding practices (similar to those created by PD). Distribute through schools and community channels.
Lowest Impact	Integrate e-bike safety modules into school programs, covering handling skills, braking distance, speed awareness, and yielding behavior.	Program	Police, Educational Partners	Coordinate with the Burlingame Unified School District to develop curriculum and integrate modules into existing safety or physical education programs.
Lowest Impact	Launch a clear e-bike vs. e-moto public education campaign that explains what is legal and what is not, targeted to parents and youth.	Program	City Manager's Office, Police, Public Works	Develop simple, consistent messaging and graphics and distribute materials through schools, City channels, and retailers.

Next Steps

The e-micromobility primer supports a coordinated, multi-departmental approach for improving e-micromobility safety and access in Burlingame. Successful implementation will depend on strong interdepartmental coordination and external partnerships. Key partners identified in the strategies above include the Burlingame Police Department, Public Works Department, Burlingame Educational Partners, and local retailers. Near-term actions should focus on strategies with the highest potential impact. Moving forward requires several policy and implementation decisions by City Council. As a next step following City Council direction, Staff may identify available funding sources, staffing capacity, and ongoing capital and programmatic efforts necessary to implement the identified priority strategies. Over time, these actions can be refined and expanded based on observed outcomes, community feedback, and evolving state guidance.

Appendix

G

Lighting Assessment

A night photograph of a winding road with streetlights and trees. The scene is illuminated by several streetlights, creating a starburst effect. The road curves through a dark, wooded area. The overall tone is dark blue and black, with the lights providing a contrast.

Fehr & Peers

City of Burlingame Safety Action Plan: Citywide Lighting Needs Assessment

Prepared for:
City of Burlingame

Submitted on:
January 16, 2026

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Executive Summary

The City of Burlingame is developing a Safety Action Plan to establish its commitment to eliminating serious injuries and fatalities on city streets. Recognizing that street lighting plays a critical role in visibility and safety for all roadway users, the City has undertaken this lighting assessment to understand existing lighting conditions on city streets, review the City's applicable lighting policies, and provide industry lighting design guidelines to inform future lighting infrastructure improvements. This assessment includes:

- **Policy Review:** An evaluation of relevant city plans and policies, including the General Plan 2040, Downtown Specific Plan, and Climate Action Plan, to understand how lighting objectives align with sustainability, community, and safety goals.
- **Safety Context:** An exploration of the relationship between lighting conditions and nighttime serious injury collisions, with particular focus on arterial and collector roadways where most pedestrian and bicyclist activity and injury collisions occur.
- **Citywide Lighting Inventory:** A geographic information system (GIS)-based analysis of over 5,500 luminaires, including style, wattage, distribution type, and spacing patterns across arterial and collector streets in the City of Burlingame.
- **Photometric Case Studies:** A simulation of typical arterial and collector roadway lighting conditions using AGI32 software to evaluate how existing luminaire types and spacing patterns perform against ANSI/IES RP-8-21 design guidance.
- **Design Guidelines:** A summary of industry lighting guidelines for roadways, intersections, midblock crosswalks, and sidewalks for the City of Burlingame to consider to guide future projects and upgrades.
- **Recommendations:** Specific policy, design, and implementation strategies for the City to consider to integrate consistent, proactive lighting upgrades for citywide safety.

Street lighting is an important safety countermeasure to increase visibility for all road users, but lighting alone cannot fully address nighttime safety. Integrating lighting with broader Vision Zero strategies ensures a more comprehensive safety approach.

Key Takeaways

- **Safety Patterns:** Nighttime serious injury collisions that occur in Burlingame tend to occur on the city's arterial and collector roadways. These roadways experience higher speeds and higher user volumes. There is an opportunity to increase the lighting uniformity and decrease the luminaire spacing on these roadways to help increase visibility and reduce the likelihood of collisions.
- **Widespread Lighting Coverage:** All arterials and collectors in Burlingame include lighting elements, such as continuous roadway lights, intersection safety lights, or pedestrian-scale fixtures. Current conditions serve as the foundation for a basic lighting system, and there is an opportunity to increase the quality, consistency, and comprehensiveness of lighting coverage across the city.
- **Dominance of a Few Fixture Types:** The top five luminaire wattages represent approximately two-thirds of installations on arterials and collectors. This concentration simplifies upgrades and also means that any deficiencies in these fixture types affect a large share of the network.

- **Design Gaps Relative to Recommended Industry Guidelines:** Photometric analysis indicates that there is an opportunity on most roadway segments in Burlingame to enhance lighting conditions to better meet recommended industry guidelines, particularly regarding average illumination and uniformity. Arterials present the biggest opportunity to address lighting gaps, where exposure and collision potential are highest.
- **Policy Alignment with Safety and Sustainability:** Existing city policies emphasize pedestrian comfort and safety, sustainability, and efficient energy use. Transitioning toward efficient LED or solar-powered fixtures, improving lighting uniformity, and enhancing lighting on safety-critical corridors would support the city's energy and Vision Zero goals. This report helps the City start to translate policy goals into actionable lighting guidelines that balance roadway safety, energy performance, and neighborhood character.
- **Opportunities for Action:** This report positions the City of Burlingame to prioritize corridors and intersections where lighting opportunities overlap with collision potential, to update lighting guidelines to incorporate industry best practices, and to integrate lighting strategies into upcoming capital improvement and Vision Zero initiatives.

Next Steps

The findings in this report provide the City of Burlingame with a foundation to:

- Transition toward more efficient, consistent, and uniform lighting systems that align with the city's sustainability and Vision Zero objectives.
- Develop capital projects and policies that integrate lighting improvements into broader transportation and streetscape investments.
- Identify and prioritize corridors where lighting improvements can help improve safety outcomes.
- Continue quantitative evaluation of the relationship between lighting and safety to refine design priorities over time.

Glossary

Below is a glossary of technical lighting terms mentioned throughout this document. **Highlighted terms** do not appear in the document and are included for reference.

Color Temperature: The color appearance of the light, measured in Kelvin. This ranges from cool to warm, typically described as a blue/white hue (cool) to yellow/orange hue (warm).

Controlled Light: Light directed toward the intended area to be illuminated, most often a street, sidewalk, pathway or park.

Distribution: The shape of the area that is illuminated by a fixture, categorized as Type I through Type 5.

Footcandle: A measure of illumination, describing the intensity of light falling on a surface.

Glare: An excess of lighting or discomfort caused by a light source. Glare occurs when the level of light is too high relative to the surrounding environment, causing visual discomfort and reducing visibility. In the case of street lighting, glare can be a problem when the light sources are too bright or are not properly shielded.

Illuminance: Or more specifically, *horizontal* illuminance, is the amount of light falling onto a *horizontal* surface, measured in lux (lx) or foot-candles (fc). This is a common objective measure of brightness along a surface in the roadway lighting context.

Illuminating Engineering Society of North America (IESNA): The professional lighting organization that produces guidance on lighting practice and application in North America.

Light Fixture: A complete lighting unit consisting of a light source, such as light emitting diodes (LED) device, lamp or lamps, and the parts designed to distribute the light, position and protect the light source, and connect the light source to the power supply. This is also called a luminaire.

Light Loss Factor: The reduction in light level as the light source ages, equipment begins to wear, and dirt accumulates.

Light Trespass or **Light Pollution:** Light that spills into areas that are not intended to be lit. For example, light that spills onto building facades or upward into the sky.

Lumens: A measure of the intensity of the light emitted from the fixture. This is the technical measurement commonly associated with the term "brightness".

Minimum Average Maintained Footcandles: The lowest average acceptable footcandle level. This level accounts for anticipated light loss over time due to factors such as lamp lumen depreciation, dirt accumulation, and fixture aging. It is used as a design criterion to ensure that even after these losses, lighting still meets the recommended performance criteria for safety, comfort, and visibility.

Mounting Height: The height of a fixture, measured as the vertical distance between the fixture and the ground.

Spacing: The lateral spacing of light fixtures (or luminaires), measured from center of pole to center of pole.

Uniformity: A measure of the evenness of light distribution, usually expressed as a ratio of the average brightness divided by the minimum brightness.

Wasted Light: Light that does not reach the intended areas to be illuminated.

Wattage: A measure of the amount of electrical power consumed by a light source. Wattage does not directly indicate brightness, but in traditional technologies such as high-pressure sodium (HSP) lamps, wattage is often used as a rough proxy. With modern technologies such as LED, much lower wattage can produce the same lumens, which is why efficiency is measured in lumens per watt. For example, an LED fixture may consume half the wattage of an HSP lamp while still producing an equal or greater number of lumens.

1. City Policy Context

The City of Burlingame highlights roadway lighting in key citywide plans. The **Burlingame General Plan 2040** includes goals related to Complete Streets, sustainability, and community character, with indirect implications for lighting through public realm design. The **Burlingame Downtown Specific Plan** emphasizes the importance of pedestrian-scale lighting to support a vibrant, walkable downtown environment. It also emphasizes that lighting on residential streets should be sufficient but not intrusive. The **City of Burlingame 2030 Climate Action Plan** encourages reduced energy consumption and supports future implementation of efficient LED or solar-powered lighting where feasible.

Collectively, these planning documents emphasize the importance of lighting, energy efficiency, and context-sensitive design to support the city's safety, sustainability, and community character goals. This report provides an opportunity to translate these policy goals into practical lighting improvements and guidelines that consider roadway safety, energy efficiency, and neighborhood fit.

2. Existing Lighting & Safety Conditions

Street lighting plays a critical role in creating safer environments for people travelling at night. Well-designed lighting improves visibility for people walking, bicycling, and driving, reducing the likelihood of collisions in dark areas. Conversely, poor lighting uniformity, long luminaire spacing, and insufficient coverage can reduce visibility, increase perceived risk by making people feel uncertain or uneasy about their surroundings, and contribute to higher rates of severe collisions.

This chapter summarizes the existing lighting conditions along arterial and collector roadways in the City of Burlingame. The purpose of this chapter is to assess how existing roadway lighting compares with industry guidelines and to evaluate whether there are opportunities to enhance current lighting conditions to better support the city's broader safety goals.

Key Takeaways

- **Safety Patterns:** Nighttime serious injury collisions that occur in Burlingame tend to occur on the city's arterial and collector roadways. These roadways experience higher speeds and higher user volumes. There is an opportunity to increase lighting uniformity and decrease luminaire spacing on these roadways to help increase visibility and reduce the likelihood of collisions.
- **Comprehensive Coverage:** Many arterial and collector roadways in Burlingame include some lighting elements. For example, intersection safety lights, continuous roadway lights, and/or pedestrian-scale fixtures. However, there is an opportunity to increase the quality, consistency, and comprehensiveness of lighting coverage across the city.
- **Fixture Dominance:** The top five fixture wattages account for approximately two-thirds of all lighting installations on arterials and collectors, highlighting a concentration of a few dominant luminaire types.
- **GIS Metrics:** Luminaire spacing varies significantly on the city's 19 miles of arterial roadways and 15 miles of collector roadways. Arterials are most often spaced at 100 to 150 feet, while

collectors frequently exceed 200 feet between fixtures. These spacing patterns, along with wattage distribution, are key metrics derived from the GIS analysis.

- **Design Gaps:** Photometric modeling of two representative arterial lighting cases revealed that there is an opportunity on most arterial roadway segments in the city to enhance lighting to better meet recommended industry roadway lighting guidelines (ANSI/IES RP-8-21), particularly regarding average illumination and uniformity.

2.1 Safety Context

During the five-year study period of the Safety Action Plan (2020–2024), twenty-one nighttime serious injury and fatal collisions were reported in the City of Burlingame, where nighttime collisions are defined as collisions that occurred between dusk and dawn. Among those reported nighttime collisions, 8 involved someone walking, including 7 serious injuries and 1 fatality. No nighttime serious injury or fatal collisions involved someone riding a bicycle.

All twenty-one nighttime serious injury and fatal collisions occurred on an arterial or collector roadway. These include El Camino Real, Broadway, Old Bayshore Hwy, Rollins Road, California Drive, Howard Avenue, Lorton Avenue, Oak Grove Avenue, and Trousdale Drive, as shown in **Figure 2-1**. This highlights the importance of focusing on the quality of lighting on arterials and collectors across the city.

Of the twenty-one nighttime serious injury and fatal collisions, 8 occurred at a signalized intersection, 6 occurred at an unsignalized intersection, 1 occurred at a midblock marked crosswalk, and 6 occurred at another midblock location. This highlights the importance of focusing on the quality of lighting at intersections and midblock locations across the city.

Five of the twenty-one nighttime serious injury and fatal collisions occurred at locations with an opportunity for increased horizontal illuminance levels and lighting uniformity, making them good candidates for targeted lighting infrastructure improvements:

- **Rollins Road/Broderick Road intersection:** Consider increasing illumination levels and uniformity and marking crosswalks at this side street stop-controlled intersection.
- **Midblock crossing near 1333 Old Bayshore Hwy:** Consider adding lighting and intersection control at this uncontrolled midblock crossing location.
- **El Camino Real between Ray Drive and Adeline Drive:** Consider adding lighting at this midblock location.
- **El Camino Real/Palm Drive intersection:** Consider increasing illumination levels and uniformity at this side street stop-controlled intersection.
- **129 Lorton Avenue:** Consider increasing illumination levels and uniformity at this midblock location.

Figure 2-2 illustrates the overlap of nighttime serious injury and fatal collisions and citywide horizontal illumination levels.

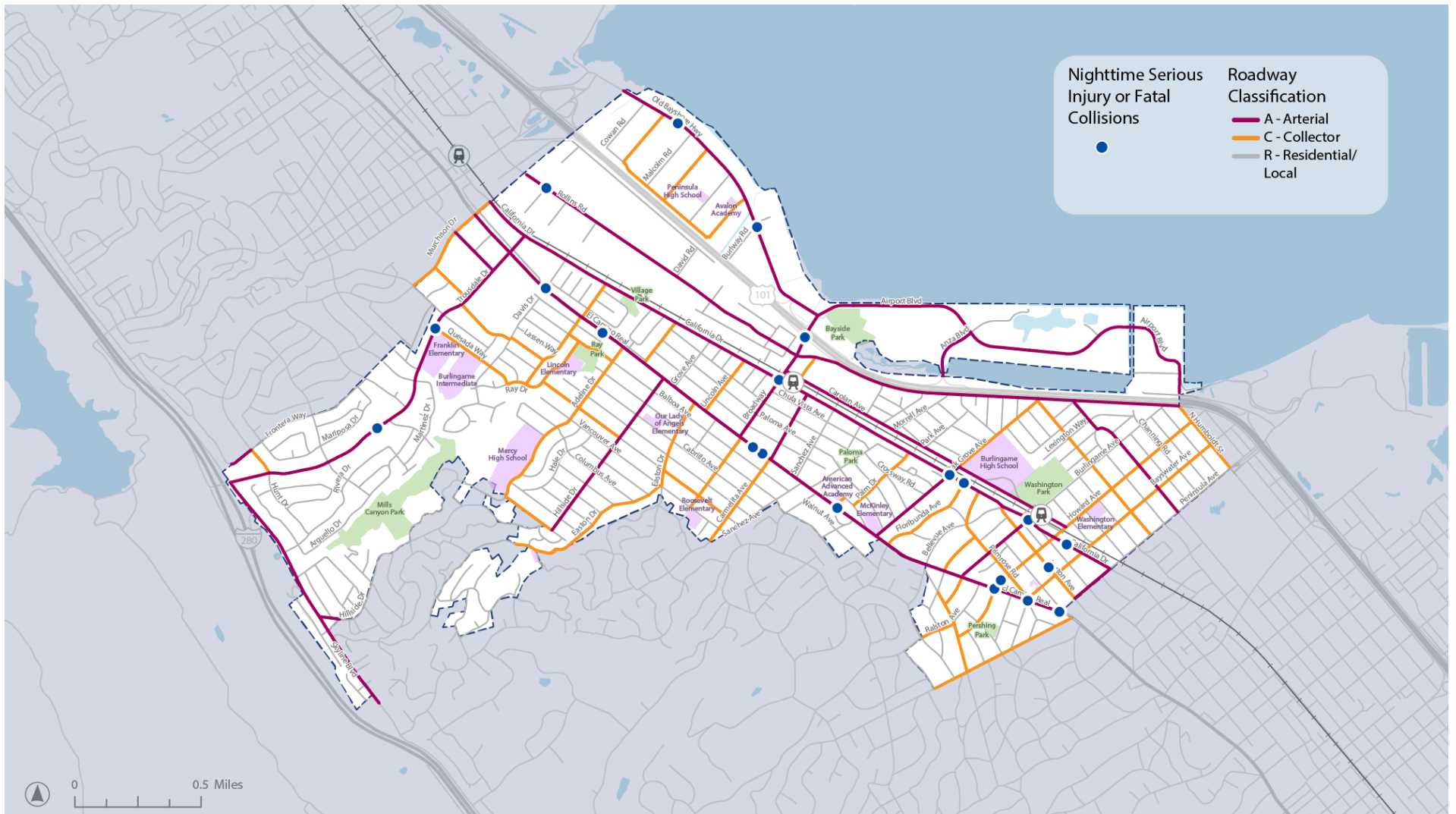
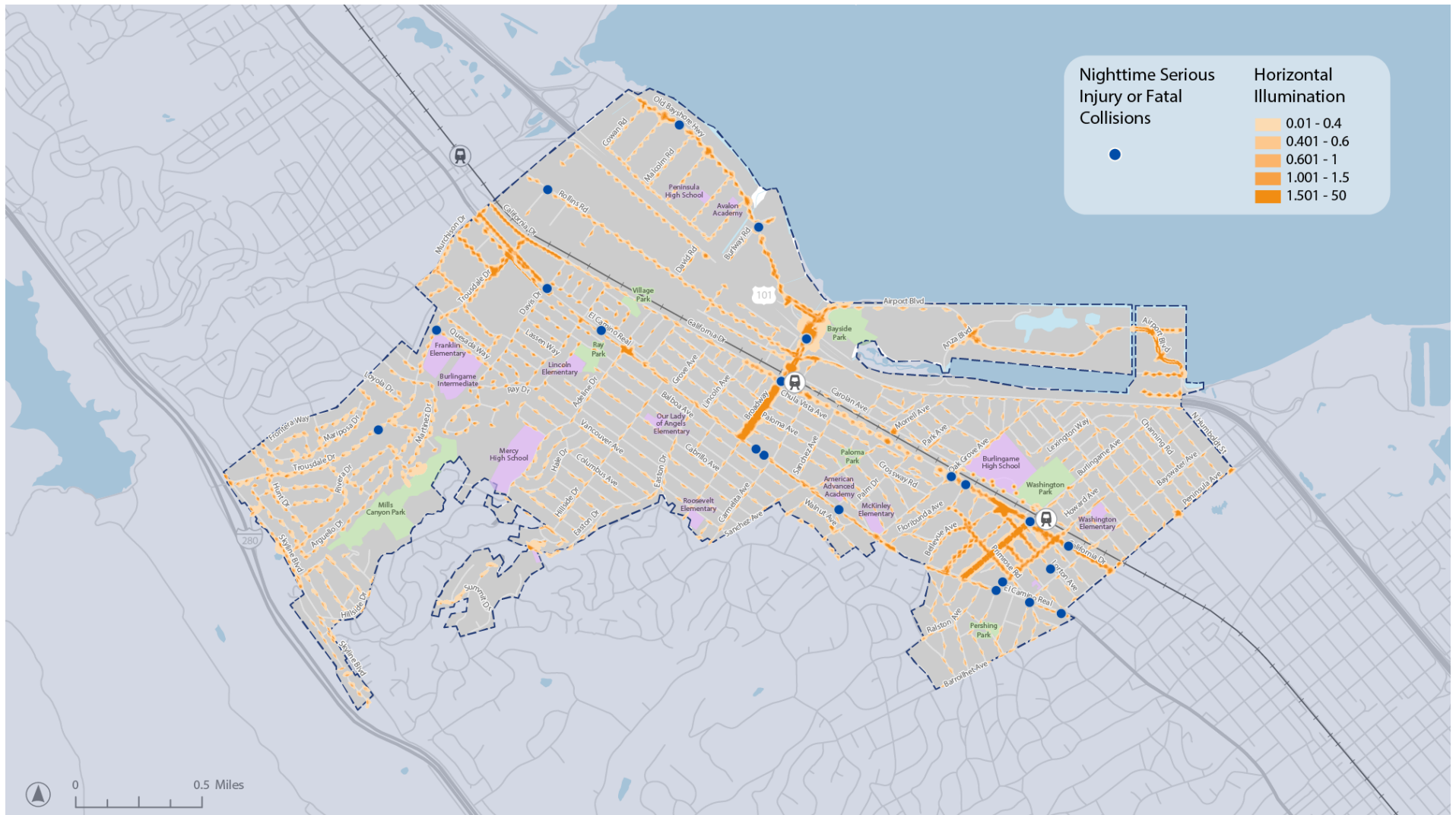


Figure 2-1



Source: Transportation Injury Mapping System (TIMS) and City of Burlingame, 2020-2024.
 Evari and City of Burlingame, 2025.

Figure 2-2

2.2 Lighting Fixture Types and Coverage

Lighting fixture types consist of key lighting inventory elements like luminaire style, wattage (W), and distribution type (Type X).

Most of Burlingame's lighting system consists of a few common luminaire styles, wattages, and distribution types.

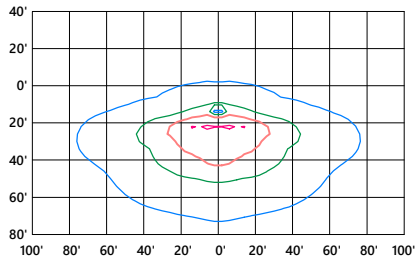
The City of Burlingame currently has more than 5,500 luminaires citywide. Over 900 luminaires are located along the city's 19 miles of arterial roadways and 15 miles of collector roadways. The five most common fixture types used on arterial and collector roadways in the City of Burlingame, along with their common locations across the city, are as follows. Together, these top five fixture types account for approximately 66% of all luminaires on arterial and collector roadways in the city.

- Cobrahead, 34W, Type 2 (quantity = 216, 4% of citywide luminaires, 23% of arterials and collectors combined), found on both arterials and collectors, largely distributed throughout central Burlingame.
- Cobrahead, 61W, Type 2 (quantity = 150, 3% of citywide luminaires, 16% of arterials and collectors combined), found on specific arterials like Trousdale Drive and Rollins Road.
- Cobrahead, 121W, Type 2 (quantity = 94, 2% of citywide luminaires, 10% of arterials and collectors combined), found on specific arterials like California Drive (northern section) and Old Bayshore Highway.
- Cobrahead, 90W, Type 3 (quantity = 80, 1% of citywide luminaires, 9% of arterials and collectors combined), found on specific arterials and collectors like California Drive (south of Broadway) and Howard Avenue.
- Cobrahead, 29W, Type 2 (quantity = 72, 1% of citywide luminaires, 8% of arterials and collectors combined), found on both arterials and collectors, largely distributed throughout southern Burlingame specifically in the Burlingame Park neighborhood.

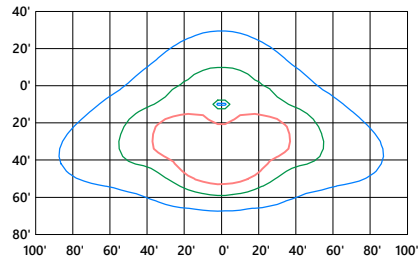
Figure 2-3 includes a map of the five most common fixture types on the city's arterial and collector roadways. The isofootcandle diagram for each of the five most common fixture types is shown in **Figure 2-4**.



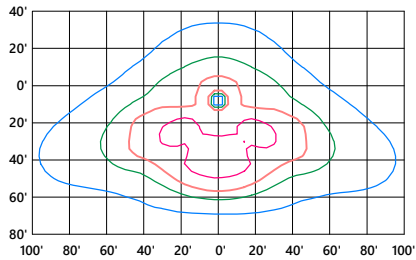
Top Five Lighting Fixtures by Wattage on Arterials and Collectors



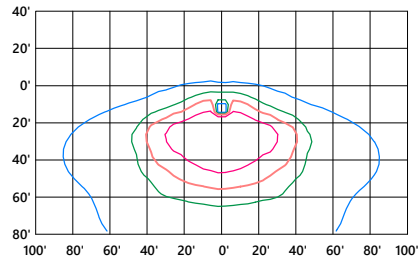
Manufacturer: Cree LED
Distribution: Type 2
Wattage: 34W - IES file shows 40W
Mounting Height: 25'



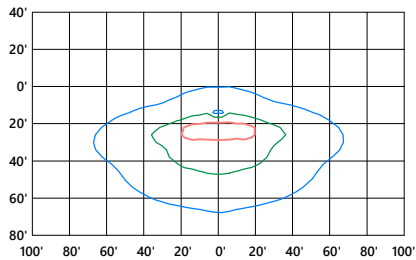
Manufacturer: Cree LEDway
Distribution: Type 2
Wattage: 61W
Mounting Height: 25'



Manufacturer: Cree LEDway
Distribution: Type 2
Wattage: 121W
Mounting Height: 25'



Manufacturer: Cree LEDway
Distribution: Type 3
Wattage: 90W - IES file shows 108W
Mounting Height: 25'



Manufacturer: Cree LED
Distribution: Type 2
Wattage: 29W - IES file shows 27W
Mounting Height: 25'

Source: CREE Lighting and City of Burlingame, 2025.

Figure 2-4

Isofootcandle Diagrams for Top Five Lighting Fixtures

The distance between luminaires, commonly referred to as “luminaire spacing” varies widely on arterial roadways in Burlingame. The longer the distance between luminaires, the less likely the streetlighting will be consistent along a given roadway, creating areas with low levels of light and, in some cases, locations with gaps in lighting.

As shown in **Figure 2-5**, approximately 25% of arterial roadway segments (or blocks) have luminaires spaced 100 to 150 feet apart, making this the most common spacing range. Examples of this spacing include Trousdale Drive and California Drive. Other luminaire spacing ranges include greater than 200 feet (on 22% of arterial roadway segments), between 150 and 200 feet (16%), between 50 and 100 feet (21%), and less than 50 feet (16%). Overall, approximately 38% of arterial roadway segments have luminaires spaced greater than 150 feet apart, making these good candidates for lighting enhancements to better meet industry guidelines for lighting brightness and uniformity (as discussed in subsequent sections of this document).

Arterial roadways generally have continuous lighting levels, with some exceptions.

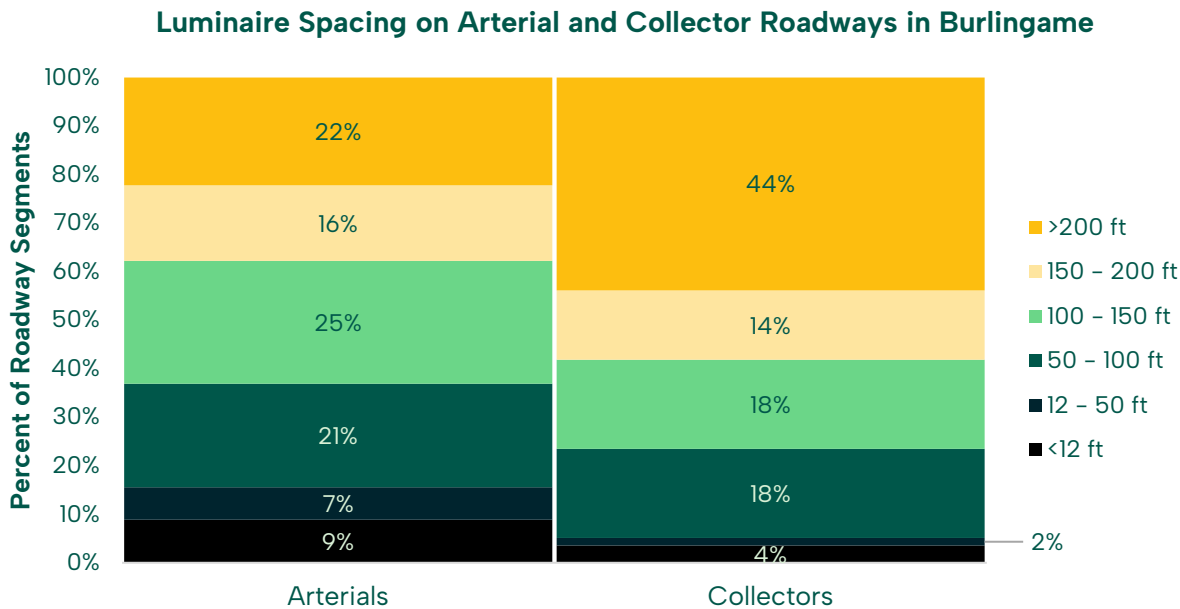
Arterial roadways, especially through the city’s commercial areas, generally have uniform and continuous light. However, there are some exceptions. For example, Rollins Road south of Broadway has luminaires with relatively low wattages (29 or 34 watts) and wide spacing between 250 and 300 feet. Hillside Drive has luminaires with relatively low wattages (34 watts) and wide spacing of 300 feet or more. These conditions may result in uneven lighting or areas of no streetlighting, potentially reducing nighttime visibility.

There is an opportunity to reduce spacing to provide more continuous lighting on collector roadways.

As shown in **Figure 2-5**, the most common luminaire spacing on collector roadways in Burlingame is greater than 200 feet (44% of collector roadway segments). By comparison, 14% of collector roadway segments fall within the 150 to 200 feet spacing range, 18% fall within the 100 to 150 feet spacing range, another 18% fall within the 50 to 100 feet spacing range, and 6% have spacing less than 50 feet. Overall, approximately 58% of collector roadway segments have luminaires spaced greater than 150 feet apart, making these good candidates for lighting enhancements to better meet industry guidelines for lighting brightness and uniformity (as discussed in subsequent sections of this document).

Several collector roadways near schools illustrate this condition. For example, Adeline Drive near Mercy High School includes street lighting, but the luminaire wattages are relatively low (29 or 34 watts) and spacings are wide (approximately 250 to 300 feet). Along Oak Grove Avenue near Burlingame High School, luminaire spacing is generally adequate, although wattages are low (29 or 34 watts), limiting the overall brightness and uniformity of lighting.

Figure 2-5: Luminaire Spacing on Arterial and Collector Roadways in Burlingame



2.3 Photometric Case Studies

To provide a deeper understanding of citywide lighting conditions and support data-driven decisions for infrastructure upgrades, two representative lighting scenarios in the City of Burlingame were identified and their performance analyzed using AGI32 software.

- **Scenario 1:** Type 2, 61W, mounted at 25’ height with 5’ luminaire mast arm, 1.0 Light Loss Factor (LLF), 4000K color temperature, and 145-foot spacing. This scenario presumes a 60-foot-wide, four-lane arterial with on-street parking lanes and staggered pole placement. This fixture type and spacing are commonly found on arterials like Trousdale Drive.
- **Scenario 2:** Type 2, 121W, mounted at 25’ height with 5’ luminaire mast arm, 1.0 LLF, 4000K color temperature, and 100-foot spacing. This scenario presumes a 40-foot-wide, two-lane arterial with on-street parking lanes and single-side pole placement. This fixture type and spacing are commonly found on arterials like the northern portion of California Drive.

These two scenarios were chosen because they capture the most common luminaire types and spacing patterns across the City’s arterial roadway network.

Table 2-1 summarizes average (E_{Havg}), maximum (E_{max}), and minimum (E_{min}) horizontal illuminance values, measured in footcandles (fc), for both the roadway and sidewalk areas under each scenario. The E_{Havg}/E_{min} ratio provides an indication of uniformity, where lower values generally represent more consistent lighting. According to the recommended design criteria in ANSI/IES RP-8-21 (“RP-8-21”), certain minimum illuminance levels and uniformity ratios should be met to ensure sufficient and evenly distributed lighting for safety and visibility.

Table 2-1: Photometric Analysis Results – Case Studies

Scenario	Calculation Summary			
	E_{Havg} (fc)	E_{max} (fc)	E_{min} (fc)	E_{Havg}/E_{min}
Scenario 1 – Roadway	0.58	1.9	0.0	N/A
Scenario 1 – Sidewalk	0.37	1.3	0.0	N/A
Scenario 2 – Roadway	1.68	3.0	0.2	8.4
Scenario 2 – Sidewalk	1.28	1.8	0.6	2.1

Note: **Bolded** values represent those that do not meet the RP-8-21 recommended design criteria (see Chapter 3).

Source: Fehr & Peers, 2025.

In Scenario 1, the zero minimum illuminance on both the roadway and sidewalk indicates that some areas receive little to no light, not meeting RP-8-21 guidelines. Scenario 2 performs better, but the roadway uniformity ratio (8.4) still exceeds the recommended threshold. This suggests the opportunity for design adjustments to improve lighting uniformity on roadways that fall under either of these common scenarios.

2.4 Citywide Illumination Model

The illumination levels noted in the sections above are based on a citywide illumination model developed for the City of Burlingame by Evari. To validate the results of the citywide illumination model and the photometric case studies the model informed, Fehr & Peers staff visited numerous locations across the city and collected over 30 light meter readings in December 2025. These locations included intersections, arterials, collectors, streets near schools, streets near parks, and streets in major activity centers (i.e., Downtown areas). At each location where light meter readings were taken, the collected spot data was consistent with the model results.

The locations visited for field verification fell within four representative roadway contexts where street lighting plays an integral role in safety and comfort for all roadway users:

1. **Arterials with In-Street Bikeways.** Includes higher-volume, higher-speed arterial roadways with Class II, IIB, III, or IIIB bikeways, where bicyclists are encouraged to operate in the roadway and where continuous, well-distributed lighting is critical at intersections and other conflict points. Visited locations include:
 - Carmelita Ave (El Camino Real to California)
 - Dwight Ave
 - Oak Grove Ave
 - Carolan Ave (Oak Grove to Howard)
 - Hillside Dr (Alvarado to El Camino)
 - Trousdale Dr (Skyline to California)

2. **Collectors with In-Street Bikeways.** Includes moderate-volume collector streets with Class II, IIB, III, or IIIB bikeways, where lighting needs are similar to arterials but at a slightly smaller scale or spacing. Visited locations include:
 - Carmelita Ave (City Limit to El Camino Real)
 - Bernal Ave (Devereaux to Hillside)
 - Ray Dr (Quesada to El Camino Real)
 - Devereaux Dr (Ray to Bernal)
 - Quesada Way (Trousedale to Ray)
3. **Downtown Streets and Areas with High Nighttime Pedestrian Activity.** Includes commercial corridors and surrounding streets with pedestrian-scale and roadway lighting, presence of near continuous tree canopy, and streetscape features. High quality lighting is critical at crosswalks, intersections, and mid-block crossings with high pedestrian activity. Visited locations include:
 - Burlingame Ave (El Camino Real to California)
 - Broadway (El Camino Real to California)
 - Various streets surrounding Burlingame Ave
4. **Arterials and Collectors with Bikeway Crossings.** Includes signalized and unsignalized intersections where bikeways cross higher-volume roadways, representing locations with elevated bicycle and vehicle conflict potential and a need for focused lighting at intersection approaches and crossing points. Visited locations include:
 - Hillside Dr/Bernal Ave
 - Adeline Dr/Bernal Ave
 - California Dr/Oak Grove Ave
 - Carolan Ave/Oak Grove Ave

Example evaluations along Trousedale Dr/Quesada Way and Hillside Dr/Bernal Ave help illustrate the field verification process and findings.

2.4.1 Detailed Lighting Investigation: Trousedale Drive/Quesada Way

The intersection of Trousedale Drive and Quesada Way has two existing roadway streetlights. Staff collected light meter readings under the two existing roadway streetlights and at several points in the marked crosswalks. The crosswalk in the southwest corner of the intersection, where there is no existing streetlight, measured the lowest light meter reading. However, all light meter readings fell within the range included in the citywide illumination model. All tree canopies at the intersection appear to be behind the streetlights and do not noticeably block light from the streetlights to the intersection.

Next, staff evaluated the lighting coverage along Quesada Way, a collector street with Class III sharrows. Staff collected light meter readings at several points directly under streetlights and at points equidistant from the nearest streetlights. The highest light meter reading locations were in the street directly beneath a streetlight, and these ranged from 0.76 to 0.84 footcandles. The lowest light meter reading locations were in the street equidistant from the nearest streetlights, and these measured 0.1 footcandles. All light meter readings fell within the range included in the citywide illumination model. Along this corridor, streetlights are located on the north side of the street, and the

tree canopy is located on the south side of the street (adjacent to Franklin Elementary School and Burlingame Intermediate School). As such, tree canopies do not affect the light coverage on the corridor.

Key Takeaways:

- Collected data validated the citywide illumination model
- Tree canopies were not found to affect light coverage
- Opportunities exist to enhance lighting at locations with the lowest light meter readings, especially in crosswalks or other potential conflict areas

2.4.2 Detailed Lighting Investigation: Hillside Drive/Bernal Avenue

The intersection of Hillside Drive and Bernal Avenue has one existing roadway streetlight. Staff collected light meter readings under the one existing roadway streetlight, at several points in the marked crosswalks, and in the approximate center of the intersection. The area under the streetlight and in the center of the intersection measured the highest light meter readings (ranging from 0.40 to 0.46 footcandles). The crosswalks crossing the side street Bernal Avenue measured the lowest light meter readings (ranging from 0.03 to 0.07 footcandles). This illustrated that the single intersection streetlight effectively lighted a portion of the intersection, but that there is an opportunity at this intersection (and all similar intersections along Hillside Drive) to add streetlighting to increase the brightness in crosswalks. Tree canopies at the intersection appear to be far enough from the streetlights to not block light to the intersection.

Next, staff evaluated the lighting coverage along Hillside Drive. On Hillside Drive, streetlighting exists only at the intersections. Staff collected light meter readings at several points along three representative blocks and found that in the center of the blocks, the light meter reading measured 0.0 footcandles. These light meter readings were consistent with the citywide illumination model.

Key Takeaways:

- Collected data validated the citywide illumination model
- Tree canopies were not found to affect light coverage
- Opportunities exist to enhance crosswalk lighting at intersections by providing additional streetlights to supplement the one existing streetlight
- Opportunities exist to provide more continuous light along the corridor by providing a streetlight at mid-block locations

Similar evaluations were conducted at other representative intersections and corridors, and findings confirmed the validity of the citywide illumination model developed by Evri. Further study is recommended to collect light meter readings and confirm the model outputs at different times of year, as seasonal factors like the presence of holiday lights on houses and the lack of leaves on some tree species may have influenced the data collection.

3. Lighting Design Criteria

Lighting design criteria establish consistent performance standards and design parameters that guide how lighting systems are planned, designed, and evaluated. These criteria define measurable targets, such as illumination levels and uniformity, that help ensure lighting supports visibility, comfort, and safety for all road users. Having clear lighting design criteria allows a city to make informed decisions about where lighting is most appropriate, apply lighting standards consistently across projects, and maintain predictable, high-quality lighting outcomes over time.

The City of Burlingame can use lighting design criteria as a framework for project planning, development review, and system upgrades. By adopting nationally recognized guidelines, Burlingame can promote safety and sustainability while minimizing ambiguity during design and implementation. These criteria also help align public expectations and professional practices, creating a shared understanding of what constitutes effective roadway and pedestrian lighting.

Lighting design criteria provide guidance and recommendations. However, they need not mandate that specific lighting levels be achieved in all cases. They are advisory rather than prescriptive. Certain lighting guidance may be financially or logistically infeasible to implement in certain situations, and final lighting decisions remain under the purview of City staff.

See **Attachment A** for a summary of recommended lighting design criteria for common transportation facility types, including roadway segments, intersections, midblock crossings, and sidewalks, to guide future lighting design decisions within Burlingame.

4. Recommendations

The following recommendations outline strategies for the City of Burlingame to consider to better align lighting design and implementation with industry lighting guidelines and prioritize lighting investments to maximize safety outcomes. Collectively, the recommendations would help the City establish a consistent lighting policy framework, integrate lighting into routine project delivery, and focus lighting investments where improved nighttime visibility can have the greatest safety benefit—particularly for people walking, biking, and accessing transit.

The recommendations are organized into policy, design, and implementation strategies.

4.1 Policy Recommendations

1. Adopt Context-Sensitive Citywide Lighting Design Criteria

The City could formally adopt citywide lighting design criteria based on ANSI/IES RP-8, as described in Attachment A. The adopted criteria would define recommended average illuminance and uniformity levels by facility context, including roadway classification, pedestrian and bicycle activity level, and pavement type.

Formal adoption of context-sensitive lighting standards would establish a consistent framework for evaluating both new and existing lighting installations. This approach reflects nationally recognized best practices and aligns with the lighting guidance commonly used by professional designers in the

absence of local standards. Adopting these criteria would enable the City to apply lighting requirements consistently across all project types when lighting is identified as a project component.

2. Require Lighting as a Project Component on Nearly All Projects

Once lighting design criteria are adopted, the City could require lighting evaluation and compliance as part of nearly all projects affecting the public right-of-way, including Capital Improvement Program (CIP) projects, development review, and private development. Evaluating existing lighting conditions and addressing enhancement opportunities relative to adopted lighting design criteria would be a baseline safety expectation.

Limited exceptions may include routine maintenance activities or emergency repairs where lighting evaluation is not practicable. The City also could establish a clear decision-making process to guide when and how to consider alternatives such as solar lighting, installation on existing utility poles, or modification and upgrade of existing fixtures. This approach would formalize and expand the City's current practice on select corridor projects and enable consistent application citywide regardless of funding source or project delivery method.

4.2 Context-Based Design Recommendations

3. Focus on Locations Where Lighting Upgrades Have Greatest Safety Benefit

Lighting enhancements provide the greatest safety benefit at locations where improved illumination increases the visibility of vulnerable road users—people walking, biking, and rolling—who interact with motorized vehicles. Informed by the citywide illumination model and field verification efforts, several location contexts were identified where targeted lighting enhancements could improve visibility and roadway safety.

Uncontrolled Crossings. Crossings where people walking, biking, and rolling cross the roadway without stop control for approaching vehicles, particularly where nighttime collisions, visibility challenges, or elevated pedestrian and bicycle activity have been documented.

- *Lighting Recommendation:* Provide new or upgraded lighting in advance of the crossing on each approach, designed to illuminate the crosswalk and approaching users and to meet applicable average brightness and uniformity criteria for the roadway context.

Intersections. Locations where multiple travel modes converge and conflict points are concentrated, especially intersections where nighttime collisions or visibility challenges have been documented.

- *Lighting Recommendation:* Upgrade lighting to better illuminate crosswalks, corners, and conflict areas within the intersection. Where feasible, integrate lighting with signal or utility poles to improve crosswalk visibility while minimizing additional streetscape elements. Ensure tree canopies are considered when placing new poles to reduce likelihood of trees blocking streetlights.

Arterials and Collectors. Higher-speed, higher-volume corridors that carry significant through traffic and may include in-roadway bikeways, transit service, and frequent access points, especially where nighttime collisions have been documented.

- *Lighting Recommendation:* Improve lighting uniformity and coverage along the corridor, with targeted enhancements at crossings, driveways, bikeway segments, and transit stops—particularly where pedestrian and bicycle activity occurs adjacent to fast-moving traffic.

High Pedestrian Demand Areas. Areas with consistently high pedestrian activity, including school zones, activity centers, commercial districts, high-density residential areas, and locations near transit centers and major transit stops. These areas often have frequent crossings, nighttime activity, and vulnerable users.

- *Lighting Recommendation:* Upgrade lighting along sidewalks, crossings, waiting areas, and key pedestrian routes to provide consistent illumination. Emphasize uncontrolled crossings and pedestrian conflict areas with opportunities to enhance lighting to align with adopted lighting design criteria to enhance visibility, comfort, and safety.

4. Adhere to Lighting Placement Principles

Lighting placement should prioritize safety, visibility, and predictability for all roadway users. At intersections and crossings, luminaires should be located in advance of crosswalks to enhance pedestrian visibility through positive contrast and to adequately illuminate all conflict areas, including crosswalks, turning movements, and intersection interiors.

Along corridors, consistent lighting should be considered where bicyclists and motor vehicles share space or are separated by striping alone, including Class III bike boulevards, Class II bike lanes, and Class II buffered bike lanes. Consistent illumination supports user predictability and improves visibility in shared or semi-separated environments.

4.3 Implementation & Maintenance Recommendations

5. Implement a Proactive Lighting Upgrade Program

The City could consider implementing a proactive program to upgrade existing lighting that does not align with adopted ANSI/IES RP-8 lighting design criteria. A dedicated annual funding allocation would support systematic progress toward improving lighting coverage, uniformity, and consistency across the city, rather than relying solely on project-driven or reactive upgrades.

This program would allow the City to address known lighting enhancement opportunities, coordinate lighting improvements with other safety initiatives, and prioritize locations with the greatest potential for safety improvements.

6. Integrate Lighting with Other Safety Strategies

Street lighting is an important safety countermeasure, but lighting alone cannot fully address nighttime safety, particularly at intersections and midblock crossings. In these locations where lighting enhancement opportunities align with other safety enhancement opportunities, additional safety improvements could be considered, including high-visibility crosswalks, enhanced signage and markings, Rectangular Rapid Flashing Beacons (RRFBs), pedestrian hybrid beacons (PHBs), or intersection control enhancements, where warranted.

Integrating lighting with broader Vision Zero strategies supports a comprehensive, systems-based approach to improving nighttime safety.

7. Design for Maintainability and Cost-Effectiveness

Lighting upgrades should account for long-term maintenance and operational considerations. Fixture placement and spacing should consider tree canopies, root zones, and overhead utilities to minimize conflicts and ensure continued performance over time. Designs should achieve desired illumination levels using the minimum number of luminaires necessary, avoiding over-lighting while meeting adopted safety and performance criteria.

8. Monitor, Evaluate, and Refine Over Time

The City should treat this assessment and its recommendations as a living framework. Periodic updates would reflect evolving lighting technologies, costs, and safety data, including tracking nighttime collision trends, evaluating emerging technologies such as adaptive lighting and smart controls, and coordinating with peer cities and regional partners to share best practices.

Attachment A. Lighting Design Criteria

Lighting design criteria establish consistent performance standards and design parameters that guide how lighting systems are planned, designed, and evaluated. These criteria define measurable targets, such as illumination levels and uniformity, that help ensure lighting supports visibility, comfort, and safety for all road users. Having clear lighting design criteria allows a city to make informed decisions about where lighting is most appropriate, apply lighting standards consistently across projects, and maintain predictable, high-quality lighting outcomes over time.

Lighting design criteria can be used as a framework for project planning, development review, and system upgrades. By adopting recognized standards, a city can promote safety and sustainability while minimizing ambiguity during design and implementation. These criteria also help align public expectations and professional practices, creating a shared understanding of what constitutes effective roadway and pedestrian lighting.

Fehr & Peers summarized key design criteria for new lighting system using ANSI/IES RP-8-21, “American National Standard Practice for Roadway and Street Lighting.” Published jointly by the American National Standards Institute (ANSI) and the Illuminating Engineering Society (IES), this resource provides evidence-based recommendations for roadway, intersection, midblock, and sidewalk lighting. It is one of the most widely recognized national references for roadway lighting design, offering a consistent framework that balances visibility, energy efficiency, and public safety.

These criteria apply to locations where continuous roadway lighting and targeted intersection lighting are required. However, lighting is not required on every roadway or at every intersection. Warrants for continuous lighting are discussed in both the AASHTO Lighting Design Guide (7th edition, October 2018) and FHWA Lighting Handbook (2023).

Lighting design criteria provide guidance and recommendations. However, they need not mandate that specific lighting levels be achieved in all cases. They are advisory rather than prescriptive. Certain lighting guidance may be financially or logistically infeasible to implement in certain situations, and final lighting decisions remain under the purview of City staff.

The following sections summarize recommended lighting design criteria for common transportation facility types, including roadway segments, intersections, midblock crossings, and sidewalks, to guide future lighting design decisions within Burlingame.

Roadway Segments

Roadway segments are defined as the roadway where motorized traffic and bicycles travel. Lighting design criteria for roadway segments are assigned based on *roadway classification*, *pedestrian activity classification*, and *pavement classification*.

Roadway classification defines a roadway segment based on its purpose within the larger roadway system. While roadway classification is typically established by the jurisdiction that owns and operates the street system, RP-8-21 provides the following general definitions:

- **Major (Arterial):** Principal roadways for through-traffic flow within and through a jurisdiction.
- **Collector:** Service traffic movements between major and local streets.
- **Local:** Provide direct property access, typically making up a large proportion of a total roadway system while carrying a small proportion of vehicular traffic.

Pedestrian activity classification defines the level of pedestrian activity on a roadway segment based on pedestrian volumes during hours of darkness. RP-8-21 categorizes pedestrian activity into the following three levels:

- **High pedestrian activity areas:** More than 100 pedestrians during the highest nightly average one-hour volume period. For example, this would include downtown areas with dense urban development (typically over 12 pedestrians per acre), or areas around major arenas.
- **Medium pedestrian activity areas:** Between 11 and 99 pedestrians during the highest nightly average one-hour volume period.
- **Low pedestrian activity areas:** 10 or fewer pedestrians during the highest nightly average one-hour volume period. In low activity areas, the jurisdiction should define whether sidewalk lighting is required, as lighting will typically have lower value in this application.

If pedestrian volumes for a given roadway segment are not known, then “medium” activity should be presumed, unless the street’s land use types and density would indicate that the criteria for high or low activity are met.

While lighting criteria for roadway segments are oriented towards motorized traffic and bicycle travel, pedestrian activity is still a key consideration when assessing roadway segment light levels. This is because the higher the volume of pedestrians on the sidewalk, the higher the probability that a pedestrian could be on the street and, therefore, the greater the need for higher lighting levels.

Pavement classification defines a roadway segment based on how light reflects from its surface and the overall lightness of the material. RP-8-21 categorizes pavement into four classes, following the International Commission on Illumination (CIE) Four-Class system:

- **Class R1:** Portland cement concrete road surface; or asphalt road surface with a minimum of 12 percent of the aggregates composed of artificial brightener aggregates.
- **Class R2:** Asphalt road surface with an aggregate composed of a minimum 60 percent gravel; or asphalt road surface with 10 to 15 percent artificial brightener in aggregate mix.
- **Class R3:** Asphalt road surface (regular and carpet seal) with dark aggregates (e.g., trap rock, blast furnace slag); or road surface taking on a rough texture after some months of use (often occurs with highways).
- **Class R4:** Asphalt road surface with very smooth texture.

The lighting along roadway segments is measured by average horizontal illuminance (fc), uniformity ratio (E_{avg}/E_{min}), and veiling luminance ratio (L_{vmax}/L_{vavg}). Horizontal illuminance reflects the overall brightness of the pavement surface, helping drivers, bicyclists, and pedestrians detect potential hazards and navigate comfortably at night. Uniformity and veiling luminance ratios measure the consistency of lighting levels along the roadway, where higher ratios indicate reduced glare and dark spots that could impair visibility.

Accounting for a roadway segment's roadway classification, pedestrian activity classification, and pavement classification, the lighting design criteria in Table 3-1 should be met. As shown here, higher illumination levels are recommended for major roadways and areas with higher pedestrian activity, while lower levels are appropriate for local streets and lower pedestrian activity areas. For example, for a collector roadway with medium pedestrian activity and an R3 pavement classification, an average horizontal illuminance of 0.9 fc is recommended, while the uniformity ratio should not exceed 4.0 and the veiling luminance ratio should remain below 0.4.

Table 3-1: Lighting Design Criteria for Roadway Segment Lighting

Roadway & Pedestrian Activity Classifications		Horizontal Illuminance E_H (fc) by Pavement Classification			Uniformity Ratio E_{avg}/E_{min}	Veiling Luminance Ratio L_{vmax}/L_{vage}
Roadway Classification	Pedestrian Activity Classification	R1	R2 & R3	R4		
Major	High	1.2	1.7	1.5	3.0	0.3
	Medium	0.9	1.3	1.1	3.0	0.3
	Low	0.6	0.9	0.8	3.0	0.3
Collector	High	0.8	1.2	1.0	4.0	0.4
	Medium	0.6	0.9	0.8	4.0	0.4
	Low	0.4	0.6	0.5	4.0	0.4
Local	High	0.6	0.9	0.8	6.0	0.6
	Medium	0.5	0.7	0.6	6.0	0.6
	Low	0.3	0.4	0.4	6.0	0.6

Source: American National Standard Practice for Roadway Lighting ANSI/IESNA RP-8-21.

Intersections

Intersections are defined as the points where roadway segments cross. Lighting design criteria for intersections are assigned based on *roadway classification of crossing roadway segments* and *pedestrian activity classification*, as defined above. The criteria differ for “full intersections” and “partial intersections”

A “full intersection” describes an intersection where the intersecting roadways are both continuously lighted.

The adequacy of lighting at a full intersection is measured by average horizontal illuminance (fc) and uniformity ratio (E_{avg}/E_{min}).

Accounting for a full intersection’s roadway classification of crossing roadway segments and pedestrian activity classification, the lighting design criteria in **Table 3-2** should be met. These criteria assume a pavement classification of R2 or R3 (as defined above). Higher illumination levels are recommended for full intersections with major crossing roadways and with higher pedestrian activity. For example, for a full intersection where two continuously lighted major streets cross and pedestrian activity is medium, an average horizontal illuminance of 2.4 fc is recommended, while the uniformity ratio should not exceed 3.0.

Table 3-2: Lighting Design Criteria for Full Intersection Lighting

Roadway Classification of Crossing Roadway Segments	Horizontal Illuminance E_H (fc) Per Pedestrian Activity Classification			Uniformity Ratio E_{avg}/E_{min}
	High	Medium	Low	
Major/Major	3.2	2.4	1.7	3.0
Major/Collector	2.7	2.0	1.4	3.0
Major/Local	2.4	1.9	1.2	3.0
Collector/Collector	2.2	1.7	1.1	4.0
Collector/Local	2.0	1.5	0.9	4.0
Local/Local	1.7	1.3	0.7	6.0

Source: American National Standard Practice for Roadway Lighting ANSI/IESNA RP-8-21.

A “partial intersection” describes an intersection where only one of the intersecting roadways is continuously lighted.

Like a full intersection, the adequacy of lighting at a partial intersection is measured by average horizontal illuminance (fc) and uniformity ratio (E_{avg}/E_{min}). However, for a partial intersection, only the roadway classification of the continuously lighted intersecting roadway applies.

For a partial intersection, the lighting design criteria in **Table 3-3** should be met. For example, for a partial intersection where the continuously lighted intersecting roadway is a major roadways with a R3 pavement classification, an average horizontal illuminance of 0.8 fc is recommended, while the uniformity ratio should not exceed 3.0.

Table 3-3: Lighting Design Criteria for Partial Intersection Lighting

Roadway Classification	Horizontal Illuminance E_H (fc) Per Pavement Classification			Uniformity Ratio E_{avg}/E_{min}
	R1	R2 & R3	R4	
Major	0.6	0.8	0.7	3.0
Collector	0.4	0.6	0.5	4.0
Local	0.3	0.4	0.4	6.0

Source: American National Standard Practice for Roadway Lighting ANSI/IESNA RP-8-21.

Midblock Crossings

Midblock crossings are defined as marked crosswalks at non-intersection locations. Lighting design criteria for midblock crossings are assigned based on *pedestrian activity classification*, as defined above. Lighting is a particularly important safety feature at midblock crossings to help make pedestrians more visible to drivers and encourage drivers to stop when a pedestrian is in the crosswalk.

The adequacy of lighting at midblock crossings is measured by vertical illuminance (fc). Based on research presented in RP-8-21, midblock crossings should be maintained at an average vertical illuminance of 1.9 to 3.7, depending on the expected level of pedestrian activity. An average of 1.9 fc is recommended for areas with low pedestrian activity, 2.8 fc for areas with medium pedestrian activity, and 3.7 fc for areas with high pedestrian activity.

Street light pole location also plays an important role in lighting design at midblock crossings. To the extent feasible, street light poles should be placed in advance of midblock crosswalks to cast light in front of crossing pedestrians (a concept referred to as “front-lighting” an object).

Accounting for a midblock crossing’s pedestrian activity classification, the lighting design criteria in **Table 3-4** should be met.

Table 3-4: Lighting Design Criteria for Midblock Crossing Lighting

Pedestrian Activity Classification	Average Vertical Illuminance (fc)
Low	1.9
Medium	2.8
High	3.7

Source: American National Standard Practice for Roadway Lighting ANSI/IESNA RP-8-21

Sidewalks

Sidewalks are defined as walkways adjacent to the road right of way. Lighting design criteria for sidewalks are assigned based on *pedestrian activity classification*, as defined above.

Sidewalks have their own lighting design criteria distinct from roadway segments, intersections, or midblock crossings. While lighting for roadway segments, intersections, or midblock crossings may spill over onto adjacent sidewalks, the lighting may not be adequate to fully light the sidewalks. To adequately light sidewalks, a low lumen output with little to no upward light should be installed at a lower mounting heights, compared to streetlights oriented towards roadway illumination.

The adequacy of sidewalk lighting is measured by average horizontal illuminance (fc) and uniformity ratio (E_{avg}/E_{min}).

Accounting for a sidewalk's pedestrian activity classification, the lighting design criteria in **Table 3-5** should be met. Higher illumination levels are recommended for areas with greater pedestrian activity, such as commercial districts or near transit stops. For example, for a sidewalk in an area with medium pedestrian activity, an average horizontal illuminance of 0.5 fc is recommended, with a uniformity ratio not exceeding 5.0.

Table 3-5: Lighting Design Criteria for Sidewalk Lighting

Pedestrian Activity Classification	Horizontal Illuminance E_H (fc)	Uniformity Ratio E_{avg}/E_{min}
Low	0.2	10.0
Medium	0.5	5.0
High	0.9	5.0

Source: American National Standard Practice for Roadway Lighting ANSI/IESNA RP-8-21.