

TAHOE PARK NEIGHBORHOOD ASSOCIATION WALK AUDIT REPORT

A Report by WALKSacramento

2015

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Walk Audit Background

This report identifies a number of potential improvements along Broadway between 57th and 65th Street that would address pedestrian and bicycle safety, traffic speeds and behavior, and help to activate the corridor as a main street. The recommendations in this report apply to the City of Sacramento as well as developers, business owners, Regional Transit, Tahoe Elementary School, and homeowners along Broadway. These recommendations are based on resident input from a community walk audit and have been vetted through City standards, guidelines, and plans.

This community has recently seen an influx of new infill development which seems to be inducing more, often high speed, traffic on Broadway. As the Tahoe Park Neighborhood continues to see more growth, especially to the east of 65th Street, it is imperative that Broadway remain a low speed, pedestrian and bicycle friendly neighborhood street. Without appropriate traffic calming features, additional crossing opportunities, and an emphasis on walking and biking, Broadway may increasingly be treated as a thoroughfare that discourages active modes of transportation and physically separates the community. This report provides the City of Sacramento and prospective developers with a list of transportation improvements that reflect the priorities and needs of residents within the Tahoe Park Community.

Identifying Barriers to Walking and Biking

To identify the barriers to walking and biking along Broadway, a walk and bike audit was held on May 30, 2015. The audit included workshops before and afterward to identify community priorities and concerns and discuss existing conditions. The 26 participants included a City of Sacramento City Council Member, two Sacramento City police officers, Tahoe Park Neighborhood Association board members, the Tahoe Park Neighborhood Association Land Use Committee, several other community members, the Sacramento Area Bicycle Coalition, and WALKSacramento.

The audit covered both the north and south sides of Broadway between 57th Street and 65th Street. Participants made particular note of the walking and biking environment, assessing pedestrian and bicycle facilities, the prevalence of crossing opportunities, driver behavior, and other factors that may create barriers to alternative forms of transportation.

Community Priorities

During the walk audit and accompanying workshops, residents from the Tahoe Park neighborhood shared their priorities and concerns about the streetscape environment along Broadway. One of the most common priorities expressed was the desire for Broadway to be a traffic calmed, pedestrian and bicycle friendly main street rather than simply a cut-through thoroughfare. The community also voiced concern that Broadway physically separates parts of Tahoe Park because of its high traffic speeds and lack of pedestrian crossings. Residents placed a high priority on improving safety along Broadway and showed particular interest in infrastructure that enables students to walk and bike to Tahoe Elementary School. With regard to specific pedestrian and bicycle



improvements, residents of Tahoe Park expressed a strong desire for more bike lanes, enhanced pedestrian crossings, and sidewalks that better protect pedestrians from vehicle intrusion. Finally, many residents shared a priority for ensuring slow traffic speeds along Broadway at all times.

Existing Roadway Conditions

The Broadway corridor between 57th Street and 65th Street is a two lane roadway with 12 ft. vehicle lanes and approximately 7.5 ft. striped shoulders. The bicycle master plan identifies class II bike lanes on Broadway between Stockton Boulevard and 61st Street. Past 61st Street the striped shoulders are designated as vehicle parking lanes. The pedestrian environment along this stretch of Broadway include five-foot sidewalks with rolled curbs. The rolled curbs sometimes lead to parked cars mounting the sidewalk and thus narrowing the pedestrian right of way. Drive lane width is relatively consistent along this corridor except at two intersections (59th Street and 65th Street) where the eastbound lanes narrow to accommodate a left turn lane. At those same locations, back-out parking creates barriers to unimpeded pedestrian travel.



There are no 4-way intersections along this entire stretch of roadway except at 65th Street. This means that all north and southbound traffic must also travel laterally on Broadway for a short distance. This leads to more traffic on Broadway than at similar four-way intersections. Across Broadway there are no midblock crossings and only four marked crossings. Along the 3/5 of a mile long corridor, only five of the sixteen intersections contain a marked crosswalk. Furthermore, only 16% of the total intersection legs are marked.

Although this stretch of Broadway is signed between 30 and 25 miles per hour along different segments, actual speeds often exceed posted limits. According to City traffic investigations in 2010, observed speed limits were close to 10 mph in excess of posted limits. Along this stretch there are five speed limit signs and eight pedestrian crossings signs. High speeds coupled with a lack of left turn lanes have been identified as a concern for all modes of travel, contributing to rear-ends, drivers circumventing turning vehicles into the pedestrian and bicycle right of way, and drivers making rapid left turns to beat oncoming traffic. Furthermore, narrow corners at intersections coupled with rolled curbs can allow right turning vehicles to mount curbs, creating conflicts for pedestrians.

The aesthetic environment of Broadway between 57th Street and 65th Street is characterized by numerous, mature shade trees and well-kept properties lining the street. However, large utility poles, transit stop benches within the sidewalk, and cars parked partially upon the sidewalk not only detract from the aesthetic quality but can impede upon the pedestrian right of way and decrease safety. Although there is some pedestrian scale lighting, the majority of lighting along Broadway is focused at the Vehicle Scale.

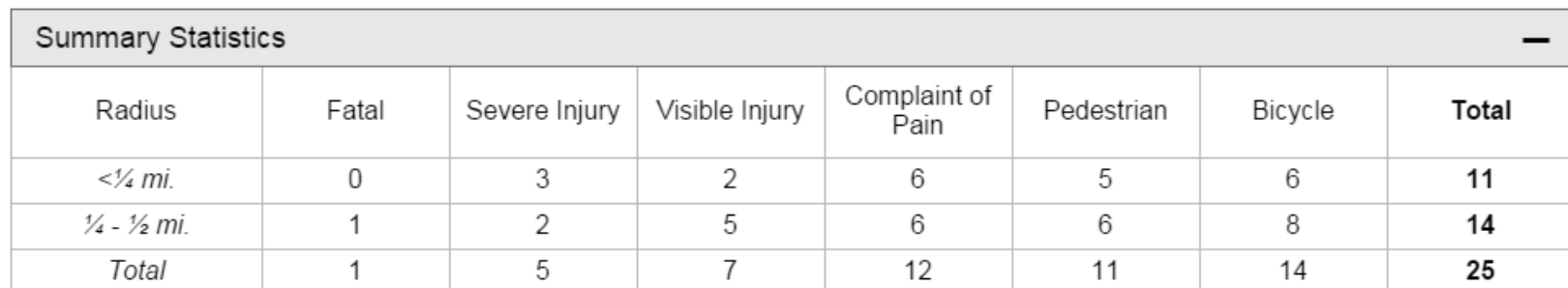
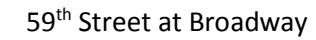
Opportunities for Advocacy

There are several strategic opportunities to enact many of the improvements recommended within this report. Due to a limited amount of available space for new infrastructure along Broadway, the majority of the proposed solutions herein can be accomplished within the existing right of way. Periodic roadway resurfacing efforts by the City are an excellent opportunity to ensure that roads are restriped to be more inclusive of all transportation modes. Additionally, the City of Sacramento is undergoing an effort to upgrade facilities throughout the City to be compliant with the Americans with Disabilities Act, creating an opportunity for not only more ADA compliant facilities but more modern street corners that discourage vehicles from mounting curbs. Additionally, the demonstrated community input and support that has guided these recommendations can contribute to more competitive applications for infrastructure improvements, especially those that support safety around Tahoe Elementary School. Finally, any new development or renovations to existing properties along Broadway should take into account the findings within this report.

Walk Audit Map



Between the nine year span of 2004 to 2013, eight collisions were reported between a motorist and a pedestrian or cyclist along Broadway. Three of these collisions occurred at 59th Street by the elementary school. The two pedestrian and six bicycle collisions included four injuries that were either severe or involved visible injuries. It is quite possible that more collisions, or near-collisions occurred but were not reported.

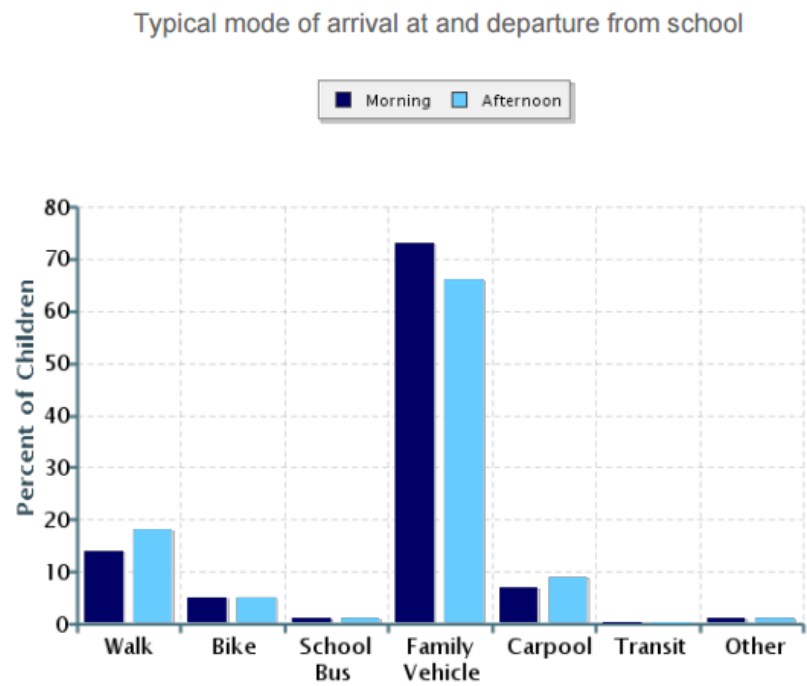
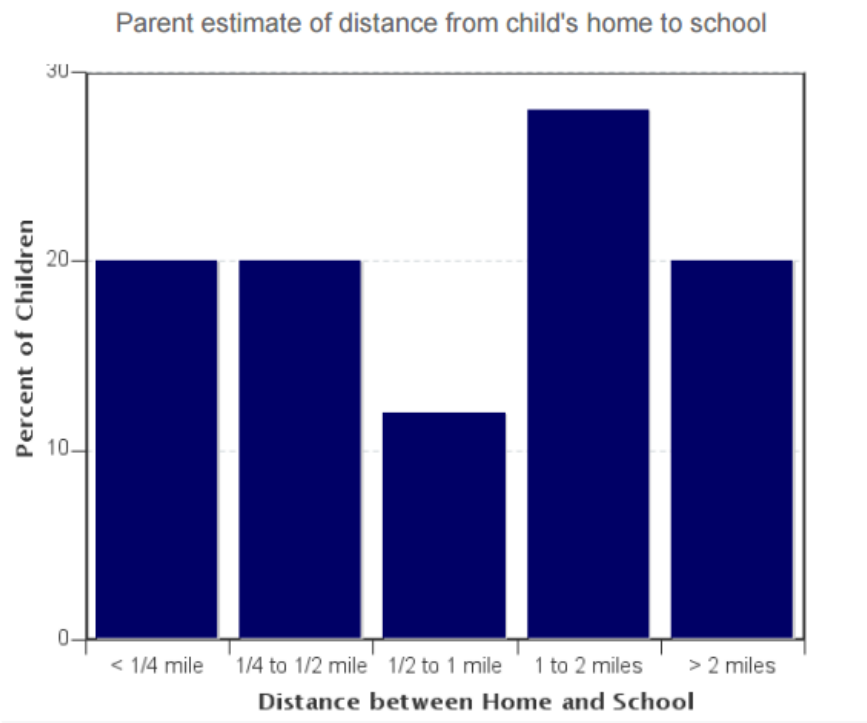


Safe Routes to School

Tahoe Elementary School is located at 3110 60th Street on Broadway and is part of the Sacramento City Unified School. For the 2014-2015 school year 338 students were enrolled, of which 87.6% were eligible for free or reduced priced lunches.ⁱ

Through surveys from the Safe Routes to School National Partnership, parents at Tahoe Elementary shared information about their student’s travel behaviors as well as reasons for allowing or disallowing their student to walk or bike to school. Over half of the students were represented by the surveys.

According to the surveys, represented below, approximately 52% of parents report living within a mile of the elementary school, a relatively walkable distance for students. However, nearly 75% of parents report that their student’s primary mode of transportation is the family vehicle. The next most common mode of transportation to school is walking at about 15%. Parents ranked “speed of traffic along the route” and “student safety at interesections and crossings” as two of the main deterrants to allowing their students to walk or bike to school. If implemented, the recommendations within this report may lead to more parents feeling comfortable allowing their student(s) to walk or bike to school.



Walk Audit Recommendations

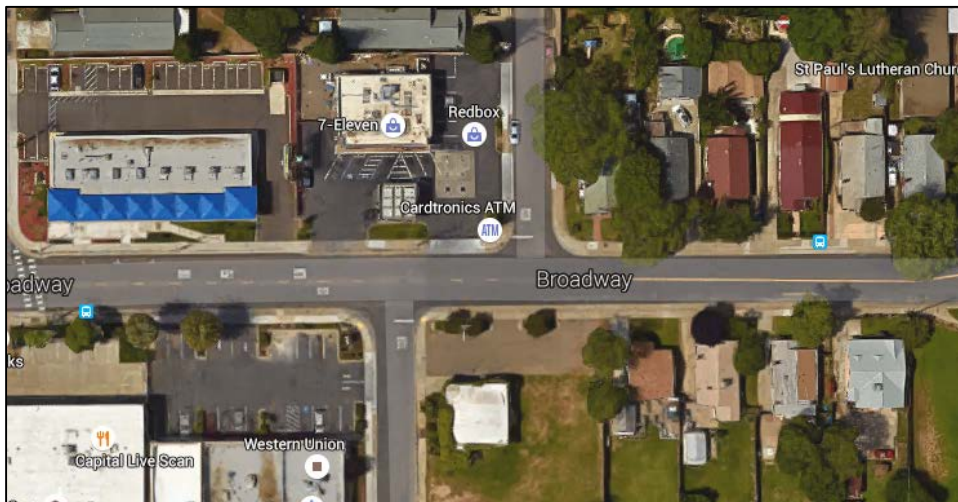
ID	Location	Recommendation	Justification
1	Broadway between 57 th Street and 65 th Street	Implement a Complete Streets, traffic calming retrofit within the existing right-of-way.	<ul style="list-style-type: none"> The lowest allowable standard for drive lanes in the City of Sacramento are 11 ft. wide. Narrow lanes have proven effective at calming traffic speeds.ⁱⁱ The 2 ft. gained by narrowing the lanes make available room for 1 ft. buffers on both sides of the street. To make the striped shoulders useable as bike lanes, on-street parking must be restricted. According the City's street standards, parking is restricted on arterials that are in excess of 14,000 ADT (Average Daily Trips). According to the 65th Street Station Area Plan, a traffic analysis in 2010, and traffic counts along Broadway, ADT has been projected near 14,000. As development continues to occur in this area, it is possible that this number will soon exceed 14,000. The striped buffers, preferably inlaid with tactile bumps to alert drivers, will not only provide separation for cyclists, but will help deter drivers from circumventing left-turning traffic through the bike lanes or on sidewalks.ⁱⁱⁱ This Complete Streets conversion conforms to roadway design standards, requires no additional procurement of right of way, proposes no major infrastructure installation, and can be accomplished relatively cheaply if coordinated with resurfacing efforts. While eliminating parking may be a tough sell for nearby homeowners, based on an aerial analysis, nearly all properties along this stretch can easily accommodate at least two cars with garages and/or long driveways. Additional on street parking can be accommodated on the numerical north/south streets.

Visual



ID	Location	Recommendation	Justification
2	58 th Street and Broadway	Install a rapid rectangular flashing beacon (RRFB) crosswalk across Broadway at 58 th Street.	<p>58th Street is a major north-south connector street through the Tahoe Park Neighborhood for vehicles, pedestrians, and bicyclists. Due to the misalignment of 58th at Broadway, all north-south trips must travel for a distance on Broadway. Due to the lack of a dedicated turn lane, motorist continuing on 58th either wait for a break in both direction of traffic to make a rapid two-stage turn, or cause traffic to back-up as they wait to turn left. Adding to this situation are two driveways at the corner gas station that add additional vehicles onto Broadway. This combination of issues has led to vehicles failing to yield for pedestrians crossing Broadway and near-collisions as motorists try to navigate the intersection.</p> <p>To increase the rate of yielding at this intersection and to improve visibility of pedestrians, an RRFB should be installed. According to the Federal Highway Administration, RRFBs can enhance safety by reducing crashes between vehicles and pedestrians. RRFBs are a lower cost alternative to traffic signals and hybrid signals that are shown to increase driver yielding behavior at crosswalks significantly when compared to standard pedestrian crossing markings. At the intersection of Broadway and 58th there are no marked crossings or signs. The cost of an RRFB is approximately \$10,000 to \$15,000 for purchase and installation of two units with solar panels for powering the units.^{iv}</p> <p>According to City of Sacramento traffic engineers, the City typically no longer approves smaller parcels with four driveways. Thus, an opportunity exists to negotiate with either the existing or future tenant to close the eastern most driveway on Broadway to make room for a crosswalk. This is particularly relevant should the landowner attempt to redevelop the site at any point in the future.</p>

Visual



ID	Location	Recommendation	Justification
3	62 nd Street and Broadway	<p>Upgrade this crossing to an RRFB crossing</p> <p>Relocate the pedestrian crossing sign to be more visible to motorists</p>	<p>Between 65th Street and this crosswalk at 62nd Street (a distance of 1,445 ft.) there are no marked pedestrian crossings nor any traffic controls. From a driver yield survey at this intersection, only 18 of 100 (18%) of drivers yielded for a pedestrian. A combination of high speeds, a fear that because of higher speeds a driver may be rear-ended if they yield, and poor visibility of pedestrians may be contributing to this lack of compliance.</p> <p>As stated above, flashing beacon crosswalks have been proven to increase driver yield rates at crosswalks when compared to traditionally marked crosswalks. Additionally, the enhanced crossing may induce motorists to slow as they enter the more pedestrian focused area of Broadway between 61st and 57th Streets.</p> <p>The pedestrian crossing sign is difficult to see when traveling westbound on Broadway. The sign is located behind a wide utility pole and under a large shade tree. According to the FHWA, pedestrian signs are important for indicating potential pedestrian presence to motorists and increasing rates of yielding.^v</p>

Visual



ID	Location	Recommendation	Justification
4	At all intersection on Broadway	<p>Similar to the intersection at 62nd Street, replace rolled curbs with vertical curbs at the following street corners:</p> <ul style="list-style-type: none"> • Broadway at 58th • Broadway at 60th • Broadway at 61st • Broadway at 63rd • Broadway at 64th • Broadway at Kroy • Broadway at 65th 	<p>Rolled curbs at intersections allow motorists making right turns to mount sidewalks. This fact was reinforced during the walk audit by participants who noted that near-collisions with pedestrians at corners are a common occurrence. At several corners along Broadway tire marks were present well within the pedestrian right of way. Vertical curbs at the corners of intersections, similar to those at 62nd Street, will improve pedestrian safety along Broadway.</p>

Visual



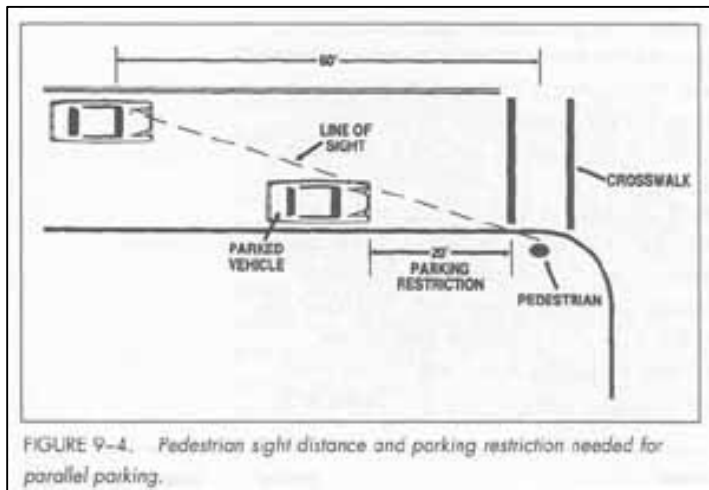
ID	Location	Recommendation	Justification
5	Between 62 nd Street and 65 th Street.	Install additional marked pedestrian crossings across Broadway	<p>The nearly 1450 ft. stretch of Broadway between 62nd Street and 65th Street has no marked crosswalks. The lack of crossings along this section of Broadway not only makes reaching bus stops and other destinations along Broadway more difficult, but makes Broadway a physical barrier that separates Tahoe Park. Additionally, studies show that rates of yielding for pedestrians at unmarked crosswalks can be as low as 5% in well-traveled areas.^{vi}</p> <p>Safe and frequent pedestrian crossings help create a more walkable community and as such should be installed along this stretch of Broadway.</p>

Visual



ID	Location	Recommendation	Justification
6	At all crosswalks on or across Broadway between 57 th Street and 65 th Street	<p>Restrict parking in advance of crosswalks</p> <p>Install advanced stop bars at the controlled intersection at 59th Street and at all future RRFB crosswalks</p>	<p>The National Association of City Transportation Officials guidelines recommend 20 to 25 feet of parking clearance around crosswalks to increase visibility of pedestrians both waiting to cross and already crossing.^{vii} According to the Federal Highway Safety Administration, a parking restriction of 20 ft. can significantly increase a motorist's line of sight.^{viii} Parking restrictions along Broadway can be accomplished via painted markings within the roadway, physical barriers such as flex-posts, or in combination with recommendation 8 by installing vertical red painted curbs at corners.</p> <p>According to the pedestrian and bicycle information center, an advance stop or yield line placed ahead of a crosswalk can greatly reduce the likelihood of a multiple-threat crash at unsignalized midblock crossings.^{ix} Advanced stop bars encourage motorists to stop well in advance of a crosswalk providing a buffer zone between the vehicle and pedestrian. According to one study, the use of a "sign alone reduced conflicts between drivers and pedestrians by 67%, and with the addition of an advanced stop or yield line, this type of conflict was reduced 90% compared to baseline levels."^x Advance stop bars should be installed throughout this corridor at all controlled crosswalks including any future RRFB crosswalks.</p>

Visual



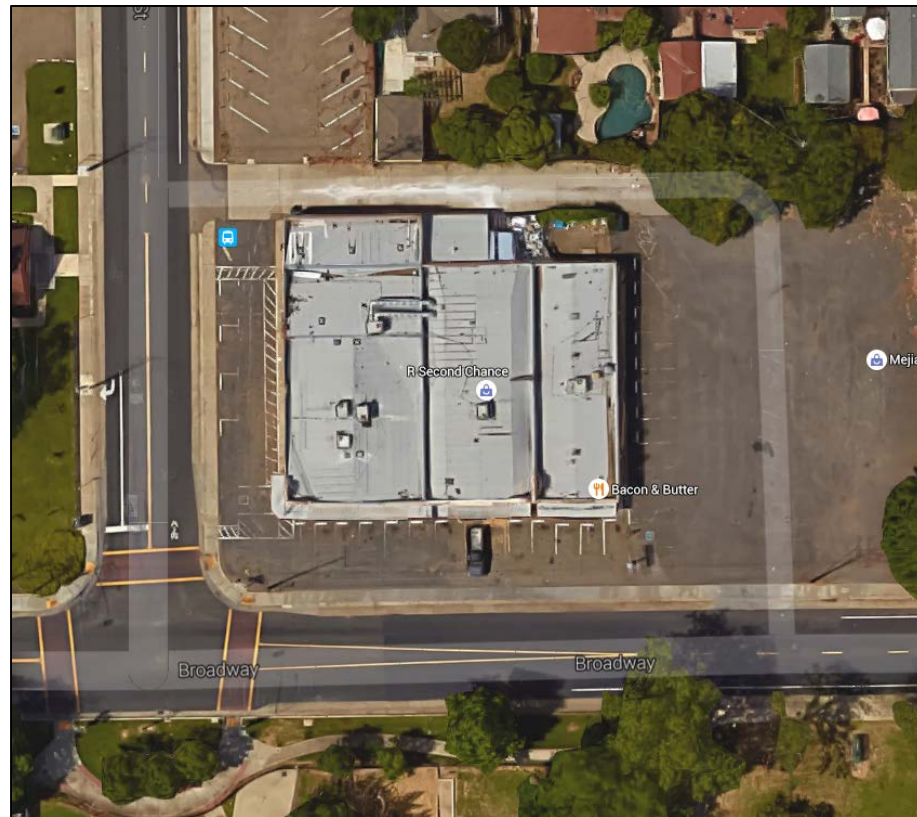
ID	Location	Recommendation	Justification
7	Between 62 nd Street and 65 th Street on Broadway, westbound	Install traffic countermeasures for reducing speeds.	<p>Between 62nd Street and 65th Street there are no traffic controls or traffic calming measures. Broadway has become an increasingly common route for cut-through traffic avoiding highway 50. The combination of these two factors seem to be contributing to high vehicle speeds along Broadway. WALKSacramento recommends installing any combination of the FHWA's Proven Safety Countermeasures for reducing speeds including on-road speed limit markings, speed feedback signs, curb extensions, and roadway markings that give the impression of narrowing lanes.^{xi}</p> <p>A promising option is to paint high visibility curb extensions onto Broadway that act as low-cost chokers. The benefit of doing so is that the painted extensions have the similar effect of narrowing the perceived roadway width for motorists and thus acting to slow traffic.^{xii} Additionally, the lack of paved or raised infrastructure allows for the continuous movement of emergency vehicles and bicycles. This is another improvement that can occur during a resurfacing effort.</p>

Visual



ID	Location	Recommendation	Justification
8	Building parking lot on Broadway between 59 th Street and 60 th Street.	Work with building owner to improve the waiting area along the east and south sides of the building.	<p>Patrons of Bacon and Butter have been observed waiting in the shade across the street by the elementary school, then crossing mid-block, often darting into oncoming traffic. Sporadic pedestrian behavior can put both pedestrians and motorists in danger.</p> <p>To help alleviate this issue, planter boxes for trees, seating, shade canopies, and other amenities should be installed along the east and south sides of the building to encourage patrons to wait by the restaurant. Additionally, streetscape activation through more outdoor seating, lighting, shade, and aesthetic treatments help to encourage pedestrian and bicycle travel and will contribute to a more main street feel.</p>

Visual



ID	Location	Recommendation	Justification
9	Meandering path adjacent to Tahoe School on Broadway between 58 th Street and 60 th Street	Fix the cracked sidewalk.	The sidewalk on the south side of Broadway at the 59 th Street intersection is cracked and creates a barrier for pedestrians, those in wheelchairs, small children on bikes, and those pushing strollers. Because sidewalk maintenance is the responsibility of adjacent landowners, the Elementary School should prioritize funds to improve the sidewalk along this stretch.

Visual



ID	Location	Recommendation	Justification
10	Along Broadway	Remove transit benches from the within the pedestrian right of way. Improve stops with additional lighting and protection.	<p>While seating at transit stops is an excellent improvement to the pedestrian environment, the benches along Broadway significantly encroach upon the pedestrian right of way. Because the benches are located within the sidewalk and not behind them, pedestrians, especially those with strollers or mobility devices, may be forced to walk out partially into the street to avoid the benches.</p> <p>Regional Transit should work with adjacent property owners and the City to increase the size of the transit stop to accommodate seating and pedestrian movement. Additional treatments such as pedestrian scale lighting and overhead shelters will further improve the safety and aesthetic quality at these transit stops. In the short term, the existing transit benches should be replaced with newer seating that discourages graffiti.</p>

Visual



ID	Location	Recommendation	Justification
11	Along Broadway	Install additional pedestrian scale lighting similar to those at 63 rd Street.	Lighting at the pedestrian scale is not important for addressing safety, but can be attractively designed to improve the aesthetic along a corridor. Pedestrian scale lighting is closer to the ground and spaced closely together creating an even lighting of the sidewalk instead of alternating bright and dark spaces. Human-scale lighting addresses actual safety concerns, both personal and traffic related, as well as the perception of safety to encourage more walking and biking. Pedestrian-scale lighting is essential to creating an inviting, walkable, and attractive environment along Broadway. ^{xiii}

Visual



ID	Location	Recommendation	Justification
12	Along Broadway, especially at 57 th Street and 65 th Street.	Redesign Broadway to feel more like a main street. Install monument signage, seating, landscaping, and other treatments that encourage a "Downtown Tahoe Park" aesthetic.	Main street amenities such as monument signage, street furniture, art work, and signs will help give Broadway a more pedestrian oriented, downtown feel. Currently, a large number drivers use Broadway as an east-west cut-through street to avoid traffic on Highway 50. Participants on the walk audit made it clear that their priority for Broadway is not for it to be a cut-through street, but to be a main street destination that acts as "Downtown Tahoe Park." These aesthetic improvements will complement the traffic calming and safety improvements suggested above to further slow traffic and enhance the pedestrian experience.

Visual



ID	Location	Recommendation	Justification
13	Along Broadway	Underground utility poles Convert all rolled curbs to vertical curbs	<p>There are four utility poles between 57th and 58th Street that obstruct the pedestrian right of way. Because undergrounding utility poles is an expensive process, this should be included as part of long term improvements along Broadway.</p> <p>The rolled curbs throughout the corridor allow for parked cars to mount the sidewalk and detract from the available walking space. Similarly, because a corridor wide retrofit can be expensive, this improvement should be considered within longer term improvement plans along Broadway.</p>

Visual



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