

# Existing Conditions

**CREATING ENVIRONS WHERE PEOPLE CAN WALK & BIKE TO THE PLACES WHERE THEY WORK, STUDY AND SHOP; TO MEET FRIENDS OR MAKE NEW FRIENDS; OR TO SIMPLY JUST WATCH THE PARADE OF LIFE.**

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The portions of Central and West Long Beach within the pedestrian plan study area have largely been developed during the first part of the 20th Century, before cities were designed for automobiles. While these neighborhoods and commercial districts were originally built to be walkable, the streets and buildings have evolved to accommodate car

travel, between Downtown and other parts of Long Beach. At the same time, historic disinvestment of these communities had led to distressed residential populations as evident socioeconomically as well as public health indicators. Throughout all of this, the foundation of a walkable community still remains.



# CX3 Snapshot

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## UNDERSTANDING THE PROBLEM

The nation is facing an epidemic of obesity as more than half of all adults in the United States are overweight or obese. Nearly 1 in 3 children [ages 2-19] in the nation are overweight or obese, putting themselves at risk for serious health problems. The likelihood of being overweight is influenced by the environment in which one lives, from one's ability to be physically active to access to healthy food options. When comparing fast food restaurants and liquor stores to grocery stores and markets, there are four times as many unhealthy food outlets as healthy outlets in California.

Low-income communities tend to have the poorest food choices with even greater densities of restaurants and stores selling processed foods versus fresh produce. For these communities, the easiest choice, if there is one, is most often not the healthy one.

## SELECTING CX3 NEIGHBORHOODS

To be a part of the CX3 area, the neighborhood must have at least 50% or more of the resident population at or below 185% Federal Poverty Level [based on the 2010 Census]. Selected Long Beach neighborhoods are at or below 130% Federal Poverty Line as these



**MORE THAN HALF OF ALL  
CX3 ADULT RESIDENTS ARE  
OVERWEIGHT OR OBESE.**

DESIGNED FOR DISEASE: THE LINK BETWEEN LOCAL FOOD ENVIRONMENTS AND OBESITY AND DIABETES. CALIFORNIA CENTER FOR PUBLIC HEALTH ADVOCACY, POLICYLINK AND THE UCLA CENTER FOR HEALTH POLICY RESEARCH. APRIL 2008.

community members experience the greatest levels of poverty. Each of these CX3 neighborhoods is nearby a elementary, middle and/or high school.

Based on the data collected, the neighborhoods are clustered within Central and West Long Beach and the southern portion of the Westside. This delineation generally followed similar place-based investments from programs like the former Redevelopment Agency Central Project Area and Building Healthy Communities Long Beach, an initiative of the California Endowment. These neighborhoods have recognized defining geography, typically major thoroughfares, physical landmarks or municipal boundaries, and have organized the political will to make positive change in their respective communities. The geographic size of each of these CX3 neighborhoods were generally consistent to provide relatively consistent comparison of data sets.

### KEY NEIGHBORHOOD FINDINGS

Residents and local stakeholders identified a number of key findings when assessing the CX3 Neighborhood data:

- There is limited access to affordable, healthy food!
- Stores and Fast Food Outlets do not meet standards for healthy markets.
- Residents often pay more for fruit and vegetables compared across the County.
- Most liquor stores do not comply with California’s signage law [Lee’s law].
- Most neighborhoods are lacking safe places for play.
- Areas around schools have high concentration of unhealthy food choices.

**I would enjoy having smoother sidewalks where I live. Also, I have a baby and the sidewalk is too rough for a stroller.**

LONG BEACH RESIDENT

### CX3 NEIGHBORHOOD PRIORITIES

**Improve Walkability:** Residents and local leaders voted overwhelmingly that the need to improve safe, active transport in the neighborhoods was a top priority. This could include creating dedicated bicycle facilities and improving safety and accessibility for pedestrians.

**Access to Healthy Foods:** Increasing access to healthy, affordable foods – specifically fruits and vegetables – was the number one priority! Recognizing that there are more fast food restaurants and liquor stores than markets and grocers, residents want to see more healthy, affordable food options.



## MAPPING THE NEIGHBORHOOD

A wide range of indicators were used to understand our neighborhoods nutrition environments. Using Geographic Information Systems software, site visits, interviews and store surveys, health officials and volunteers examined factors ranging from healthy food access and availability to marketing practices and product quality.



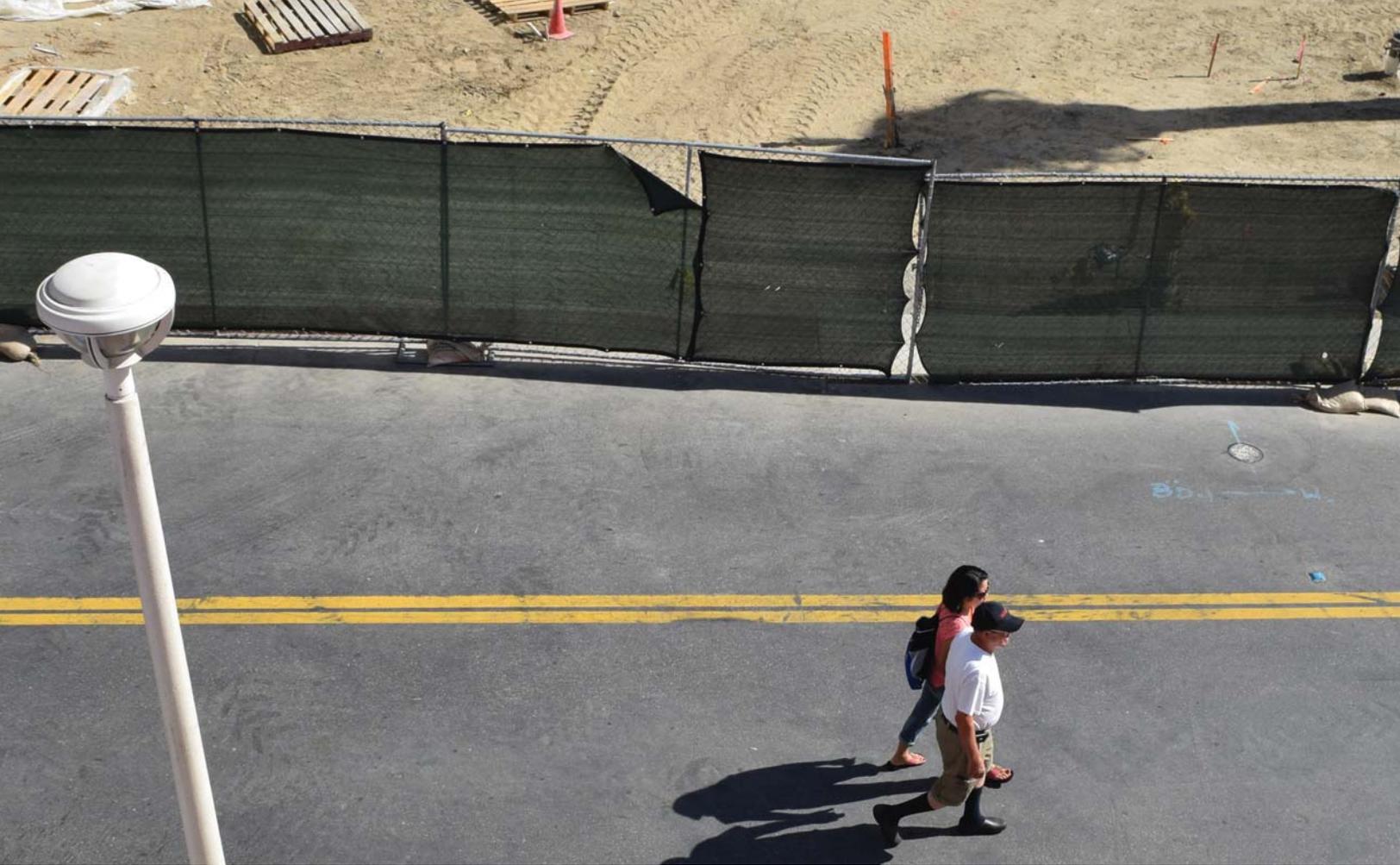
### WHAT DID WE LOOK AT?

- All types of food stores
- Fast Food Outlets
- Walkability
- Parks and Schools
- Transit
- Outdoor Media
- Emergency Food Outlets



### QUALITY CRITERIA

- Food Access
- Food Price
- Food Availability
- Nutrition Information
- Exterior Advertising
- Interior Advertising
- Safety & Walkability



# Pedestrian Environment

The public right-of-way is the space between public and private parcels; it is made up of the roadway, sidewalks, parkways and medians; its character affects how users behave within it. Wide streets tend to lead to drivers traveling at higher speeds, while narrow sidewalks tend to preclude crowds from walking in a commercial district. As nearly a quarter of Long Beach's fifty square mile land area is made up of the public right-of-way, the policies, programs and design standards for it can have significant consequence on mobility, economic conditions, the environment, public health and quality of life.

The pedestrian plan study area, which encompasses Central and West Long Beach and portions of the Westside, was largely developed in the early part of the 20th Century, before cities' transportation network became dominated by automobiles. Much of the area was served by trains and a streetcar network, which at the time was part of the most extensive metropolitan transit network in the world. Most streets within the study area were constructed as two-lane roadways with flanking sidewalks and parkways on either side. Some streets had wider roadways as more significant thoroughfares or in some cases, to carry fixed rail transit. Transportation trends have altered how

these streets function as increasing automobile volumes and speeds led to a greater number and severity of conflicts with other cars as well as pedestrians and cyclists. Some roadways have been made wider for automobile traffic, at the expense of sidewalk width. Most Central and West Long Beach and Westside streets remain intact, providing a strong foundation to build a walkable community. The focus area's traditional pattern of compact, mixed-use development, dense transit network and generally even distribution of community amenities also lends itself to walking.

# Environmental Factors



**STREET  
NETWORK**



**STREET  
HEIRARCHY  
& WIDTH**



**TRAFFIC  
VOLUME**



**SPEED LIMIT**



**CONTROLLED  
CROSSINGS**



**PEDESTRIAN  
ACCESSIBILITY**



**PEDESTRIAN  
SAFETY**



**STREET  
LIGHTING**

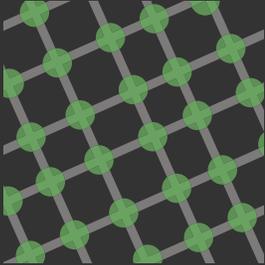


**URBAN  
FORESTRY**

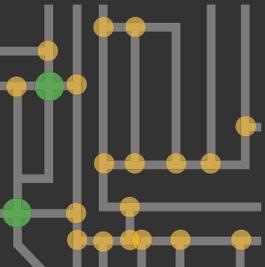
# EVOLUTION OF THE STREET GRID

- PED FRIENDLY INTERSECTION
- CAR DEPENDENT CUL-DE-SAC
- "T" INTERSECTION

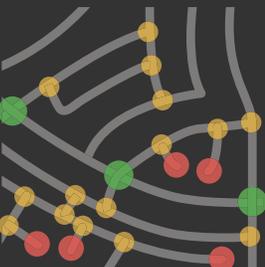
1900: GRIDIRON



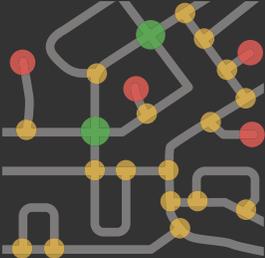
1950: FRAGMENTED PARALLEL



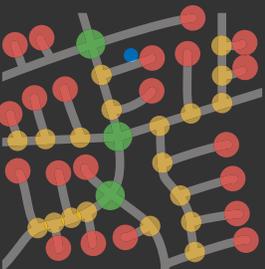
1960: WARPED PARALLEL



1970: LOOPS & LOLLIPOPS



1980: LOLLIPOPS ON A STICK



The consistency and density of the street network often determines how walkable an area can be.

Communities defined predominantly by large, impermeable blocks or populated by significant numbers of cul-de-sacs and dead end streets tend to be difficult for pedestrians

on quarter mile increments in both north and south directions with finer, varied street networks in between. Most blocks in Downtown have a nearly square dimension of 400-440 feet distances. Outside of the downtown area, the grid more often has a rectilinear bias with the narrow direction being less than 400 feet and the long direction being closer to 800 feet. In the focus area, commercial districts are more linear main streets along thoroughfares.



**WALK SCORE, WHICH USES INTERSECTION DENSITY, BLOCK LENGTH AND POPULATION DENSITY TO MEASURE THE WALKABILITY, GIVES LONG BEACH A SCORE OF 69, SOMEWHAT WALKABLE.**

WALKSCORE.COM, 2016

to navigate. Consistent street networks and finer block structures and provide more options for traversing neighborhoods to a desired destination. Major public infrastructure or job centers can pose challenges for walkability if they are designed as closed campuses.

While the traditional nature of the street network creates mostly walkable neighborhoods and commercial districts, there are breakdowns in the street grid that isolate some neighborhoods. The most significant interruption is the Los Angeles River and Interstate 710 Freeway, that together create a near impermeable quarter mile wide barrier with few connections between Central and West Long Beach. Additional breakdowns of the street network accommodate large institutions, including Poly High School, Long Beach City College and former Cabrillo military housing complex, now Cabrillo High School, Job Corp., Villages at Cabrillo and Long Beach State Technology Park.

Central and West Long Beach was largely developed with a varied street grid but consistently walkable block structures. The primary grid is based



**BLOCK STRUCTURE**

- Street Block
- CX3 Project Site





## STREET HIERARCHY & WIDTH



**While streets are typically intended to accommodate all users, many are designed to emphasize specific types of transportation.**

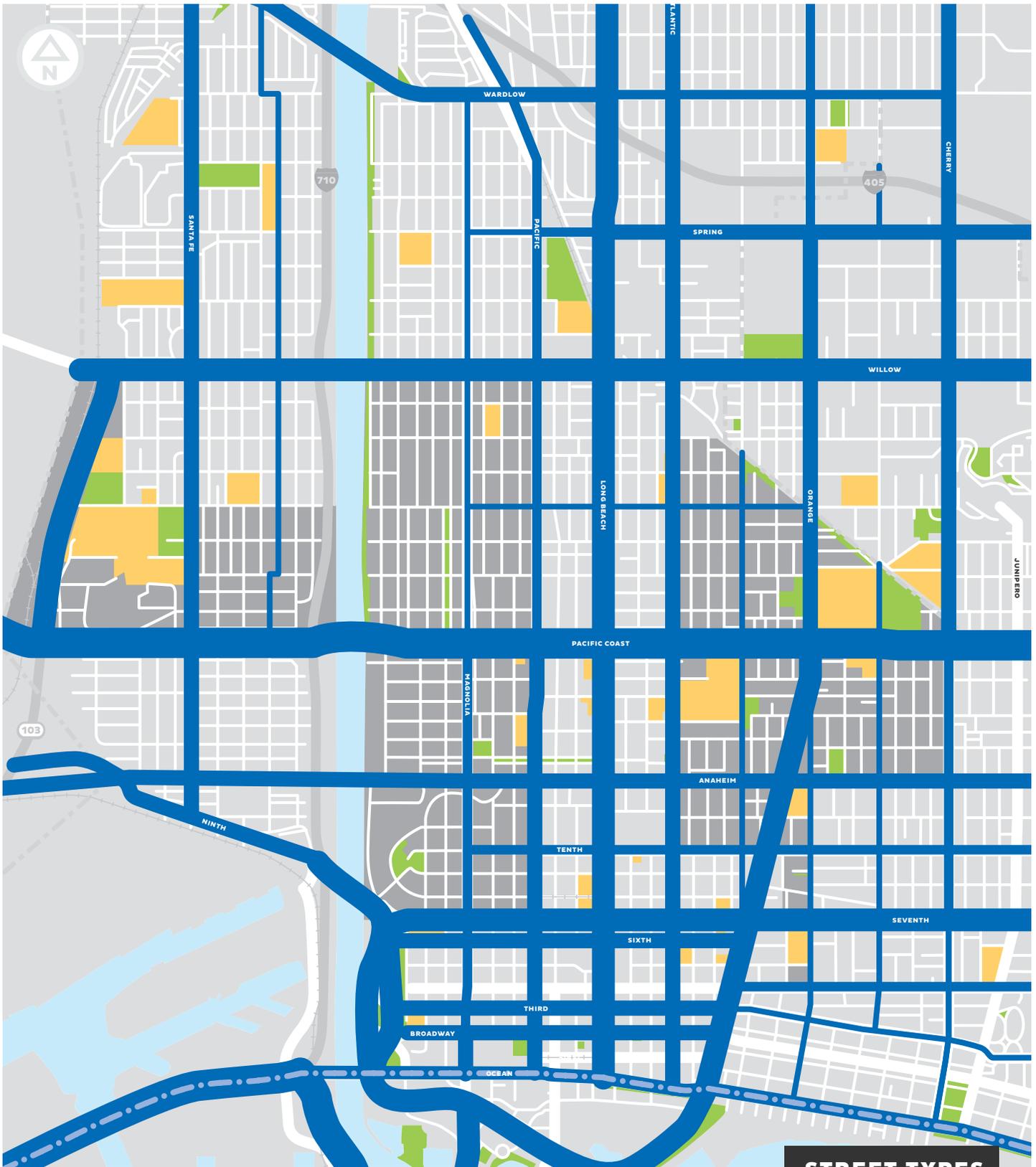
Street widths and configuration change are based on their intended purpose. Alleys are designed to provide service to the rear of properties, while neighborhood streets that offer local connections from major thoroughfares move transit and cars regionally. Well-functioning transportation networks have a street hierarchy that serve different transportation demands while also accommodating the well-being of the local community.

The hierarchy of streets in Central and West Long Beach are established by regional corridors including the Interstate 710 Freeway and Pacific Coast Highway with a consistently spaced grid of boulevard and avenues. The major connections through Central and West Long Beach are the north-south thoroughfares Pacific, Atlantic, Alamitos and Santa Fe Avenues, along with east-west corridors 7th, 10th, Anaheim and Willow Streets. Easy, Magnolia, Martin Luther King Jr., Walnut Avenues and Hill Street serve as secondary connections. These are often designed similarly to local streets which has led to impacts to both the transportation network as well as the communities they travel through.

The width of the street will often determine how it will be used: wide streets tend to promote high vehicle

speeds, narrower streets promote greater pedestrian permeability, as just a couple examples. Roadways with surplus vehicle carrying capacity have been modified to create bicycle facilities, expand pedestrian amenities, add landscaping and increase vehicle parking by manipulating the width and number of lanes.

The streets designed to carry higher traffic volumes in Central and West Long Beach tended to be wider, with Pacific Coast Highway, Willow Street, Long Beach Boulevard, Pacific Avenue and Santa Fe Avenue being the widest. Perception varies between them as the well-landscaped raised medians on Pacific and Santa Fe appear more intimate than that of Pacific Coast Highway and portions of Willow Street. Not including a few streets that, due to prior issues, once had train tracks that led to wider roadways, such as Martin Luther King Jr. and Daisy Avenues, local streets are generally appropriately sized.

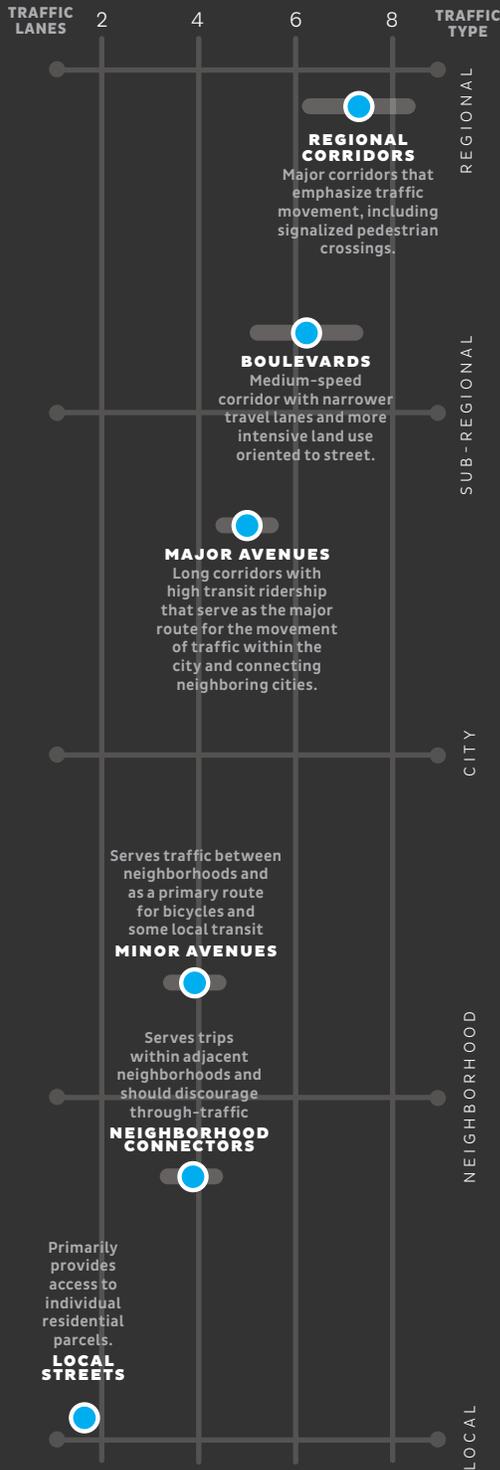


**STREET TYPES**

- Street Block
- CX3 Project Site
- Neighborhood Connector
- Minor Avenue
- Major Avenue
- Boulevard
- Regional Connector
- Scenic Route



# STREET TYPOLOGIES & TRAFFIC



The street network hierarchy's is largely based on its ability to accommodate volume of traffic safely and efficiently.

Boulevards and Avenues are designed to carry more vehicles using multiple travel lanes as well as active traffic controls like signals. Local streets carrying fewer cars tend to be narrower with a single travel lane in either direction with stop signs providing more passive traffic control. Current land-use

of vehicle traffic owheras the local streets support more immediate commute needs. The primary east-west corridors of 7th Street, Anaheim Street, Pacific Coast Highway and Willow Street carry twice the volume of the secondary routes 4th, 10th and Hill Streets. The north-west corridors more evenly distribute

The traffic volume and speed makes walking in this area feel really unsafe, especially at the crosswalks.

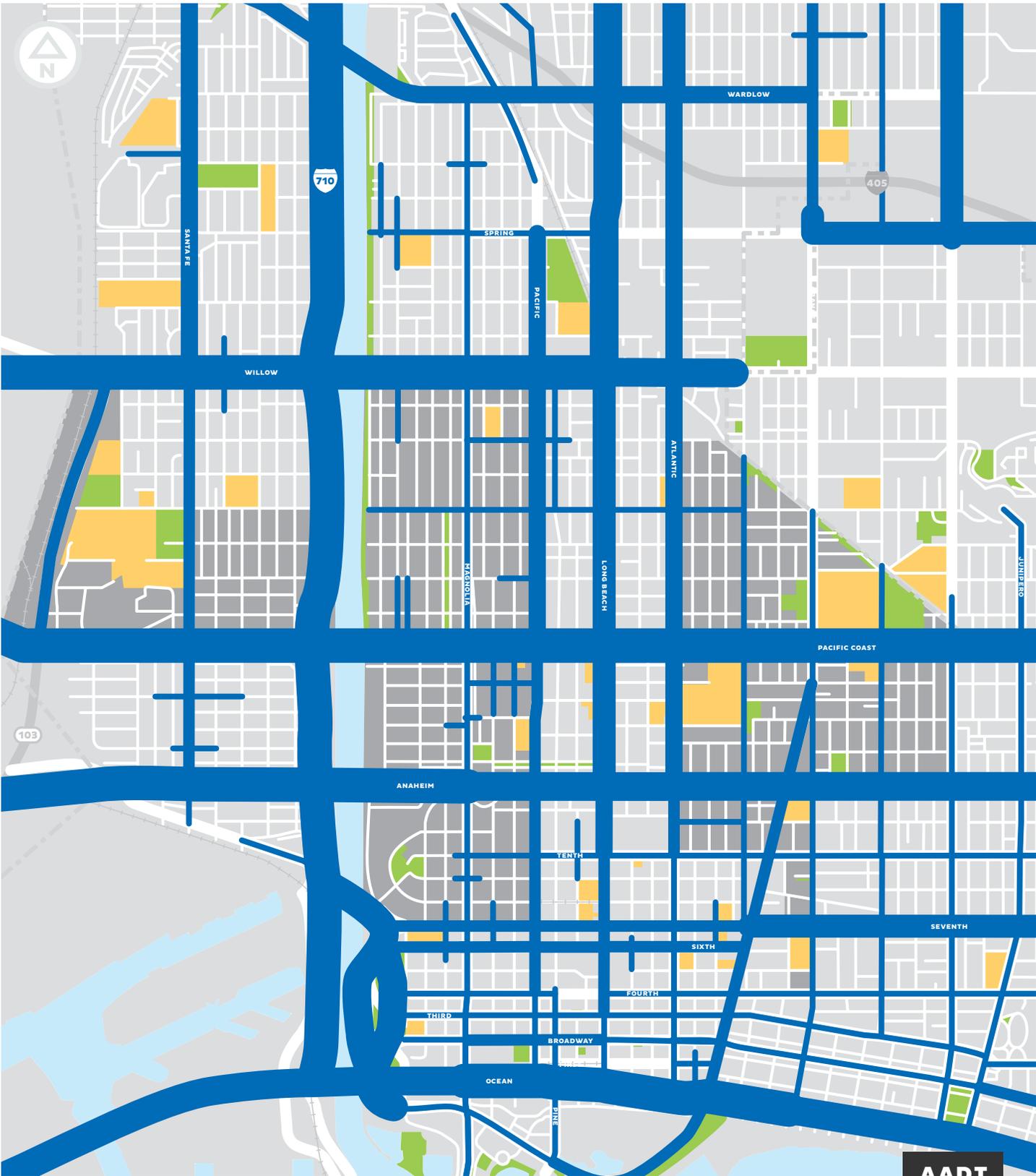
WASHINGTON RESIDENT

planning often supports these traffic patterns with regional and neighborhood-serving commercial uses and other more intensive development like office buildings and residential com-plexes on major thoroughfares, while local streets serve residential neighborhoods and smaller scale development.

vehicle traffic volume between Santa Fe, Pacific Avenue, Long Beach Boulevard, Atlantic Avenue and Alamitos Avenue and Easy, Magnolia, Martin Luther King Jr. Avenues carry more local traffic volumes. East-west traffic volumes generally remain consistent throughout Central and West Long Beach while north-south volume tends to be less until reaching Downtown.

Major thoroughfares in Central and West Long Beach support the majority

From the City of Long Beach Mobility Element Table 4: Contest Sensitive Classification System Definitions, P. 74



**AADT**

AADT is the annual average daily travel which indicates the amount of vehicle travel per day with data taken over the span of a year.



As streets are designed to carry different types of traffic they each have designated maximum travel speeds for vehicles reinforcing their respective local to regional purpose.

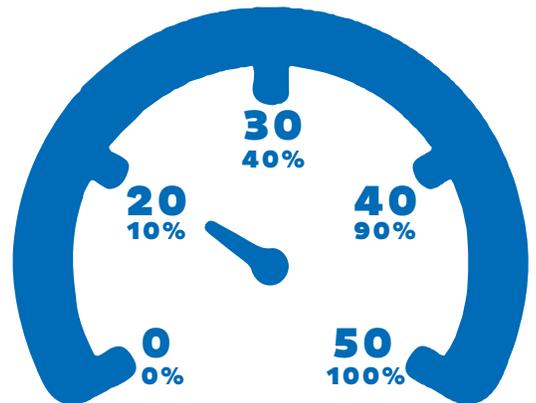


Major thoroughfares that connect regional distances tend to have speed limits between 30 and 40 miles per hour while local streets tend to have lower speed limits, as vehicles tend to travel shorter distances to their ultimate destination, typically a

25 mile per hour reductions when children are present around nearby schools. Local streets are limited to 25 mile per hour vehicles speeds though there are a few streets in Central and West Long Beach with 15 mile per hour speed limits

**WHEN STRUCK BY A CAR, PEDESTRIANS HAVE A SURVIVAL RATE OF 90% AT 20 MPH AND A MORTALITY RATE OF 90% AT 40 MPH.**

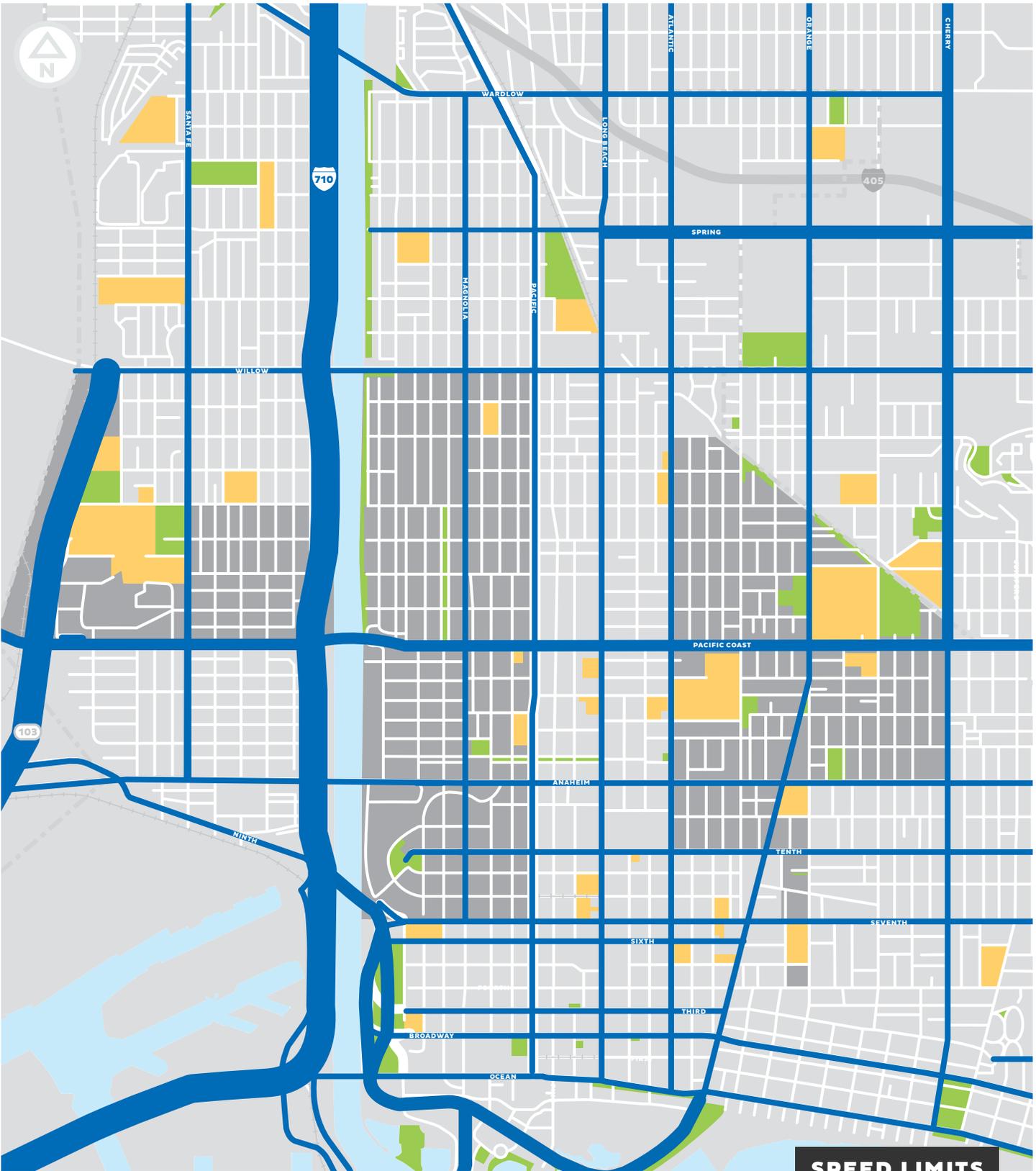
U.S. DEPARTMENT OF TRANSPORTATION LITERATURE REVIEW ON VEHICLE TRAVEL SPEEDS AND PEDESTRIAN INJURIES, 1999



residential neighborhood or school. The actual speed of vehicle traffic will affect the safety as well as the sense of comfort for pedestrians occupying the adjacent sidewalks.

The majority of thoroughfares in Central and West Long Beach have posted speed limits of 30-35 miles per hour with some streets observing

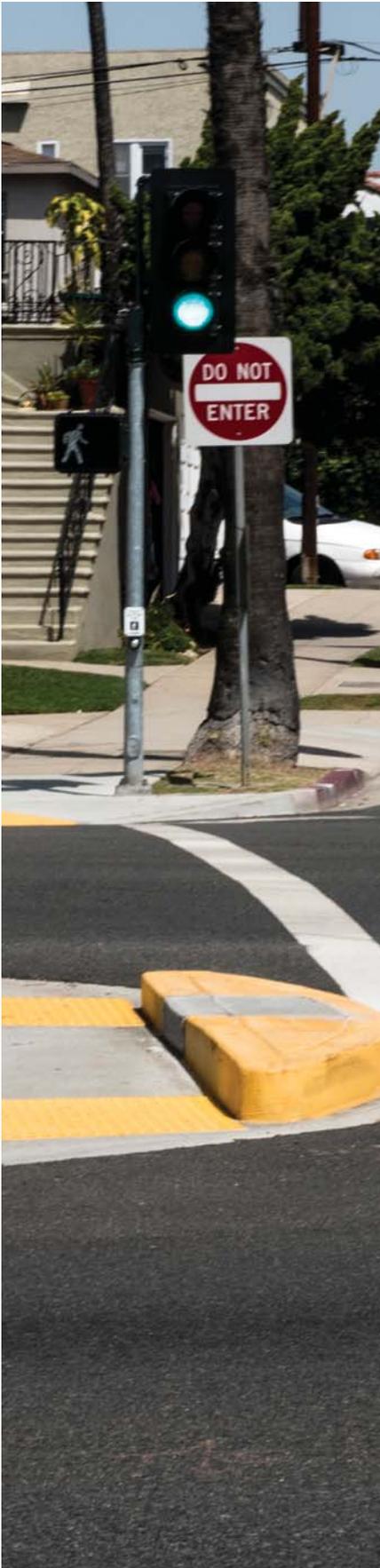
posted. There are a number of streets where the average travel speeds significantly surpass the posted limit, often due to surplus roadway capacity, distance between traffic controls or reduced friction from peak traffic period restrictions to on-street curbside parking.



- Street Block
- CX3 Project Site
- 46 mph or more
- 36 - 45 mph
- 26 - 35 mph
- 25 mph or less

**SPEED LIMITS**





**CONTROLLED CROSSINGS**



Most modern street intersections have traffic controls to manage who, whether vehicle or pedestrian, has the right of way to enter and travel through first.

As traffic volume and speeds increase, the need for controls between directions and types of traffic becomes more necessary. On local streets, these controls can be provided by little more than a stop

sign for two or more directions of travel, but Avenues and Boulevards need traffic signals with appropriate markings to safely manage vehicle and pedestrian movement. Often these signalized intersections are

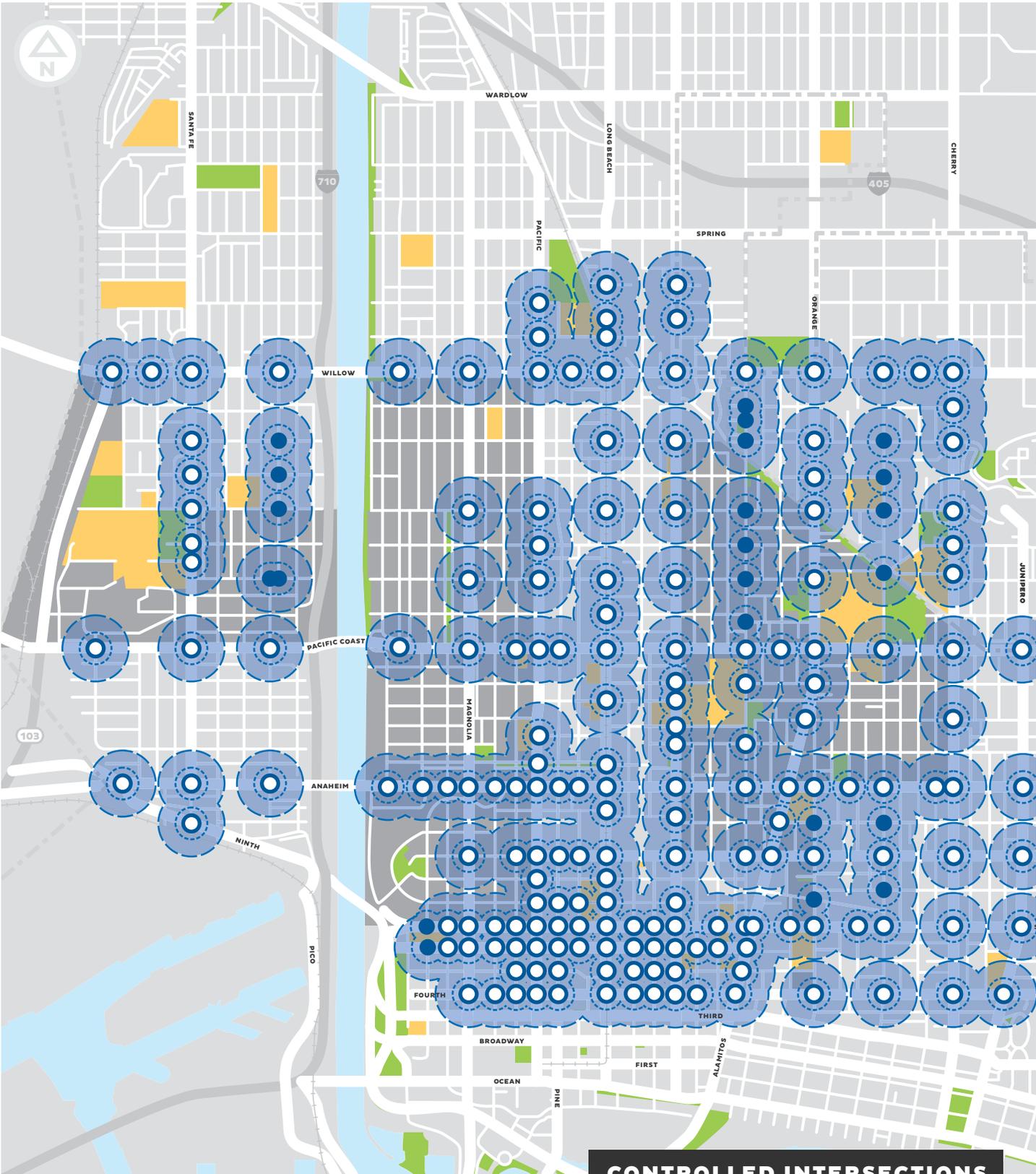
**Last year, there was a pedestrian that died trying to cross the street. There is no traffic signal and the crossing distance is really long.**

WASHINGTON RESIDENT

limited to serving the needs of vehicle movement which can be detrimental to pedestrians who typically need shorter increments of controlled opportunities to safely cross major streets.

Traffic controls are provided at the intersections of boulevards and avenues to focus automobile traffic out of the neighborhoods. The limited number of traffic controls at secondary intersections on major streets has led to longer distance between pedestrian crossings along some corridors intended to be Pedestrian Priority Areas as identified in the Mobility Element.

Consistency within the street grid of Central and West Long Beach lends to diverse options for traversing through and between neighborhoods.



**CONTROLLED INTERSECTIONS**

- Street Block
- CX3 Project Site
- Stop Signs
- Traffic Signals
- 1 Block Radius
- 2 Block Radius





## PEDESTRIAN ACCESSIBILITY

The traditional street will have sidewalks flanking the roadway, built upon raised curbs.

Sidewalks are designed to provide safe pedestrian facilities that separate vehicles from traveling at higher rates of speed. A sidewalk's availability and navigability determines how accessible a community is for those with limited mobility whether due to age, disability or families walking

Missing sidewalks on thoroughfares crossing the Los Angeles River and I-710 Freeway, and throughout some of the industrial areas, pose significant impediments to connectivity. Narrow sidewalks on Alamitos Avenue and Pacific Avenue can make these corridors inaccessible where sloping

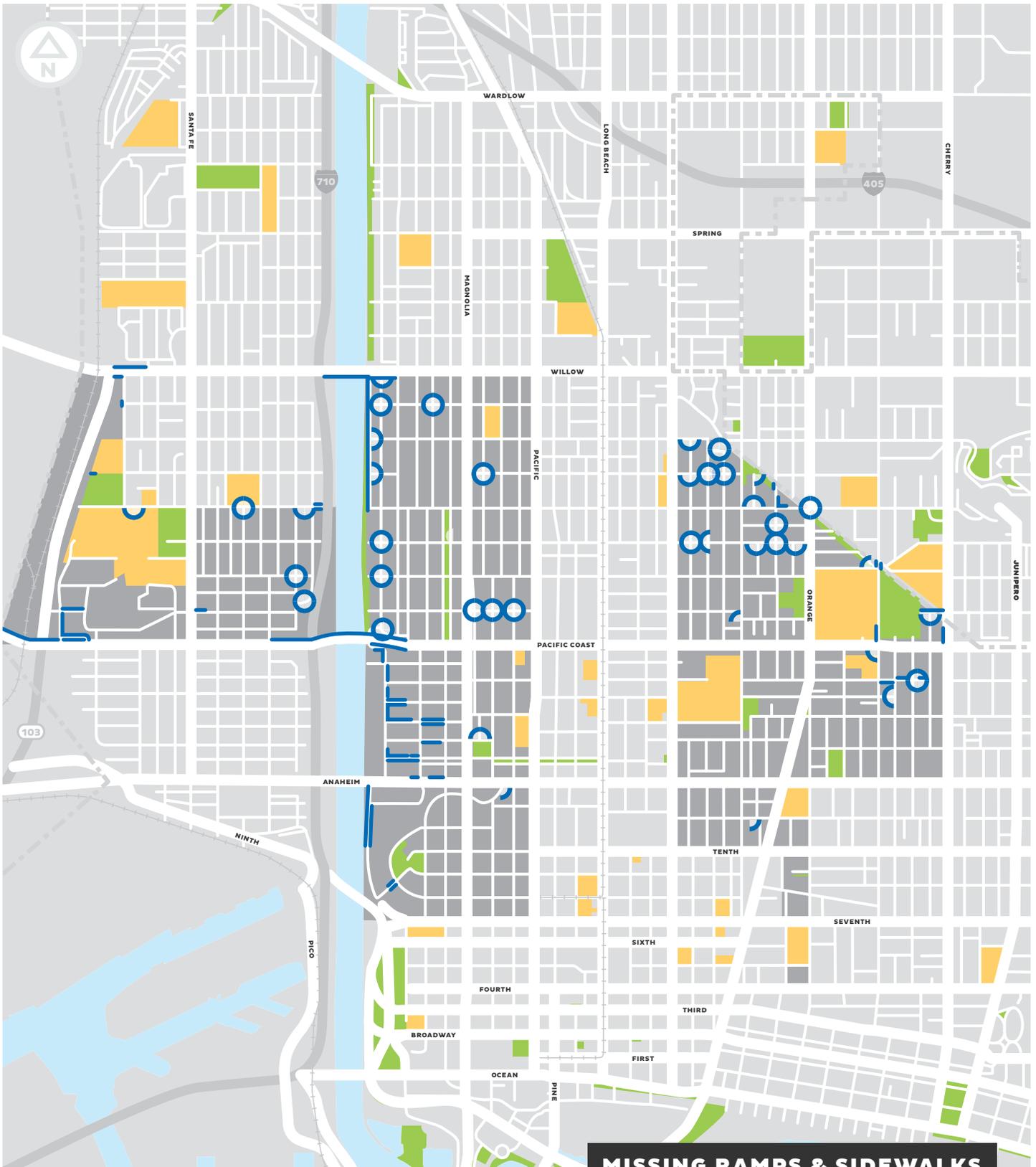
**The ADA Standards for Accessible Design provides regulations to the design, construction and alteration of public facilities to be readily accessible and usable by individuals with disabilities. These facilities include curb ramps, sidewalks, public transportation facilities, etc.**

2010 ADA STANDARDS FOR ACCESSIBLE DESIGN

with children. With raised sidewalks, properly designed ramps at all corners of an intersection is essential to accommodate this same audience.

Due to predominantly being developed as a streetcar community, Central and West Long Beach are fortunate to have sidewalks flanking most streets.

driveways and infrastructure encroach on pedestrian paths of travel. The majority of intersections in the study area do have curb ramps though some intersections of local streets are lacking one or more corner ramps.



**MISSING RAMPS & SIDEWALKS**

- Street Block
- CX3 Project Site
- Missing Curb Ramp
- Missing Sidewalk



## LOCAL NEWS: RISING NUMBER OF PEDESTRIAN FATALITIES AND INJURIES

According to statistics provided by the Long Beach Police Department, vehicle-versus-pedestrian collisions have dramatically risen over recent years. Experts attribute the rise in pedestrian fatalities to smartphone distractions, driving or walking while intoxicated, speeding, jaywalking and walking around in dark clothing at night.



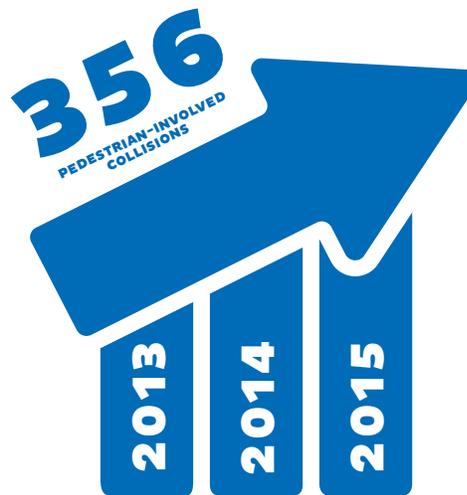
TOP  
Two boys illegally cross the street at a red light in Long Beach, risking being hit by a vehicle.  
PHOTO COURTESY OF LA STREETS BLOG



American cities have had a historic decline in the number of severity of traffic collisions due to increased safety technology and trend towards slowing and controlling traffic.

But the combination of distractions from mobile devices and increased trips due to a recovering economy has led to increasing number of collisions resulting more often in

has somewhat to do with the street and sidewalk design, but more to do with the concentration of schools, commercial activity and residents. These conflicts have resulted in the



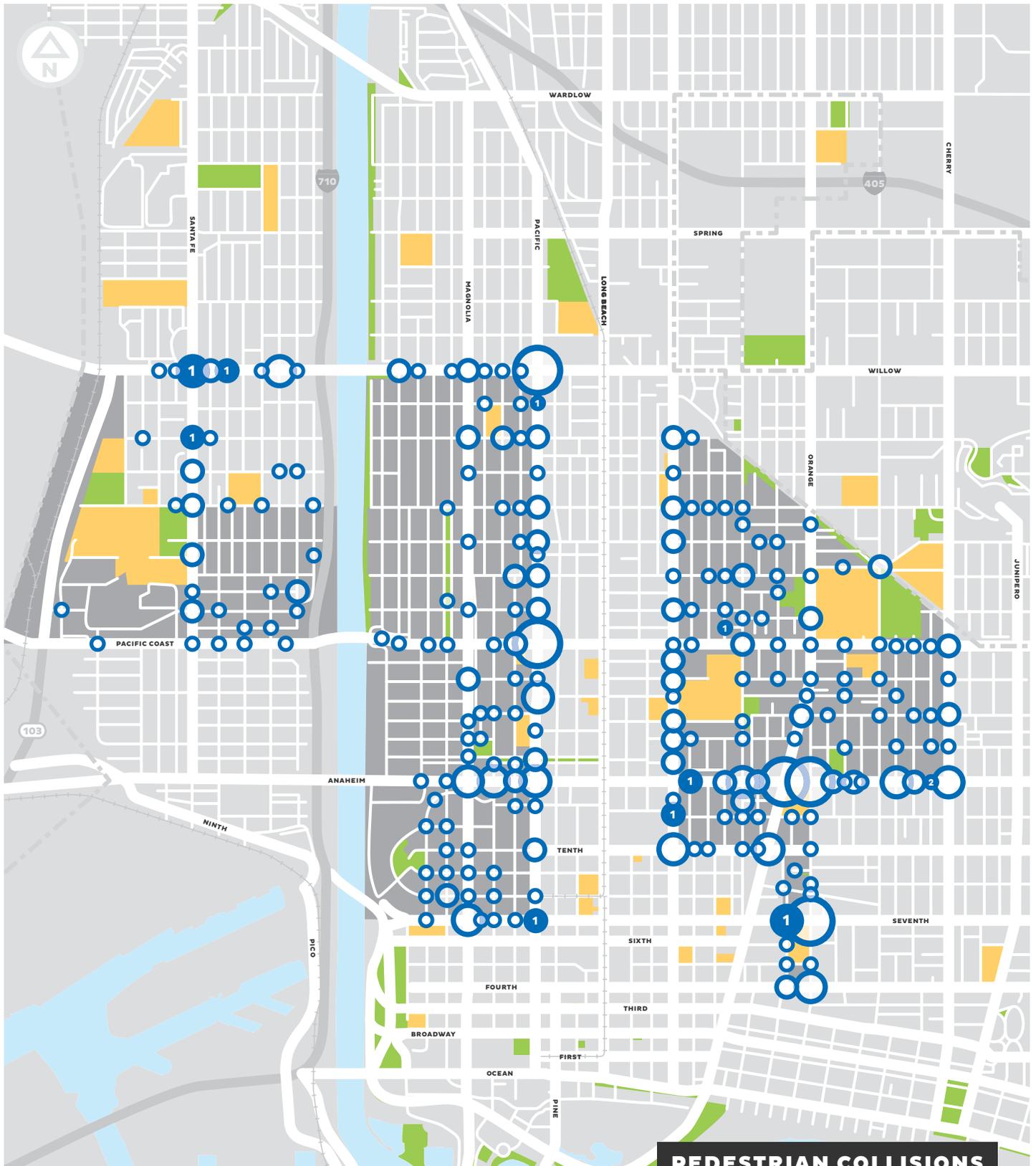
**PEDESTRIAN-INVOLVED COLLISIONS IN LONG BEACH CLIMBED FOR THE THIRD CONSECUTIVE YEAR IN 2015, UP TO 356, AND WERE UP MORE THAN 25% SINCE 2011.**

JOSH DULANEY, LONG BEACH PRESS TELEGRAM

severe pedestrian injury and death. These accidents tend to happen where major thoroughfares travel along high pedestrian generators, including schools, major transit nodes, dense residential neighborhoods, job centers and business districts.

Pacific Coast Highway, Anaheim Street and 7th Street are major vehicle thoroughfares with significant levels of pedestrian activity. This

majority of Long Beach's pedestrian involved collisions taking place along these three corridors. There are also specific safety hotspots outside of these corridors at the intersection of 4th Street at Orange Avenue near the Senior Center and Willow Street at Pacific Avenue and Long Beach Boulevard.



**PEDESTRIAN COLLISIONS**

**Severe Pedestrian Collisions [2004 - 2014]**

- Street Block
- CX3 Project Site
- Fatality
- 1 - 2
- 3 - 5
- 6 - 9
- 10 or more



**CASE STUDY:  
1ST & 4TH  
STREET  
LONG BEACH**

In 2009, the City and the Long Beach Redevelopment Agency installed 92 energy-efficient pedestrian lights in the East Village, particularly along 1st Street. Former East Village Association President Richard Lewis said the improvements will go a long way to making the area pedestrian-friendly and improve public safety perceptions. Additionally in 2010, the Redevelopment Agency Board approved the installation of 12-foot pedestrian lights along 1st and 4th Streets.



TOP  
Pedestrian lighting located at the intersection of 4th and Linden next to Long Beach Transit bus shelter.



**Street Lighting is an essential component to any safe street and pedestrian environment, though often is considered the least when developing complete street designs.**

Local agencies will often develop standards for the placement, type of light fixtures and color of the light emitted to respond to various conditions. Some have evolved those

intersections as they potentially relate to conflicts between pedestrians and vehicles, as well as safety as it relates actual and perceived crime, by making sure the entire pedestrian realm is well-lit and that there are no dark corners. One consideration of street lighting is light pollution, particularly in residential areas where it may not sensitive to have lights on throughout the night. Motion-sensor street lighting can be an appropriate response to this as the lights would only activate if there is a person within its proximity.

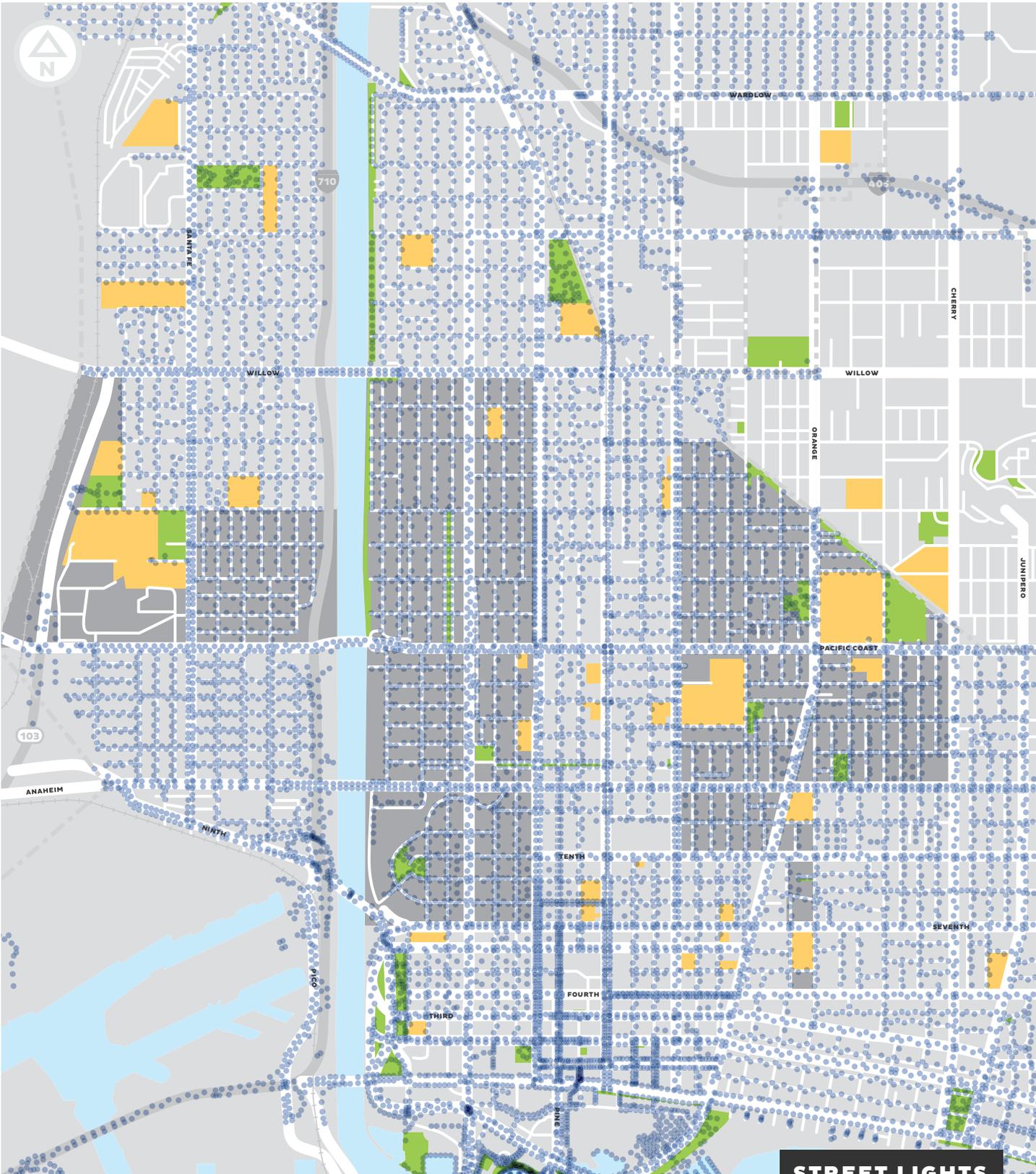


**61% OF PEOPLE FEEL EITHER 'MORE SAFE' OR 'MUCH MORE SAFE' WITH THE ADDITION OF PEDESTRIAN LIGHTING.**

**THE INFLUENCE OF STREET LIGHTING ON CRIME AND FEAR OF CRIME, 1991**

Long Beach has street lighting design standards in place to respond to varied conditions including neighborhood streets and major thoroughfares. The city is currently transitioning standard street lights to LED, which will emit a cooler, brighter light than the metal halide lamp that has characterized the city's orange glow at night. The Wrigley Village portion of Pacific Avenue is the only sustained part of the study area equipped with pedestrian scale lights that augment the standard street lights which provide well-lit environment for evening walks.

standards to include additional consideration of pedestrian safety. These considerations should include lighting of crosswalks and



**STREET LIGHTS**

- Street Block
- CX3 Project Site
- Street Light





# A GUIDE TO LONG BEACH STREET TREES

**PARKWAYS SMALLER THAN 4 FT SHOULD BE AVOIDED**

**DROUGHT TOLERANT**

**CALIFORNIA NATIVE**

The City of Long Beach Public Works Department is responsible for preserving and protecting the community's urban forest and promoting the health and safety of City trees throughout their life span.

## EVERGREEN

Trees that do not lose their foliage during the winter or dry season.

## PARTLY DECIDUOUS

These trees tend to retain their foliage in the winter months.

## DECIDUOUS

Trees that lose their leaves and other plant structures, such as petals, seasonally.

MINIMUM PARKWAY SIZE [FT]

8+



COAST LIVE OAK



HONEY LOCUST

7



EVERGREEN MAPLE



BIG LEAF MAPLE



MONTEREY PINE

6



BLACK ACACIA



WHITE ADLER

5



EVERGREEN PEAR

4



LILY OF THE VALLEY



CROWN OF GOLD



PURPLE ORCHID

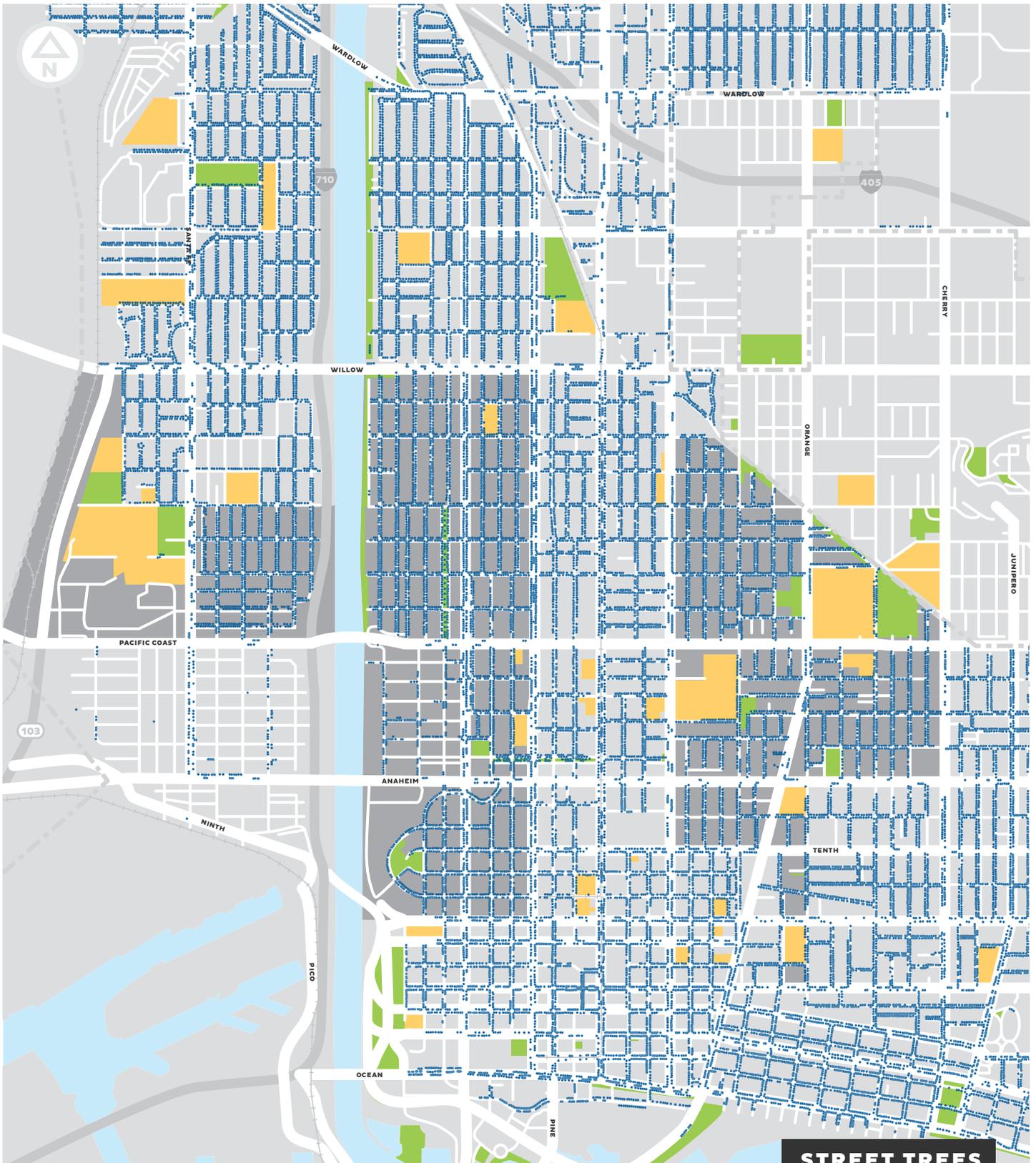
These trees have been approved by the City of Long Beach Public Works Department as viable street tree options. For more information on other species of trees allowed by the City, [www.longbeach.gov/pw/](http://www.longbeach.gov/pw/)

## URBAN FORESTRY



With limited municipal budgets for road and sidewalk maintenance, as well as other city services, street trees have often been considered an amenity to local infrastructure. There is more understanding of the value these trees have to traffic calming, pedestrian comfort, local environmental health, with growing public and private investment in urban forestry within the public right-of-way. Due to limited space and underground utilities in urban environments, there are often barriers to planting trees that can grow and be healthy.

Long Beach has an extensive urban forest between its parks, streets and private properties, though in the historic parts of the city the tree canopy thins. This is due to the combination of far fewer acres of park space outside of the Eastside, greater lot coverage from denser development and narrower planting areas on the city streets. Primary thoroughfares like 7th Street, Anaheim Street and Willow Street currently have very limited area within the pedestrian environment for planting trees, which results in stunted growth for trees and/or conflicts with maintenance of the pavement conditions due to root growth. Pacific Coast Highway and Alamitos Avenue have no available planting area as the sidewalks are only wide enough to provide the necessary clear path of travel.



**STREET TREES**

- Street Block
- CX3 Project Site
- Street Tree





# Pedestrian Generation

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The design of the street network and public right-of-way is part of defining the pedestrian environment; the design and uses of adjacent properties also have a significant impact on the walkability of a community. Denser communities with a mixture of land-uses typically promotes more walking than sprawling, single-use areas. Neighborhoods with large youth and senior populations tend to see more pedestrians as they often do not have access to vehicles. Schools and high quality parks tend to generate pedestrian activity, as do large employment centers and well-designed commercial districts.

Central and West Long Beach was largely developed during a time when the primary form of transportation was walking, though areas have since become automobile-oriented. Most neighborhoods in the study area have schools and parks, commercial nodes and even medical services within reasonable walking distances. The CX3 neighborhoods struggle with many of the factors that lead to unhealthy populations including environmental impacts from industry and freight transportation, food deserts and crime. These stressors can led to high levels of obesity as well as asthma and cancer.



**TOP**  
Local residents walk on a narrow sidewalk, forcing some of them off into the parkway.  
PHOTO COURTESY OF CITY FABRICK

**ABOVE INSET**  
Woman and child walk home from school on the sidewalk underneath shade-providing trees.  
PHOTO COURTESY OF CITY FABRICK

# Pedestrian Factors

**TRANSIT  
RIDERSHIP**



**PUBLIC  
FACILITIES**



**COMMERCIAL  
& EMPLOYMENT  
CENTERS**



**ACCESS TO  
HEALTHY FOOD**



**RESIDENTIAL  
POPULATIONS**



**OBESITY**



**ENVIRONMENTAL  
BURDEN**





**TRANSIT RIDERSHIP**



An effective public transit system generates pedestrian traffic as the majority of bus riders walk to and from their bus stops.

Transit riders activate the public realm by occupying the bus stop while waiting for their bus or train to arrive. Corridors with high transit ridership and nodes with concentrations of high boarding transit stops are often areas of much pedestrian activity. Long Beach's Transit network extends

While several of the most significant transit nodes are at the Metro Blue Line light rail stations, there are high rider transit stops around the Long Beach City College Pacific Coast Campus at the Pacific Coast Highway and Orange Avenue intersection, in front of Poly High School on Atlantic

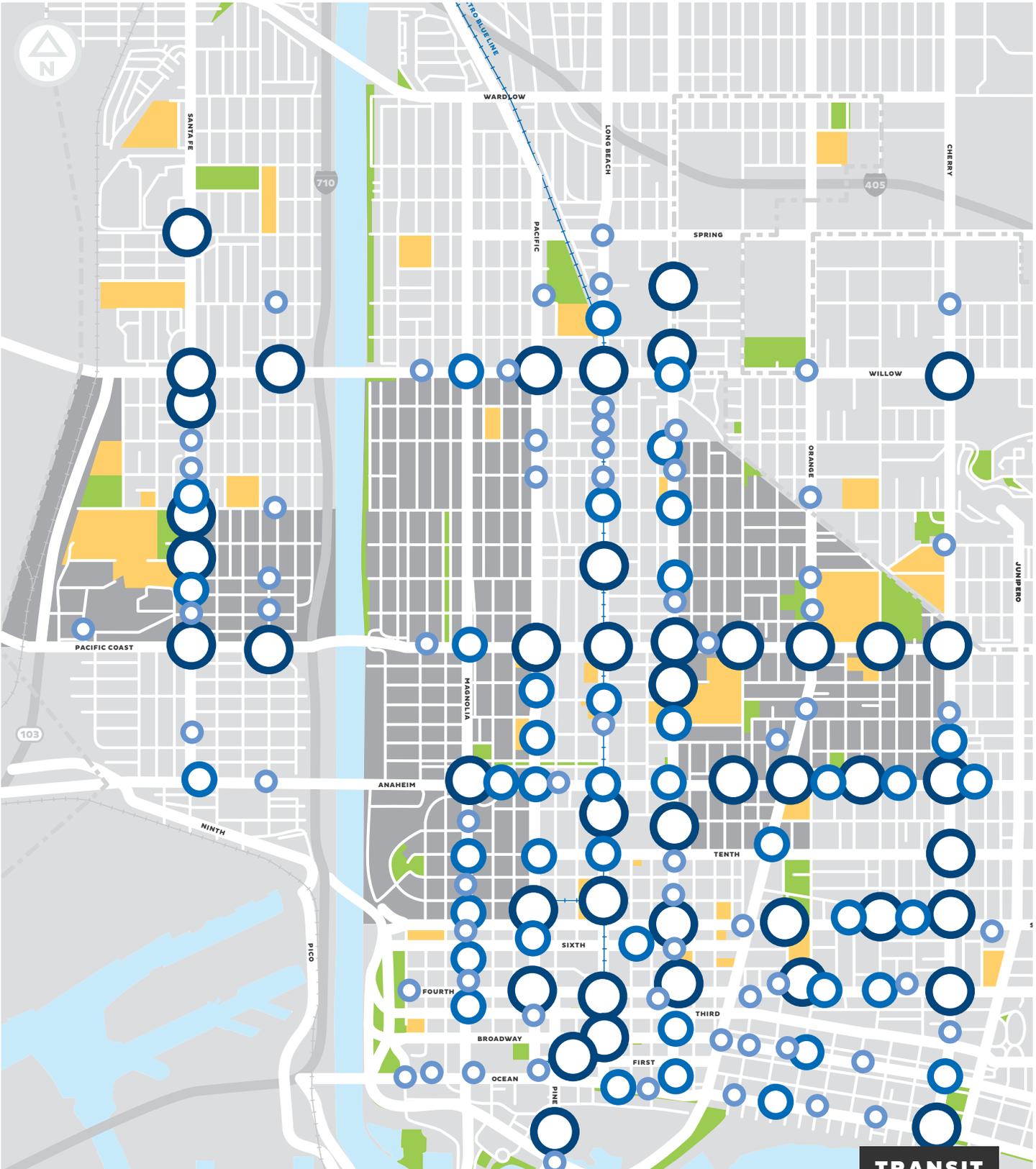
**83% OF BUS RIDERS AND 68% OF TRAIN RIDERS IN LA COUNTY BEGIN THEIR TRIP BY WALKING.**

METRO SPRING 2015 COMMUNITY SURVEY



to every corner of the city with most residents within a quarter mile of a bus line. Compared to West Long Beach, the bus route network is denser in Central and West Long Beach and the Downtown with bus stops no more than a few blocks apart. Anaheim and 7th Streets are significant east-west bus corridors while Atlantic Avenue and Long Beach Boulevard predominantly carries north-south transit routes.

Avenue and Cabrillo High School on Santa Fe Avenue. Other significant transit nodes at Pacific Avenue and Willow Street and adjacent to the Villages at Cabrillo campus serve riders where a convergence of multiple transit lines intersect.

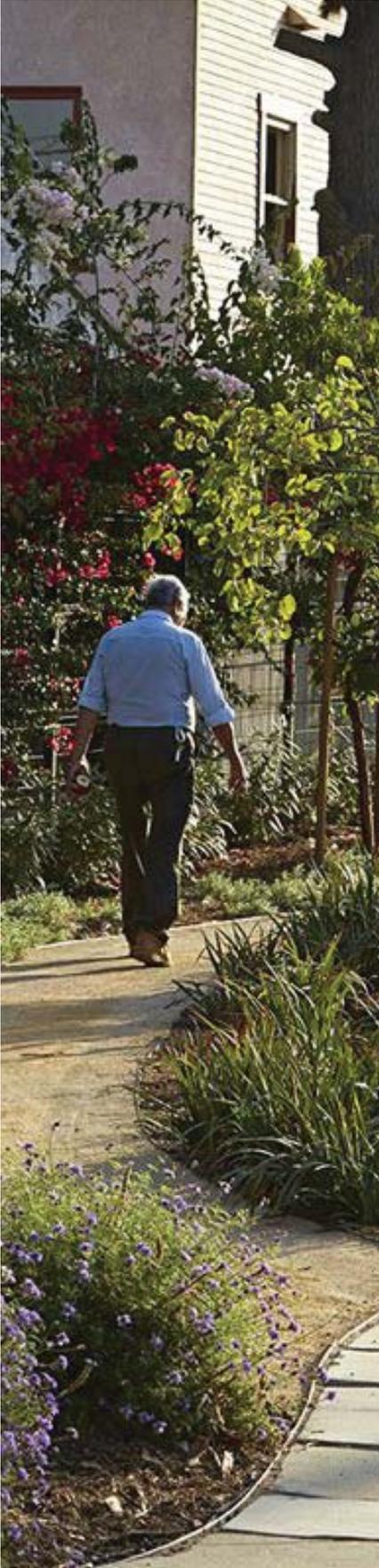


### Number of Passenger Boardings Per Day

- Street Block
- CX3 Project Site
- 21 - 50
- 51 - 100
- 101 +



The locations shown are the number of passenger street boardings at intersections only.



## PUBLIC FACILITIES



**In densely populated communities, the public parks and civic assets become even more essential to residents' quality of life and ability to socially interact.**

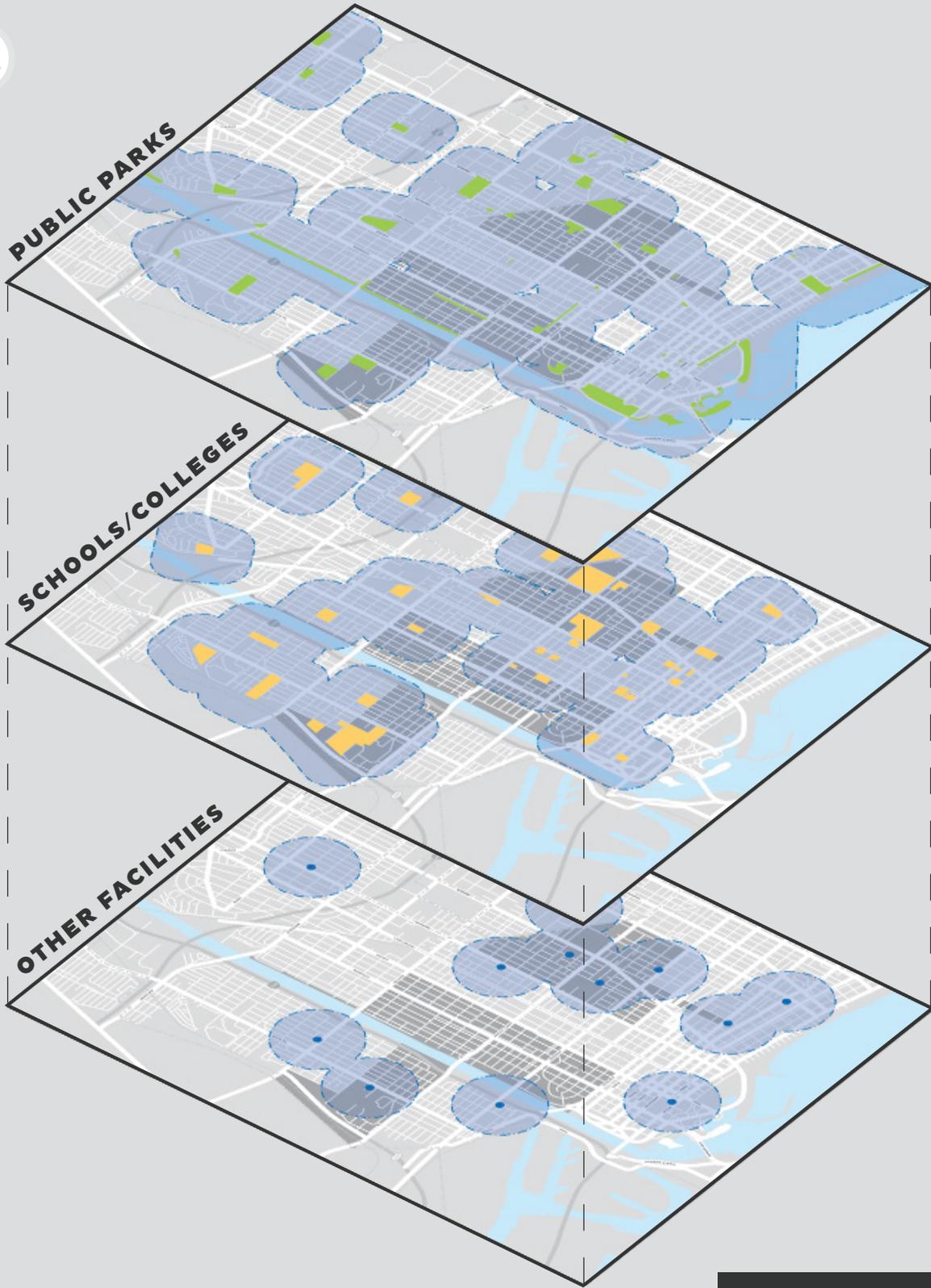
To support the health and wellness of residents, some type of publicly accessible open space should be within walking distance of every resident. While distribution is part of the equation, maintaining accessible infrastructure that safely connects residents to these parks is another part.

While Central and West Long Beach is underserved by total acreage of open space and park amenities relative to the city as a whole, the existing park network is distributed evenly so that most every resident is within a 10 minute walk of park. The larger clusters of park space are located in the southwest, northeast and northwest corners of the study area with pocket parks scattered throughout the interior.

Typically, traditional residential neighborhoods have a local school within walking distance of the

local student body. Because of their proximity, the schools served as community centers as well as academic institutions. As school development standards evolved and school districts centralized, new campuses were developed to serve larger cache areas that related less to geography and more to preferences.

Central and West Long Beach is fortunate to have a public school located within walking distance of most every neighborhood. The CX3 Neighborhoods were in most cases named by the Elementary School located within them. There are also two Middle Schools [Franklin and Washington], three High Schools [Poly, Cabrillo and Renaissance] and Long Beach City College's Pacific Coast Campus in the study area, which progressively help to serve larger student bodies.



**PUBLIC FACILITIES**

- Street Block
- CX3 Project Site
- Public Parks
- Schools/Colleges
- Libraries & Community/Health Centers
- 1/4-Mile Walk

## CASE STUDY: GREAT STREETS LOS ANGELES

Los Angeles Mayor Eric Garcetti launched the LA Great Streets Initiative to revitalize 15 of the city's neighborhood centers by focusing improvements on their main commercial street. One of the priority goals is to improve access and mobility for all users, including pedestrians. Improving a person's ability to walk in these commercial centers improves the local economy and helps to decrease dependence on vehicles.

### COMMERCIAL & EMPLOYMENT CENTERS

According to the latest US Census, walking to work continues to shrink relative to biking, driving and riding transit.

The pedestrian commute modal share was halved proportionally over the past year. This can be attributed to many factors including the rise of suburban office parks and the growth of decentralized metropolitans across the nation, among other reasons. The placement of large job centers in or near multi-use communities tends to facilitate more walking as employees are provided a choice of walking to places to shop, eat and live.

Central and West Long Beach is situated between major job centers of the Downtown commercial district, Westside and Magnolia Industrial Area and multiple major medical centers. While generating pedestrian traffic from patrons in commercial districts and students around schools, there are also significant employment centers whose staff also walk, whether on their break or commuting to and from work. Based on a national average, with a walking commute time of just under twelve minutes these employment centers can reasonably serve the communities within a half mile radius.

Concentrations of commercial services tend to promote pedestrian activity, as patrons will visit multiple businesses on foot. Car parking, bicycle facilities and public transit service will bring customers to the commercial district while the condition of the pedestrian environment will

determine their willingness to walk between destinations. Traditional Main Streets were developed on the basis of concentrating diverse businesses and connecting them with good sidewalks, safe streets and welcoming public amenities. While the experience has since been similarly manufactured in shopping centers of all shapes and sizes, the Main Street is being reinvigorated as neighborhood commercial districts and regional destinations.

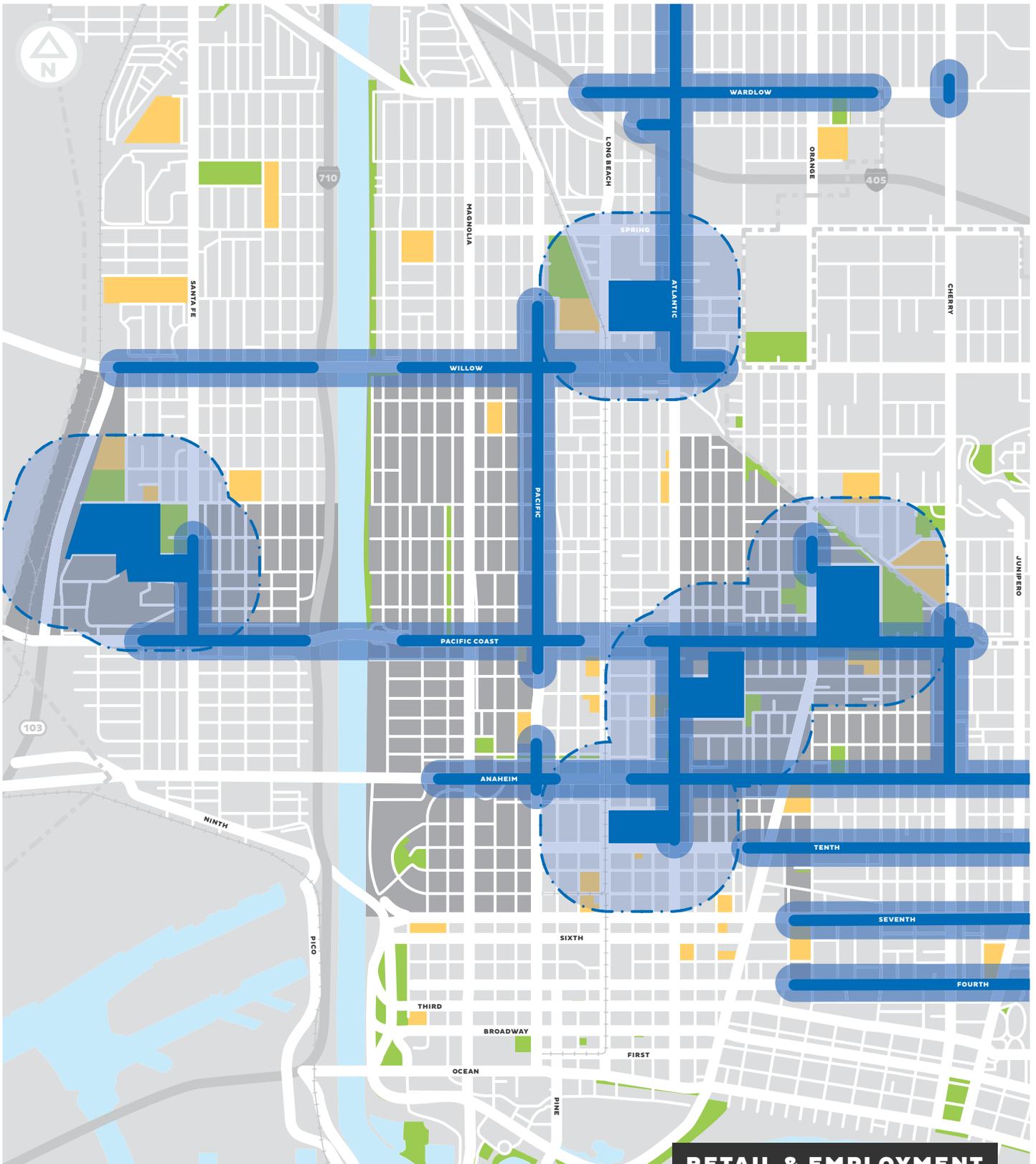
There is a mix of commercial districts and corridors in Central and West Long Beach providing a variety of experiences and services. Pacific Avenue and Willow Street in Wrigley Village and stretches of Anaheim Street and Pacific Coast Highway have consistent commercial activity while there are sporadic concentrations of retail uses along Atlantic Avenue, 7th Street and 10th Street. Neighborhood scale business districts on Daisy Avenue in Wilmore City, Santa Fe Avenue adjacent to Admiral Kidd Park, Orange Avenue next to Long Beach City College and the 1400 block of Cherry Avenue are essential activity centers for local residents.



**TOP**  
Chabelitas Restaurant on the LA Great Street of Van Nuys Boulevard. As part of the program, a grant was awarded to highlight the potential of this quasi-public space with colorful signage, lighting and a faux-tile pattern.  
PHOTO COURTESY OF LA GREAT STREETS

**MIDDLE**  
On the LA Great Street of Reseda Boulevard, several temporary improvements have been made on building facades, awnings and sidewalks to improve the overall walking experience of this commercial main street.  
PHOTO COURTESY OF LA GREAT STREETS

**BOTTOM**  
Small businesses on the LA Great Street of Venice Boulevard using temporary furniture to take over the street for its Small Business Saturday.  
PHOTO COURTESY OF LA GREAT STREETS



Street Block  
 CX3 Project Site

Large Job Centers  
 Significant Commercial Corridors  
 1/4-Mile Walk

**RETAIL & EMPLOYMENT**



## CHILDREN WITH ACCESS TO FREE OR REDUCED LUNCH

LBUSD SCHOOLS	GRADE	FRPM* [TOP 40]
Addams	K-5	94.7%
Washington	6-8	94.4%
Burnett Smith	K-5	94.3%
Robinson	K-8	93.9%
Garfield	K-5	93.7%
Willard	K-5	93.3%
Dooley	K-5	92.9%
Stephens	6-8	92.9%
Lindbergh	6-8	92.4%
Webster	K-5	92.3%
Franklin	6-8	91.8%
McKinley	K-5	91.6%
Cesar Chavez	K-5	91.3%
Signal Hill	K-5	90.9%
Burbank	K-5	90.7%
Barton	K-5	90.5%
Jefferson	6-8	90.3%
Harte	K-5	90.1%
Edison	K-5	90.0%
Colin Powell	K-8	90.0%
Hamilton	6-8	89.8%
International	K-5	89.4%
Lee	K-5	89.3%
Perry Lindsey	6-8	88.8%
Jessie Nelson	6-8	88.6%
Lincoln	K-5	86.4%
Stevenson	K-5	86.4%
King	K-5	85.9%
Beach	9-12	85.2%
Alvarado	K-5	84.4%
Hill Classical	6-8	82.8%
Muir	K-8	80.5%
Mann	K-5	80.4%
Cabrillo	9-12	80.3%
Roosevelt	K-5	80.2%
Hudson	K-8	80.1%
Grant	K-5	79.7%
Lafayette	K-5	79.6%
Whittier	K-5	79.6%
Jordan	9-12	78.9%

### LBUSD Schools in CX3

\*Percentage of students that are eligible for the Free or Reduced Lunch program  
CITY OF LONG BEACH DEPARTMENT OF HEALTH AND HUMAN SERVICES



Access to fresh produce and nourishing food options is essential to the health of the residents.

It is important in low-income communities to provide healthy food choices within walking distance of residents, as many have limited access to private automobiles. The

residents are within close proximity to grocery stores and markets or have the means to ride transit or drive relatively short distances to community retail centers where they are located. Many low-income neighborhoods on the Westside and in Uptown, as well as some on the eastern portion of Central and West Long Beach are without healthy food options like grocery stores and markets. Specifically, the Cabrillo, Burnett and Mary Butler neighborhoods of the study area are without a local option for purchasing healthy food.

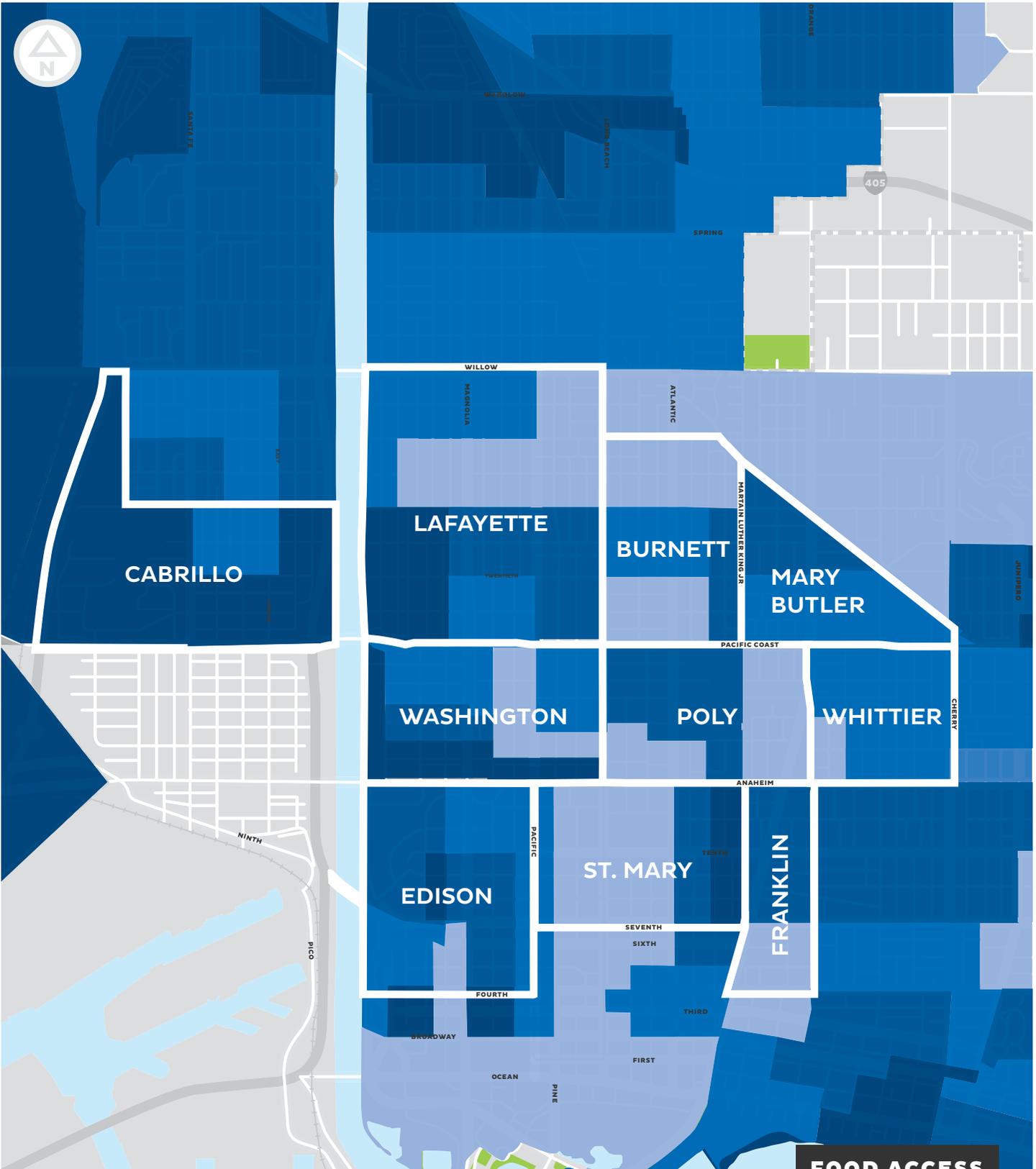


**ONLY 14% OF ADULTS IN LONG BEACH REPORT EATING 5 OR MORE SERVINGS OF FRUITS AND VEGETABLES A DAY, THE RECOMMENDED DAILY AMOUNT.**

LOS ANGELES COUNTY HEALTH SURVEY, 2015

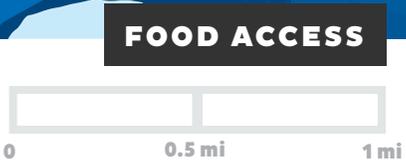
US Census tracks Low Income and Low Healthy Food Access as a public health indicator for disadvantaged communities. Due to the compact, dense nature of Long Beach, most

While many of the neighborhoods within the study area have a grocery store or market that has healthy food options, the predominant majority of options are fast food outlets, liquor stores and convenience stores. The grocery stores carrying healthy food options tend to be isolated behind parking lots, oriented towards customers arriving via automobile instead of those on foot. In contrast, the unhealthy food options have better pedestrian accessibility and greater distribution which makes the healthy choices more challenging.



### Estimated Grocery Retail Leakage Rate [2014]

- Insufficient Data
- 1% or less
- 2%
- 3 - 48%
- 48 - 81%
- 82% or more



Grocery Retail Leakage is the percent of people that must leave their neighborhood to go grocery shopping.

## CASE STUDY: 10TH STREET LONG BEACH

In Long Beach, the former Office of Councilmember Suja Lowenthal has proposed a series of vision plans for several streets within the council district—including 10th Street which has a strong residential land use profile. After engaging with the local community in a series of public outreach events, the 10th Street Vision Plan team proposed several improvements to enhance the pedestrian safety, comfort and accessibility of the neighborhood. Some of the proposals include working within private residential properties to foster a consistent design language that celebrates the unique neighborhood character. What makes 10th Street a successful candidate for a streetscape revisioning is its relatively high density and high number of nearby local destinations. The Plan proposes to prioritize these improvements and launch a pilot project that tests the feasibility of some of these improvements.



### RESIDENTIAL POPULATIONS

Residential population often directly correlates to the number of people walking, though not necessarily the quality of the pedestrian environment.

Residential neighborhoods that are compact and dense can generate a greater demand for commercial uses and public amenities than suburban communities based on their respective geographic area. Clusters of commercial and public amenities can thus be located within walking distance of the compact neighborhoods while similar uses for suburban areas must be located beyond walking distance to have similar levels of use.

Long Beach's densest residential population is located between 4th Street, Anaheim Street, Cherry Avenue and Atlantic Avenue, though the entirety of Central and West Long Beach retains residential population concentrations similar or comparable to parts of Manhattan. This population density insures that sidewalks are typically active throughout most of the study area.

Studies have shown that young people, especially those below 16 years of age, do not drive thus limiting their options of transportation. In many suburban communities, this can result in parents and adult relatives acting as their chauffeurs due to the limited number of amenities within reasonable distance of walking or biking. A greater concentration of young residents generally necessitates more public services like schools, parks and libraries, ideally within

walking distance of their homes. Similar to Long Beach's overall population density, the Central and West areas host a large portion of the city's population of youth population. Over a quarter of Central and West Long Beach's residential population is under 18 years of age, with many of the study area neighborhoods having youth make up over a third of the residential population.

Similar to youth, elder residents find their transportation options more limited, without regular access to a private automobile due to health reasons or reduced resources for purchasing and operating a private automobile. At the same time, bicycling and walking long distances become less viable transportation options as well. To age in a place, a preference for many seniors, they have to remain connected to friends, family, community amenities and regular services, including healthcare.

Long Beach's senior population is fairly evenly distributed throughout the city. There are slightly larger concentrations of elder residents in the Poly and Edison neighborhoods where they make up over ten percent of the local population. There are clusters of senior services around Memorial Hospital and St. Mary Medical Center as well as along 4th Street near the Downtown Senior Center in the Franklin neighborhood.



BEFORE



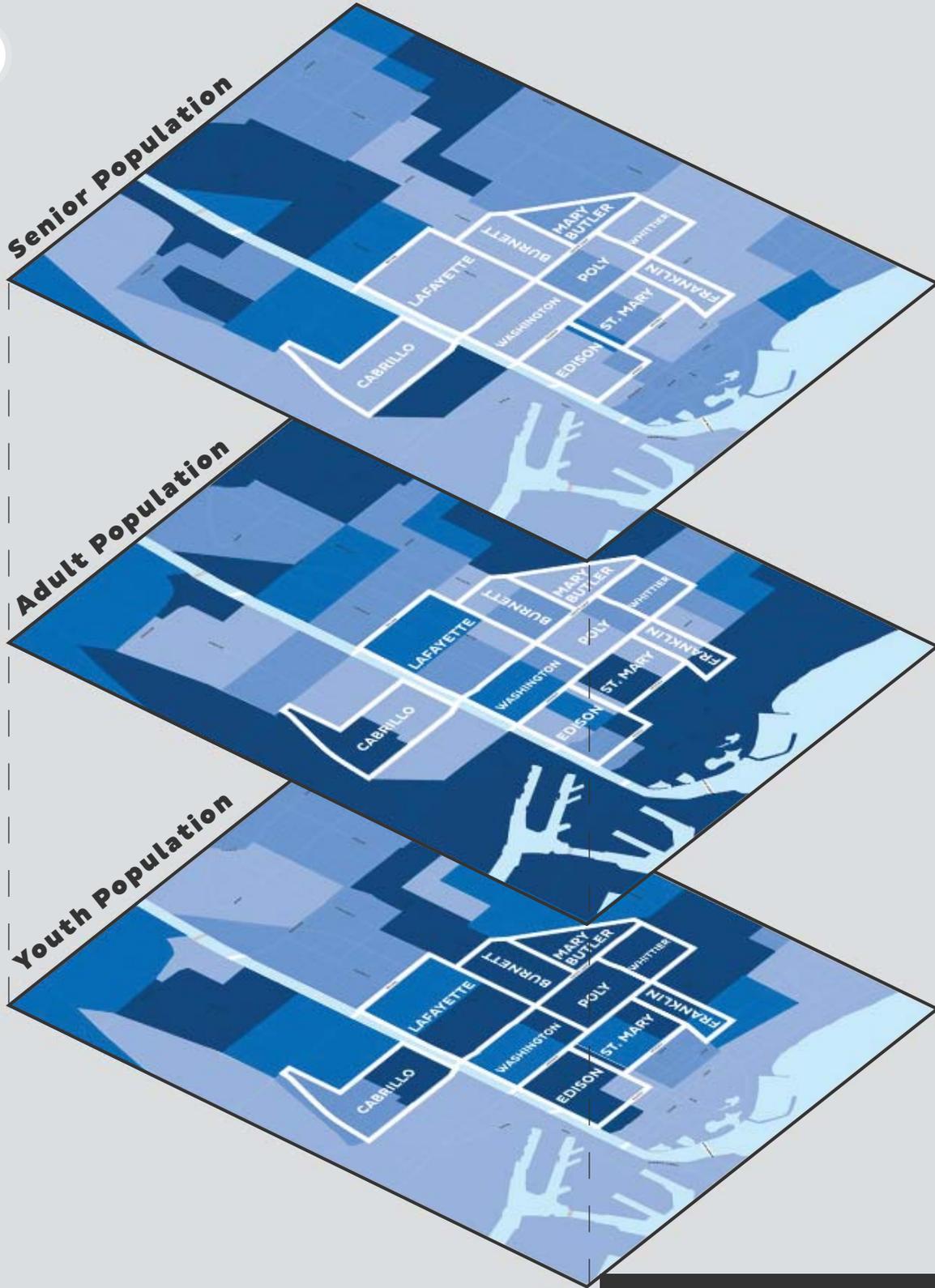
AFTER

**BEFORE**  
Currently, 84% of the 10th Street project segment, from Alamitos to Redondo, is residential. Elements that detract from the pedestrian experience include narrow sidewalks, difficult crossings, lack of illumination and inconsistent elements in the private realm.

PHOTO COURTESY OF HERE DESIGN

**AFTER**  
The 10th Street Plan presents several opportunities to improve walkability of the neighborhood. Some of these improvements include curb extensions, pedestrian lighting and placemaking interventions.

PHOTO COURTESY OF HERE DESIGN



**RESIDENTIAL POPULATION**

**Percent of Youth**

- 0 - 19.4%
- 19.4 - 24.2%
- 24.2 - 29.1%
- 29.1 - 64.4%

Youth are identified as ages 0 - 17

**Percent of Adults**

- 0 - 59.5%
- 59.5 - 63%
- 63 - 66.9%
- 66.9 - 100%

Adults are identified as ages 18-64

**Percent of Seniors**

- 0 - 7.4%
- 7.4 - 10.9%
- 10.9 - 15.1%
- 15.1 - 93.0%

Elderly are identified as ages 65 and older

## BODY COMPOSITION OF STUDENTS IN CX3

From 2014-2015, the California Department of Education conducted a statewide Physical Fitness Test [PFT], which observed the fitness levels of students, including those within the CX3 area. Thousands of 5th, 7th and 9th grade students were tested based on several fitness standards, including 'body composition'. Body composition is used to describe percentages of fat, bone, water and muscle, which can determine if a person is or isn't obese. The table below presents the body composition of CX3 students and estimates what percentage of them need improvement or are at risk for health issues.

CX3 SCHOOLS	NEEDS TO IMPROVE	HEALTH RISK
Washington	19.9%	26.2%
Franklin	20.3%	27.1%
Edison	22.8%	36.6%
International	23.9%	26.8%
Lincoln	14.0%	37.4%
Cabrillo	19.3%	19.9%
Roosevelt	18.8%	32.5%
Hudson	22.3%	39.4%
Lafayette	22.3%	19.4%
Whittier	19.4%	29.4%
Polytechnic	15.6%	12.4%
Renaissance	23.4%	8.4%
<b>CITY AVERAGE</b>	18.0%	16.8%
<b>COUNTY AVERAGE</b>	20.2%	18.8%

CALIFORNIA DEPARTMENT OF EDUCATION

"Childhood obesity is a major issue in Long Beach as nearly half of all 5th, 7th and 9th graders are considered overweight or obese, according to a study from an organization called ReThinking Greater Long Beach. In addition, the study found that obesity rates were significantly higher in low-income areas and neighborhoods with a high concentration of mini markets had higher rates of obesity. Dr. Peter Vash told the Long Beach Press Telegram that "even small changes, such as reducing portion size and cutting out soda, can make a big difference."

KELLY PUENTE, LONG BEACH PRESS TELEGRAM

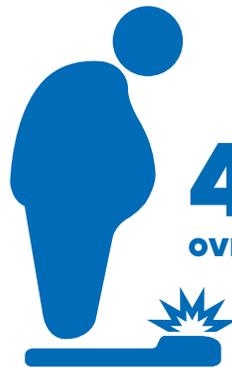


Obesity is one of the nation's most significant public health epidemics.

Many factors can lead to energy imbalance and weight gain, including the built environment, genes, food access, attitudes and emotions, personal habits and income. Obesity is a risk factor for a multitude of health issues including heart disease,

While California is below the national average of obesity [approximately one-quarter of Californians versus one-third of Americans] Long Beach is above the state and Los Angeles County [22.2%] average at 31.2%. Central, West and North

**26%**  
OBESITY



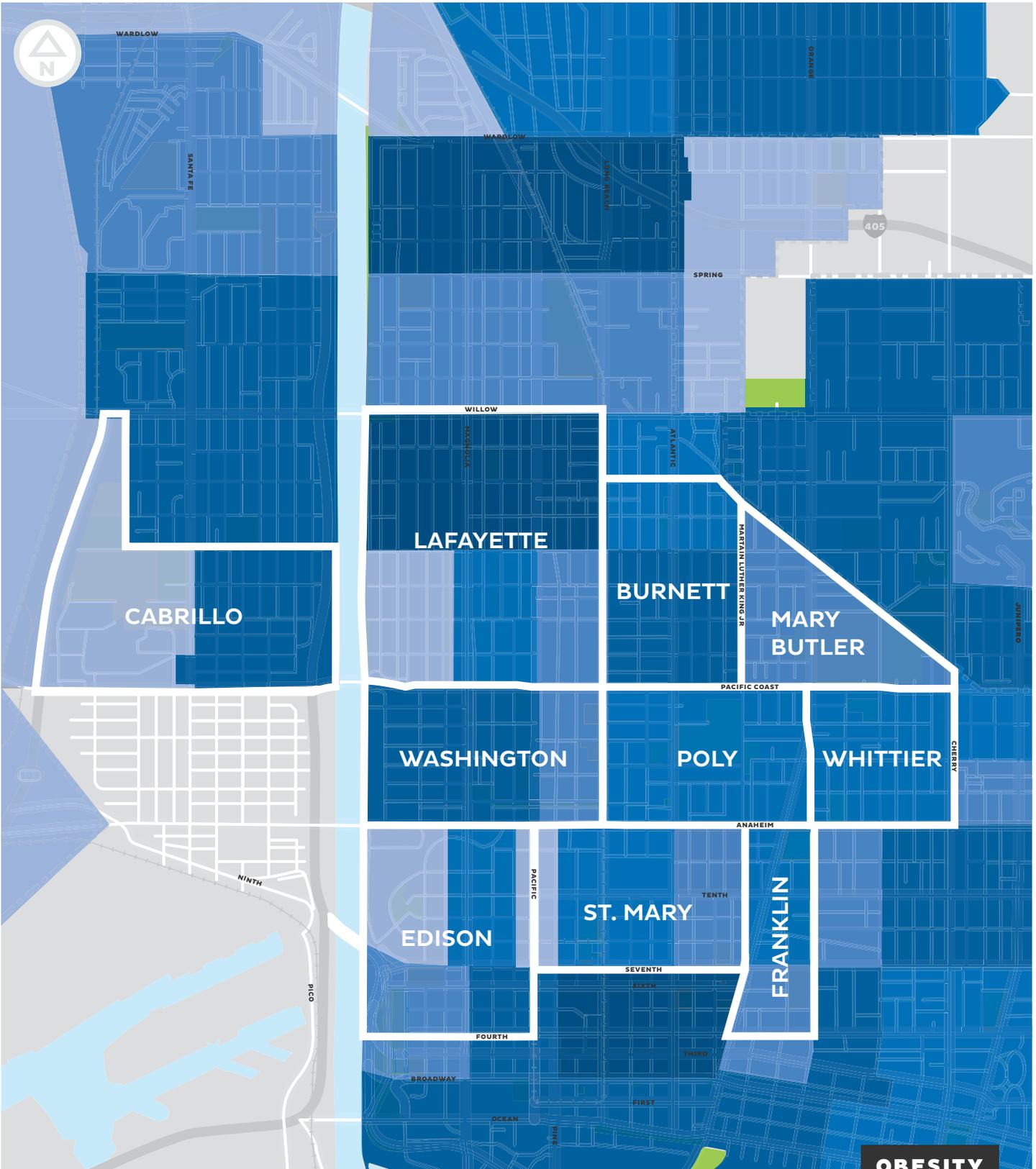
**41%**  
OVERWEIGHT

**IN LONG BEACH, 26% OF ADULTS REPORT BEING OBESITY AND 41% OF ADULTS REPORT BEING OVERWEIGHT— BOTH FIGURES ARE HIGHER THAN THE COUNTY AVERAGE.**

LOS ANGELES COUNTY HEALTH SURVEY, 2015

type-2 diabetes, stroke, high blood pressure and some kinds of cancer. As there is no single cause of obesity, treatment could include a mix of behavioral treatment, diet, exercise and even drugs or surgery. Altering the physical environment could substantially affect behavior, diet and exercise, thus treating obesity without substantial medical aid.

Long Beach have higher proportions of obese residents with especially high concentrations in the Cabrillo, Lafayette and Edison neighborhoods. Variation within the study area vary while a third of the residents are considered obese in portions of those neighborhoods while Mary Butler neighborhood is closer to the County average.



**OBESITY**

**Estimated Percent of Obese Adults [2013]**

- Insufficient Data
  - 26.2% or less
  - 26.2 - 28.7%
- 28.7 - 30.8%
  - 30.8 - 33.6%
  - 33.6% or more



Adult obesity is quantified by having a body mass index of 30 percent or greater.  
 Source: Healthy Food Access



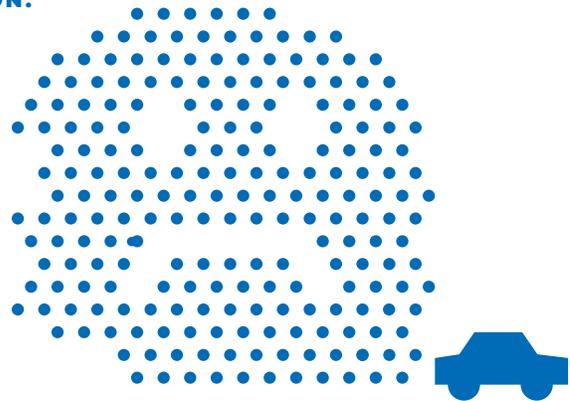
The air and water quality of a community carries a direct correlation to residents' health and quality of life.

Besides the direct effect that regularly inhaling toxic chemicals has on public health, air pollution forces local inhabitants to be less physically active, encouraging obesity and other related health impacts. CalEnviroScreen is

southwest and northeast portions of the study area share the greatest pollution burden due in large part to concentrations of heavy industrial uses, port facilities and major transportation infrastructure. Based

**THE LOS ANGELES-LONG BEACH AREA IS THE WORST IN THE NATION IN TERMS OF OZONE POLLUTION.**

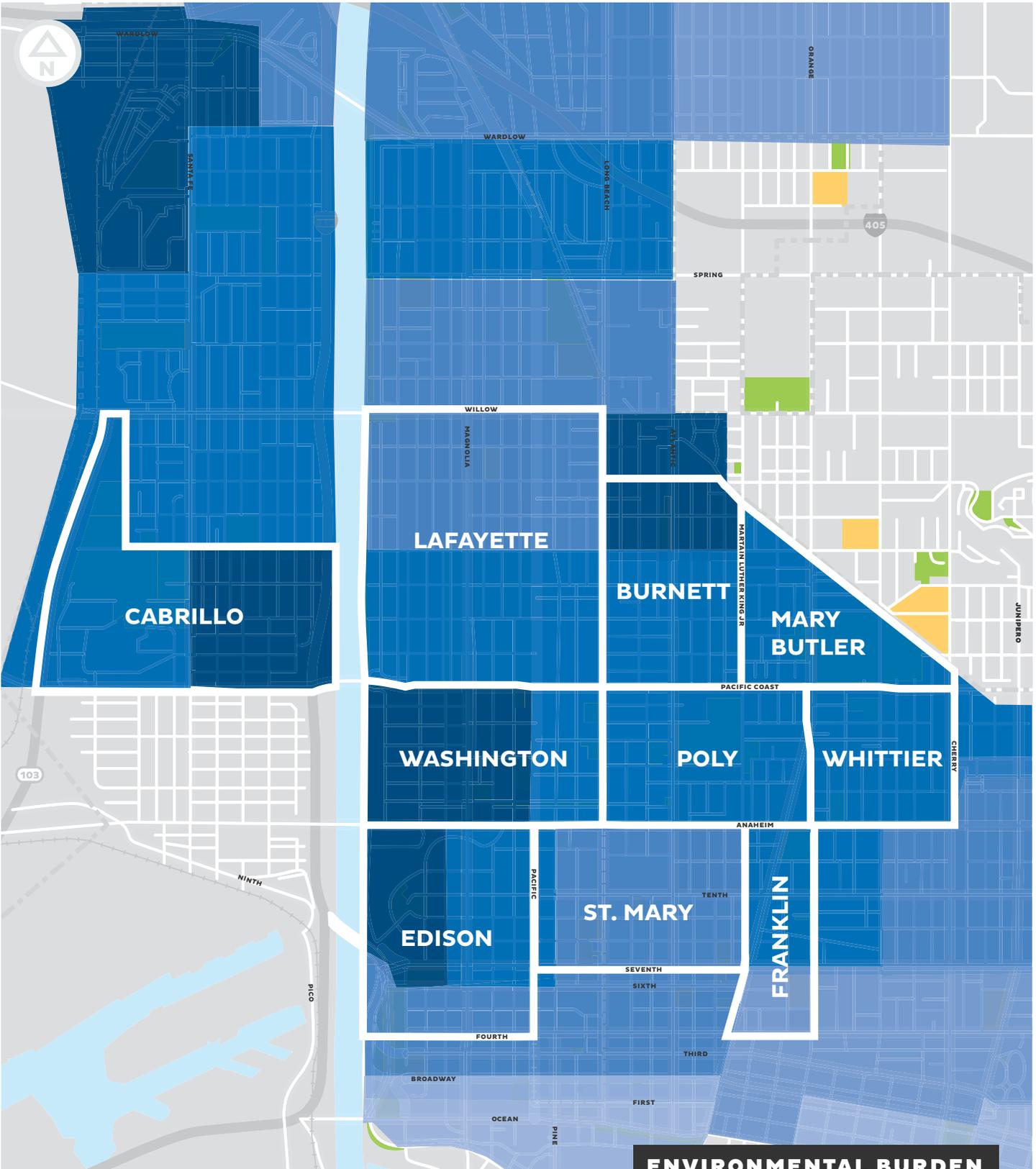
AMERICAN LUNG ASSOCIATION, STATE OF THE AIR 2016



a screening methodology that can be used to help identify California's disadvantaged communities that are disproportionately burdened by multiple sources of pollution.

Cross referencing pollution burden with socioeconomic conditions, Long Beach's central, western and north areas share the greatest burden from environmental pollution. The west,

on the CalEnviroScreen metrics, the entire study area suffers from very high rates of asthma and low birth weights relative to the rest of the state. Systemic improvements to infrastructure and industry beyond increasing active mobility modal share would need to take place for improvements to air quality within the study area.



**CalEnviroScreen Score**

- 51 - 62
- 39 - 50
- 29 - 38
- 19 - 28
- 5 - 18

CalEnviroScreen Score measures the environmental burden of an area based on several public health indicators. The higher the score, the greater environmental burden that community faces.

**ENVIRONMENTAL BURDEN**



