

September 2016

Glendale Citywide Pedestrian Plan Part 1: Taking Stock

EXECUTIVE SUMMARY



glendale
california

A decorative graphic consisting of several colorful swirls in shades of blue, green, red, and yellow, arranged in a cluster to the right of the text.

Why are we doing this work?



The Citywide Pedestrian Plan will establish a comprehensive, centralized, and coordinated approach to improving pedestrian infrastructure, safety, and demand within Glendale.

Developing a Citywide Pedestrian Plan is crucial for Glendale, given that pedestrian collisions are notably high for the region and state. Further, low- and fixed-income residents in Glendale, including the elderly, are disproportionately represented in these collisions.

The Plan will establish improving pedestrian safety as the city's highest priority. Widespread community outreach will directly inform its recommendations. Additionally, the plan will consolidate existing and recommended policies, projects, and programs—including recommendations from the Pedestrian Safety Task Force, the new Pedestrian Safety Advisory Committee, and the existing Pedestrian Safety Action Plan—into a single master plan.

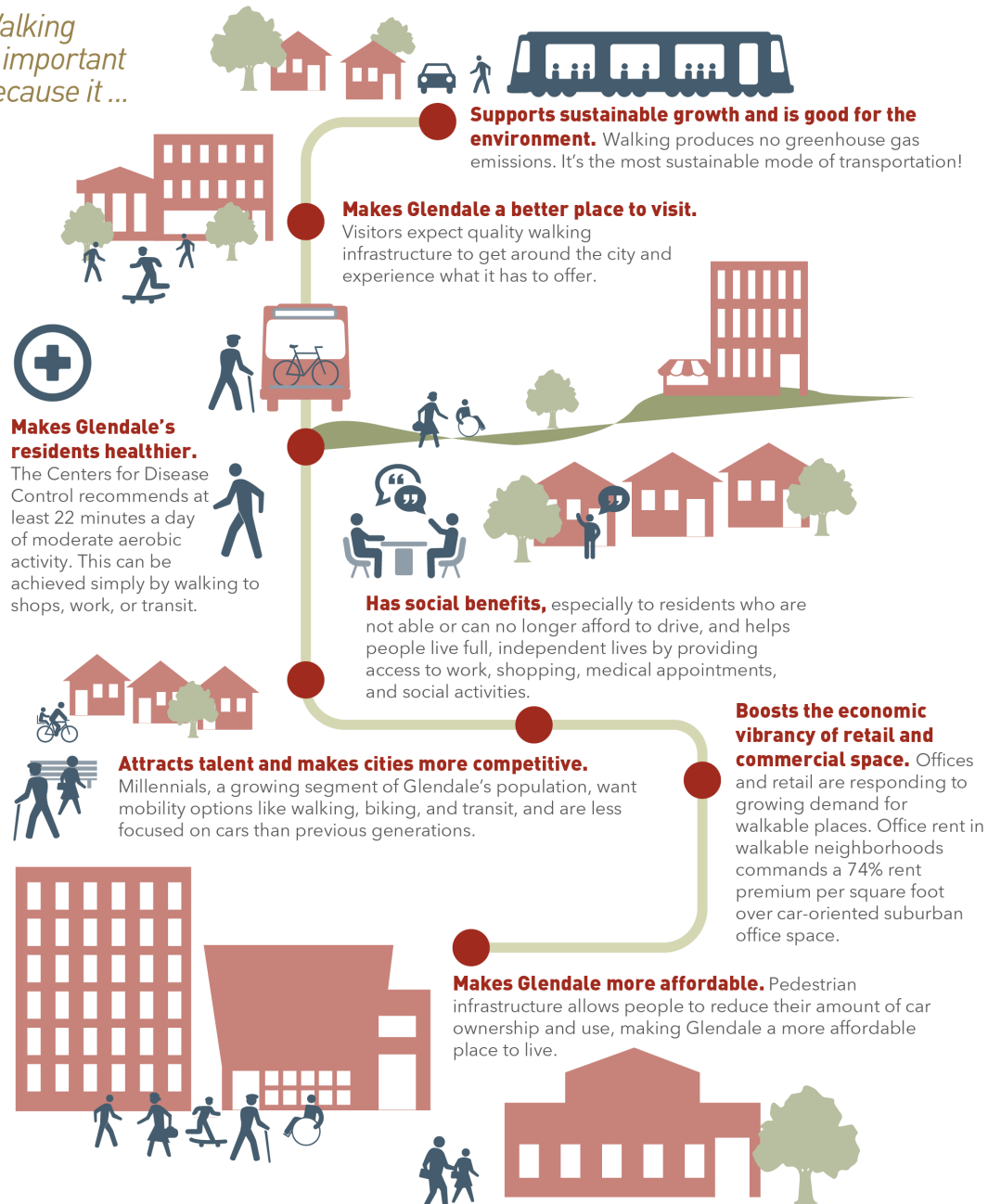
The Citywide Pedestrian Plan will encourage increased use of non-motorized and active transportation by outlining specific pedestrian improvements and projects. These improvements will be identified by systematically prioritizing known origins and destinations, including schools, parks, civic institutions, transit, and residential and commercial areas with high pedestrian use. Particular emphasis will be placed on transit connections and areas with high collision rates.

The Plan is being developed in coordination with other pedestrian initiatives, notably the Non-Infrastructure Safe Routes to School Program, and the Citywide Safety Education Initiative:

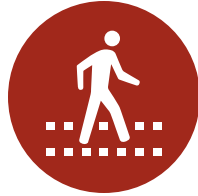
- **The Non-Infrastructure Safe Routes to School Program** will educate K-9 students about pedestrian safety to prevent injuries and fatalities and to encourage walking and bicycling among school children.
- **The Citywide Safety Education Initiative** will focus on improving pedestrian safety in Glendale through continuing-education programs that teach residents conscientiousness and the rules of the road for all transportation modes. This program will target all segments of the Glendale population, including older adults.

Why is walking important?

Walking is important because it ...



What makes a place walkable?



Pedestrian-oriented design.

Walkable streets have dedicated walking infrastructure (e.g., sidewalks, signalized crosswalks). Further, walkable streets have buildings that engage pedestrians on the ground floor. Dead walls and deep setbacks tend to make space uninviting to people on foot.



Dense networks of streets, trails, and greenways.

When street networks are dense and grid-like, they allow people to reach destinations more directly on foot. Conversely, curvilinear and cul-de-sac streets increase distances between destinations.



Mixed land uses.

Walkable places have a wide array of land uses in close proximity. For example, a neighborhood with grocery stores, restaurants, clothing boutiques, hardware stores, housing, and offices, all within walking distance of one another, allows residents to walk in order to reach their destinations.



Understandable and organized around centers.

Walkable places are intuitively navigable for pedestrians. In addition to wayfinding measures like common signage, walkable places have activities that are clustered around axes or nodes.



Easy connections to frequent transit.

Walking and transit go hand in hand. Transit riders typically begin and end their trips with short walking trips. Therefore, making these connections to and from transit more convenient is critical to walkability.



Well-managed parking and right-of-way.

The placement, orientation, and supply of parking plays a key role in walkability. Streets where parking lots separate buildings from sidewalks make them unappealing for walking relative to streets with parking located behind buildings.

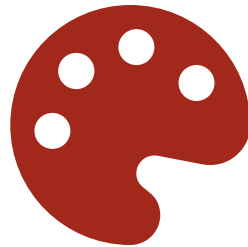
What are Glendale residents saying about walking?



4 Pop-Up Events
April – July 2016



400 Participants † = 10 people



Arts and Crafts Festival



Cruise Night



Earth Day Festival



Fire Services Day

Participants were asked ...



What would make you walk more in Glendale?



... and responses were coded using colored fabric, producing mosaics that show how people feel about walking in Glendale.



Colored fabric used to produce the mosaic showing how people feel about walking.
Photo from Nelson\Nygaard



Members of the public participating in the engagement activity.
Photo from Nelson\Nygaard



Members of the public participating in the engagement activity.
Photo from Nelson\Nygaard



A young participant contributes his opinion to the mosaic.
Photo from Nelson\Nygaard

People would walk more in Glendale if ...

- 1 Cars would **drive more slowly**.
- 2 There were more **traffic enforcement**.
- 3 There were safer and more **visible crosswalks**.
- 4 There were more **places to walk**.

How well do existing plans and policies support walking in Glendale?

STRENGTHS



- Safe and Healthy Streets Plan provides direction for Pedestrian Plan development
- Mobility and land use policies aligned across current plans
- Plans since 2006 include Complete Streets policies
- Community plans identify pedestrian priority areas and include detailed street standards
- City code protects pedestrians during construction

OPPORTUNITIES



- Create an implementation plan for Safe and Healthy Streets Plan and Pedestrian Safety Advisory Task Force recommendations
- Implement AB 321 to lower speed limits near schools to 15 mph and explore opportunities to lower speed limits on other roadways through AB 529
- Communicate and reinforce mobility goals through economic development plans and strategies
- Overlay mobility and access goals to specific development projects as part of Community Planning and Design Review Board
- Use Metro First/Last Mile Strategic Plan concepts to enhance active transportation modes and provide opportunities for grant funding
- Reference chapters of Glendale Municipal Code to pedestrian safety efforts

What kind of walking city does Glendale want to be?

VISION



Glendale will be a **great place to walk**, leading to a community that is **safer, healthier**, more **sustainable**, and economically **vibrant**.



Make Walking Safer

GOAL 1

- Reduce the number of crashes and eliminate traffic-related injuries and fatalities
- Use an integrated and multi-pronged approach to reduce vehicle speeds
- Protect vulnerable populations and account for pedestrian needs first in planning and design
- Institute a culture of safety to get more people walking for more trips
- Teach and reinforce safe driving and walking behavior



Create Connected and Complete Communities

GOAL 2

- Make connections to the places people need to and want to go
- Provide seamless connections to transit and ensure access to community assets
- Enhance streetscapes to create vibrant public spaces with wide sidewalks, active frontages, and amenities
- Make walking more pleasant by extending trees and landscaping into the street network



Build Walkable Places for All

GOAL 3

- Prioritize projects in critical pedestrian areas to meet mobility and safety needs
- Make investments that improve health and promote equity
- Serve people of all ages and abilities
- Make walking a part of everyday life in Glendale



Organize for Implementation

GOAL 4

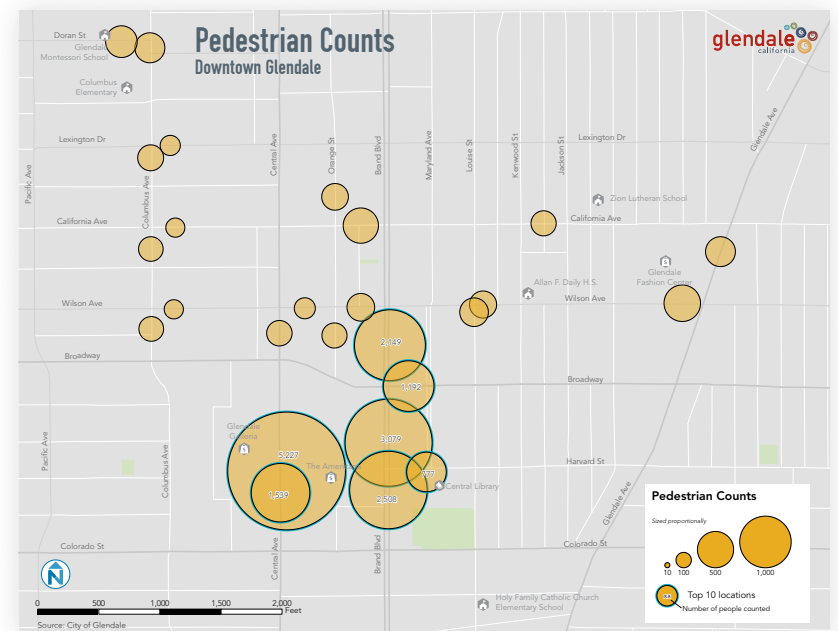
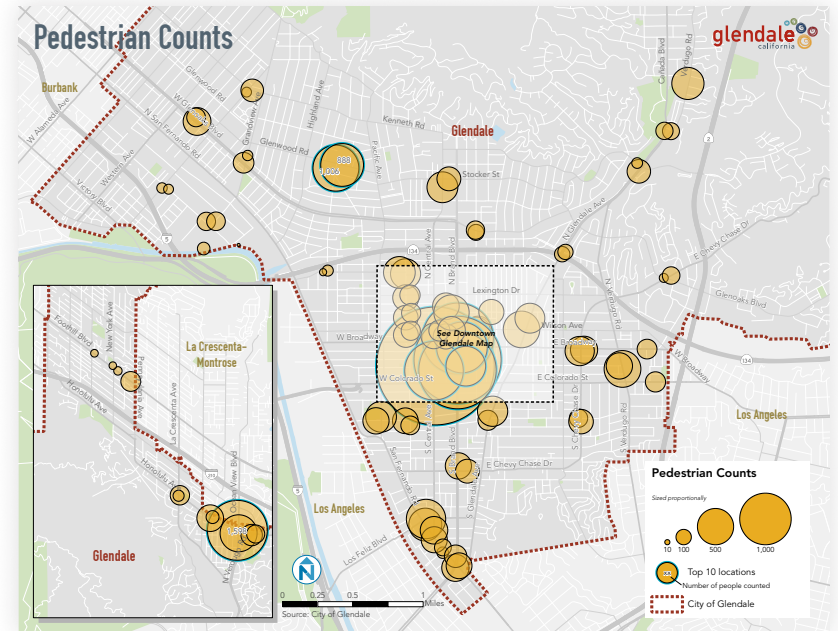
- Maximize impact within existing capital investments and pursue new funding sources
- Pursue opportunities for low-cost, interim solutions as well as creative maintenance solutions
- Communicate, coordinate, and integrate activities across city departments
- Report on progress annually

Where are people walking in Glendale today?

Cameras counted pedestrians at 92 observation points, or *screenlines*, during three two-hour periods between April and May of 2016. Nearly half (49%, 21,782) of all count observations were made at downtown pedestrian count locations. The five locations with the most pedestrians were:

- 1 **Americana Way**
between Brand Boulevard and Central Avenue
- 2 **Brand Boulevard**
between Broadway and Harvard Street
- 3 **Brand Boulevard**
between Harvard Street and Colorado Street
- 4 **Brand Boulevard**
between Broadway and Wilson Street
- 5 **Honolulu Avenue**
between Ocean View Boulevard and Wickham Avenue

The maps to the right show the number of pedestrians counted at each screenline—citywide (top) and downtown only (bottom).



What walking infrastructure does Glendale have?

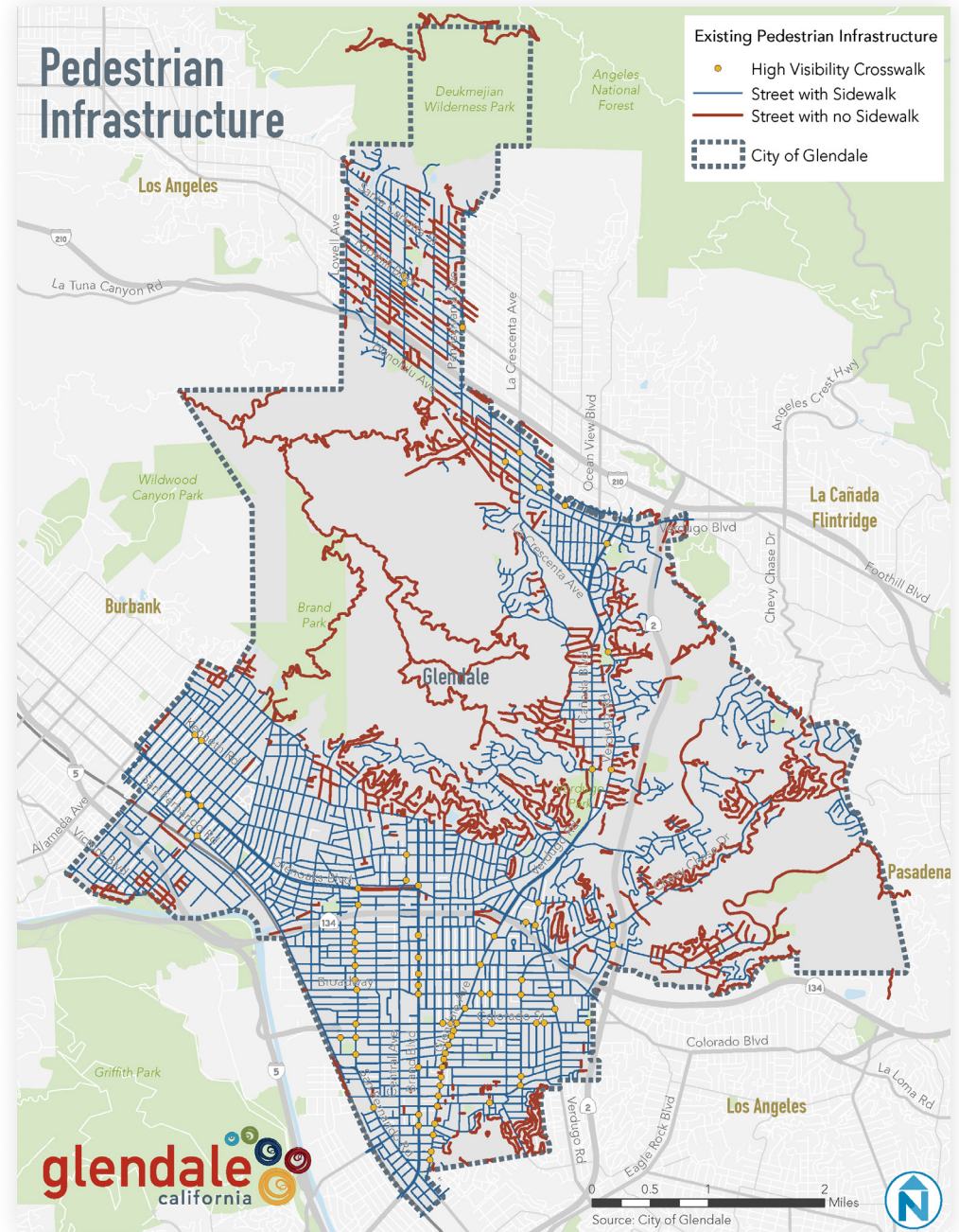
Crosswalks and sidewalks are key elements of pedestrian infrastructure. The map to the right shows where Glendale currently has sidewalks and high-visibility crosswalks, as well as where there are gaps in infrastructure.



Of all street segments in Glendale, 68% have sidewalks. This is higher for arterial streets (95%) and collector streets (93%), but lower for local streets (61%).

80

Of all intersections within Glendale, 80 have high visibility crosswalks. Most of these are located along busy roadways including Glendale Avenue, Brand Boulevard, and Pacific Avenue.



CURB EXTENSIONS



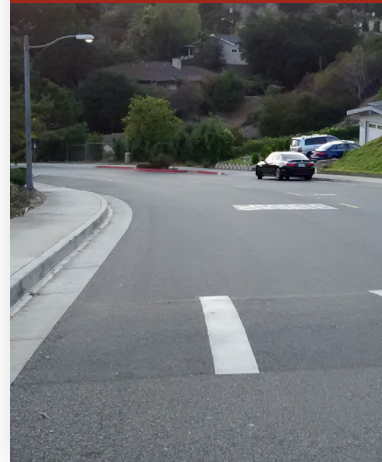
Curb extension in downtown Glendale
Photo from the City of Glendale

PEDESTRIAN ISLANDS



Pedestrian island in Glendale
Photo from the City of Glendale

SPEED HUMPS



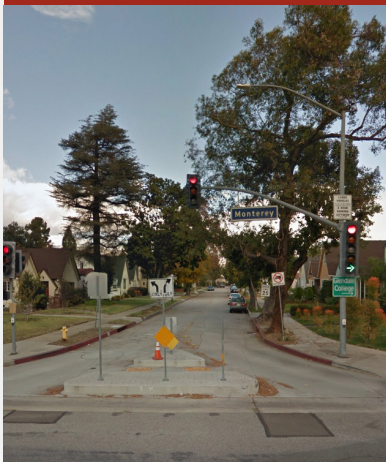
Speed hump on Fern Drive in Glendale
Photo from Nelson\Nygaard

TEXTURED PAVEMENT



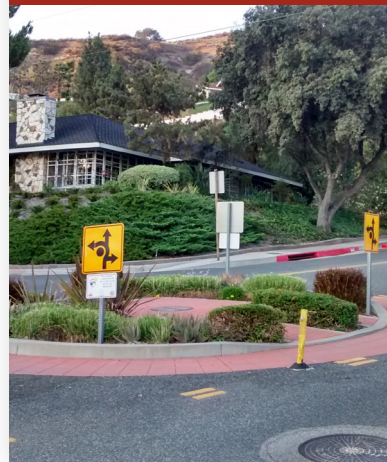
Textured pavement at Montrose and Honolulu in Glendale
Photo from Nelson\Nygaard

TRAFFIC DIVERTERS



Traffic diverter in Glendale
Photo from the City of Glendale

TRAFFIC CIRCLES



Traffic circle on Fern Drive in Glendale
Photo from Nelson\Nygaard

RECTANGULAR RAPID FLASHING BEACONS (RRFB)



RRFB in Glendale
Photo from the City of Glendale

RADAR SPEED SIGNS

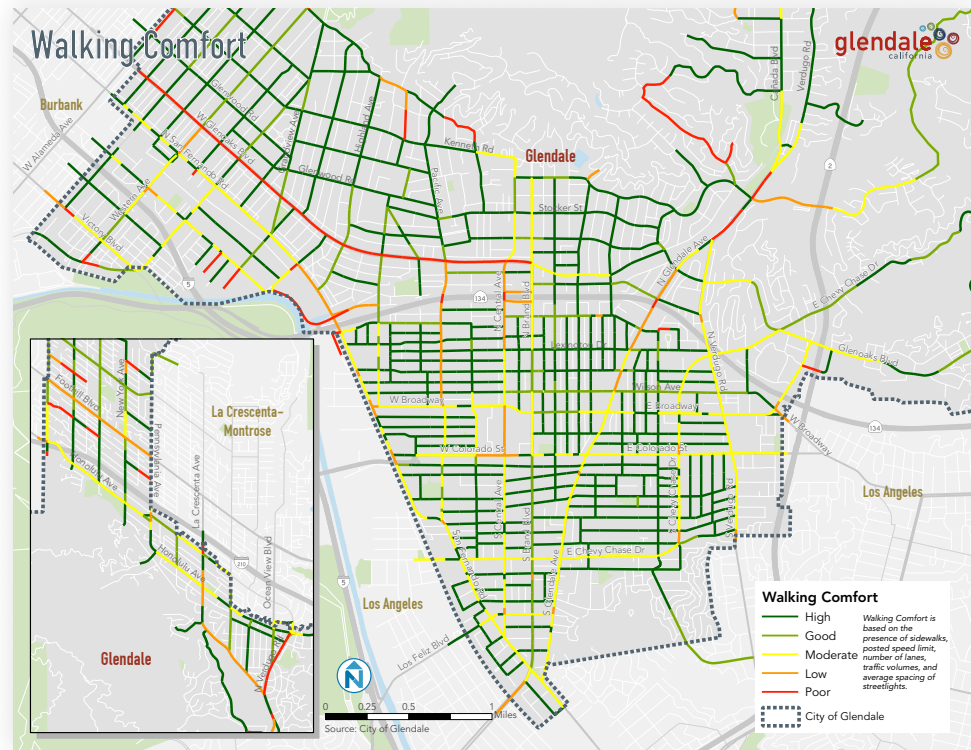
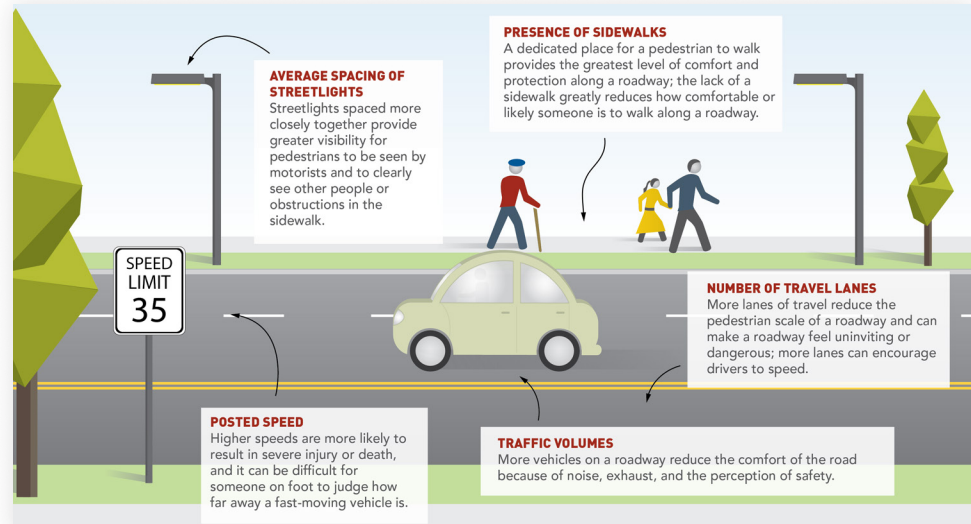


Radar speed sign in Glendale
Photo from Nelson\Nygaard

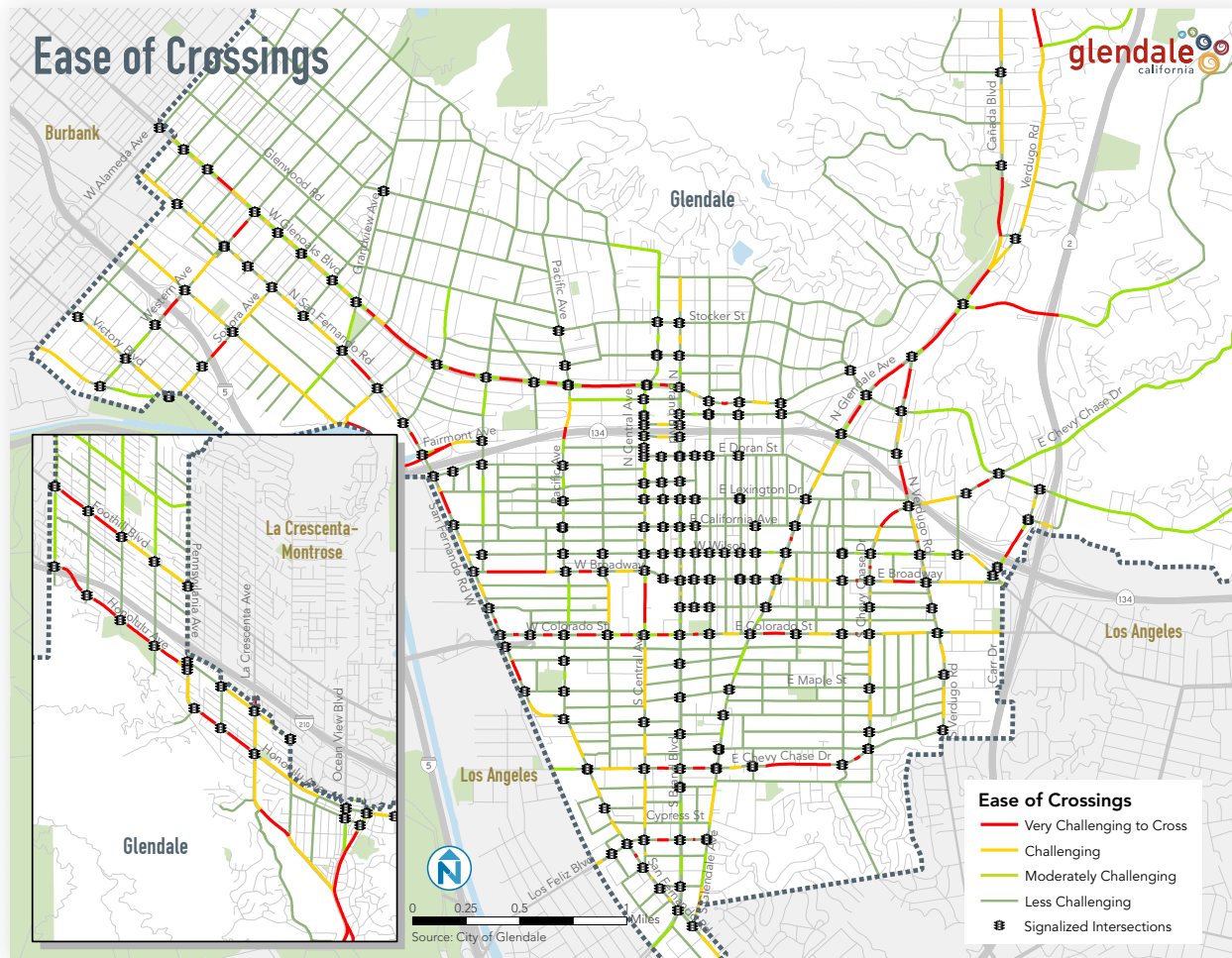
How comfortable is it to walk in Glendale?

An analysis of walking comfort scores roadways by how pleasant, inviting, and safe they are for walking. People walking or using mobility devices use Glendale’s roadway network to connect to businesses, jobs, schools, and recreation. Roadways that have more travel lanes, higher traffic volumes, and vehicles traveling at faster speeds are more likely to be uncomfortable or uninviting for people walking. At night, streets that lack lighting may become even less comfortable, as darker streets make pedestrians less visible to cars and can increase people’s concerns about personal safety. However, the presence of sidewalks is the most significant factor in determining how comfortable a roadway is for people walking. The figure to the right (top) illustrates the criteria associated with walking comfort included in our analysis.

The map to the right (bottom) shows that higher order roadways, like major arterials, are less comfortable for pedestrians, largely due to traffic speeds, number of lanes, and traffic volumes. The roadway with the lowest comfort scores for the greatest distances is Glenoaks Boulevard, which has a “poor” comfort rating from Brand Boulevard west to the Glendale city limits.



How easy is it to cross the street in Glendale?



Our analysis includes four factors that affect the ease of crossing the street as a pedestrian:



Posted speed

Higher speeds make it more difficult for pedestrians to judge how fast a vehicle is approaching and when it is safe to cross; higher speeds also result in more severe injuries in the event of a collision



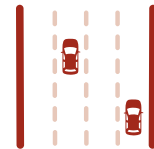
Intersection density

All intersections are legal crossings in California and drivers may be more likely to expect a crossing pedestrian at an midblock location; intersection density is the number of intersections per unit of roadway (e.g., intersections per mile)



Distance to the nearest signalized intersection

Traffic signals provide a designated time for pedestrians to cross the street

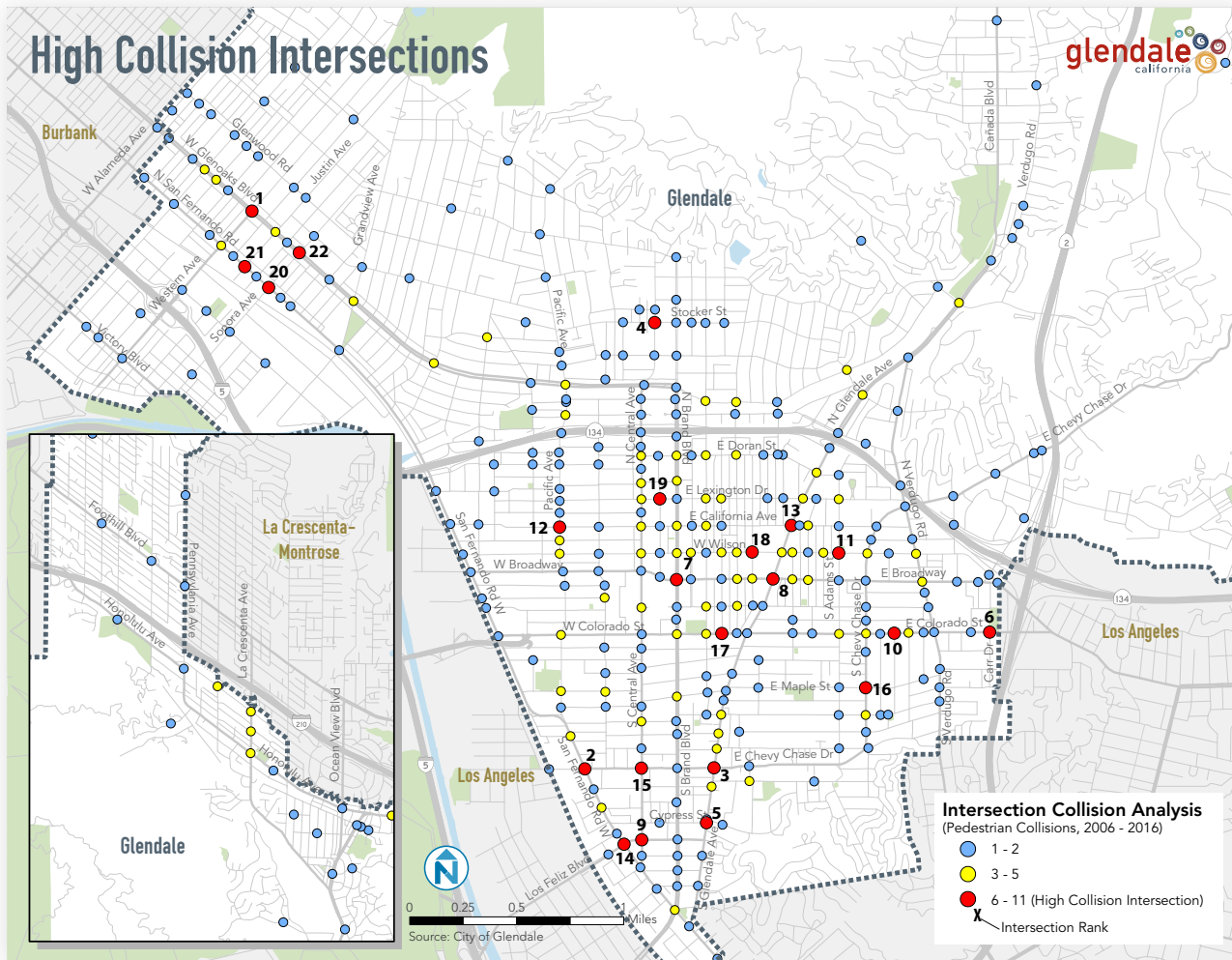


Number of travel lanes

More lanes increase the crossing distance and the length of time a pedestrian is exposed to motor vehicles on the street

◀ The map to the left shows the streets in Glendale that are most difficult to cross on foot.

Which intersections see the most collisions?



22

Twenty-two intersections had six or more pedestrian-injury collisions between 2006 and 2015. All but five of these intersections fall within a high-collision corridor (see next page). The five intersections with the most collisions are:

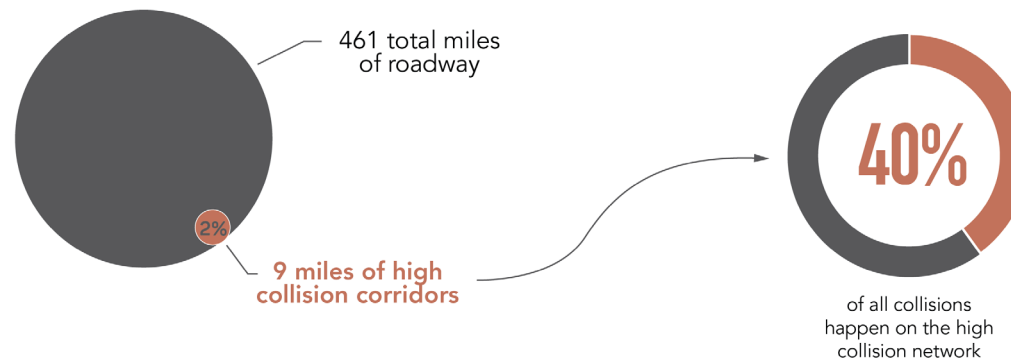
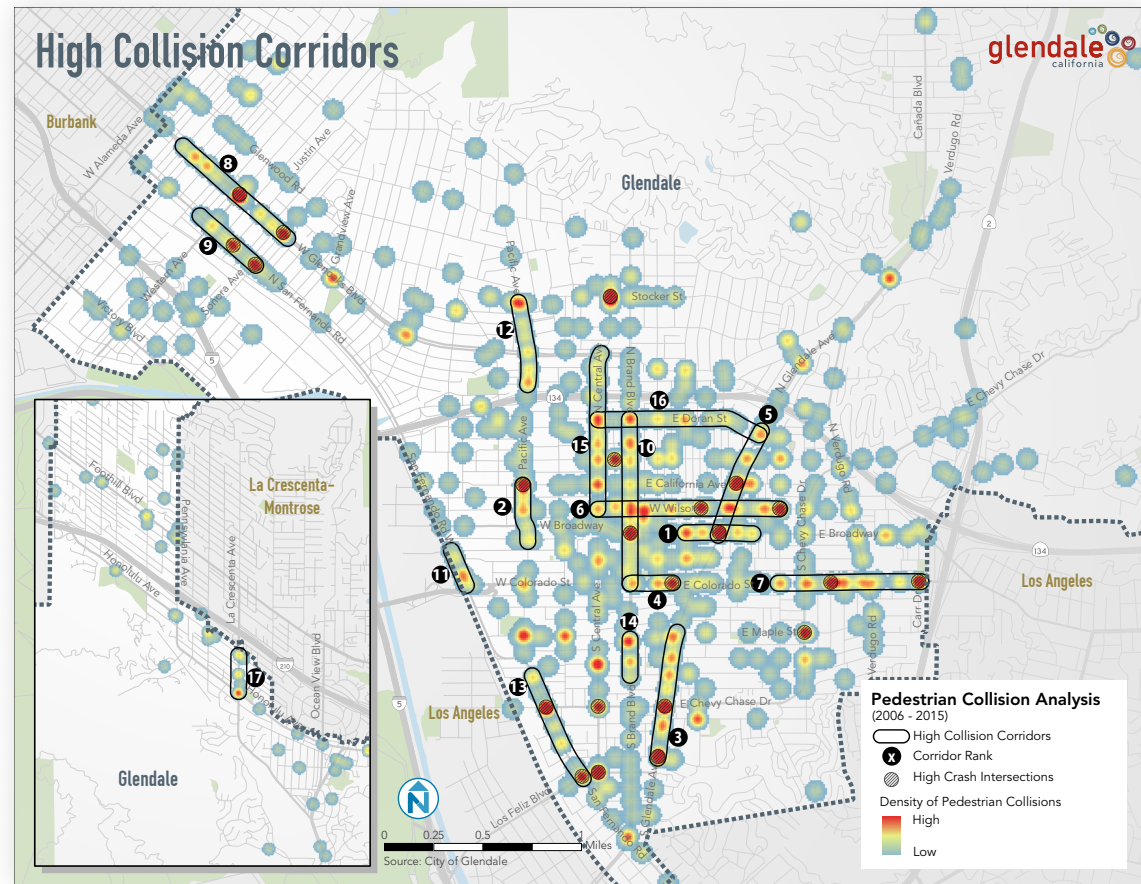
- 1** W Glenoaks Boulevard at Western Avenue
- 2** W Chevy Chase Drive at San Fernando Road
- 3** E Chevy Chase Drive at S Glendale Avenue
- 4** N Central Avenue at W Stocker Street
- 5** E Cypress Street at S Glendale Avenue

◀ The map to the left shows high-collision intersections in Glendale.

Which corridors see the most collisions?

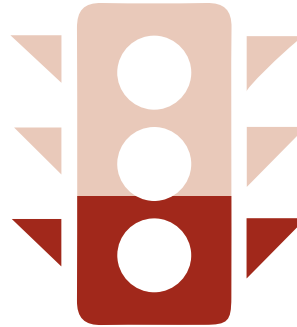
The corridors with the highest concentration of collisions in Glendale are major and minor arterials. The five corridors with the most collisions are:

- 1 E Broadway**
from N Jackson Street to N Cedar Street
- 2 N Pacific Avenue**
from W California Avenue to Ivy Street
- 3 S Glendale Avenue**
from E Maple Street to E Cypress Street
- 4 E Colorado Street**
from S Brand Boulevard to S Kenwood Street
- 5 N Glendale Avenue**
E Doran Street to E Broadway

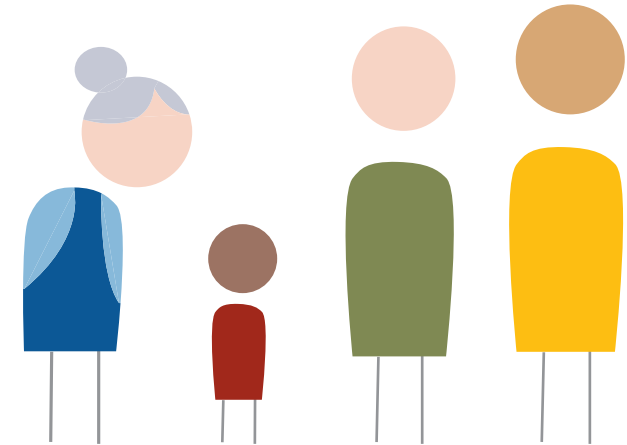


◀ The 17 high-collision corridors total nine miles and represent approximately 2% of the non-freeway roadway network; they account for 40% of pedestrian collisions. This presents an opportunity for targeted investment.

What key findings did the collision analysis uncover?

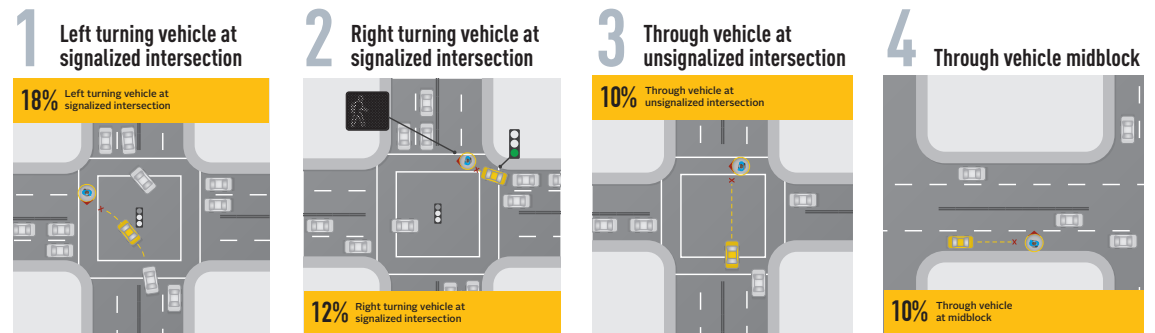


40% of pedestrian collisions in Glendale take place at signalized intersections, suggesting opportunities to both enhance pedestrian accommodations at existing signals as well as to provide additional enhanced pedestrian crossings.



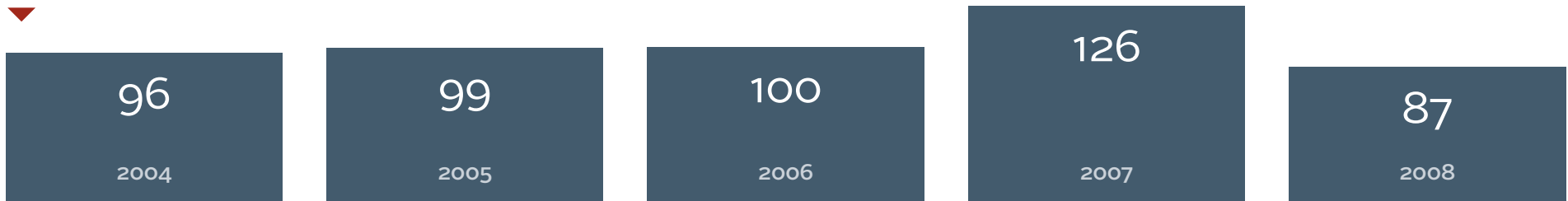
Younger and older pedestrians are more likely to be hit in collisions than the population on average.

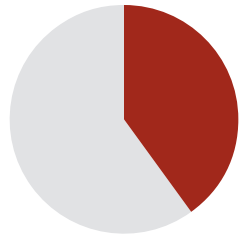
Young adults and men are over-represented as drivers in collisions involving pedestrians.



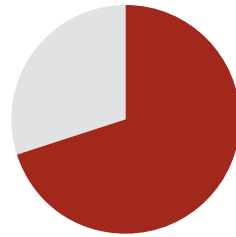
Most common collision types

Number of collisions involving pedestrians has been relatively consistent between 2004 and 2013.

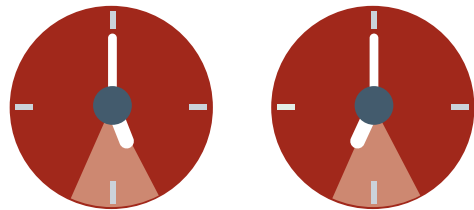




+40%
More than 40% of the people killed in traffic collisions in Glendale are pedestrians.



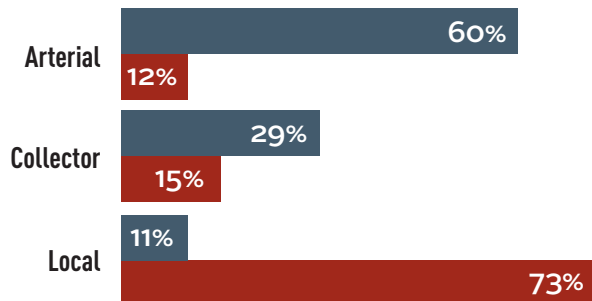
70%
Overall, motorists are deemed at fault for 70% of pedestrian collisions.



The peak period for pedestrian collisions is 5 p.m. to 7 p.m. Many collisions happen in the afternoon and early evening, when the most people are travelling.



Collisions are more likely to be severe or fatal in off-peak periods. Collisions are increasingly likely to result in a severe or fatal injury as the evening progresses, likely because less traffic on the roads means that drivers are traveling at higher speeds.



Over 60% of pedestrian collisions occur on arterial streets, most of which have four or more lanes and which constitute only 12% of the roadway network in Glendale.

THE EFFECT OF VEHICLE SPEED ON PEDESTRIAN FATALITIES

SPEED LIMIT
20

5% chance of pedestrian fatality

SPEED LIMIT
30

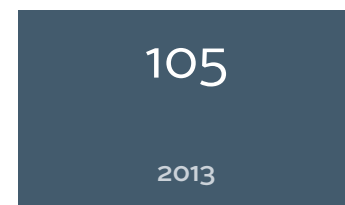
45% chance of pedestrian fatality

SPEED LIMIT
40

85% chance of pedestrian fatality

Source: Killing Speed and Saving Lives, UK Dept. of Transportation, London, England. See also Limpert, Rudolph. Motor Vehicle Accident Reconstruction and Cause Analysis. Fourth Edition. Charlottesville, VA. The Michie Company, 1994, p. 663.

Higher motor vehicle speeds result in more severe injuries and a higher likelihood of fatalities in the event of a collision with a pedestrian.



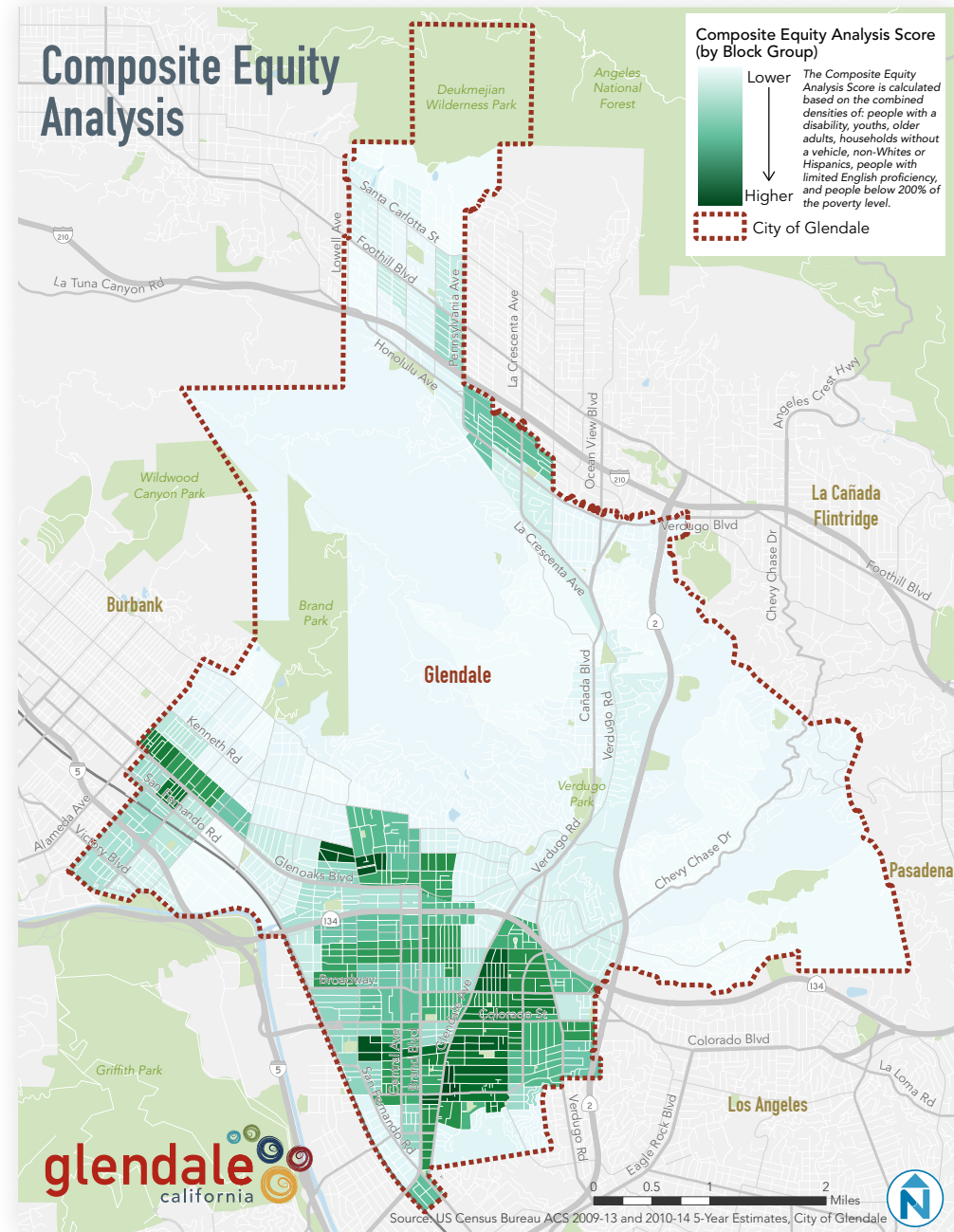
Which parts of Glendale rely most on walking?

The map to the right identifies areas of Glendale where people may have a greater need for walking infrastructure and programs. This is either because they do not have access to a car, cannot drive, or are simply more likely to take transit (and therefore walk) due to demographic characteristics.

The composite equity index shown on the map includes seven socioeconomic indicators at the census block group level:

- Individuals with a disability
- Youth (under 18 years of age)
- Older adults (65 years and over)
- No-vehicle households
- People of color
- Limited English proficiency
- People below 200% of the federal poverty level

Areas of Glendale with the highest concentration of people who may have a greater need for walking projects and programs include the Citrus Grove, Mariposa, and Pacific-Edison neighborhoods. Smaller concentrations exist in Verdugo Viejo, Glenwood, Grandview, and in the Montrose neighborhood.

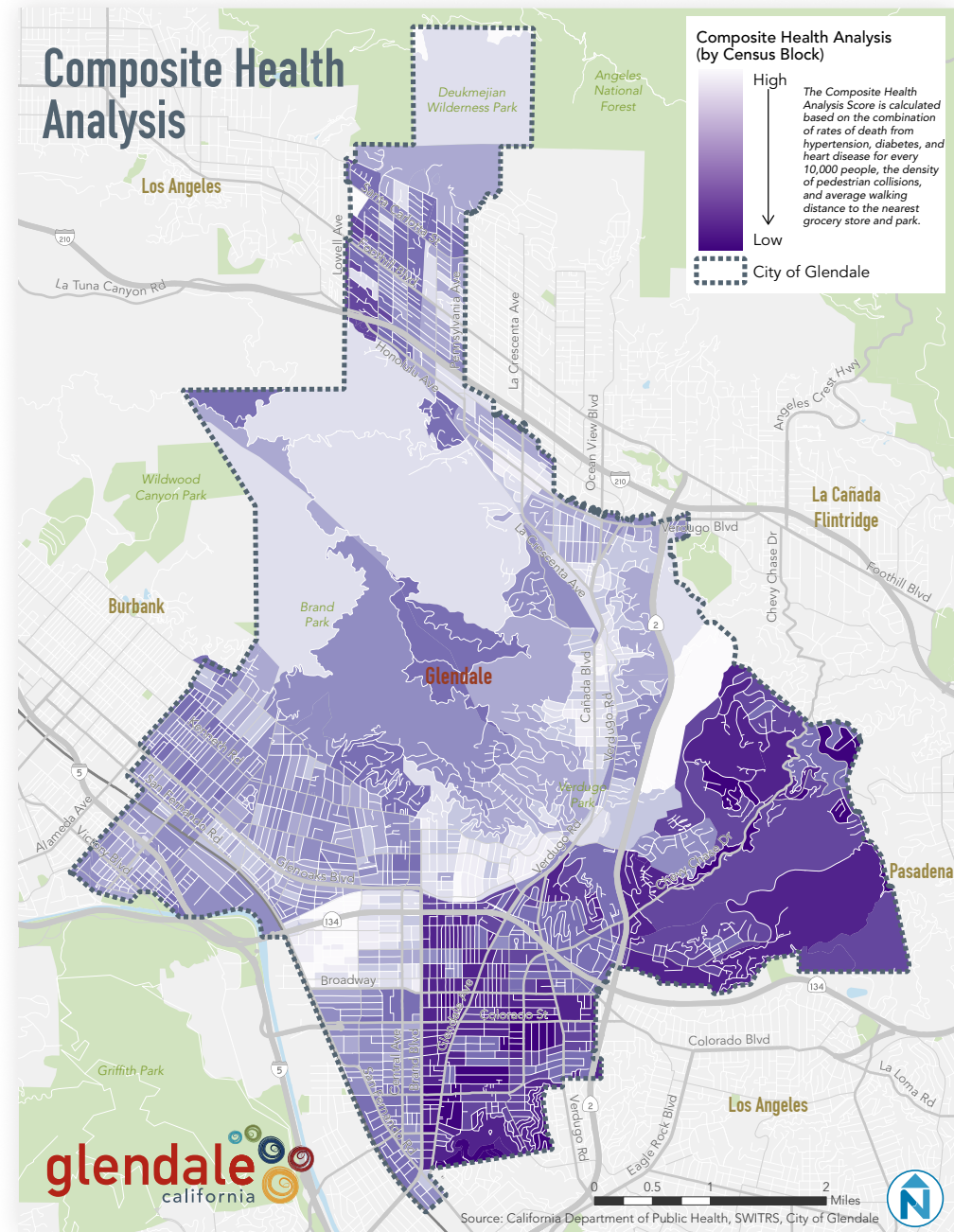


In which areas can walking most improve health?

In the areas of Glendale with negative health outcomes and more limited access to recreation and healthy foods, greater pedestrian access could play an important role in improving health outcomes.

Walking on a regular basis has been shown to reduce rates of cardiovascular disease, risk of coronary artery disease, and risk of stroke while improving quality of life and mental health.

The map to the right presents the composite health index. The index reveals areas where walking can have the greatest health benefits: City Center, Mariposa, Somerset, Chevy Chase, and Woodbury.



Where can we look for inspiration?

VISION ZERO

Vision Zero Los Angeles

Vision Zero is a collection of strategies to eliminate traffic fatalities. The strategies aim to prevent collisions, which are largely caused by poor road design and unsafe travel behavior.

Originating in Sweden in 1997, Vision Zero plans have been adopted in cities across the nation, including New York, San Francisco, Austin, Los Angeles, and San Diego. In 2014, the Los Angeles Department of Transportation released its first Vision Zero strategic plan, with the goals of reducing traffic deaths by 20 percent by 2017, and eliminating traffic fatalities citywide by 2025.



INNOVATIVE PEDESTRIAN PROGRAMS

NY Safe Streets for Seniors

Safe Streets for Seniors is a program that aims to improve pedestrian safety and comfort for New York City’s growing senior population.

In response to a disproportionate number of senior pedestrian traffic fatalities, the city began to study the contributing factors and developed a toolbox of safety improvements to address them. Infrastructure improvements included *daylighting* (improving driver-pedestrian visibility), countdown signals, shortened crossing distances, and more. Since the city began implementing these improvements, senior pedestrian fatalities have decreased by 17 percent from 2008 to 2012.



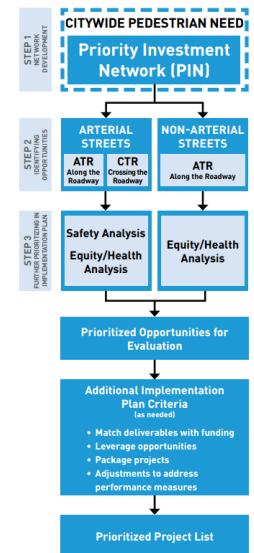
A group of people cross a recently refurbished intersection in New York City

PRIORITIZATION

Seattle’s Core Values

Establishing a prioritization process allows cities to focus projects in areas of greatest need and areas where new walking projects and programs can have the biggest benefit.

In support of the city’s core values, Seattle’s Pedestrian Master Plan aims to make Seattle the most walkable city in the nation and establishes goals of safety, equity, vibrancy, and health. To prioritize projects, the city collects data and assigns scores based on those goals.



City of Seattle’s Pedestrian Master Plan Prioritization Framework
Image from SDOT

ENFORCEMENT STRATEGIES

Safe Streets Boulder

The Safe Streets Boulder Report tracks bicycle and pedestrian collision trends that inform enforcement efforts in the city.

The 2012 Safe Streets Boulder Report identified bicycle and pedestrian collision types, the behaviors that cause them, and top collision locations. Crosswalks were found to be the most common location for collisions involving pedestrians, leading to the addition of three new crosswalk safety laws. Using data from the report, police now target enforcement activities at the most frequent collision locations.



Heads Up, Boulder! messaging at crosswalks
Image from the City of Boulder

ROADWAY RECHANNELIZATION

Lancaster Blvd, Lancaster, CA

Roadway rechannelization projects improve safety by repurposing vehicle travel lanes to space for people walking and riding bicycles.

Roadway Rechannelization can mean reducing the total number of lanes or reducing the width of existing lanes. Both options encourage people to drive more slowly and free up space for landscaping and other pedestrian and bicycle features such as pedestrian safety islands, bike lanes, and wide sidewalks.



Center lanes are transformed into public space on Lancaster Boulevard in Lancaster, CA
Image from Streetsblog LA

TRAFFIC CALMING

Temporary Curb Extensions

Traffic calming refers to a variety of roadway and intersection design treatments that make streets safer by encouraging drivers to observe the speed limit.

Curb extensions can improve safety for everyone using streets, sidewalks, and crossings by narrowing the roadway and increasing space for pedestrian-friendly infrastructure. Curb extensions shorten the distance required to cross the street, thereby reducing the amount of time a pedestrian is exposed to traffic. Curb extensions can be created using temporary, low-cost materials or as part of a pilot project to study the final design before making permanent changes.



A temporary, low-cost curb extension in Austin, TX
Image from Austin Mobility

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