PERFORMANCE METRICS FOR THE CITY OF LOS ANGELES

How the right data, tools, and measurements can propel us into an age of livability

A collaboration between:

RENEW LA, Los Angeles County Department of Public Health
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INTRODUCTION

The City of Los Angeles is at a crossroads. There is an unprecedented opportunity to shift the City's paradigm of transportation planning and policy, with new political leadership and revisions to the General Plan on the horizon. Over the next thirty years, the Los Angeles (LA) region will expand the transportation system through investments from Measure R. As the region moves forward, it is important for our political leaders, city staff, and community, to understand current conditions and tradeoffs that may lead to better or worse outcomes for various indicators. This report seeks to establish baseline conditions in order to measure progress in the future.

These efforts are not unique. Among others, the following reports have embarked upon similar efforts in recent years:

- "Dangerous by Design" from Transportation for America
- "Bicycling and Walking in the United States 2012 Benchmarking Report" from the Alliance for Biking and Walking
- "PlaNYC 2011 Progress Report" from the City of New York
- "Vision Los Angeles" from the Environmental Defense Fund & the Los Angeles County Economic Development Corporation
- "The Denver Regional Equity Atlas" from Mile High Connects

These reports and this effort, specifically for the City of Los Angeles, recognize that many cities do not measure the performance of their entire transportation system, and those that do tend to focus solely on automobile travel. In addition, very few jurisdictions fail to measure or recognize the link between their transportation system and the health of residents, economic development, and the environment. Often, the lack of baseline data on alternative modes (walking, bicycling, and public transit) means that these modes – and the people that depend on them – are overlooked in transportation planning and policy. This report seeks to measure these consequences and begin to answer, **"How can a city as large and complex as Los Angeles comprehensively measure its transportation system and their consequences therein?"**

This report lays the foundation for a more equitable, livable, and sustainable future for the City of Los Angeles. Donald Appleyard's 1981 book, *Livable Streets*[1] defines the concept of livability:

> "People have always lived on streets. They have been places where children first learned about the world, where neighbors met, the social centers for towns and cities...They have also been the channels for transportation and access (pg.1)."

As such, this report seeks to document the current state of the transportation system and other elements that make communities inviting places for residents. This effort seeks to help the City of LA effectively benchmark these elements and evaluate future progress towards short and long-term transportation and livability goals.

In 2011, the Los Angeles County Department of Public Health (DPH) Renewing Environments for Nutrition, Exercise, and Wellness (RENEW) program spearheaded this effort to establish a set of performance metrics in the City of Los Angeles for three main purposes:

1. To document the current conditions for the City's bicyclists, pedestrians, and transit riders;
2. To make explicit the safety, health, environmental, economic, and equity impacts of our transportation system;
3. To disseminate this information to key decision-makers and community groups in the City.

The DPH assembled a team of transportation consultants, university researchers, community advocates, and public health analysts to collaborate on this effort. The group began by asking, "What makes a livable city?" We then created a list of factors that contribute to healthy, sustainable, and equitable communities. These factors led to a discussion of measurements and benchmarking, relying upon the aforementioned reports and other efforts. From this, we created a compendium of performance metrics that had the greatest potential to motivate community support and political action toward a more livable future for Los Angeles. In the process of finalizing these metrics, the team was mindful of the competing forces of data availability, policy implications, and the time and money required to measure the multitude of factors related to livability.

This report is the culmination of these efforts and discussions. We present a set of performance metrics displayed as a series of graphics and text. Our hope is that this data will serve as a baseline for a new era in transportation performance measurement in the City of Los Angeles – one whose goal is not only to maximize mobility and access but also quality of life for all Angelenos.

VISION

In defining the elements of "livable city," the group crafted a vision for both Complete and Living Streets. Complete Streets are designed and operated so that users of all ages and abilities can travel safety, regardless of mode. Living Streets build on the concept of Complete Streets by including social interactions, environmental considerations, and other elements as defined in the following tenets. We envision a more equitable and healthy Los Angeles in which investments are prioritized and leveraged to achieve Complete and Living Streets.

Complete Streets Tenets: Complete Streets should...

1. Function for people of all ages and physical abilities whether they walk, bicycle, ride transit, or drive
2. Increase accessibility to jobs, housing, services, and recreational opportunities for residents
3. Reduce transportation costs for residents
4. Increase neighborhood economic development
5. Increase asset-building and ownership opportunities for residents
6. Reduce air pollution and traffic congestion, and attain climate change goals
7. Connect housing, jobs, amenities, and services across the region
8. Increase access to open space and recreational opportunities for residents

Living Streets Tenets: Living Streets should...

1. Integrate income, racial, and social equity into street design and function
2. Create affordable housing and mixed-income communities
3. Integrate connectivity and traffic calming with pedestrian-oriented site and building design to create safe and inviting places
4. Connect people to the street design and planning process by fostering daily use and a sense of shared responsibility
5. Strengthen and enhance neighborhoods as envisioned by community members without displacing current residents
6. Encourage active and healthy lifestyles
7. Integrate green management and conservation of water, energy, waste, and plant life

8. Be inviting places with engaging architecture, street furniture, landscaping, and public art that reflect the diversity and culture of the neighborhood
9. Foster healthy and just commerce
10. Vary in character by neighborhood, density and function

Based on these tenets, our team developed metrics that can help City staff, community members, and advocates understand where Los Angeles currently stands with these goals in mind. In cases where the necessary data does not exist or is difficult to obtain, we identify what the City should track to understand how it performs compared to the tenets of Complete and Living Streets.

DATA

The selected performance metrics fall into four categories, with health being an integrated theme across all categories.

- *Transportation* - access to transportation infrastructure, efficiency and performance of the transportation system
- *Safety* - injuries and fatalities resulting from transportation.
- *Economics* - distribution of monetary costs and benefits of the transportation system
- *Environment* - environmental effects of the transportation system, such as air pollution

We define corresponding metrics for each of these categories. Some metrics combine demographic overlays in order to better understand any disparities among our City's population.

Data availability, particularly at the exact citywide scale, restricts this analysis. In order to find data, we used publicly available data sources and spoke directly with staff in various departments. This effort identified gaps in data availability and therefore, this report calls for new data collection.

While this effort highlights the need for more data to be collected and be made publicly available, we acknowledge that this would create a burden on staff. We found, however, that some of these data are already being collected by staff and developers but are not being analyzed. For example, almost every new development must conduct traffic counts including counting cyclists and pedestrians, yet these data are not compiled in a central location or utilized in existing traffic models. Other data are simply not collected, and thus will require an investment by the City. We believe that the benefit of capturing these missing data outweighs the costs of collecting and analyzing them.

The data in this report are organized in the following manner:

A matrix including the following:

I. Performance Metric Category
A. Metric / Data Point
1. Objective
2. Data elements
3. Justification / policy implications

Each metric / data point is accompanied by a visual (table, chart or map) with bullet points that illustrate key metric outcomes.

Overall, the reader is intended to use the following information to better understand the challenges and opportunities for increasing the quality of life for all people living in the City of Los Angeles.

TRANSPORTATION

Metric	Data Elements	Objective	Policy Implications / Justification
Percentage of population within ¼ mile (1 to 2 min. bike ride) of a dedicated bikeway *(Figures 1 & 2)*	• Shapefile of existing bikeways by type, only including Classes I and II for 'dedicated bikeways' • 2010 Census population data • Does not take into account "quality" of bikeway; could potentially be used in conjunction with NavigateLA's "bikeway conditions" layer	Increase the percentage of population living within a ¼ mile of a dedicated, quality bicycle facility	• Build more dedicated / quality bikeways • Prioritize bikeways in bikeway-poor areas • Prioritize bikeways in low-income communities where persons are often dependent on non-auto modes • Cycling has significant health benefits – just 15 minutes of cycling (2.5 miles) twice a day burns the equivalent of 10 lbs per year[2]
Percentage of population within ¼ mile (10 to 15 min. walk) of frequent and reliable transit service *(Figures 2 & 3)*	• Metro GIS map of existing bus stop / rail stops, and bus line / rail lines • Census block-level population data • Proxy for frequency / reliability using Metro 15-minute map and rail lines	75% of new development should be within ¼ mile of a frequent / reliable transit stop	• Prioritize development near frequent and reliable transit stations to grow in a sustainable fashion • Make transit a more feasible option for all residents • Public transit users walk an average of 10 minutes daily – and 29% achieve 30 min. daily physical activity requirement[3] • Transit neighborhoods have 120% more bike / walk trips than auto areas[4]
Transit boardings and alightings (ridership) by stop *(Figure 4)*	• Metro table of stops with number of boardings and alightings by fiscal year • Converted table into GIS shapefile	Increase understanding and awareness of high frequency transit stops to prioritize improvements	• City should invest in amenities at intersections with high ridership • Work with Metro to improve frequency; prioritize improvements along high ridership corridors • Pedestrian / bicycle improvements should be prioritized in these high ridership areas as most transit trips begin and end with a walking or bicycling trip

Metric	Data Elements	Objective	Policy Implications / Justification
Mode split for trips less than 3 miles in length *(Figure 5)*	• National Household Travel Survey trip-level detail available for LA Metropolitan Statistical Area	Increase the percentage of short trips made by walking and bicycling	• City should strive to increase number of short-trips made by bicycle and walking for a host of environmental and quality of life reasons
Change in vehicle miles traveled (VMT) per change in population *(No figure)*	• Daily VMT estimate on annual basis; census level population estimate	City should strive to grow in size without adding vehicle trips	• Each additional hour in a car confers a 6% increase in likelihood of obesity[5] • VMT reduction implies a likely reduction in pollutants emissions; 1 degree rise results in 20 to 30 excess cancer cases and 1000 excess air-pollution associated deaths[6] • Transportation is responsible for 70% of U.S. oil consumption and 28% of greenhouse gas emissions[7]
Pedestrian and bicycle counts *(Figures 6 & 7)*	• 2011 Bicycle and Pedestrian Count data from Los Angeles County Bicycle Coalition • GIS shapefile of bicycle infrastructure for overlay • GIS shapefile of rail lines and stops for overlay	Increase the number of pedestrians and bicyclists and the mode share of pedestrians and bicyclists at each count site	• Judge whether investments in bicycle / pedestrian infrastructure are influencing travel behavior • Prioritize infrastructure for pedestrians and bicyclists at popular destinations • Counts should feed into multi-modal level of service analysis – a potential way for LADOT to measure service of streets and determine mitigations • What gets counted, counts

Publicly accessible data on the status of our City's walking environment are very limited. Recent articles state that over half of Los Angeles' 10,570 mile sidewalk system is in disrepair.[8] A person is a pedestrian for at least part of every transportation trip, so enhancing our pedestrian infrastructure is key to facilitating mobility. In addition, creating more inviting and walkable public spaces may result in 35 to 161% increases in physical activity.[9] This has important public health implications, as each additional hour walked is associated with a 4.8% reduction in obesity.[10]

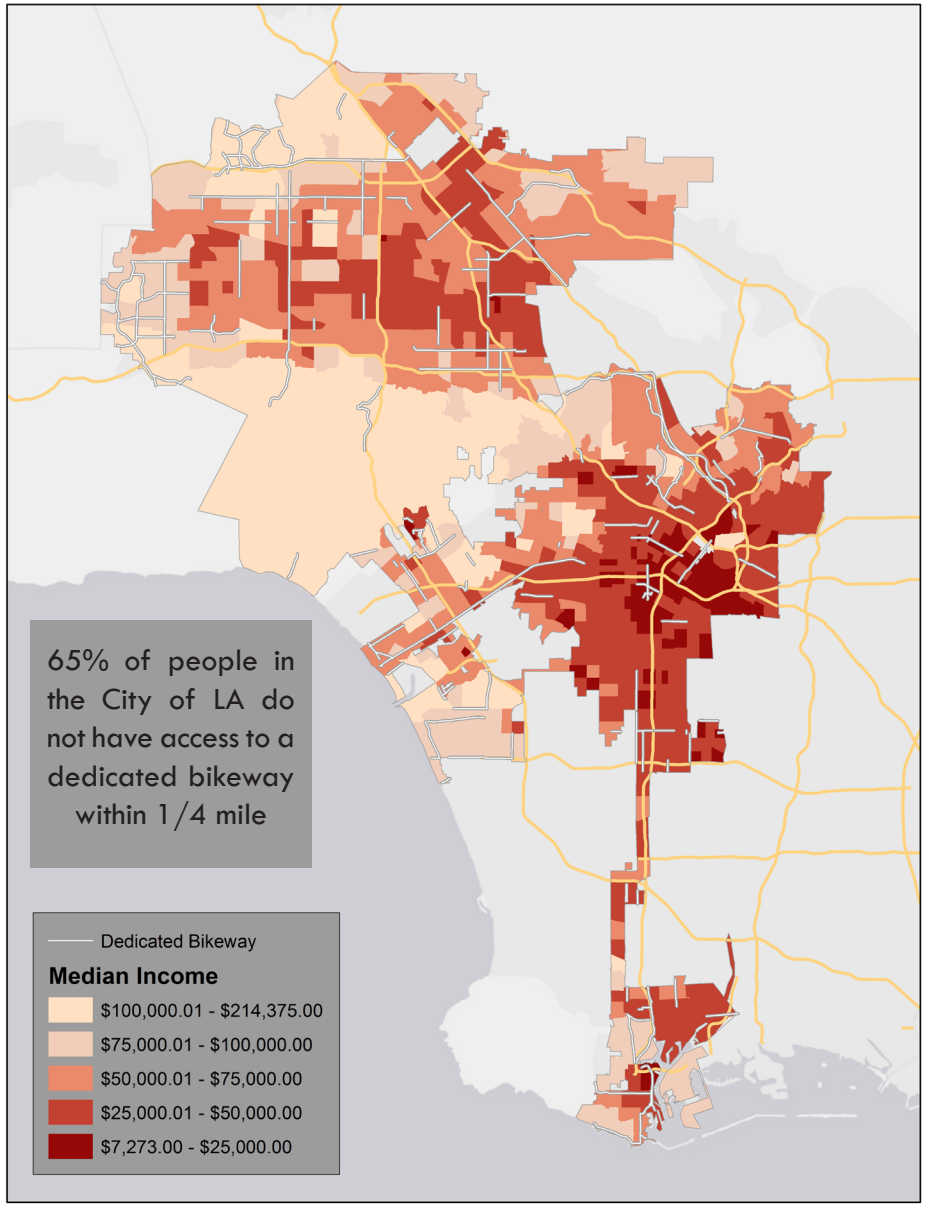


FIGURE 1: POPULATION WITHIN 1/4 MILE OF A DEDICATED BIKEWAY (BIKE LANE OR PATH)

- Only 35% of Angelenos live within 1/4 mile of a dedicated bikeway
- Class 1 (bike paths) and Class 2 (bike lanes) are the only bikeways considered here, as a proxy for "high quality" bikeway facility
- Maintenance and design of facilities impact ridership
- Prioritize new facilities in areas devoid of them
- Prioritize network connections
- There are currently no dedicated bikeway connections between the San Fernando Valley and Central Los Angeles
- High quality bicycle facilities range in type and design and as such, the City should use the latest guidance from agencies such as the National Association of City Transportation Officials

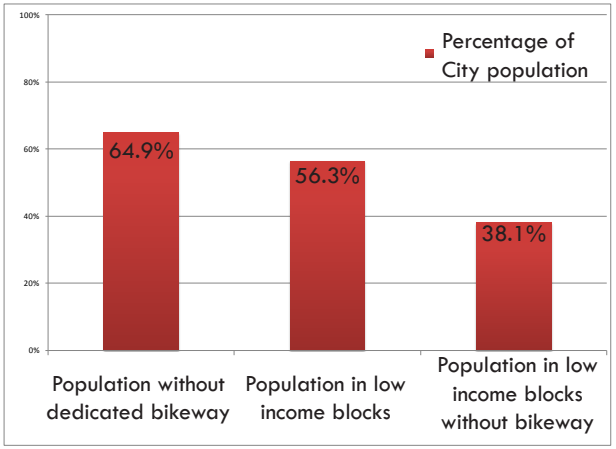
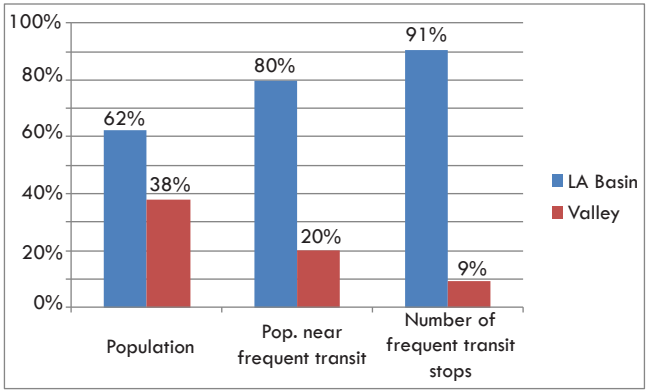
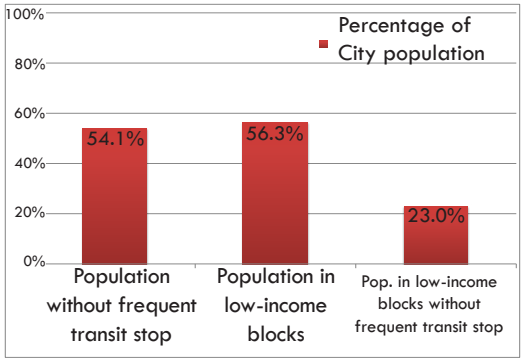


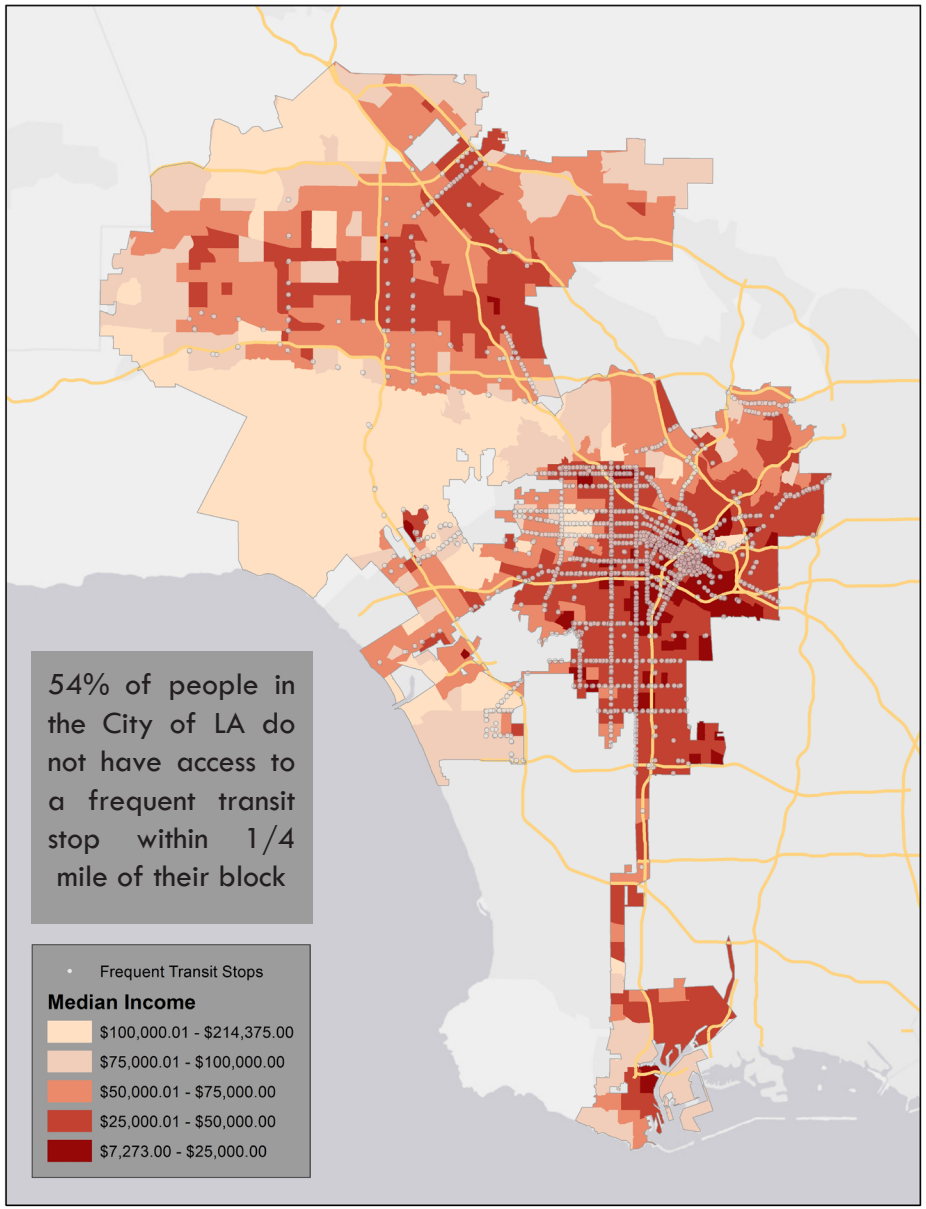
FIGURE 2: POPULATION WITHIN 1/4 MILE OF FREQUENT AND RELIABLE TRANSIT SERVICE

- Only 46% of Angelenos live within 1/4 mile of a frequent* and reliable transit stop
- Frequent and reliable service is largely concentrated in Downtown
- Many low-income neighborhoods and areas of the Valley are not well served – only 20% of Valley residents live near frequent transit service

* Runs every 15 minutes during weekday daytime







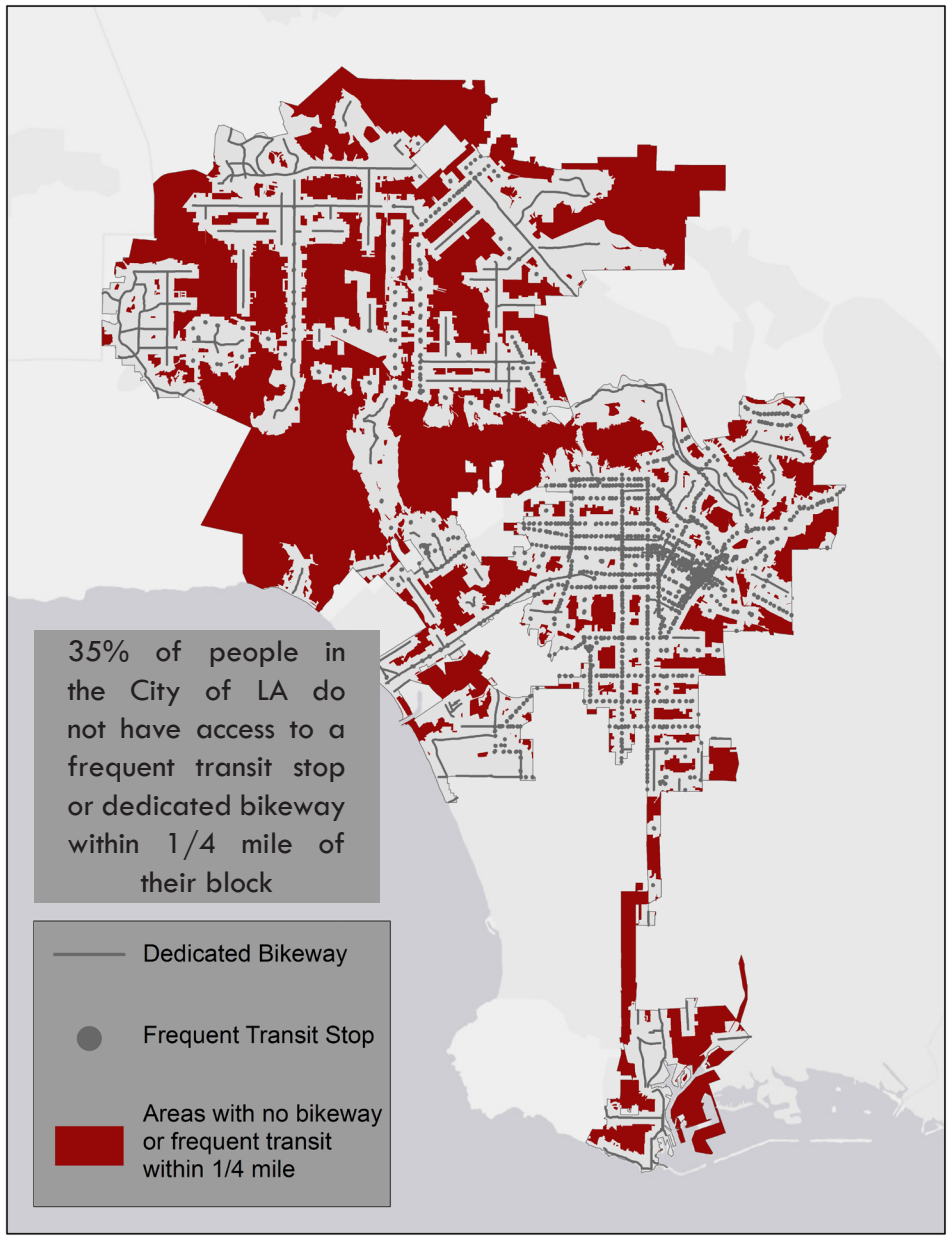


FIGURE 3: POPULATION WITH NO ACCESS TO A DEDICATED BIKEWAY OR FREQUENT AND RELIABLE TRANSIT SERVICE WITHIN ¼ MILE

- 35% of people do not have access to either a frequent transit stop or a dedicated bikeway within a quarter-mile of their block
- These households have few transportation alternatives in close proximity

FIGURE 4: TRANSIT BOARDINGS AND ALIGHTINGS* (RIDERSHIP) BY STOP

- Stops with high numbers of boarding and alighting averages are mostly clustered
- There are particular cluster areas in Downtown Los Angeles, along Vermont Ave. and Wilshire Blvd.
- The City should invest in amenities at stops where there are high boarding and alighting averages, including benches, shade, and real-time information
- Pedestrian / bicycle improvements are especially important in these areas, as most transit trips begin and end with a walking or bicycling trip

*Average daily boarding/alighting figures during the first quarter of the 2011 fiscal year

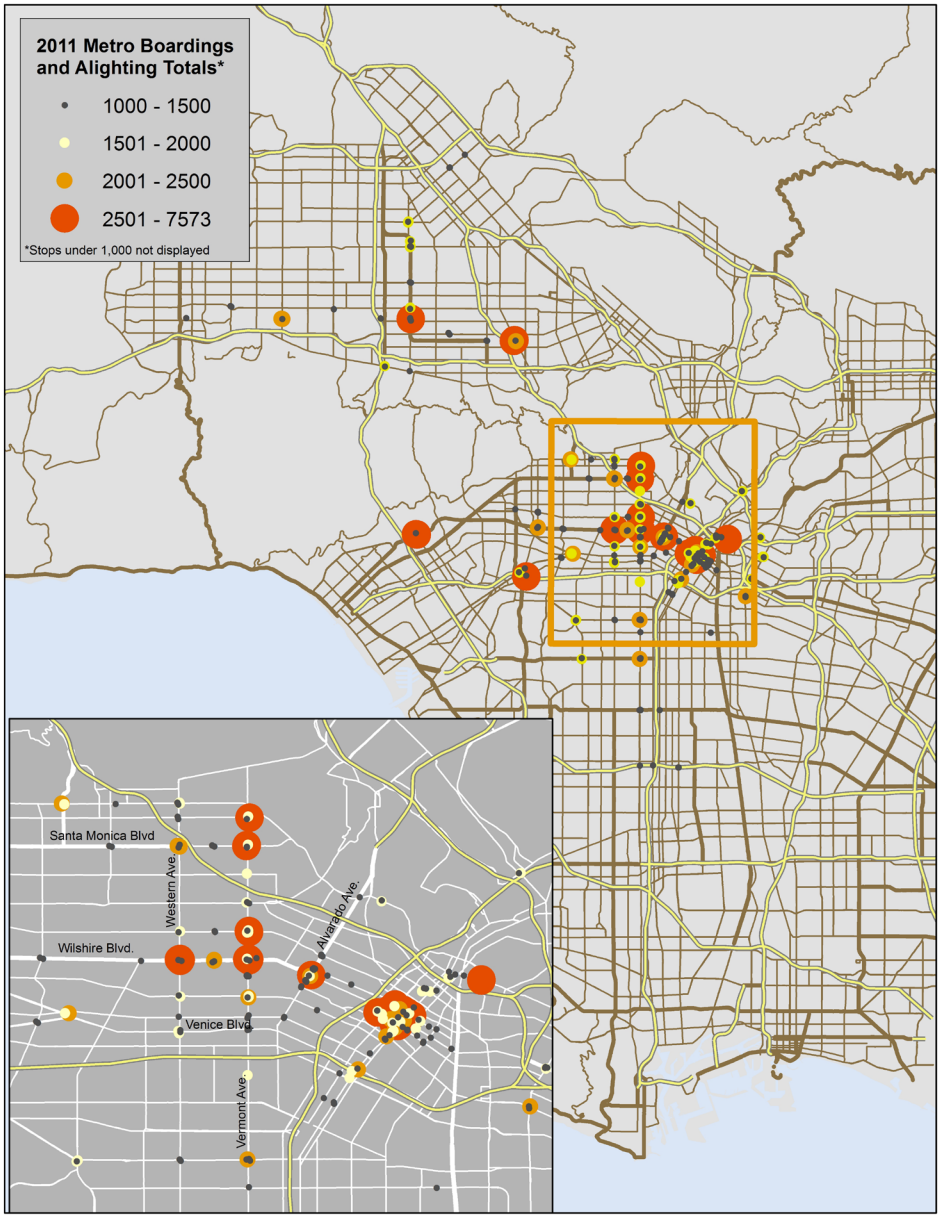


FIGURE 5: MODE SPLIT FOR TRIPS LESS THAN 3 MILES IN LENGTH

Mode	Number of trips	Percentage
Drive	45,548	84.4%
Transit	1,152	2.1%
Bike	554	1.0%
Walk	6,332	11.7%
Other	386	0.7%
Total	53,972	100%

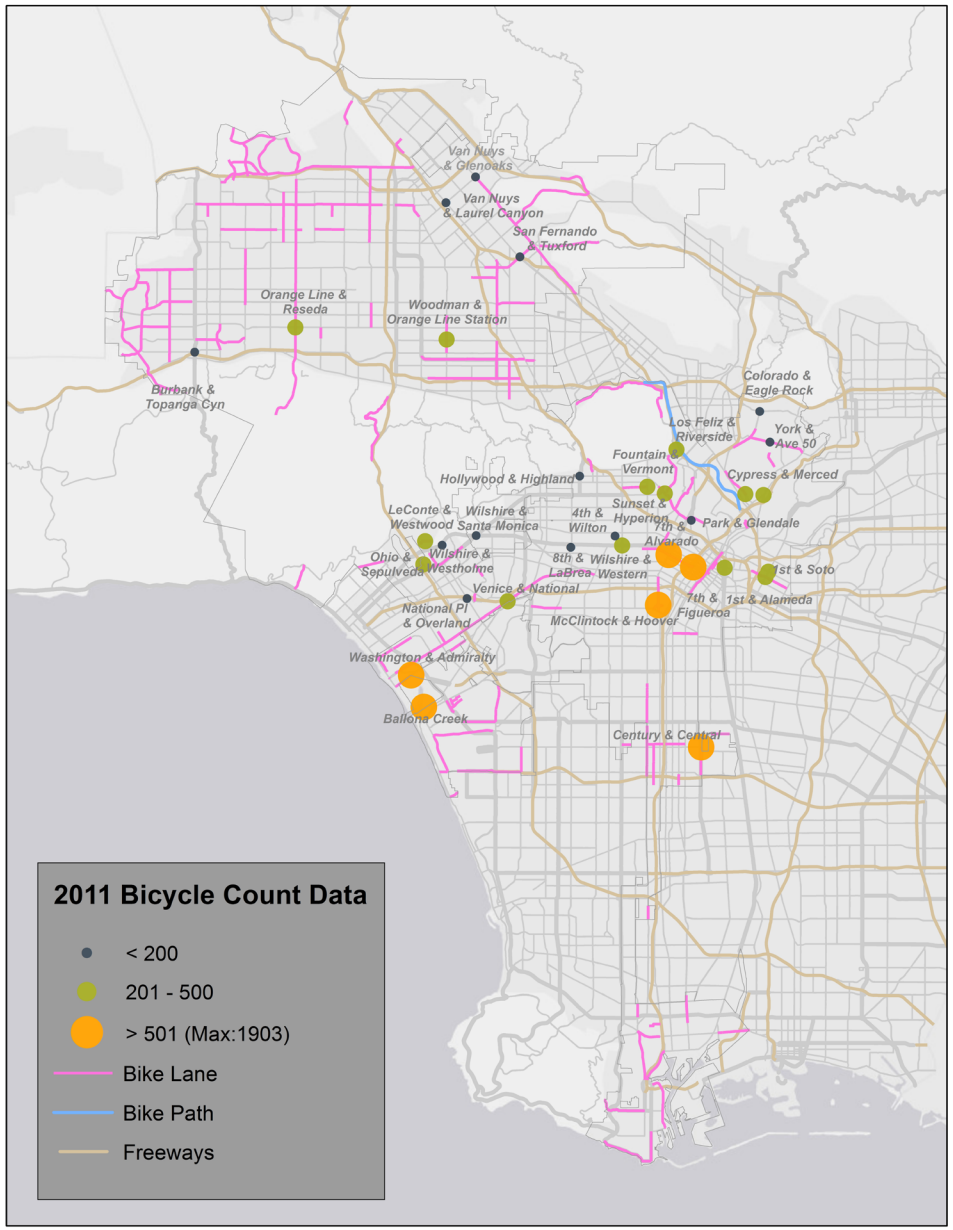
NATIONAL HOUSEHOLD TRAVEL SURVEY: ALL TRIPS LESS THAN 3 MILES
(Los Angeles Metropolitan Statistical Area)

- Driving is still the primary mode of choice for short trips
- Many short trips are made by walking, indicating the importance of improving pedestrian infrastructure
- By shifting the modal split away from driving, the City stands to see improvements in health of its residents

FIGURE 6: BICYCLE COUNT AND FACILITIES

- The highest volumes* of cyclists are found where a bike lane or path exists
- This is also supported in other cities, such as Minneapolis and Portland, where there is a relationship between the amount of bike lanes and paths and people cycling to work[11]
- The City should prioritize installation of new bike lanes and paths to increase the amount of people cycling

Intersection	Cyclists	Intersection	Cyclists
1st & Alameda	231	McClintock & Hoover	1425
1st & Soto	277	National Pl & Overland	91
4th & Wilton	102	Ohio & Sepulveda	365
7th & Alvarado	661	Orange Line & Reseda	324
7th & Figueroa	516	Park & Glendale	87
8th & LaBrea	139	San Fernando & Tuxford	91
Ballona Creek	1903	Santa Monica & Wilshire	135
Burbank & Topanga Cyn	85	Sunset & Hyperion	333
Century & Central	509	Van Nuys & Glenoaks	177
Cesar Chavez & Soto	303	Van Nuys & Laurel Canyon	182
Colorado & Eagle Rock	138	Venice & National	372
Cypress & Merced	211	Washington & Admiralty	1132
Figueroa & Pasadena	254	Wilshire & Westholme	82
Fountain & Vermont	250	Wilshire & Western	296
Hollywood & Highland	160	Woodman & Orange Line	357
LeConte & Westwood	277	York & Ave 50	168
Los Feliz & Riverside	232		



*Volumes reflect total over count periods. For more information, see methodology section.

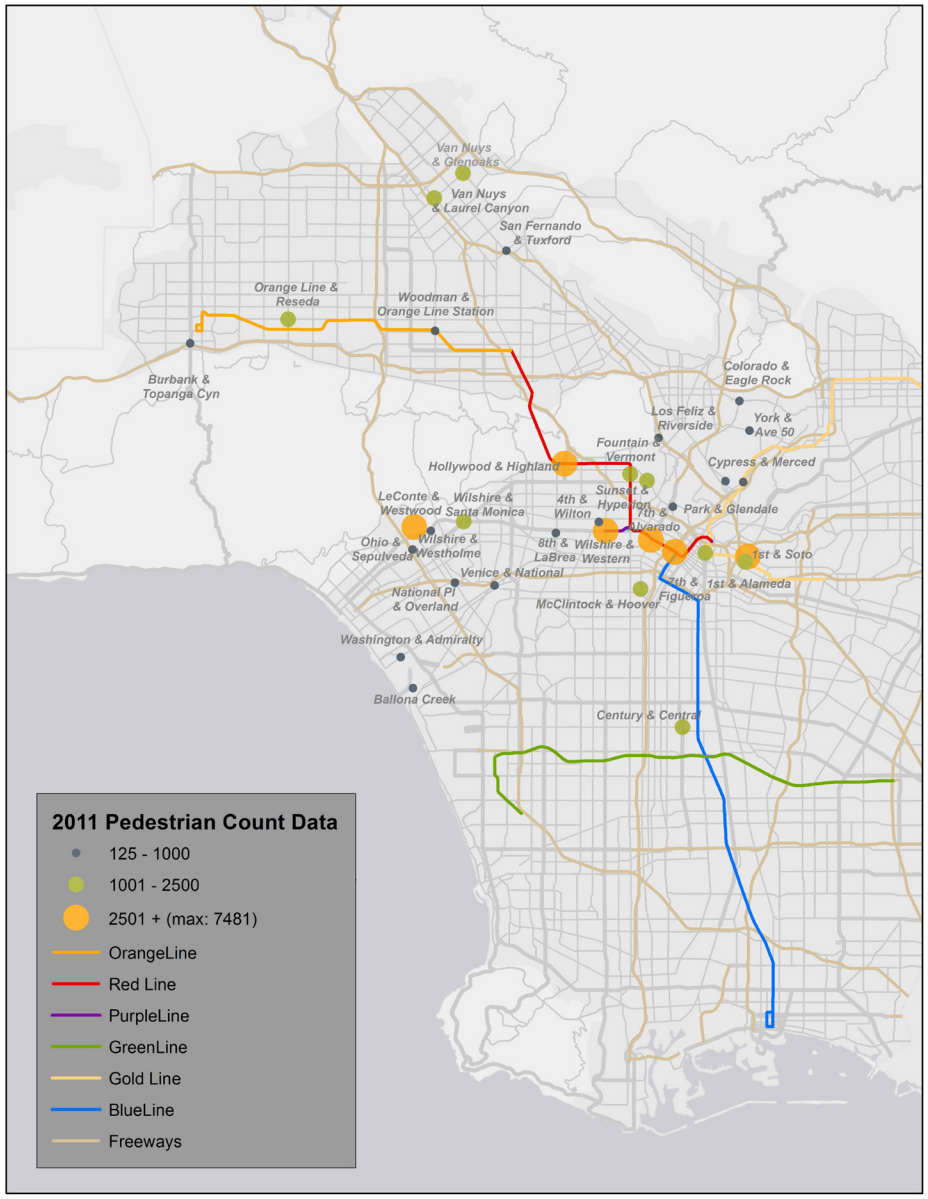


FIGURE 7: PEDESTRIAN COUNT

- High volumes of pedestrians* are found around fixed rail transit stops
- A high volume of pedestrians are also found around major job centers on the Westside (UCLA and at the intersection of Wilshire Blvd. and Santa Monica Blvd.) and adjacent to universities (USC and UCLA)
- The City should investigate whether these areas with high pedestrian volumes are in need of safety improvements, including high visibility crosswalks, bulb-outs, and countdown signals

Intersection	Peds.	Intersection	Peds.
1st & Alameda	1438	McClintock & Hoover	1677
1st & Soto	2135	National Pl & Overland	214
4th & Wilton	355	Ohio & Sepulveda	597
7th & Alvarado	7319	Orange Line & Reseda	1718
7th & Figueroa	6709	Park & Glendale	634
8th & LaBrea	740	San Fernando & Tuxford	125
Ballona Creek	460	Santa Monica & Wilshire	1198
Burbank & Topanga Cyn	299	Sunset & Hyperion	2349
Century & Central	1170	Van Nuys & Glenoaks	1884
Cesar Chavez & Soto	5515	Van Nuys & Laurel Canyon	1277
Colorado & Eagle Rock	984	Venice & National	909
Cypress & Merced	552	Washington & Admiralty	438
Figueroa & Pasadena	747	Wilshire & Westholme	528
Fountain & Vermont	1521	Wilshire & Western	6129
Hollywood & Highland	7450	Woodman & Orange Line	531
LeConte & Westwood	6076	York & Ave 50	777
Los Feliz & Riverside	430		

*Volumes reflect total over count periods. For more information, see methodology section.

SAFETY

Metric	Data Elements	Objective	Policy Implications / Justification
Collisions and fatalities by mode *(Figures 8 & 9)*	• Number of collisions by severity and mode from the UC Berkeley SafeTREC Transportation Injury Mapping System • Collisions by mode for California and the United States	Reduce pedestrian, auto, and bicycle collisions per mile traveled (or per population by mode)	• Improve infrastructure and slow automobile traffic to make it safer for those that bicycle and walk
Hit-and-run incidents by mode and severity *(Figure 10)*	• Hit-and-run statistics by severity and mode from the Los Angeles Police Department	Reduce all hit-and-run incidents	• Increase penalties for hit-and-run incidents, particularly those involving pedestrians and cyclists • LAPD should fully investigate all cases where a person walking or bicycling is hit no matter the type or severity of injury
Pedestrian and cyclist involved collisions by community plan area *(Figures 11 & 12)*	• Point locations of collisions by severity and mode from the UC Berkeley SafeTREC Transportation Injury Mapping System • Community plan areas for geographic distribution	Reduce geographic disparities in collision incidents	• Use safety improvement funding to target area in greatest need

There are no data available about street conditions, such as pothole locations, which are hazardous to cyclists. In addition, there are no data available that tracks the proximity of bicycle facilities to the door zone, which poses another potential danger for cyclists.

FIGURE 8: COLLISIONS PER 100,000 POPULATION BY MODE, 2009

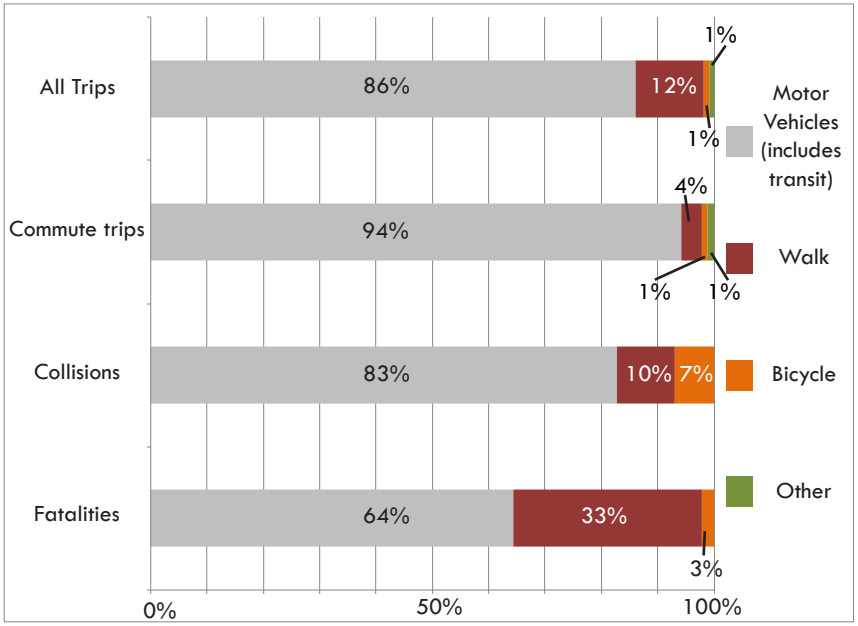
Mode	Los Angeles	California	United States
Automobile	545	1,258	1,956
Bicycle	46	36	18
Pedestrian	71	36	22

Sources: UC Berkeley Safe Transportation Research and Education Center, California Highway Patrol, National Highway Traffic Safety Administration, Census

- Pedestrians are 1.5 times more likely than passenger vehicle occupants to be killed in a car crash on each trip[12]
- Pedestrian and bicycle involved collisions per capita are far more common in Los Angeles compared to California and the U.S.

FIGURE 9: FATALITIES BY MODE, 2009

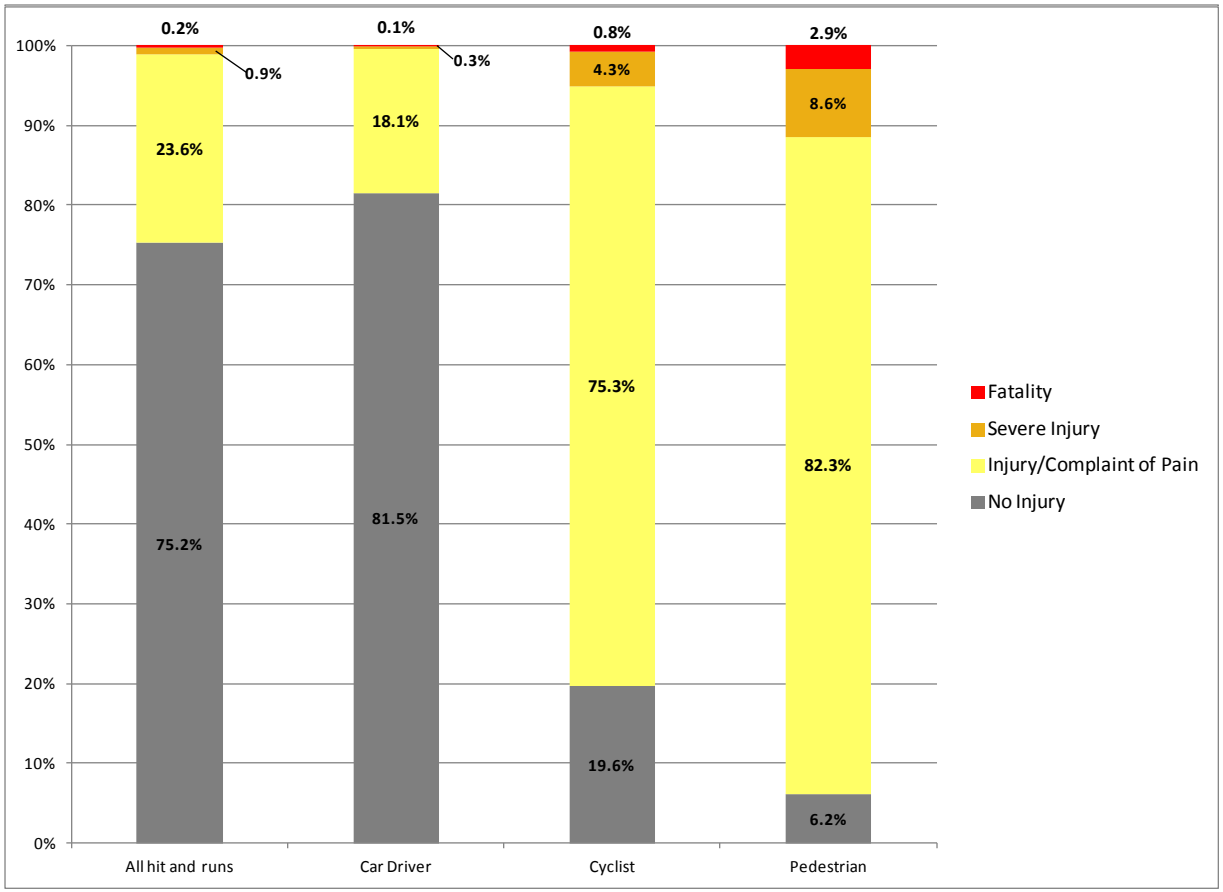
(City of Los Angeles)



- Pedestrians and bicyclists in Los Angeles face disproportionate safety risks when they travel
- Pedestrians comprise less than 5% of all commuters and make 12% of all trips, but they suffer 1/3 of all fatalities
- Bicyclists make only about 1% of trips, but they are involved in 7% of all collisions

FIGURE 10: SEVERITY OF HIT-AND-RUN CRASHES IN THE CITY OF LOS ANGELES, BY MODE (2011)

- Most hit-and-run incidents involving only car drivers (no pedestrians or cyclists) do not result in injury
- Most hit-and-run incidents involving cyclists or pedestrians result in some type of injury
- Most hit-and-run fatalities involve pedestrians



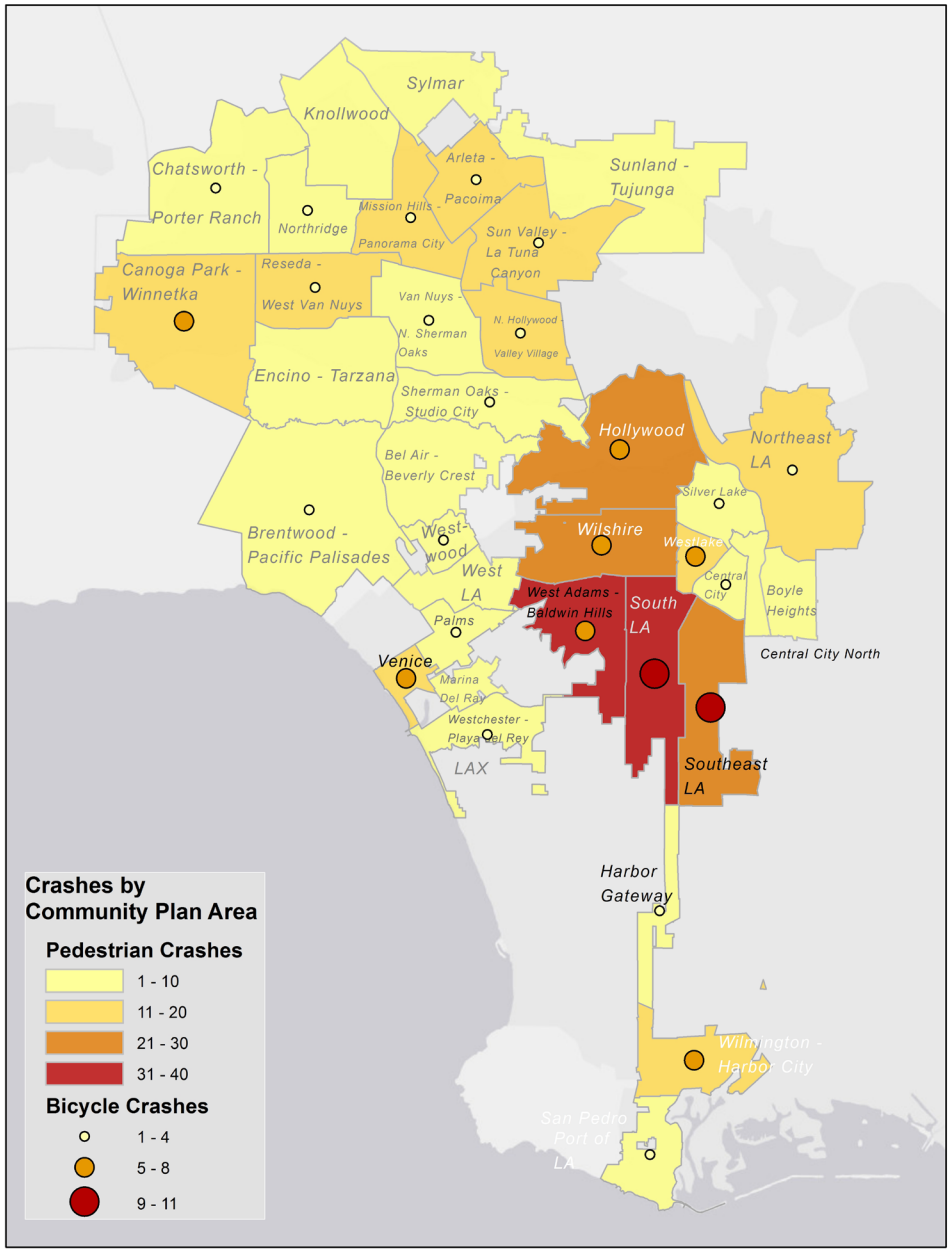
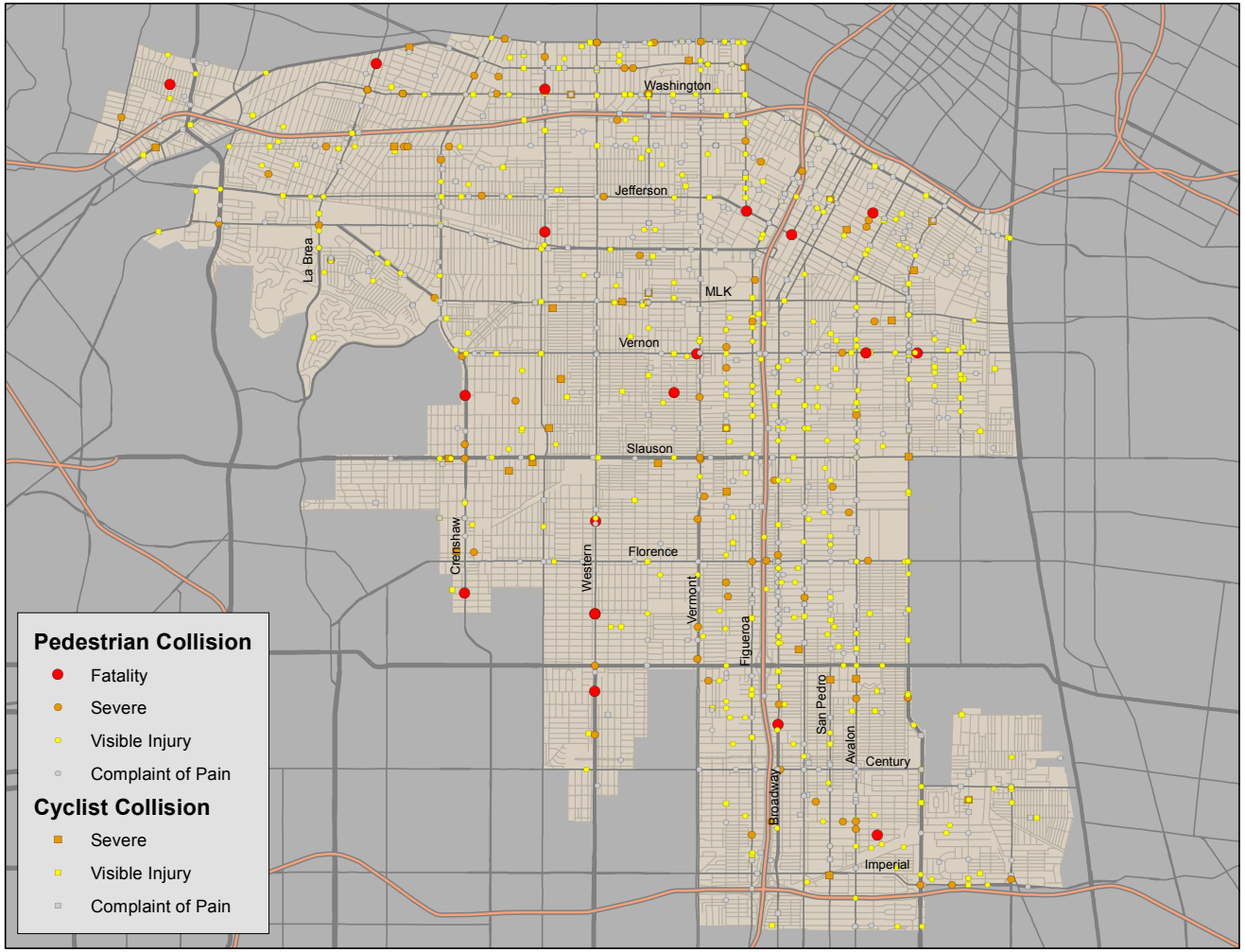


FIGURE 11: PEDESTRIAN AND CYCLIST INVOLVED COLLISIONS BY COMMUNITY PLAN AREA* (2009)

- Pedestrian and cyclist involved in collisions are particularly clustered in the West Adams, South LA, and Southeast LA community plan areas
- The issue of pedestrian and cyclist safety from collisions should be addressed during the Community Plan process

*The City Council districts are in flux because of redistricting. As such, community plan areas (as defined by the Department of City Planning) are used to aggregate data into geographic areas within the city.

FIGURE 12: PEDESTRIAN AND CYCLIST INVOLVED COLLISIONS (2009)
HIGH RATE AREAS IN DETAIL: WEST ADAMS/BALDWIN HILLS, SOUTH LA & SOUTHEAST LA



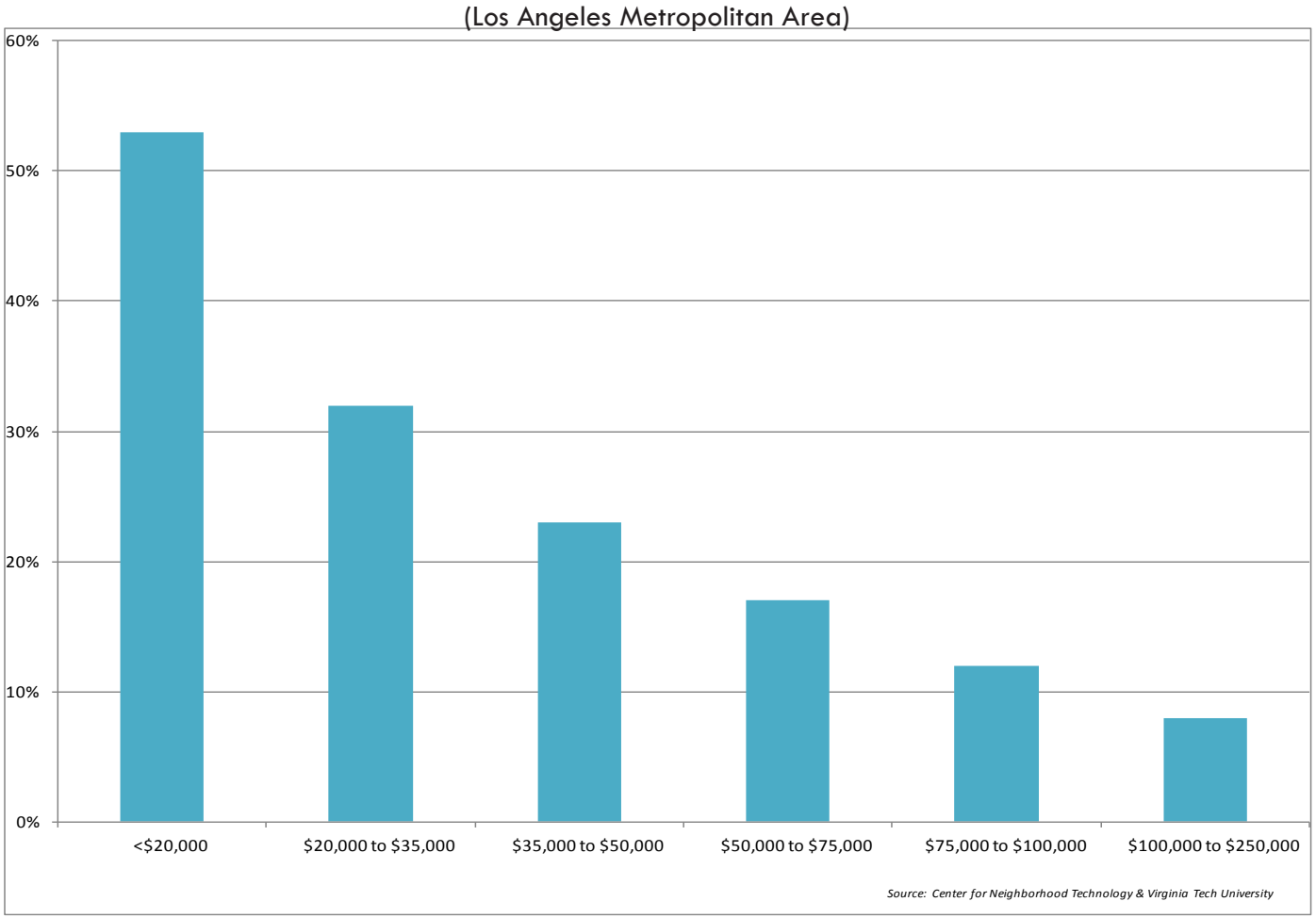
- Through closer examination of these crashes, we can pinpoint the specific areas in greatest need of safety improvements.

ECONOMICS

Metric	Data Elements	Objective	Policy Implications / Justification
Transportation expenses as percentage of household income *(Figure 13)*	• Center for Neighborhood Technology Housing & Transportation Affordability Index and CNT/Virginia Tech Report for LA Metro area	Determine which populations are most affected by transportation costs	• Recognize that transportation costs can be a larger burden for low-income households • Equitable distribution of transportation opportunities across the population is an important goal to reach • Cars are expensive but provide most geographic opportunity, increase and improve infrastructure for walking, bicycle and transit in order to provide more opportunity for lower cost options
Annual automobile ownership and transit expenditures by proportion of the population *(Figures 14 & 15)*	• CNT H&T Affordability index for City of LA	Better understand the relationships between costs and travel	• Recognize transportation burden for many households
Congestion management mitigation for new developments – i.e., developer fees for adding new trips to the transportation system *(Figure 16)*	• Case studies within LA County on development guidelines / developer mitigation fees required by certain types of development	Ensure developer mitigation aligns with a multi-modal approach, and reveals the true costs (externalities) associated with driving	• Align mitigation fees and requirements in line with sustainable transportation future – i.e invest in modes other than private automobiles
Public investment by mode *(Figure 17)*	• Metro Call for Projects disbursement data	Increase funding for sustainable transportation projects; spend funds in proportion to desired modal split	• Align transportation spending with current travel behavior – i.e., spending on pedestrians should be increased • Reward sustainable and healthy ways to travel
Public investment in park space *(Figure 18)*	• Trust for Public Land City Park Facts, City of LA	Increase park spending per resident	• Encourage healthy behavior by providing physical activity opportunities in park-poor areas

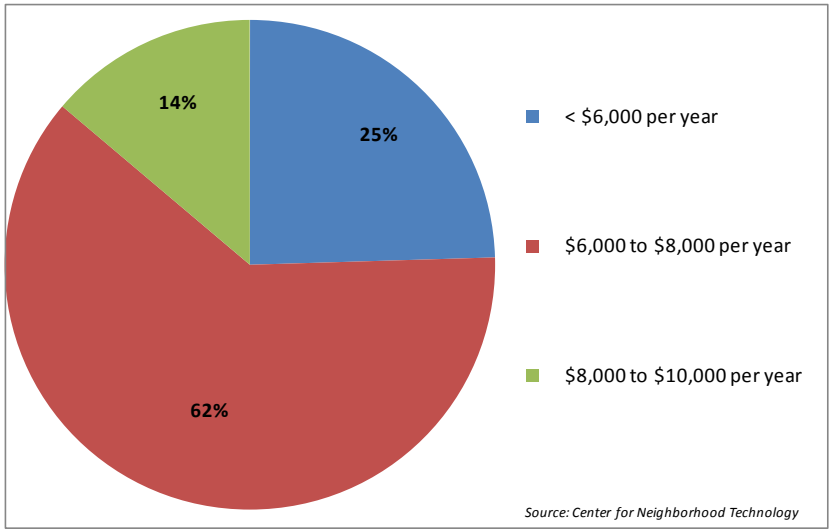
Public investment in park space is not available by a smaller geographic area than the County of LA. The lack of smaller scale geography data masks the geographic distribution of financial resources towards creating new parks.

FIGURE 13: TRANSPORTATION EXPENSES AS A PERCENTAGE OF HOUSEHOLD INCOME



- Low-income households spend a greater proportion of their income on transportation than do middle- and high-income houses
- Need to take into account the "luxury" factor – higher income households will spend proportionally more on transportation by virtue of owning expensive cars,[13] but as a proportion of total income, these costs are still very low
- With few options other than the automobile, basic access and mobility can be a financial burden

FIGURE 14: ANNUAL AUTO OWNERSHIP EXPENDITURES BY PROPORTION OF THE POPULATION (City of Los Angeles)



- More than three-quarters of Angelenos spend over $6,000 on auto ownership each year

FIGURE 15: ANNUAL TRANSIT EXPENDITURES BY PROPORTION OF THE POPULATION

(City of Los Angeles)

- Seven out of eight Angelenos spend less than $250 on transit each year
- Just two percent spend over $400 on transit annually

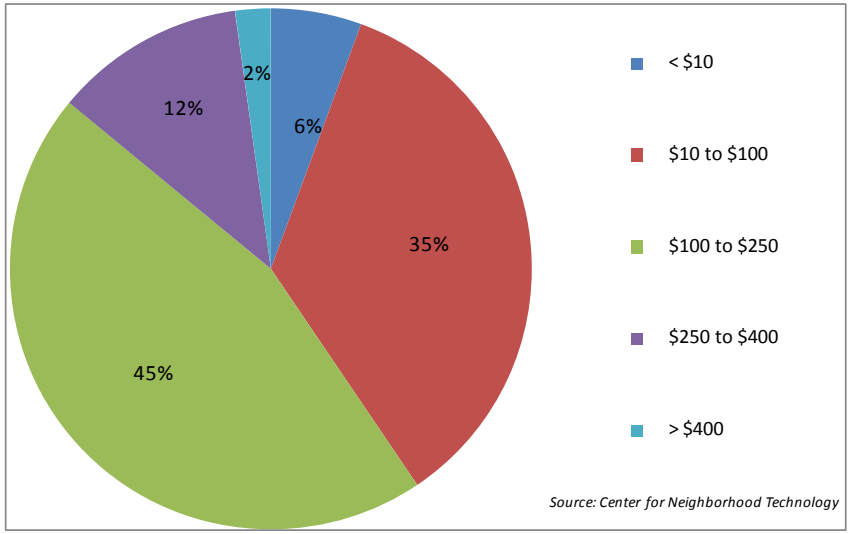


FIGURE 16: CONGESTION MANAGEMENT MITIGATION FOR NEW DEVELOPMENTS

Unfortunately, specific data on the City of Los Angeles' congestion management fee structure are unavailable at this time. Therefore, we examine the City of Pasadena as an example of how to effectively leverage development funding to support transportation infrastructure.

What are congestion mitigation fees?

- A component of the state-mandated Congestion Management Program
- Developers of residential, commercial, and industrial property pay a fee to mitigate the increase in traffic congestion caused by their development
- Fees are based on the specific land use and number of trips that a new development will generate

Where have congestion management fees been implemented?

- 22 jurisdictions within LA County
- Fees vary by jurisdiction; Metro creates county wide guidelines but local jurisdictions manage their own fees

FOLLOWING PASADENA'S EXAMPLE

Pasadena's progressive fee system prioritizes multi-modal transportation. While investments in road capacity can confer benefits to cyclists and pedestrians, they tend to prioritize automobiles. Pasadena possesses a more equitable fee system by directing revenue to modes other than the single occupant vehicle. Additionally, unlike many other areas, Pasadena does not exempt transit-oriented developments from congestion mitigation fees.

Summary of Congestion Mitigation Fees, City of Pasadena

For every $100 in fee revenue, approximately:

- $40 adds roadway capacity
- $40 supports transit
- $12 supports intelligent transportation systems
- $5 to $15 provides traffic calming and bicycle or pedestrian facilities

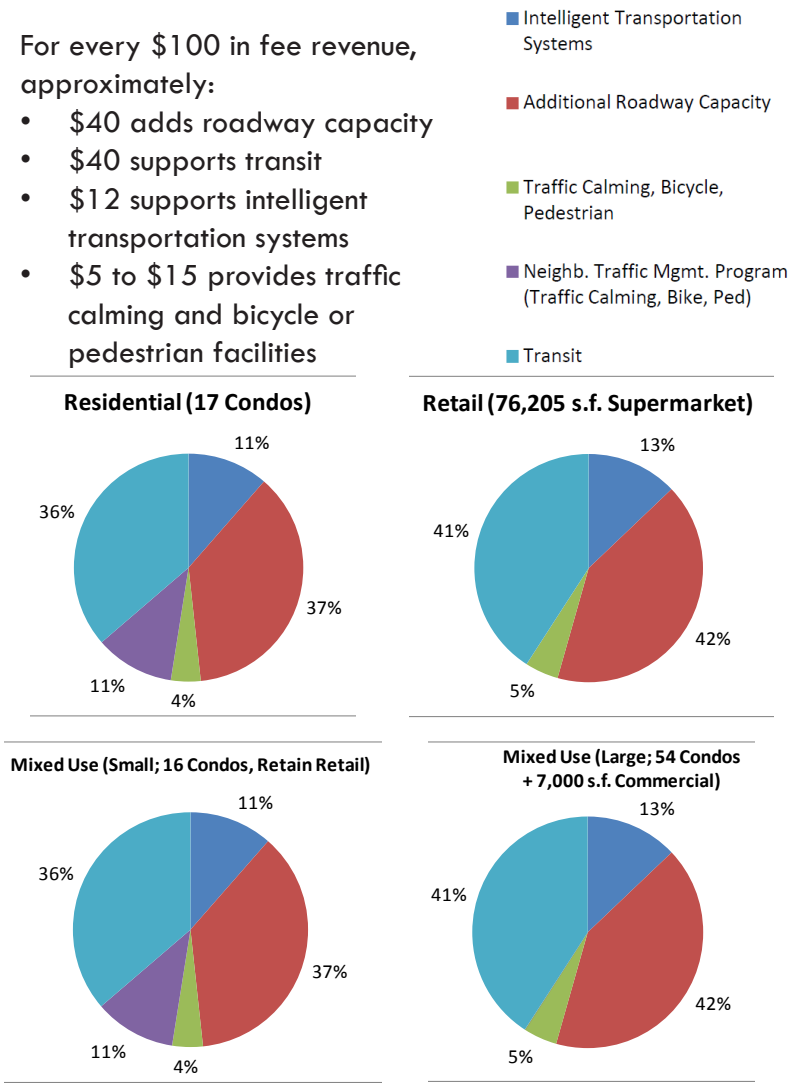
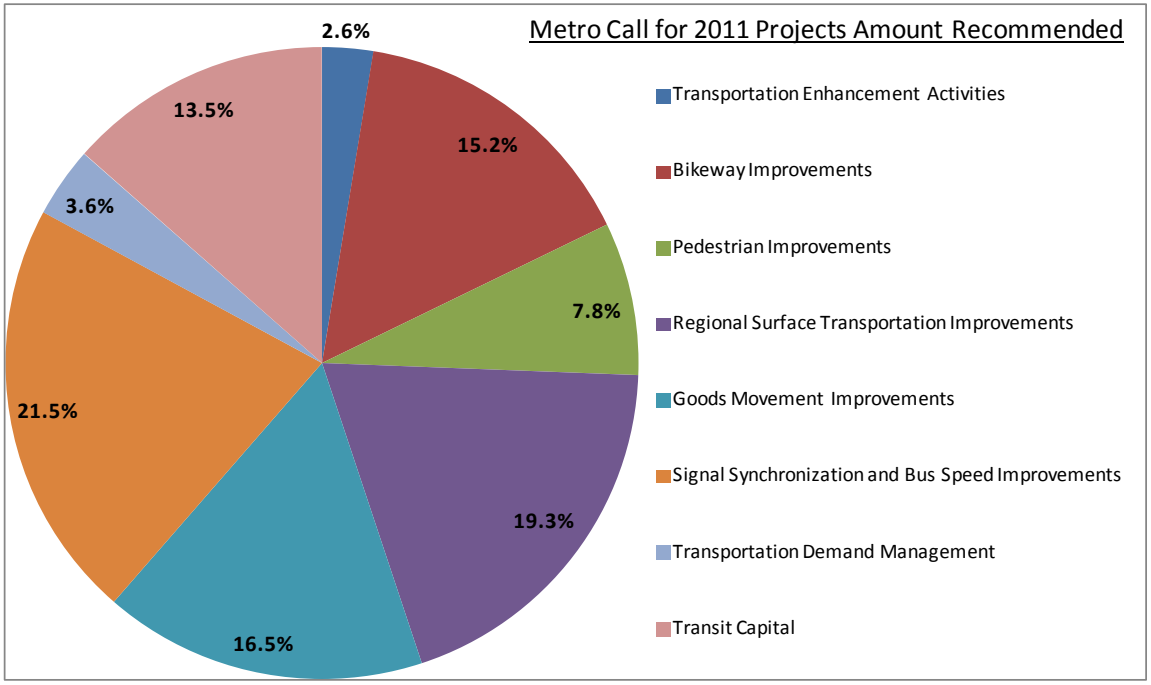


FIGURE 17: PUBLIC INVESTMENT BY MODE (METRO CALL FOR PROJECTS)

Funding Category	Recommended Amount
Transportation Enhancement Activities	$2,685,835
Bikeway Improvements	$15,913,630
Pedestrian Improvements	$8,229,016
Regional Surface Transportation Improvements	$20,215,691
Goods Movement Improvements	$17,320,744
Signal Synchronization and Bus Speed Improvements	$22,542,000
Transportation Demand Management	$3,774,000
Transit Capital	$14,210,000
TOTAL	$104,890,916



- For the purposes of this report, we consider only investment categories explicitly related to bicycle/ pedestrian projects to directly benefit cyclists and pedestrians
- Cycling infrastructure, and the funding to install new infrastructure, is commonly linked to increases in bicycle mode share[14]
- Active transportation comprises 21% of all trips in the Southern California Association of Governments (SCAG) region[15]; if increases are desired, funding needs to increase as well. Comparitvely, only 1.3% of funding in the 2012 SCAG Regional Transportation Plan goes towards active transportation[16].

These metrics only demonstrate the recommended amounts of funding rather than how the actual funding was dispersed.

These data do not demonstrate the recommended funding levels relationship to applications. There may be more demand for funding requests than the recommended disbursement amounts.

FIGURE 18: PUBLIC INVESTMENT IN PARK SPACE

(City of Los Angeles)

Total expenditure	$221,596,617
Total expenditure per resident	$58
Total capital expenditure	$30,838,606
Capital expenditure per resident	$8
Total operating expenditure	$190,758,01
Operating expenditure per resident	$50
Source: Trust for Public Land	

- These investments are not evenly distributed across all areas of the City
- The City should invest new park dollars in park-poor communities

These data mask the distribution of these funds. Therefore, it can potentially mask whether inequities exist regarding public investment in park space throughout different areas within Los Angeles.

ENVIRONMENT

Metric	Data Elements	Objective	Policy Implications / Justification
Overweight and obese children by City Council district *(Figure 19)*	• UCLA Center for Health Policy Report (LA County level data) • Los Angeles County Department of Public Health report (LA City)	Eliminate childhood obesity	• Support policy and projects that promote active lifestyles and healthy nutrition for children and adults, especially in areas with high percentages of overweight children
Number of parks and schools within 500 feet of high traffic volume street or freeway *(Figure 20)*	• LADOT Average Daily Traffic volume data • Census block-level data • Park and school locations	Recognize the effects of air pollution on local populations Prioritize air quality buffers and other air quality mitigations around new and existing sensitive sites	• Policy change / implications for land uses around high-volume streets and freeways • Allocate funds to mitigate the negative effects of roadway proximity, such as improved housing sealing to improve indoor air quality • Reduce the volume of motor vehicle traffic to reduce adverse health effects • Diesel particulate matter (PM) contributes to 3,900 premature deaths in CA annually[16] • Ambient PM2.5 is associated with 14,000 to 24,000 premature deaths statewide annually[17] • In 2010, 105 days in LA County exceeded CA Ozone standard[18]

Metric	Data Elements	Objective	Policy Implications / Justification
Percentage of population living within a ¼ mile of a park/ green space *(Figure 21)*	• Local, county and state park GIS shapefile • Park acreage / 1,000 residents • Park acreage / community plan area	Every household / person should be within a ¼ mile of a dedicated, safe, and quality park / green space	• Parks have numerous health and community benefits • The City should work to preserve land as open space in park-poor areas, and invest in parks in park-poor areas • Only 30% of physically active people report meeting daily exercise recommendations with available green space[19] • 2.4 times higher risk of mental health issues with little to no access to green space[20]

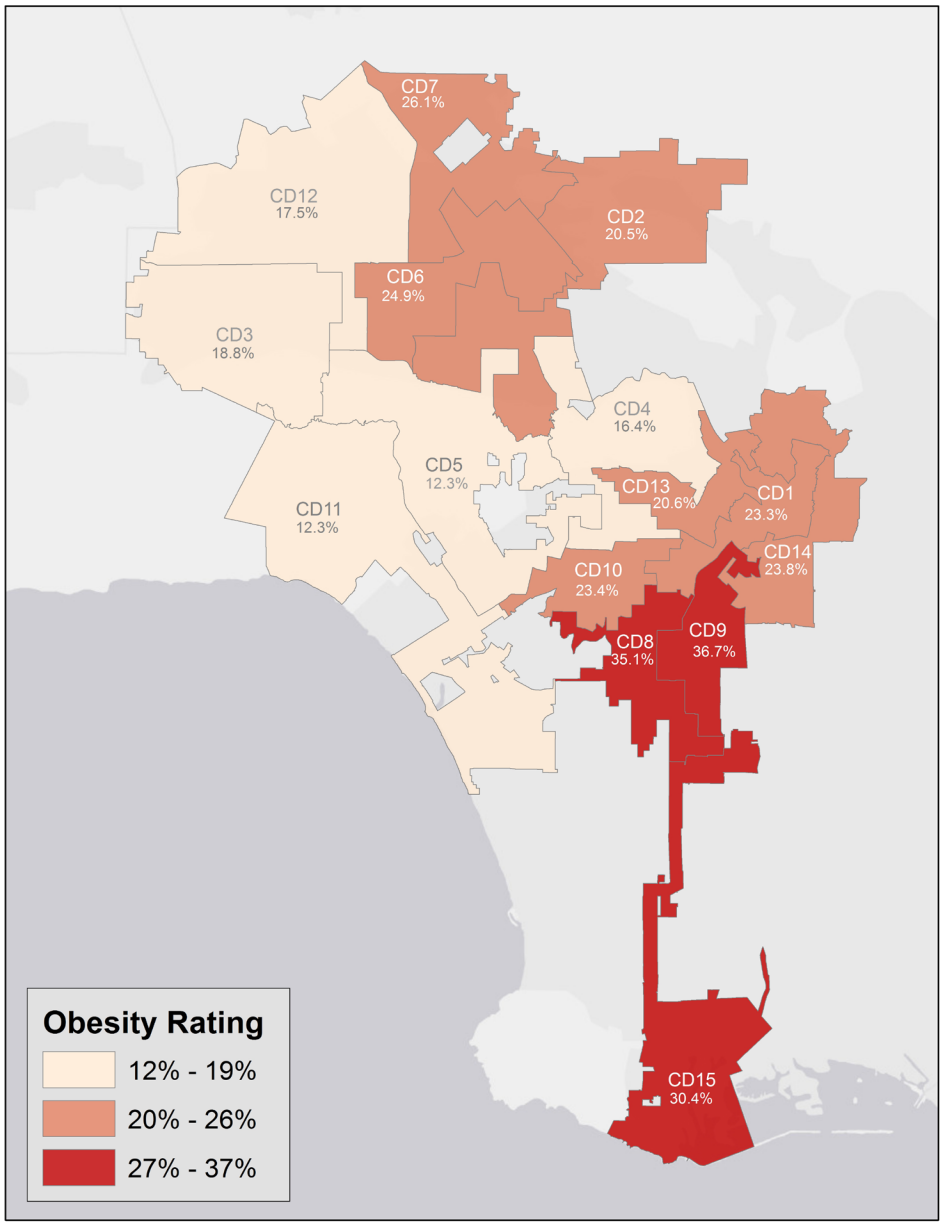


FIGURE 19: OVERWEIGHT AND OBESE CHILDREN BY CITY COUNCIL DISTRICT

1 in 4

LA kids is at an unhealthy weight[21]

- One in four children in the City of Los Angeles is overweight or obese
- Council Districts 8, 9, and 15 have the highest obesity rates in the City
- Childhood obesity is an issue in all Council Districts
- Obese children are more likely to become obese adults[22]
- Obesity increases the risk of heart disease, diabetes, and some cancers[22]
- While City Council districts are being currently re-drawn, these same patterns will remain the same; with the highest obesity ratings found in South Los Angeles and lower percentages in the western side of the city

FIGURE 20: NUMBER OF PARKS AND SCHOOLS WITHIN 500 FEET OF A HIGH TRAFFIC VOLUME STREET OR FREEWAY

- 20% of all parks are within 500 ft. of a major road (over 50,000 average daily traffic) or freeway
- People visiting these parks have a higher risk of exposure to harmful particulate matter when exercising[23]
- Despite a 2003 California law which prevents schools from being built within 500 feet of a freeway, there are currently 22 schools near a major road or freeway in Los Angeles
- Given the high volume of traffic on many non-freeway streets, siting guidelines should consider major roads in addition to freeways

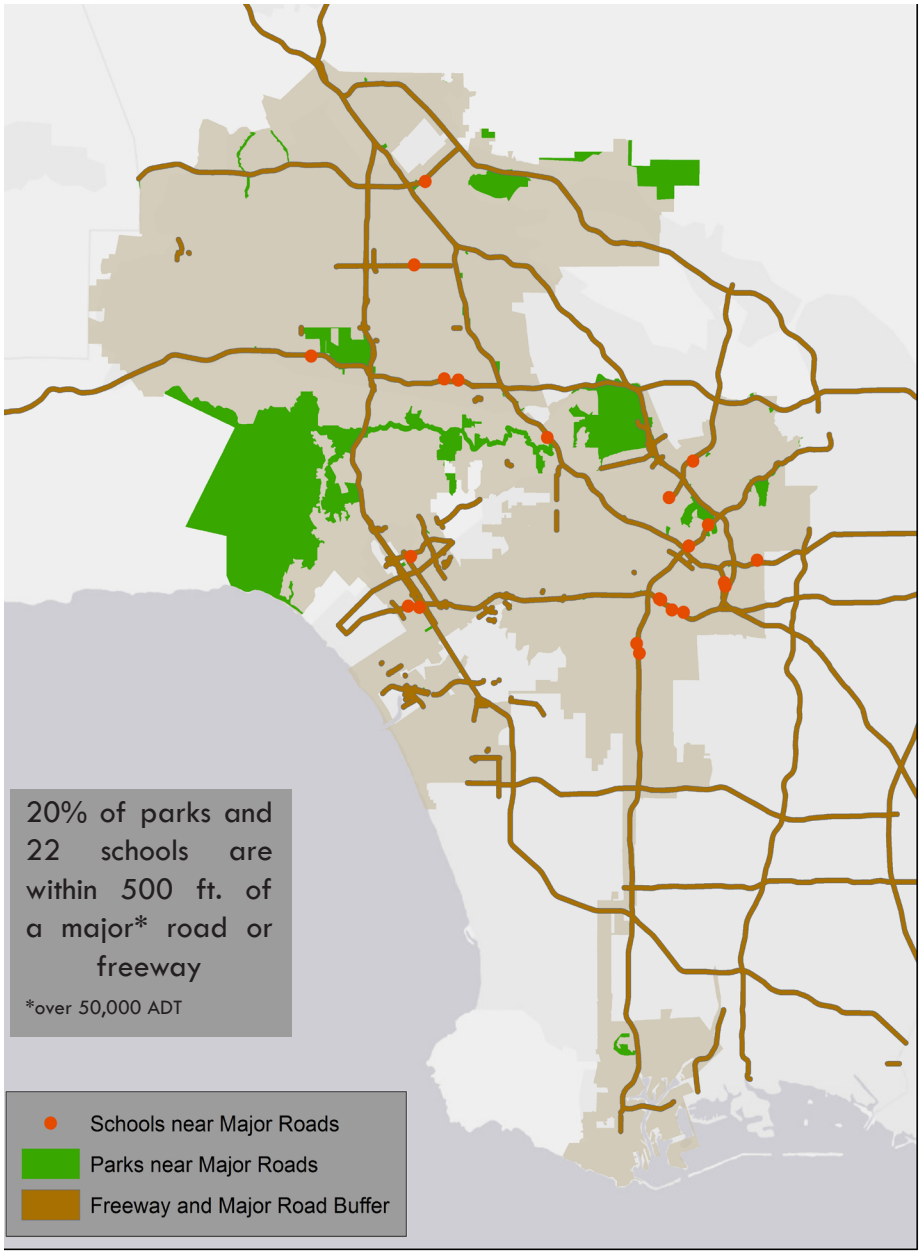
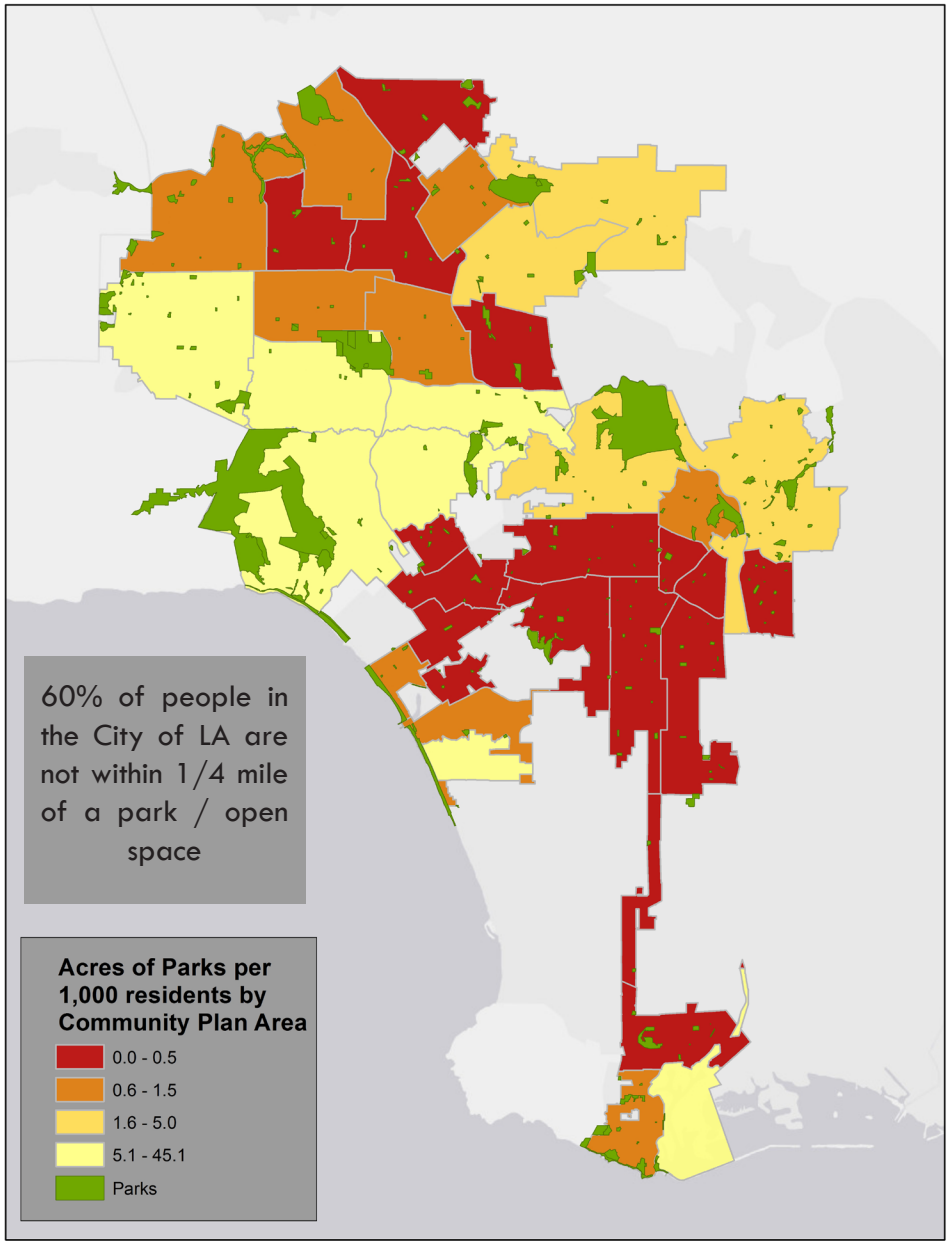
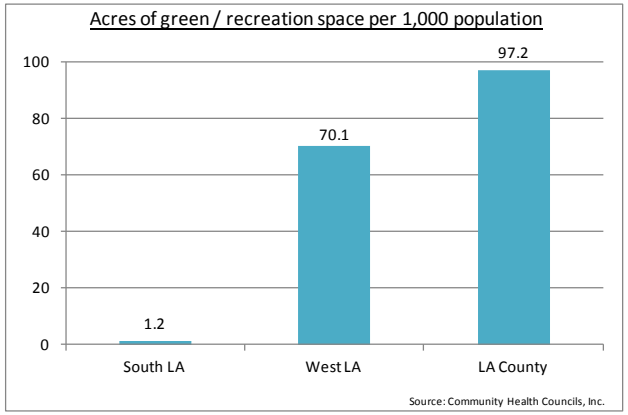


FIGURE 21: PERCENTAGE OF POPULATION LIVING WITHIN 1/4 MILE OF A PARK / GREEN SPACE



- Access to park / green space is not evenly distributed across the City
- Prioritize investments and preservation of open space in park poor areas of the City
- These metrics do not capture park maintenance or safety



METHODOLOGY

(Listed by corresponding figure)

1. Population data from block-level Census 2010 data. Bikeway data includes bike paths and routes installed as of March 20, 2012.
2. Population data from block-level Census 2010 data. Stops labeled and mapped herein as "frequent and reliable" are served by a transit line that runs at least every 15 minutes during the daytime. These were determined by inclusion of the transit line on Metro's "15-Minute Map," published June 2011.
3. Census blocks were coded by whether they were within a quarter mile of a dedicated bikeway (see note 1) and frequent and reliable transit service (see note 2). Population was calculated based on blocks coded no to both these factors.
4. Ridership data totals determined by average weekday boardings and alightings for FY2011 Q1, from Automatic Passenger Counters. Data received from Jesse Simon at Metro.
5. Data from the 2009 National Household Travel Survey. Available from www.nhts.ornl.gov
6. Bicycle volume data provided by the Los Angeles County Bicycle Coalition from the 2011 Bicycle and Pedestrian Count effort and corresponded to dedicated bikeways (see note 1).
7. Pedestrian volume data provided by the Los Angeles County Bicycle Coalition from the 2011 Bicycle and Pedestrian Count effort and overlaid with Metro fixed rail routes.
8. Local data obtained from UC Berkeley Transportation Injury Mapping System (TIMS), 2009 data. Available at tims.berkeley.edu; State and National data (2009) from the National Highway Traffic Safety Administration.
9. Travel data from 2009 National Household Travel Survey for the Los Angeles Metropolitan Statistical Area. Collision data from 2009 UC Berkeley Transportation Injury Mapping System.
10. Hit-and-Run data from 2011 from the Los Angeles Police Department, provided to the Los Angeles County Bicycle Coalition.
11. Collision data from 2009 UC Berkeley Transportation Injury Mapping System, joined to Community Plan Areas.
12. Collision data from the 2009 UC Berkeley Transportation Injury Mapping System at locations within West Adams, South LA and Southeast LA Community Plan Areas. Crashes symbolized by severity also from the TIMS data.
13. Center for Neighborhood Technology and Virginia Tech University.
14. Annual auto ownership expenditures for the City of Los Angeles for the year 2000 from "Housing & Transportation Cost Trade-offs and Burdens of Working Households in 28 Metros." Center for Neighborhood Technology and Virginia Tech. Available at: www.cnt.org/repository/H-T-Tradeoffs-for-Working-Families-n-28-Metros-FULL.pdf
15. Annual transit expenditures for the City of Los Angeles for the year 2000 from "Housing & Transportation Cost Trade-offs and Burdens of Working Households in 28 Metros." Center for Neighborhood Technology and Virginia Tech. Available at: www.cnt.org/repository/H-T-Tradeoffs-for-Working-Families-n-28-Metros-FULL.pdf
16. Congestion management mitigation data provided courtesy of the City of Pasadena and Metro staff and reports.

METHODOLOGY

17. Metro 2011 Call for Projects preliminary staff recommendations. Available at: http://www.metro.net/projects_studies/call_projects/images/2011_project_recommendations.pdf
18. Trust for Public Land 2011 City Park Facts. Available at: http://cloud.tpl.org/pubs/ccpe-city-park-facts-2011.pdf
19. Data from the 2007 Indicators of Health report from the LA County Department of Public Health.
20. Intersection traffic volume data from LADOT 2009-2011 average daily traffic (ADT) volumes and joined to roadway segments. Freeways and roadways with over 50,000 ADT were buffered by 500 feet, and this buffer was selected to align with the CA school siting law and research regarding health impacts of air pollution.
21. Census blocks were selected if located within a quarter-mile of a park. The park acreage was joined to community plan area to depict park access patterns throughout the city, depicted as acres/1,000 people.

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