



EASTLAKE-GARFIELD DISTRICT

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Acknowledgements

This assessment and set of recommendations for the Eastlake-Garfield district is submitted by a multidisciplinary health team, convened by St. Luke's Health Initiatives (SLHI), as part of Reinvent PHX. Funded by the U.S. Department of Housing and Urban Development, Reinvent PHX is a partnership between the city of Phoenix, Arizona State University, and SLHI to develop a long-range plan for the neighborhoods along the light rail.

The scope of SLHI and the health team's work is to focus on gathering information from "underserved, particularly non-English speaking, residents in each district." From information gathered from residents, along with other primary and secondary data, the health team produced this "health impact assessment of Eastlake-Garfield's existing built-environment conditions" with a focus on "healthy food and recreation access, walking and bicycling safety, and exposure to excessive heat." After assessing the current conditions, the health team recommends the attached "intervention strategies focused on improving public health."

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SLHI's mission is to inform, connect and support efforts to improve the health of individuals and communities in Arizona. SLHI seeks to be a catalyst for community health.

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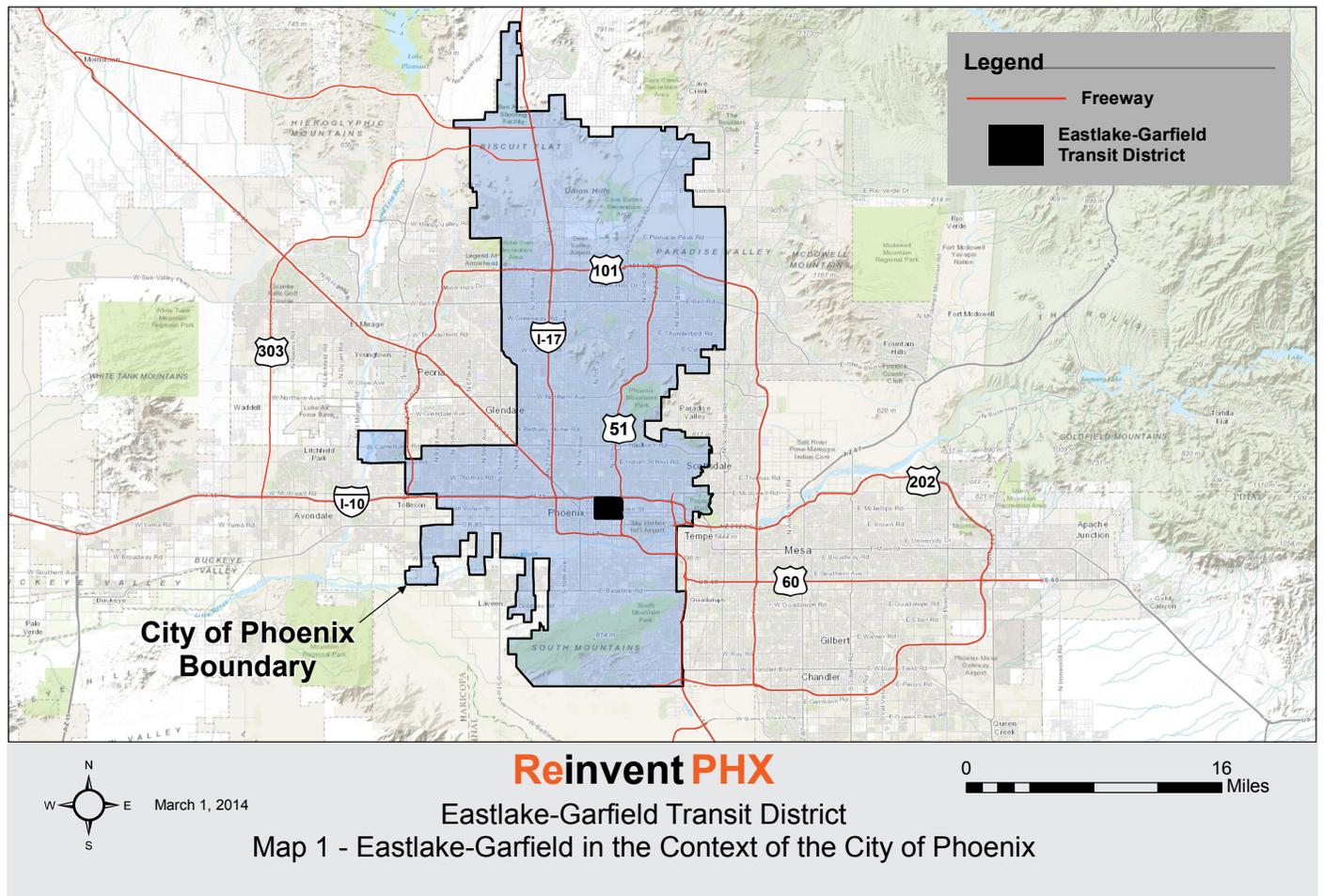
Health Assessment Report

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Eastlake-Garfield District and Its Residents

Eastlake-Garfield residents differ from the city of Phoenix, Arizona and U.S. populations in several ways that provide challenges—and opportunities—to leading fully healthy lives. (See Map 1 for location of Eastlake-Garfield within the context of the city of Phoenix.) Eastlake-Garfield families have lower incomes. The majority of Eastlake-Garfield residents identify themselves as Latino and are more likely to speak a language other than English.



The district is home to many children and youth. Many residents are already plagued with a variety of chronic diseases and report having unhealthy eating habits. And lastly, families are likely to either not own a car or own just one car.

This combination of demographic and social factors creates a unique set of health challenges—and opportunities—for residents of Eastlake-Garfield. In the public health field, these types of factors are called determinants of health. (See sidebar for more information on determinants of health.) The complex interrelationships of these factors—which reach far beyond the traditional healthcare system—have significant influence over an individual’s and community’s health.

Let us briefly examine some determinants of health for the residents of the Eastlake-Garfield district and how the built environment can affect these factors. (For more on how planning decisions affect health, see *The Built Environment and Health in Phoenix: Understanding the Connections to Healthy Eating and Active Living*, which can be found in the appendix.)



Understanding the Determinants of Health

Intuitively, we know that many factors affect our physical and mental health—beyond the traditional healthcare system of doctors and hospitals. While this traditional system is important, other factors carry great influence over our health; these factors are called determinants of health. The Centers for Disease Control and Prevention (CDC, 2013) provides a comprehensive definition of the determinants of health:

“Factors that contribute to a person’s current state of health. These factors may be biological, socioeconomic, psychosocial, behavioral, or social in nature. Scientists generally recognize five determinants of health of a population:

Biology and Genetics. Examples: sex and age

Individual Behavior. Examples: alcohol use, injection drug use (needles), unprotected sex, and smoking

Social Environment. Examples: discrimination, income, and gender

Physical Environment. Examples: where a person lives and crowding conditions

Health Services. Examples: Access to quality health care and having or not having health insurance”

Within the context of Reinvent PHX, not only do planning and policy decisions affect health, characteristics of the residents influence health. In turn, these determinants of health influence recommendations.

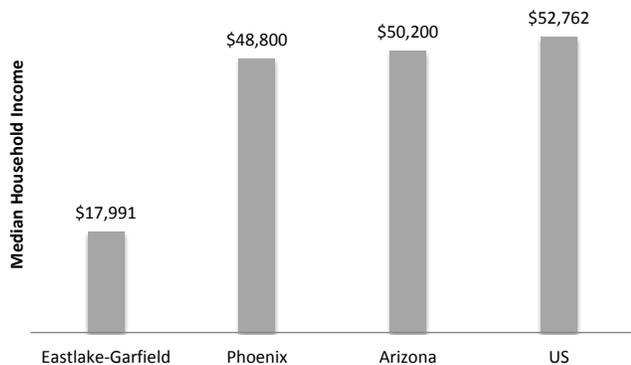


Figure 1. Eastlake-Garfield residents’ median household income compared to city, state and country

Eastlake-Garfield households earn substantially less when compared to the rest of the region and country. *Source: U.S. Census 2010.*

Income

The typical Eastlake-Garfield district resident has a very modest income, with 80% of area families earning less than \$46,100, which is twice the federal poverty level for a family of four. (See Figure 1.) A family’s socioeconomic status is one of the most influential determinants of health, and therefore plays a substantial role in overall health and well-being.

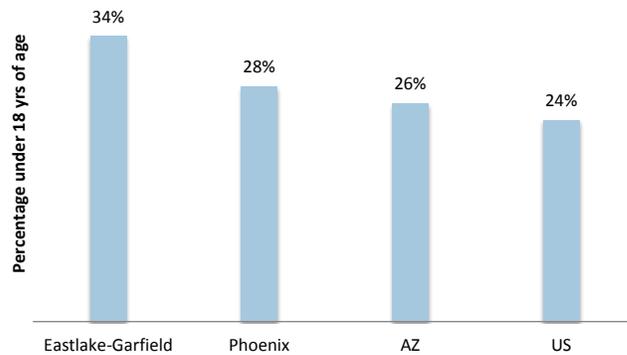


Figure 2. Percent of Eastlake-Garfield residents under the age of 18 compared to city, state and country

One out of every three Eastlake-Garfield residents is under 18 years old. *Source: U.S. Census 2010.*

Age

Research shows that routines and practices that lead to a healthy lifestyle are established early in life (Hodges, 2003). A little over one-third of the residents of Eastlake-Garfield are under the age of 18, which provides an opportunity for learning and sustaining healthy habits for future generations. (See Figure 2.)



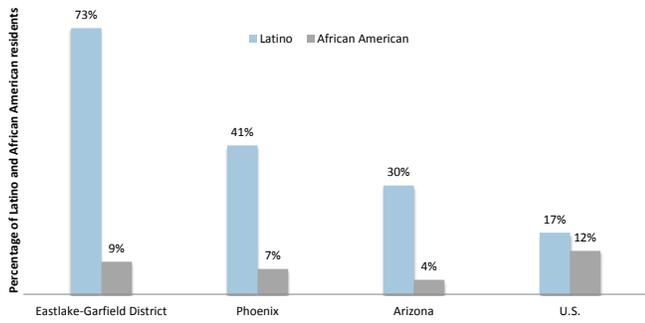


Figure 3. Race and ethnicity of Eastlake-Garfield residents compared to city, state and country

Eastlake-Garfield residents overwhelmingly identify themselves as Latino. Source: U.S. Census 2010.

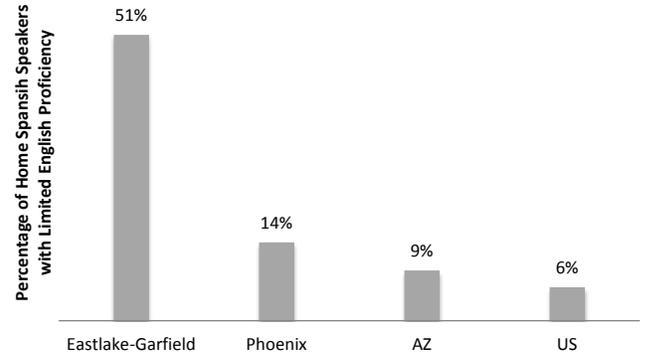


Figure 4. Percentage of Eastlake-Garfield residents with Limited English Proficiency compared to city, state and country

Over half of Eastlake-Garfield residents who speak Spanish at home identify themselves as Limited English Speakers. Source: U.S. Census 2010.

Race and Ethnicity

A high percentage of the district residents identify themselves as Latino and African-American. (See Figure 3.) While race or ethnicity do not cause obesity, Latinos and African-Americans are at a disproportionate risk of being obese and to suffer from heart disease, diabetes or stroke (Centers for Disease Control and Prevention, 2009; Han, Merrit, & Olmstead, 2008).

English Proficiency

Limited proficiency in English significantly increases the risk of not receiving adequate health care services and general dissatisfaction with the medical services received (Flores, 2005). More than half of the residents describe themselves as not speaking English “very well.”



	Eastlake-Garfield	Arizona	U.S.
Eats two or more servings of fruit per day	52%	50%	33%
Eats three or more servings of vegetables per day	20%	22%	26%
Drinks one or more sodas per day	69%	28%	--
Drinks one or more sugar-sweetened beverages per day	74%	19%	--
Eats fast food at least once per week	78%	64%	--

Table 1. Eating habits of Eastlake-Garfield residents compared to state and country

Eastlake-Garfield residents eat comparable amounts of fruit & vegetables compared to Arizona and U.S. averages. However, sugar-sweetened beverages, sodas & fast food are consumed at a much higher rate. *Source: Eastlake-Garfield Community Health Survey; Arizona Health Survey.*

Diet

According to the Arizona Health Survey (2011), Eastlake-Garfield residents' eating habits are fairly similar to national and Arizona eating patterns in terms of fruits and vegetables. (See Table 1 for details.) Unlike the state and national standards, residents in this district consume significantly more sugary beverages and fast food. Consumption of both sugary beverages and fast food has clear links to obesity (Vartanian, 2007; Rosenheck, 2008).

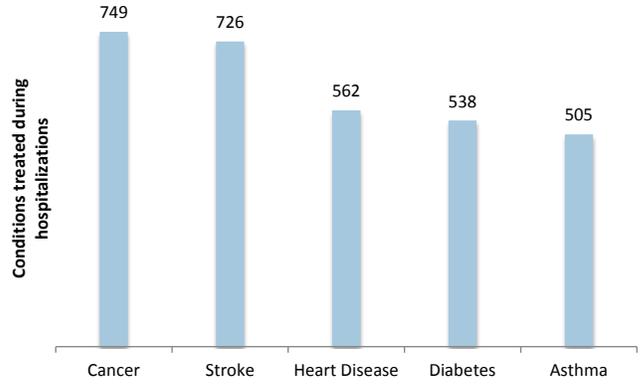


Figure 5. Eastlake-Garfield residents' conditions treated during hospitalizations in 2010

Almost 92% of hospitalizations reported patients diagnosed with either cancer or stroke. A healthy diet and regular exercise can help manage these conditions, both of which can be directly affected by the built environment. *Source: Arizona Department of Health Services (2009-2011): Hospital Discharge Data.*

Existing Health Conditionsⁱ

In 2011, Eastlake-Garfield residents had 770 hospitalizations with cancer, diabetes, heart disease, stroke, asthma or some combination of these chronic diseases. Almost half of all hospitalizations reported patients diagnosed with both diabetes and heart disease. (See Figure 5.) According to the Centers for Disease Control and Prevention (CDC) (2009), Latinos and African-Americans are particularly at-risk for these conditions.



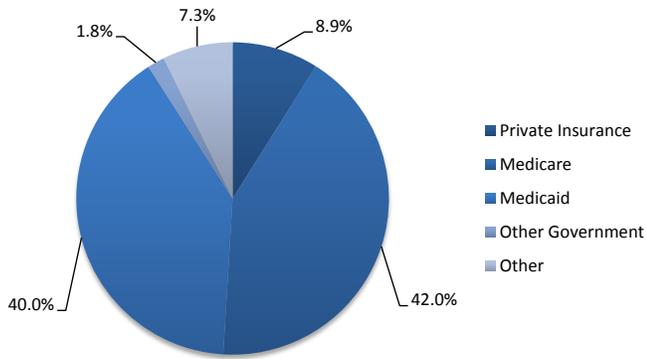


Figure 6. Payee information for Eastlake-Garfield residents' hospitalizations in 2010

Eighty-two percent of Eastlake-Garfield residents' hospitalization charges were associated with patient care covered by government programs. Source: Arizona Department of Health Services. (2009-2011). Hospital Discharge Data.

Currently hospital charges are the only method allowing comparison of financial burdens related to hospital care, but do not represent either costs of care or revenue received by the hospitals. Insurance companies pay based on negotiated contracts, Medicare and Medicaid pay according to a significantly reduced reimbursement rate, and hospitals typically have policies that allow low-income patients to receive reduced charge or free care.

The vast majority of Eastlake-Garfield patients are covered by Medicare, Medicaid and other federally- and state-funded programs, with charges associated with district residents totaling nearly \$40 million in 2011. (See Figure 6). Fifty-seven hospitalizations were self-paid with collective charges of almost \$2.5 million. These hospital charges do not include physician services, rehabilitation, lost wages or other costs associated with hospitalizations for chronic illnesses. Even with private insurance, the total costs of hospitalizations can be devastating to families. Substantial lost wages during a hospital stay adds to this cost burden.

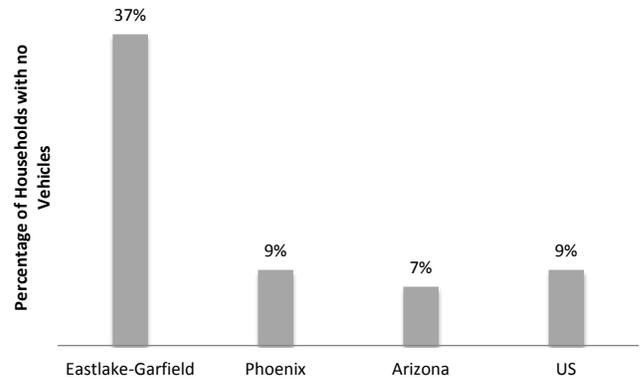


Figure 7. Percent of Eastlake-Garfield households with no car compared to city, state and country

More than a third of Eastlake-Garfield households do not own a vehicle. Source: U.S. Census 2010.

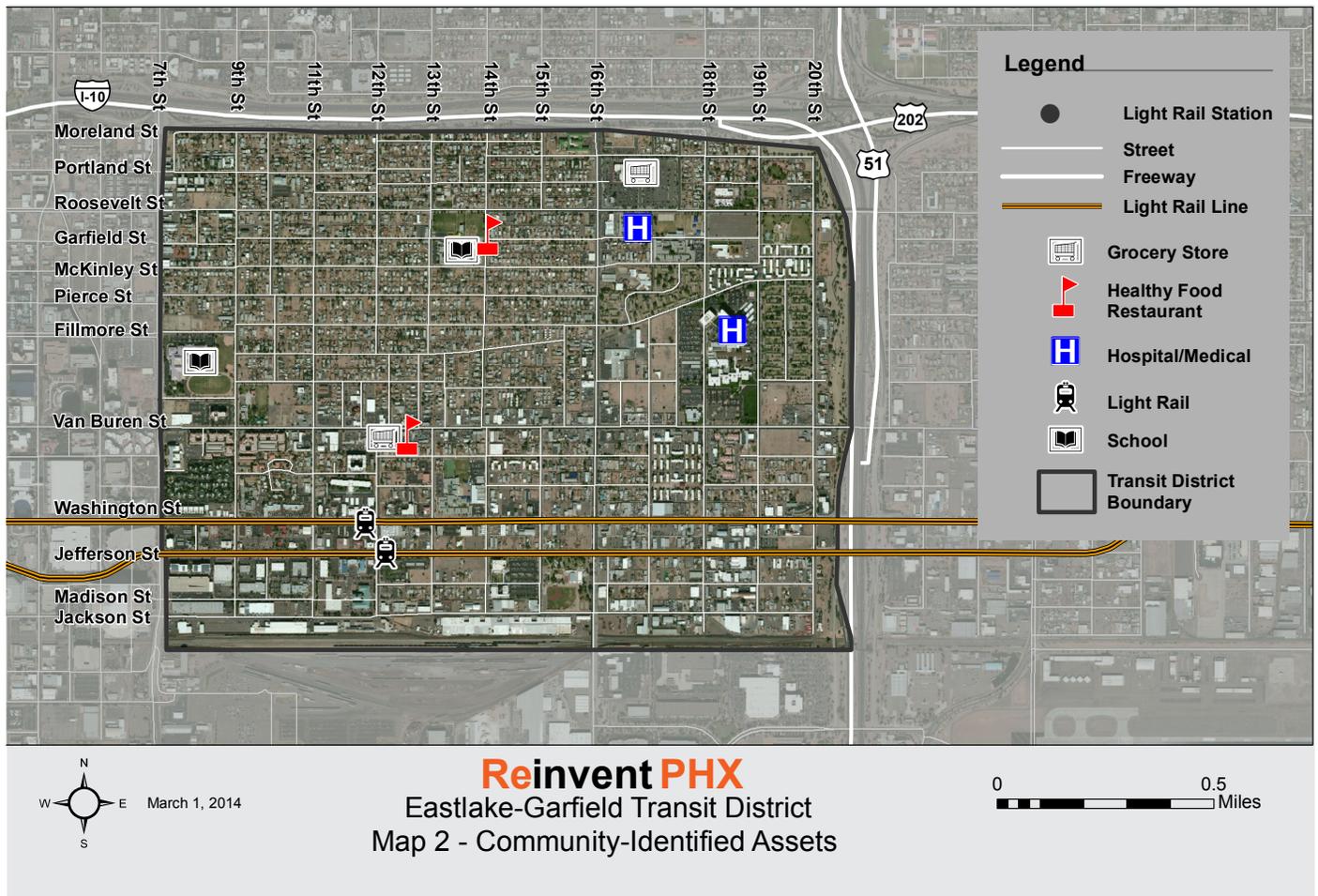
Transportation

More than one-third of the households in the Eastlake-Garfield district have no car. (See Figure 7.) Moreover, an additional 42% of households own just one car, which limits transportation options for working families.

Housing and Transportation Costs

For most households, housing and transportation are the two largest budget items. From a public policy perspective, housing and transportation costs combined should consume no more than 45% of a family's income (Center for Neighborhood Technology, n.d.). On average, Eastlake-Garfield household spends more than 53% of its income on housing and transportation costs combined, with 31% going to housing costs and 22% to transportation (Center for Neighborhood Technology, n.d.).





Eastlake-Garfield Health Assets

St. Luke’s Health Initiatives hosted two community workshops for residents of Eastlake-Garfield to identify health assets and challenges. (See sidebar and the appendix for more information.)

Residents identified community health assets using a broad definition of a community asset as “anything that can be used to improve the quality of community life” (Work Group for Community Health and Development at the University of Kansas, 2012). Assets fall into three groups:

District Assets. Identified by residents who live throughout the district as resources that improve the quality of life of residents throughout the district.

District Latent Assets. Identified by residents who live throughout the district as resources that have the potential to increase the quality of their life. However, because of their current condition, these resources need improvement in order to have an impact. An example could be a bus stop that could contribute to the health of the community if seating, drinking fountains and shade were provided.

Neighborhood-Specific Assets. Identified by residents who live in a specific neighborhood as resources that improve the quality of life of residents. Although Reinvent PHX is assessing Eastlake-Garfield as a cohesive district, residents see it as three separate neighborhoods— Eastlake Park, Garfield and Edison Park. As a result of these resident-identified boundaries, some assets were identified as such by only residents of one neighborhood.

Eastlake-Garfield Community Workshop

To better understand issues related to healthy foods, active living, public transportation and neighborhood safety, St. Luke’s Health Initiatives hosted two community workshops with residents from Eastlake-Garfield, which were attended by 44 residents. Because many attendees were Spanish-speaking, the workshop was conducted and facilitated in both English and Spanish.

Residents participated in small group discussions. Using a large aerial map of the district and surrounding areas, residents used icons to identify healthy eating, active living and transportation assets and liabilities. Residents also developed recommendations. These ideas represent their needs and visions for the future within the framework of a realistic assessment of their community.

Information gathered from this workshop is referenced throughout this report. A full workshop report, including a description of methodology, is located in the appendix.

District Assets

Workshop participants identified the following as assets that contribute to and support the community. (See Map 2.) These assets were identified by residents who live throughout the Eastlake-Garfield district.

Asset	Description	Health Determinant Affected by Asset
Garfield Elementary School	Ninety-seven percent of students attending this school are Latino and the school takes great pride in their focus on familial and cultural traditions that engage the neighboring community.	Social Environment; Physical Environment
St. Luke’s Medical Center	One of the most prominent landmarks in the district, not only because of its physical visibility, but also because of its commitment to community health.	Health Services; Physical Environment
Maricopa County Public Health Clinic	This Clinic provides services such as free to low-cost immunizations, health testing and screenings. It is located close to the Luke Krohn Public Housing development where residents can easily walk to it.	Health Services; Physical Environment



District Latent Assets

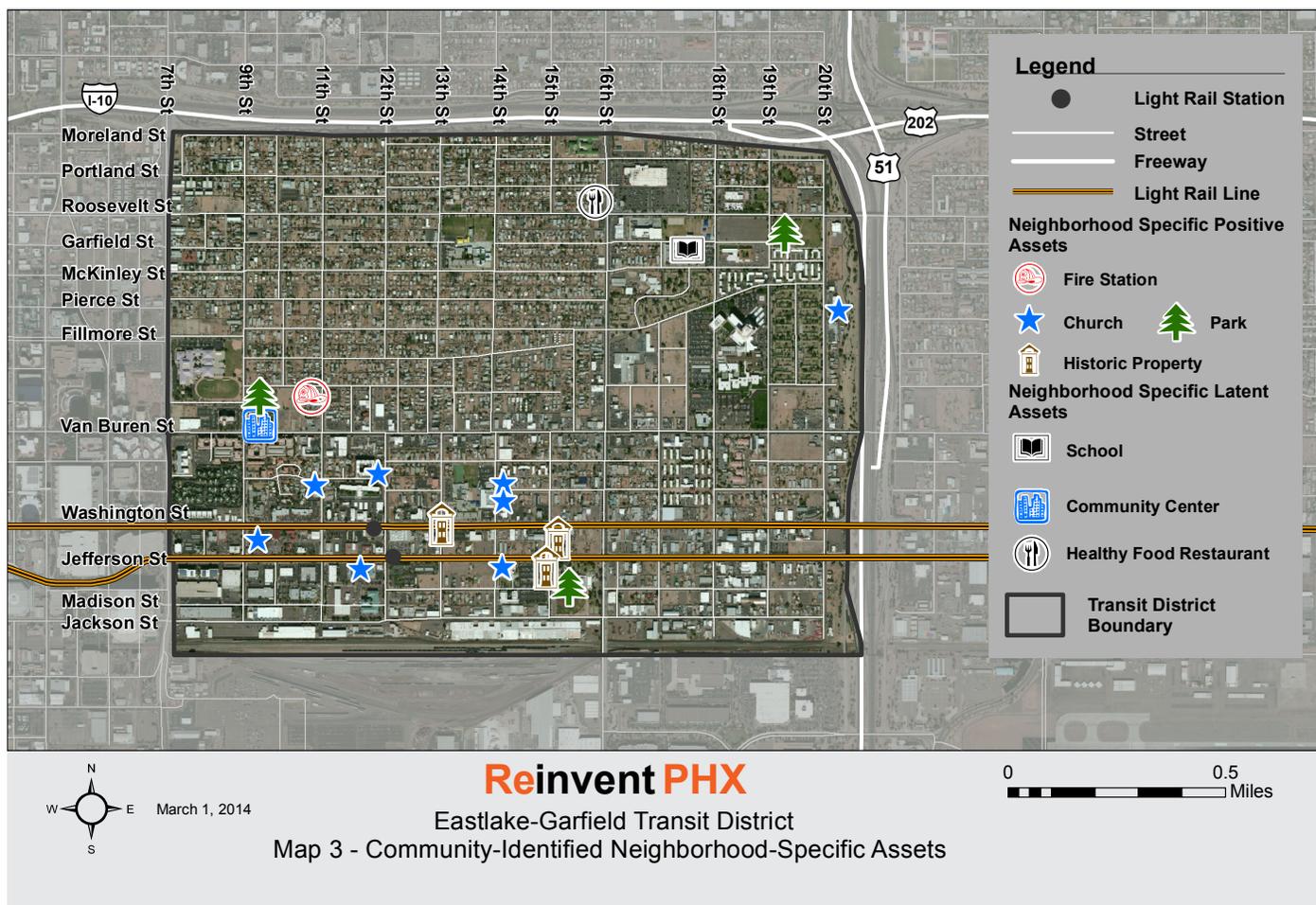
These community assets were identified as “latent” by residents because they do not always support the needs of the Eastlake-Garfield district. While these resources have potential, their current form and location do not meet resident needs or expectations.

Latent Asset	Description	Health Determinant Affected Asset
Ranch Market	This supermarket offers a wide variety of fresh produce, meats, dairy and groceries along with an extensive selection of baked and prepared foods. The inventory caters primarily to the cultural and ethnic diversity of Latin foods. Though produce is considered affordable by some, residents say the prices of non-produce items are high.	Physical Environment
Light Rail Stations	The two light rail stations are located too far from most residents. Combined with poor street infrastructure and a perceived lack of safety, this potential asset does not meet the needs of the community.	Physical Environment
Eastlake Park	The Park’s facilities include playgrounds, pools, basketball courts, a fitness center, a community center and an extensive list of regularly-scheduled programs. However, some residents from the Garfield Neighborhood do not see it as connected to the broader community in terms of street infrastructure or community outreach.	Physical Environment

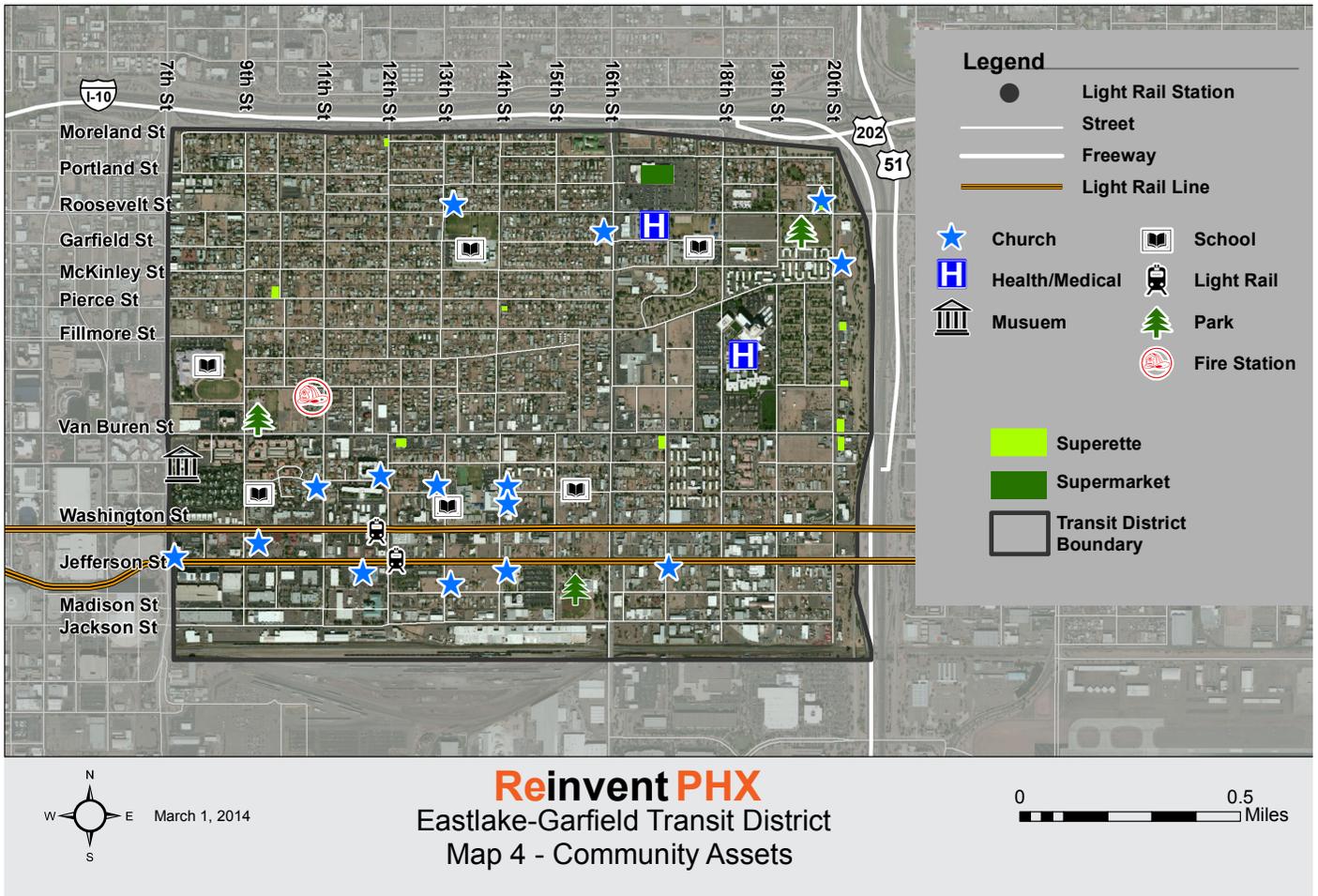
Neighborhood-Specific Assets and Latent Assets

Given the unique character of each neighborhood within the district, residents identified assets within their community that were not acknowledged by residents from adjoining neighborhoods. (See Map 3.)

	Asset	Description	Health Determinant Affected by Asset
Garfield Neighborhood	Phoenix Fire Station 8	Located next to Verde Park, it creates a perception of “more eyes on the street” at the Park and surrounding neighborhood.	Social Environment; Physical Environment
	Verde Park	Amenities include a playground, basketball courts, volleyball courts and a community center. However, access to the Park is limited by a fence.	Physical Environment



	Asset	Description	Health Determinant Affected by Asset
Edison Park Neighborhood	St Philip-Deacon Catholic Center	This is a gathering place for the community, a safe haven; some call it the heart of their neighborhood.	Social Environment; Physical Environment
	Edison School	Neighborhood residents say that the school does not reach out to the community enough. Morning and afternoon school traffic causes congestion on Roosevelt Street. Residents also see drug dealers and inebriated individuals loitering around the school after hours.	Social Environment; Physical Environment
	Edison Park	The Park lacks bathrooms and drinking fountains. Playground equipment is not adequate to meet the activity needs of varying age groups. Insufficient lighting and lack of security personnel or patrols combined with drug dealers, homeless people and drunken individuals loitering in the park, Edison Park does not feel safe.	Physical Environment
Eastlake Park Neighborhood	Eastlake Churches	Residents are proud to be the home of many churches, including: Bethlehem Baptist; First Institutional Baptist Church; Iglesia de Dios Pentecostal; Immaculate Heart of Mary Catholic Church; Open Door Church, Pentecost Church; Phillips Memorial CME Church; Pilgrim Rest Baptist Church; and Tanner Chapel.	Social Environment; Physical Environment
	Eastlake Historic Landmarks	Residents identified the following landmarks as assets because of their historic value: Dr. Hacket's house, Mr. and Mrs. Calvin Goode's home, and The Black Theatre Troupe.	Social Environment; Physical Environment



Other Community Assets

Kana Park, located south of Van Buren Street and east of 16th Street was mentioned by several workshop participants. They found it to be useful for specific fitness activities but did not further comment on the facilities.

Though not an existing asset, several Garfield residents identified multiple farmers’ market sites, which have since been abandoned. Dispersed throughout the neighborhood, these markets had provided easy and convenient access to fresh foods. Food co-ops that historically were located in the Eastlake neighborhood

were identified as having been assets by the residents of that neighborhood. Residents from both neighborhoods were passionate in their requests to reinstate these two types of fresh food sources.

Several other potential health-related community assets were identified by the Reinvent PHX health team. (See Map 4.) Some assets lay within the district boundaries while others were located outside these boundaries but within walking distance for some residents. The Phoenix Public Market and the Safeway on 7th Street and McDowell Road are two such assets.





Access to Healthy Food

A nutritious diet is a building block of overall health and well-being. Good nutrition and regular exercise can reduce the incidence of obesity, heart disease, stroke, cancer and diabetes, which together comprise the leading causes of death and disability in the U.S. (CDC, 2012).

The topic of nutrition becomes complicated when we look at obesity data. According to the CDC, one out of every four Arizonans is obese. Further, obesity impacts certain populations more than others, including those of Latino or African-American heritage and those with lower-incomes. In a district like Eastlake-Garfield, with 82% of the residents identifying themselves as African-American or Latino, access to healthy food is critical in addressing growing obesity and diabetes rates in these communities.

Eastlake-Garfield Community Survey

In addition to the workshop, St. Luke's Health Initiatives collected data about residents through a community survey. The purpose of the survey was to identify issues related to healthy eating, physical activity and access to public transportation. In all, 87 surveys were returned. Survey data is referenced throughout this report. A full report of survey results can be found in the appendix.



While nutrition is about what we eat, what we eat is influenced by our environment. In many neighborhoods, retailers that carry healthy foods are scarce. Planning decisions influence resident access to healthy foods. The location of all food outlets, from supermarkets to convenience stores, farmers' markets to fast food restaurants, can profoundly affect a community's collective health.

Families who live near a supermarket are more likely to eat the daily recommended amount of fruits and vegetables (Kettel Khan, et al., 2009). Conversely, children who live in poor or predominantly minority neighborhoods are more likely to have greater access to fast food restaurants and convenience stores (Lee, 2012). Minority or low-income families are more likely to live in communities that are "food deserts"—a term used to describe neighborhoods with limited or no access to healthy, affordable food (U.S. Department of Agriculture, Economic Research Service, 2009).

The lack of conveniently accessible healthy and affordable retail food outlets, coupled with low family income and high transportation cost, can exert substantial influence over what a family eats. We can see how these issues impact the Eastlake-Garfield district. Given that the district is a predominantly low-income and predominantly minority community, it is not surprising that fast food restaurants and convenience stores greatly outnumber full service supermarkets (Lee, 2012).

Similar to a food desert, a "limited supermarket access" area measures access to retail food outlets that carry healthy food, taking into account family income and car ownership (The Reinvestment Fund, 2011). While Eastlake-Garfield does not meet the technical definition of a limited supermarket access area, the district does face serious barriers to accessing healthy and affordable food.

Healthy Food Options in Eastlake-Garfield

According to an analysis by The Reinvestment Fund (2011), Eastlake-Garfield is home to one supermarket, which accepts vouchers from the federally-funded Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) program (Arizona Department of Health Services, 2012). This district is also home to two corner stores, which do not accept WIC. Five additional stores—primarily convenience stores—accept WIC. (See Map 5 for locations.)

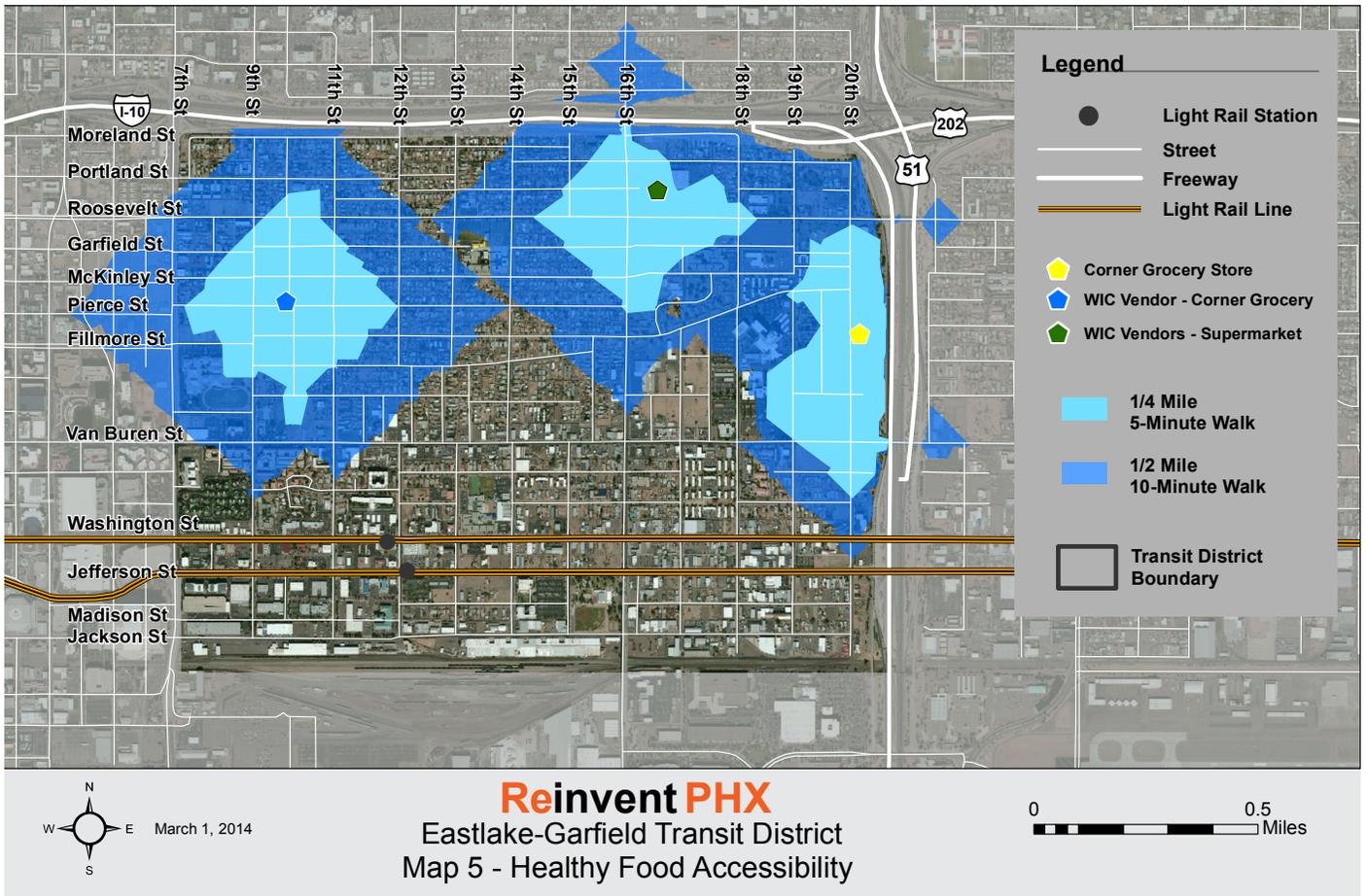
From the standpoint of making healthy food affordable, WIC plays an important role. It provides food assistance to low-income pregnant or breastfeeding women or families with young children to purchase healthy food, such as milk and fresh fruits and vegetables. WIC has been shown to provide better health outcomes for infants, young children and their mothers (Devancey, 2007).

Of the eight food retailers, only three have a variety of food that could adequately support a healthy diet—Ranch Market, Baiz Market and American Way Market. Map 5 (Healthy Food Accessibility) shows the walking radius for only these retailers. Only 35% of households in the district are located within a convenient walk of healthy food.

Supermarkets

Ranch Market, the only supermarket in the district, provides a variety of healthy food options. It carries a wide variety of fresh fruits and vegetables and is also a WIC vendor. However, residents considered it a latent asset during the workshop—an asset that does not fully meet the needs of the community.





Residents reported that the produce is not affordable and that the prepared food is not necessarily healthy. Residents who are not Latino remarked that this supermarket does not adequately meet their needs, given a perception that the majority of the food is targeted to Latino cuisines.

Located at Roosevelt and 16th Streets, Ranch Market is accessible for those who use a bus. Just 11% of the Eastlake-Garfield residents live within a 5-minute walk of the store.

Though a majority of the residents reported shopping at Ranch Market, some also reported going outside of their district boundaries to shop for fresh product at the Walmart on 38th Street and Thomas Road or the Fry's at 30th Street and Thomas Road.

Corner Grocery Stores

Located on 20th Street, Baiz Market does not accept WIC vouchers. This corner store specializes in international foods and carries an assortment of healthy fresh fruits,



vegetables and dairy products. Approximately 10% of area residents live within a 5-minute walk of Baiz Market; nearly all of these residents live in the Luke Krohn Public Housing development.

American Way is the other corner store in Eastlake-Garfield, which was frequently mentioned by residents attending the workshop. While it accepts WIC, it has an extensive liquor selection. The available produce and healthy food choices are not as extensive as Baiz.

Other Food Retailers and WIC Vendors

While the purpose of the WIC program is to provide no-cost healthy food options to vulnerable populations, the five Eastlake-Garfield WIC vendors, other than Ranch Market and American Way, do not carry a wide selection of healthy food. While some vendors meet the minimum standards of the WIC program, the variety of healthy food options beyond those prescribed by WIC is limited and the cost of those items is high. Residents noted that liquor sales at many of these stores draw unsavory

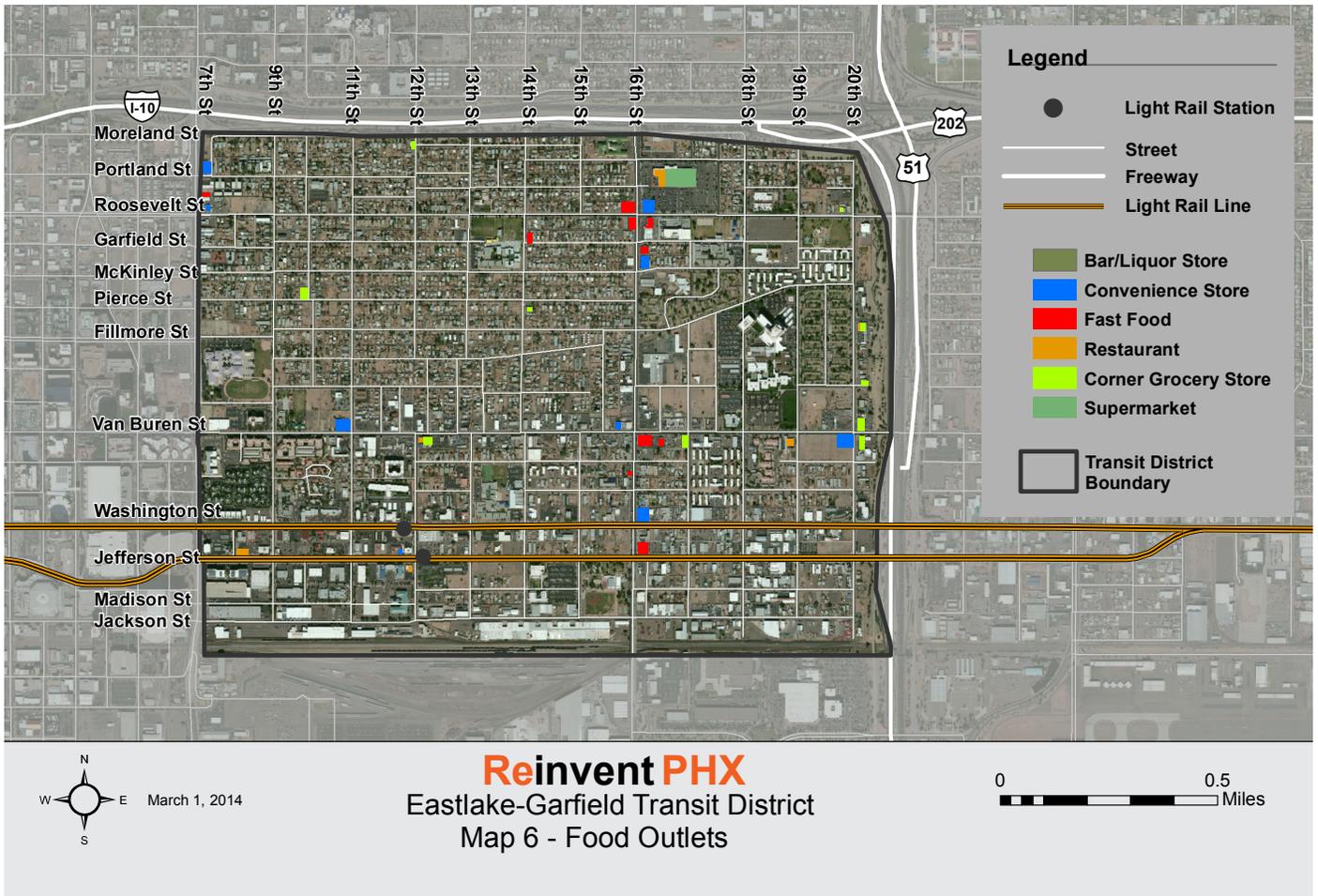
individuals in and around the stores. Residents perceived these stores to be unsafe and were uncomfortable shopping here, particularly after dark. (See Table 2 for an overview of the other food retailers and WIC vendors in Eastlake-Garfield.)

Other Food Options

Only one community-based food option, a community garden, was identified at Faith North Montessori School and its satellite location at the Augustus H. Shaw Jr. School. This garden is maintained by and for the students at the school. No farmers' markets or community supported agriculture drop-off sites were identified in the district (Valley Permaculture Alliance, personal email communication, 2012).ⁱⁱⁱ

Eastlake-Garfield has 25 other retail food outlets. (See Map 6.) The district has nine convenience stores, 16 restaurants, which include both fast food restaurants (e.g., Jack in the Box, McDonalds, Church's Chicken) and slow food or sit-down restaurants.^{iv}

Store name	Location	Type of Store ⁱⁱ / WIC Voucher Acceptance	Description	Percent of Population within a 5-Minute Walk
Alamo Liquor & Food	20 th and Van Buren Streets	Liquor store/ Accepts WIC	Carries some WIC-eligible foods, such as baby food, milk, tortillas and bread Limited selection of additional staples such as bananas, potatoes, onions, avocados and some non-perishables Liquor store	8%
Alvarado Mini Mart	20 th and Van Buren Streets	Convenience store/ Accepts WIC	Carries limited WIC-eligible items such as peanut butter, baby food, milk, juice and cereal No fresh produce Other staples, like beans and rice, are over-priced Has an extensive liquor department	2%
Foodway Market	12 th and Mooreland Streets	Convenience store/ Accepts WIC	Carries limited WIC-eligible items such as milk, baby food and cereal Limited selection of fresh produce such as cilantro, apples, oranges and onions Wide selection of canned foods Has an extensive liquor department	9%



Store name	Location	Type of Store ⁱⁱ / WIC Voucher Acceptance	Description	Percent of Population within a 5-Minute Walk
La Tolteca	12 th and Van Buren Streets	Convenience store and restaurant/ Does not accept WIC	Formerly carried fresh produce, grains, meat and other healthy food options Now primarily restaurant and bakery Very limited food options are sold such as rice, beans, tortillas and canned goods	13%
Quality Food Market	14 th and Pierce Streets	Convenience store/ Accepts WIC	Carries limited WIC-eligible items such as bread, formula, cereal, canned tuna, cheese and milk Staples like milk, eggs, rice and beans are overpriced as compared to other district stores Sells beer	21%

Table 2. Other food retailers and WIC vendors in Eastlake-Garfield.

Community-Identified Barriers to Healthy Food

According to survey respondents, access to affordable, quality food from stores within the neighborhood is the biggest challenge to improving family diets. Nearly 54% reported that healthy food was expensive. Considering that 80% of Eastlake-Garfield families earn less than 200% of the poverty level, this is not surprising. Low-income families often consume a less nutritious diet than an average income family (Bhattacharyaa, Currieb, & Haiderc, 2004). For adults, as income decreases the rate of obesity increases.

Distance to an affordable supermarket is also a concern. Almost 50% of the residents mentioned that the lack of supermarkets in their neighborhood dramatically limits their capacity to access quality fresh food. Research supports that distance to a supermarket affects healthy food consumption (Leadership for Healthy Communities, 2012).

Workshop residents mentioned depending on others with a car for rides to the supermarket. Fifty percent of survey respondents reported doing all or some of their grocery shopping at supermarkets like Food City, Fry's and Walmart. Over 45% reported doing all or some of their grocery shopping at ethnic markets, specifically Ranch Market. Only five percent of respondents reported doing some of their grocery shopping at small venues, such as street vendors or fruit and vegetable stores.

Key Issues about Healthy Food in Eastlake-Garfield

- The district has only one supermarket—Ranch Market—which is also a WIC vendor. Fourteen percent of district residents live within a 5-minute walk of it.
- Four of the five additional WIC vendors do not carry a wide variety of healthy and affordably-priced food. All sell beer or liquor.
- There are no community-based healthy food options, such as community gardens or farmers' markets.
- Almost half of the residents said that the lack of a nearby supermarket that sells fresh, affordable fruits and vegetables dramatically limits their access to quality fresh food.
- Most Eastlake-Garfield residents report using a car to get to the supermarket.



Access to Recreation

Along with a healthy diet, physical activity is critical in order to maintain a healthy lifestyle and to improve the overall health of residents. Public parks, recreation facilities and safe streets provide a place for us to play, exercise, walk and bike. When looking at a population with limited resources and predisposition for chronic disease, access to recreation is key when considering investments aimed at creating healthier communities.

Parks play an important role in promoting health. People who live closer to a park exercise more (Babey, Brown, & Hastert, 2005; Cohen, McKenzie, & al, 2007). This is true in Eastlake-Garfield. According to the community survey, one-third of the residents reported that the lack of parks—or parks with the appropriate amenities—made it difficult to exercise. However, nearly 28% of survey respondents currently use a park to exercise.

Assessing the District: Street and Park Audits

To better understand and document the health assets and challenges of the Eastlake-Garfield district, residents conducted an assessment of selected streets and parks.

Residents performed 19 audits encompassing three parks and six streets. Streets selected for an audit were identified by residents as those frequented used by residents, or had a number of injuries or fatalities according to data from the Arizona Department of Health Services.

There are limitations to data collected through resident auditors. The data is often based on personal perceptions, which differ from person-to-person. However, these audits are helpful in gaining insight into residents' viewpoints and an overall snapshot in time.

The audit instruments themselves were developed using a variety of sources (The WABSA Project, 2003; Health by Design, n.d.; Brownson, Brennan Ramirez, Hoehner, & Cook, 2003) and will be refined and used in the subsequent Reinvent Phoenix districts. Full audit results are in the appendix.

Parks provide a place to be physically active, which can help decrease obesity and related chronic conditions. Residents who do not have access to parks often go without exercise. This is particularly true for low-income families who may be unable to afford other exercise options, such as a gym membership (The Trust for Public Lands, 2006).

Safety is a critical consideration in the usage of parks (Babey, Brown, & Hastert, 2005). Parents who believe their neighborhood is unsafe are less likely to encourage their children to walk to schools and parks or to play outdoors (Miles, 2008). This reserve extends to communities that have a higher degree of “physical disorder” or blight, such as litter, graffiti and lack of residential maintenance. Not surprisingly, parents will keep children indoors rather than risk their personal safety.

This reluctance to visit parks, in the face of a perceived safety threat, extends to adults as well. Individuals who perceive a park to be safe are between six and seven times more likely to be frequent users of that park. Adults are up to 13 times more likely to use a park specifically for exercise (Cohen, et al., 2007). Without adults modeling regular exercise, children are unlikely to develop lifelong healthy habits (Surgeon General, 2012). Going outside to bike or walk to the neighborhood park becomes an unfamiliar routine for children and adults without a safe setting to do so.

The Eastlake-Garfield district has three parks operated by the City Parks and Recreation Department. (See Map 7 for recreation accessibility. See Table 3 & 4 for information on the three Eastlake-Garfield parks operated by the Parks and Recreation Department.)

	Land Used for Parks	Park Acres per Person
Eastlake-Garfield District	1.47%	0.00144
City of Phoenix	1.35%	0.00315

Table 3. Amount of parkland acreage per Eastlake-Garfield resident.

Eastlake-Garfield residents have nearly one-third fewer parkland acres per person than City residents as a whole.

Kana Park

In addition to these three parks, Eastlake-Garfield has one mini-park operated by the Phoenix Housing Department. Located within the Sidney P. Osborn Public Housing property, Kana Park is also used by residents in the surrounding neighborhoods. The park has two basketball courts, a toddler playground, and an additional playground for older children. Benches line the playground and courts.

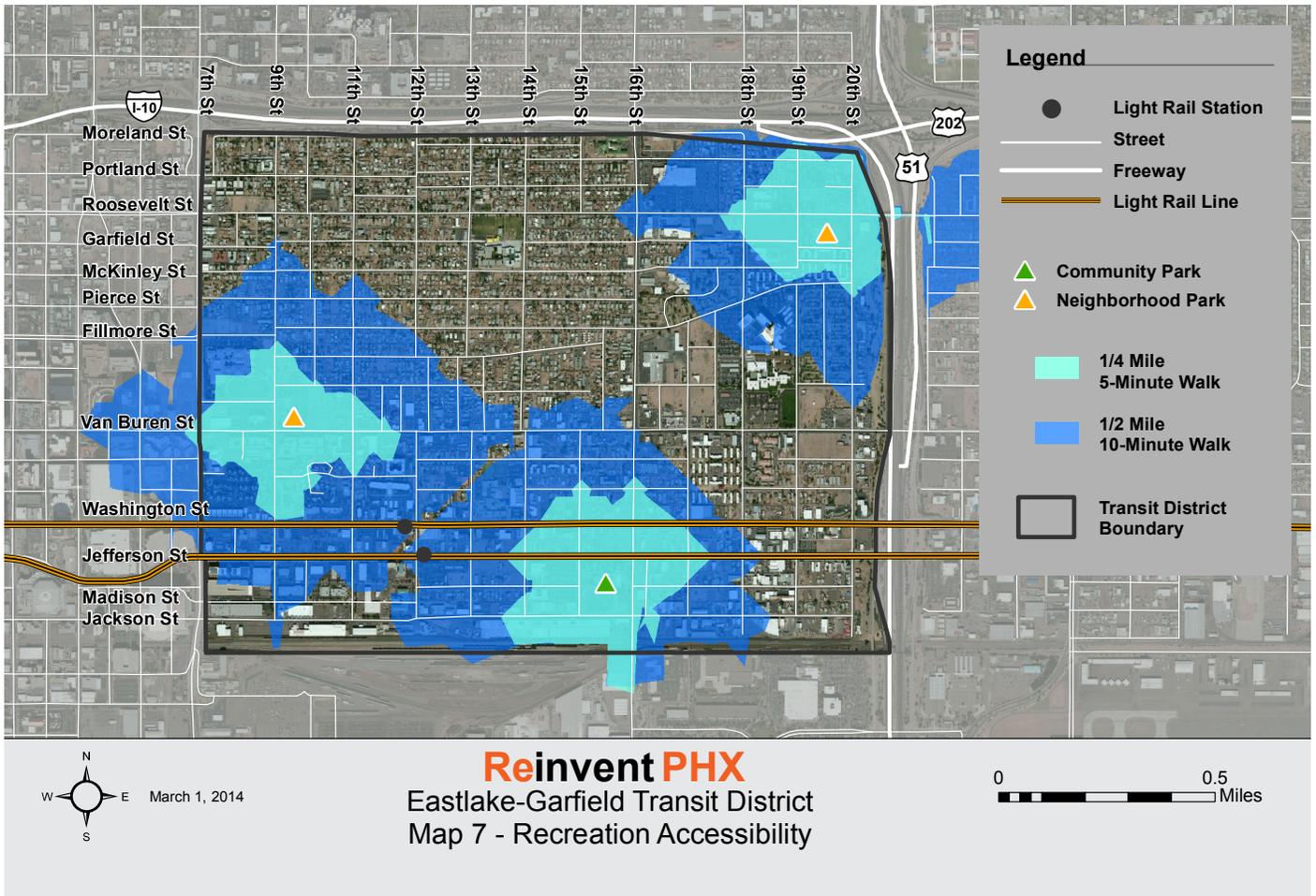
This park was recognized by Eastlake-Garfield residents as an asset; however, it is in very poor condition. Basketball hoops are missing nets; little is left of the volleyball court beyond the poles that once held a net. Swings are in disrepair. Playgrounds are covered in graffiti. Shade structures only cover the playground for older children and not the toddler playground. If repaired, this park could be an important recreation asset for residents.

Eastlake Park

Eastlake Park is one of the historic parks in Phoenix and a popular recreational facility in the Eastlake neighborhood and beyond. Opened in 1914, Eastlake Park and Community Center have been home to many civil rights rallies, visits from civil rights leaders and the starting point of numerous civil rights marches to the Capitol. The park sits on almost 18 acres in a residential area that is adjacent to an industrial area. The park’s amenities include several sports courts and fields, a swimming pool, playgrounds and a large community recreation center that offers a wide variety of programs including fitness classes and social events.

Park	Acres	Percent of Residents within a 5-Minute Walk
Eastlake Park	8.86	3%
Edison Park	4.84	10%
Verde Park	3.93	12%

Table 4. Snapshot of Eastlake-Garfield parks.



Resident opinions of the park differ greatly based on where the resident lives. Most residents from the Eastlake Park and Edison Park neighborhoods see Eastlake Park as a health asset. Some Garfield residents, however, report feeling uncomfortable and unwelcome at this park; others considered it too far to use regularly. Some residents were unaware of the renovations and new programming that have been implemented in recent years.

Park Audit

Two separate park audits were performed for Eastlake Park, each completed by a district resident. Being a popular and heavily frequented park that recently underwent a major renovation, it is not surprising that both auditors reported that the recreation equipment was in good condition. Both auditors observed that the play equipment is suited for young children. While there are other sports and activities that older children could engage in, one resident commented, "There should be equipment for older children. For example: there are just baby swings."



Benches and picnic tables were likewise in good condition, but little shade was observed around the recreation equipment. The two residents estimated less than 25% of the park is shaded.

In spite of the heavy use of this park, the two resident auditors reported seeing only a few drinking fountains and noticed that restrooms were often closed on weekends. One noted, “They’re rarely open on the weekends and that’s when they are most needed.” They both noted that the barbecue grills, ramadas and picnic tables were in good condition.

In spite of the good condition of the park and a large number of people present, the two park auditors suggested a few safety improvements—lighting and additional security. One auditor characterized the lighting as “too weak and does not provide sufficient lighting during the night.” Residents did not see any security surveillance.

Additional suggestions included: “I would like the pool to be open longer in the summer and obviously with a shade over it.”^v Additionally, residents suggested that the park needed to be more inclusive by providing information, such as pamphlets and instructions, in both English and Spanish.

Verde Park

Verde Park is located at 9th and Van Buren Streets. Opened in 1904, Verde sits in a predominantly residential area of the historic Garfield neighborhood.

The amenities at this park include a playground, some sport courts and a community center that offers programming.

Park Audit

Two separate park audits were performed for Verde Park, each completed by a district resident. Residents reported that the recreation equipment is in good condition, including the playground equipment for young children, soccer field, basketball court, volleyball court and skateboarding area. The auditors noted that the play equipment was targeted to younger children and the park lacks shade. Residents estimated less than one-fourth of the park would be shaded when the sun is directly overhead.

The auditors observed that the restrooms are in good condition, but closed on weekends and when the community center is closed. The park has a single drinking fountain. Residents emphasized the need for more drinking fountains both during the audit and in the community workshop. Residents want more seating.

The auditors raised issues with dogs at Verde Park. One auditor summed up the problems, writing “...dog owners don’t keep their dogs on a leash and don’t clean their waste and the dogs run after the children.”

Safety was a concern at this park. Vacant lots and abandoned buildings in the adjacent neighborhood contribute to residents not feeling safe walking to the park. Of particular concern is the frequent congregation of homeless and intoxicated individuals in the space



“We need extra security, more people patrolling for the security of the people who visit Verde Park.” *Eastlake-Garfield resident about Verde Park.*

between the community center and the fence along Van Buren Street. Residents were concerned about the lack of security personnel in case of emergencies. “We need extra security, more people patrolling for the security of the people who visit Verde Park,” wrote one auditor.

Edison Park

Edison Park is located at Roosevelt and 20th Streets near the Luke Krohn Public Housing property. Workshop participants and resident auditors stated that this park does not meet the needs of the community and identified a number of issues that need to be addressed.

Park Audit

As reported by both residents conducting audits at Edison Park, half of the equipment was in poor condition. While the soccer field and basketball courts were relatively well-maintained, the splash pad was in poor condition. “The splash pad in the summer gets too full. The splash pad water gets nasty sometimes and it smells,” recounted one auditor. The park has no

restrooms or drinking fountains and limited benches. Although the park has some trees, residents estimated that less than half of the park is shaded at mid-day.

Numerous reasons contribute to residents feeling unsafe at Edison Park and the access to it. Some of these include: graffiti, vandalism, excessive litter and animal waste; abandoned buildings and liquor stores neighboring the park; and gang members and intoxicated individuals that congregate at the park. These safety issues are compounded by the lack of adequate lighting and lack of surveillance. This contributes to residents being dissuaded from using the park for recreation and exercise.

Auditors acknowledged that “there are a lot of people in the afternoon and night, it’s a good place to talk with others and a good meeting place.” However, they were quick to point out that the park could serve them better “if they could put more shade, more lighting, and water [drinking] fountains and more supervision” and “maybe if they fix the playground for kids.”



Key Issues about Recreation in Eastlake-Garfield

- When compared to all Phoenix residents, there are less than half the number of park acres for every Eastlake-Garfield resident in their district.
- Eastlake-Garfield contains three public parks where residents conducted park audits: Eastlake Park, Edison Park and Verde Park.
- Safety in and around the parks is a key issue that should be addressed.
- Residents generally viewed parks as assets to their community, while identifying necessary changes to some parks in order to better meet the needs of the community.

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Safe Streets and Public Spaces

Development patterns of Phoenix are typical of many newer American cities: low-density and car-dependent. Urban design and transportation systems have focused on accommodating the automobile, not pedestrians or cyclists. Through strategic infrastructure investments, urban design and planning can encourage walking, bicycling and use of public transportation.

While there are many ways to be physically active, few are as inexpensive and easy as walking. For many, a significant barrier to bicycling is the initial cost of the bicycle, as well as lack of safe places to ride. The most obvious health outcome of increased walking and bicycling is better health. The Surgeon General recommends at least 30 minutes of walking five times a week as a means of reducing obesity and other chronic health conditions (2012).

In addition to walking or bicycling for health-related reasons, these activities can be used for transportation. One study found that children who walked to and from school daily got on average 24 minutes more exercise per day than those who walked occasionally or rode in a car (Active Living Research, 2009).

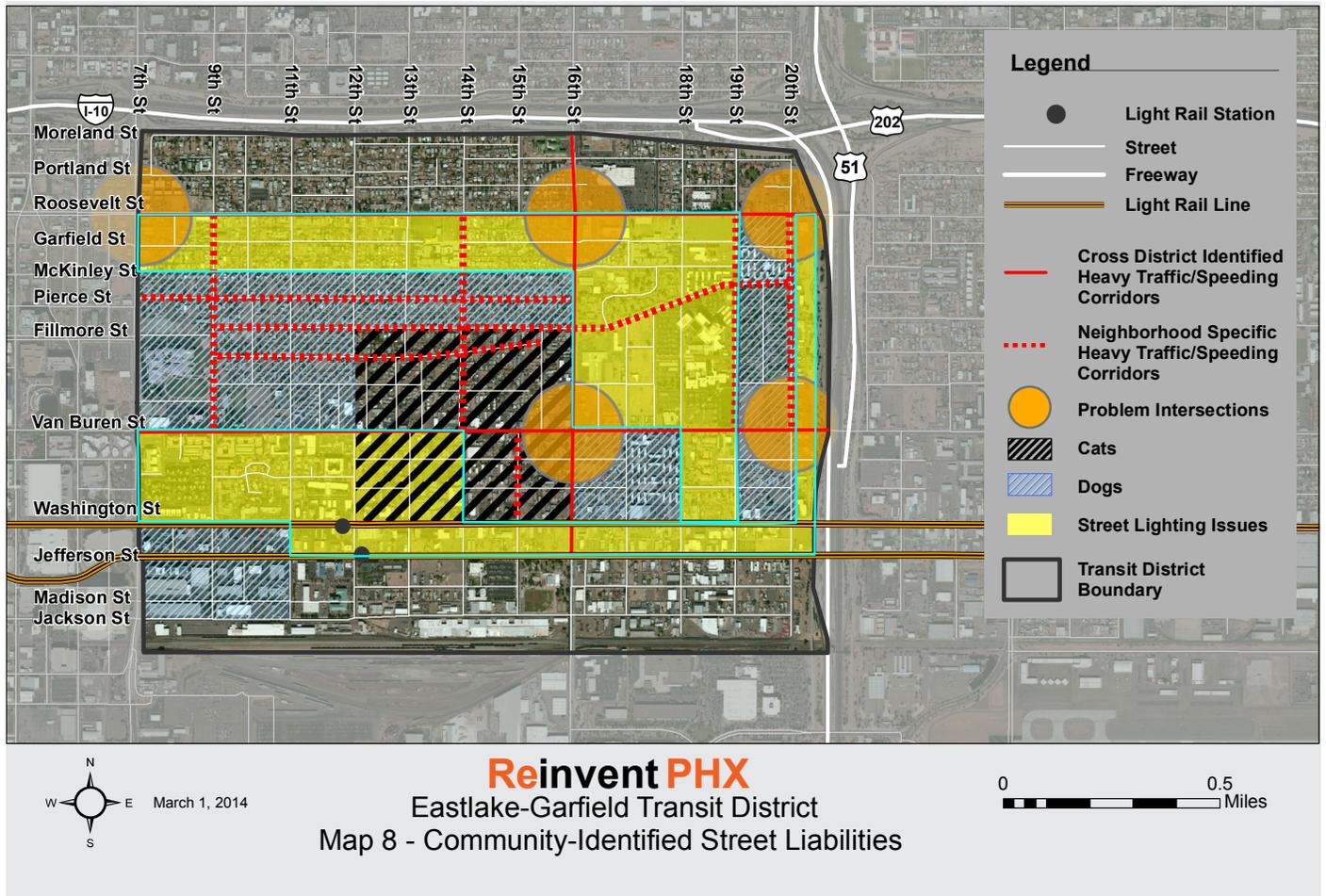
Those who use public transportation tend to walk to and from the stop which, in turn, increases the likelihood of meeting the minimum daily recommendation of physical exercise (PolicyLink and Prevention Institute, n.d.). Those who live in more compact neighborhoods walk, bicycle and use public transportation more frequently than those in more spread-out neighborhoods. Those who live in

compact neighborhoods also have lower rates of obesity (Ewing, Schmid, Killingsworth, A., & Raudenbush, 2003).

Public transportation reduces traffic collisions and the injuries, disabilities and deaths that accompany more serious crashes. It also reduces air, water and noise pollution, and reduces the emotional and financial stress often associated with car ownership (Victoria Transport Policy Institute, 2010).

To better understand the walking and bicycling environment and use of public transportation in Eastlake-Garfield, we look at the street infrastructure through four lenses:

- Issues raised during the community workshop. Some of these issues are tied to particular locations within the district, while others are more general in nature. (See Map 8.)
- An epidemiological analysis of pedestrian and cyclist injuries. (See Map 9.)
- Observations of the walking and bicycling environment.
- An analysis of the temperature at the street level in various locations. During the excessively hot summer months, heat is a barrier to walking, bicycling and public transit use and poses a health hazard.



Community-Identified Street Concerns

Eastlake-Garfield residents walk and bike as a means of transportation within the district to access bus and light rail stops, parks, jobs and for basic errands. While walking and biking are routine activities for residents, aspects of the current built and social environment limit walking and biking altogether.

Workshop participants identified a number of issues that affect feeling safe and comfortable walking, biking or taking public transportation in their neighborhood. (See Map 8 Community Identified Street Hazards.)

Land Use

Certain land uses and commercial activities can be disruptive or socially uncomfortable for those who want to walk, bike or take transit. Liquor stores, adult entertainment businesses, vacant lots and abandoned buildings are types of land uses that affect how residents interact with health assets and how they go about their daily lives.

In particular, workshop participants voiced their displeasure at the proliferation of liquor stores, especially those along key walking, biking and transit corridors. (See orange circles around intersections on Map 8.) Residents perceived the areas around these stores as zones of crime and violence, believing drug deals, prostitution and other criminal activities occur at or near these locations. Residents also reported seeing evidence of gang-related activities such as tagging and vandalism.

Several adult entertainment businesses are located on Van Buren Street, especially between 16th and 20th Streets. This type of land use makes many residents feel uncomfortable and unsafe, especially if they are with young children.

Workshop participants also identified vacant lots and abandoned buildings throughout the district as places used for prostitution, drug use and other criminal activities. The community is eager to transform these vacant lots or ill-maintained buildings in ways that will meet the community's essential needs and simultaneously deter current uses.

Personal Safety

Workshop participants reported other criminal activity, primarily tied to gang activities, burglaries, vandalism and drugs. Crime data from the Phoenix Police Department supports residents' concerns for safety. Analysis of the city of Phoenix crime data from 2010 to 2012 shows that both property and violent crime incidents are peppered throughout the district (City of Phoenix Police Department, 2012). The concentration of crime is high along Van Buren Street and 16th Street, specifically around the intersections of 16th and Van Buren Streets and 16th and Roosevelt Streets.

Feeling unsafe is accompanied by unease with law enforcement. According to those who attended the workshop, families of Latino heritage worry about being asked about their immigration or citizen status, resulting in an environment of distrust for residents; therefore, crimes go unreported. According to some residents, reporting a crime will increase police presence—albeit temporarily—which will increase the likelihood of harassment as well as retaliation by those involved in the criminal activity. The simplest solution is to not engage the police at all, which allows crime to go unreported and unchecked.

Almost all workshop participants expressed concerns with stray dogs and cats. (See blue areas and brown areas, respectively, on Map 8.) Dogs are not just dangerous to personal safety, but also can create traffic hazards on major streets. While it may be easy to dismiss concerns about stray and unleashed dogs, injuries from dog bites resulted in over 316,200 visits to the emergency room nationally, of which more than

two percent were hospitalized (Agency for Healthcare Research and Quality, 2010). Residents report not letting children play outside or choosing not to walk for fear of being bitten by an unleashed or stray dog.

Reckless Drivers

Residents identified three streets as particularly dangerous because of current traffic patterns and driving behaviors—Roosevelt, Van Buren and 16th Streets. (See red line on Map 8.) Of particular concern is Roosevelt Street, which is a school zone with two schools located less than a mile from each other.

Residents from each of the three neighborhoods identified additional dangerous streets within their neighborhoods. (See red dotted lines on Map 8.)

Street Safety Hazards

The lack of street lighting is a serious concern and was repeatedly mentioned during the community workshop. Dark streets and intersections make it dangerous to walk or bicycle at night or take the bus early in the morning. Many residents reported completing all outdoor activities before dark in order to avoid the dark streets.

Site-specific safety hazards include:

1. The intersection of 20th and Roosevelt Streets does not have a traffic light or a four-way stop. Residents report speeding along Roosevelt Street. This presents further risks to those walking to Edison Park, which is located at this intersection.





	Bicycle	Pedestrian	Violence	Total
No Injury	4	0	0	4
Possible Injury	4	2	0	6
Minor Injury	8	6	0	14
Serious Injury	2	2	0	4
Fatal Injury	1	4	0	5
Trauma	15	23	73	111
Total	34	37	73	144

Table 5. Total number of pedestrian and cyclist injuries

More than 75% of injuries in Eastlake-Garfield were treated in Level I Trauma Centers. Source: Arizona Department of Transportation's Safety Data Mart; Arizona State Trauma Registry.

2. The corner of 14th and Fillmore Streets lacks a crosswalk. Residents reported Fillmore Street to be one where drivers speed excessively with little regard for pedestrians. This is a heavily walked street, particularly by residents from this neighborhood who shop at Quality Food Market, located just north of this intersection.
3. Bicyclists and pedestrians cited lack of a traffic light at the intersection of 12th and Moreland Streets. Vehicular traffic is low in this area, but residents reported this to be a dangerous intersection given the volume of bicycle traffic. Additionally, a WIC vendor (Foodway Market) is located at this intersection, which invites pedestrian traffic including young children.

Injury Analysis^{vi}

Analyzing pedestrian and bicyclist injuries provides another way to examine walking and biking conditions in the district. The type of injuries analyzed fall into three broad categories: 1) bicyclist injuries; 2) pedestrian injuries, which may be caused by a collisions with a motor vehicle or falling or striking an object, such as a utility pole; and 3) violence-related injuries. A full report analyzing district injuries and containing the comprehensive epidemiological analysis and findings can be found in the appendix.

From 2007-2011, a cyclist or pedestrian was injured in 144 cases while traveling in the district. (See Map 9 for locations. Table 5 provides an overview of the injuries sustained.)

More than 77% of the injuries were substantial enough to warrant treatment at a Level I Trauma Center, which would include those with potentially life threatening injuries based on vital signs, level of consciousness, type of injury, or other considerations.

Over the five-year period, five people died in Eastlake-Garfield—three pedestrian traffic collisions, one bicyclist and one severe fall. Three of the five individuals who died had high blood alcohol content or illegal drugs in their system. For two of the pedestrian fatalities disregard for crosswalk or traffic signal was a factor. Two of the fatalities were reported on 11th Street, just north of Van Buren.

One common thread was time of day. One-quarter of incidents occurred between the hours of 3 p.m. and 6 p.m., most of which were violence-related. The morning rush hour (6 a.m. - 9 a.m.) was the most dangerous time for traffic related injuries to both pedestrians and bicyclists. (Figure 8 provides detail regarding when injuries and collisions occurred.)

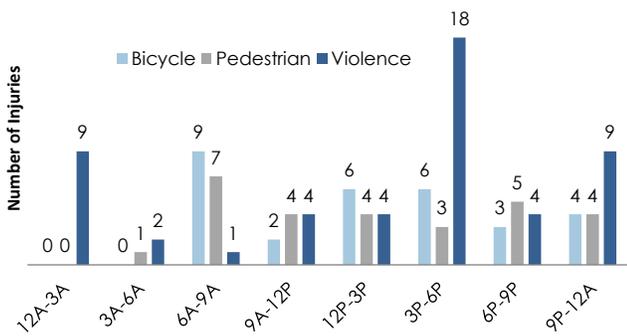
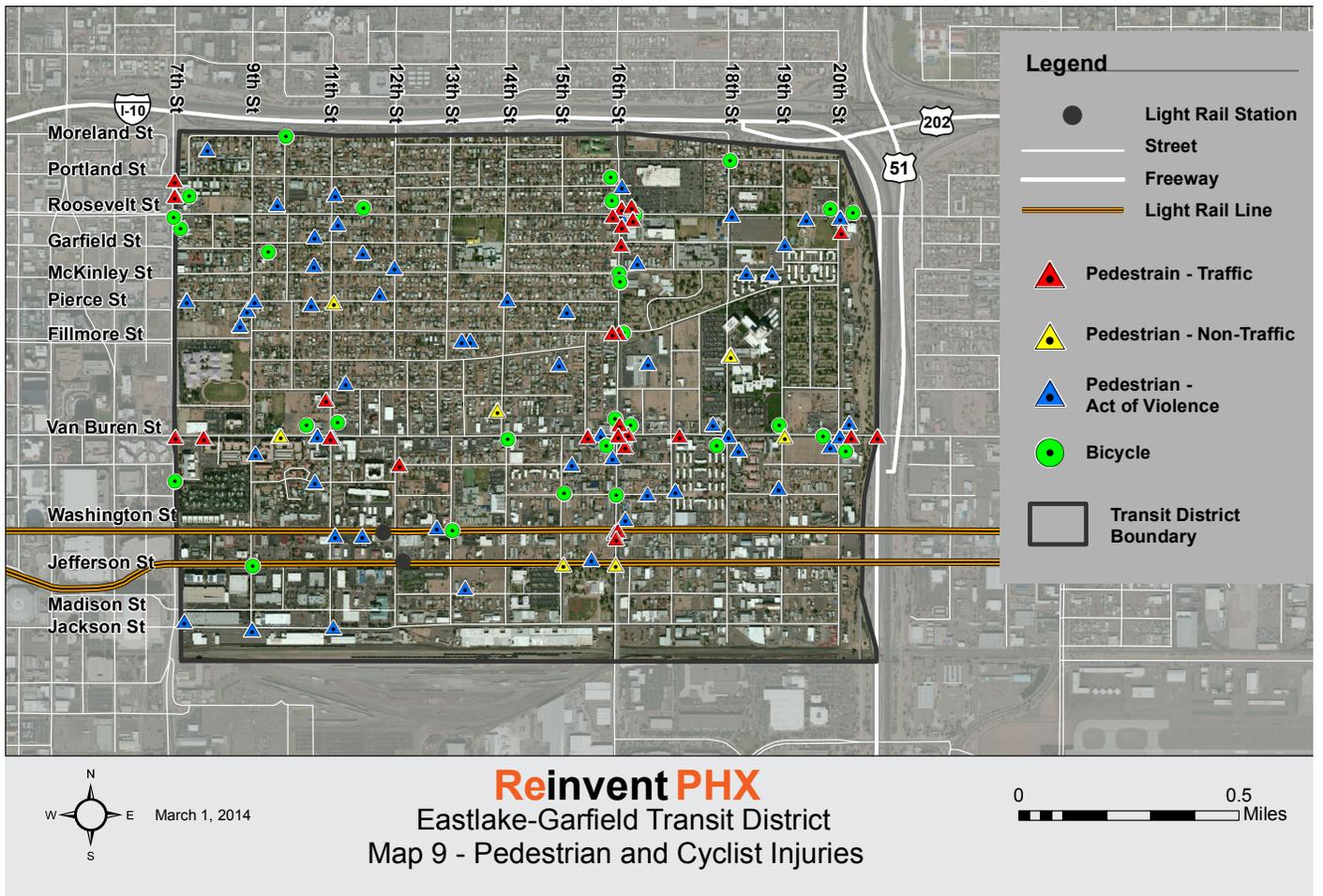


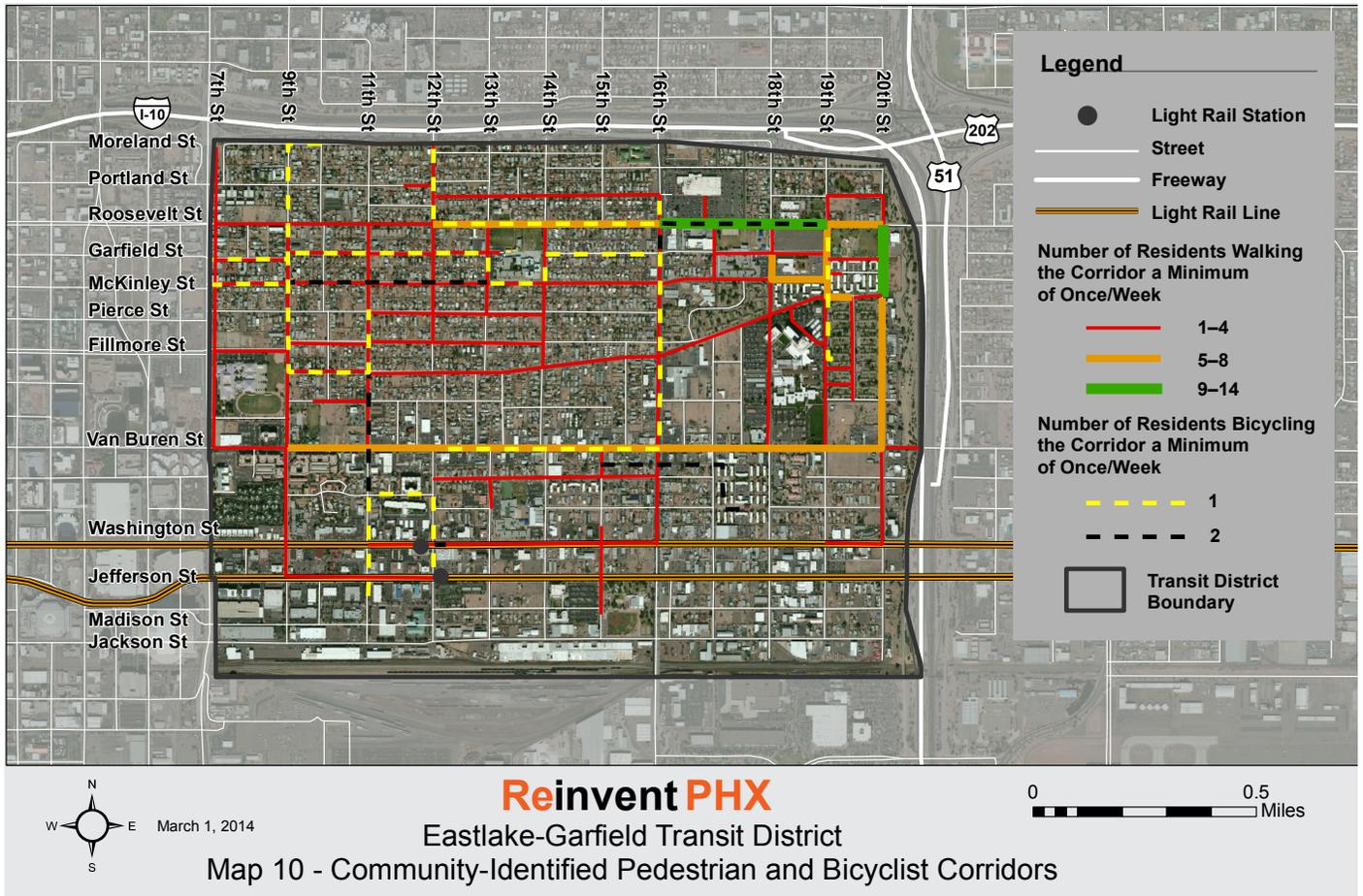
Figure 8. Times of injuries for pedestrians and bicyclists in Eastlake-Garfield

Almost half of all violence related injuries occurred during the afternoon. Source: Arizona Department of Transportation's Safety Data Mart; Arizona State Trauma Registry

	Tested Patients Who Were Over the Blood Alcohol Legal Limit (.08)
Bicyclists Injuries	40%
Pedestrian Injuries	29%
Violence-Related Injuries	71%

Table 6. Causes of injuries for pedestrians and bicyclists in Eastlake Garfield

Alcohol is a frequent contributor to injuries. Source: Arizona Department of Transportation's Safety Data Mart; Arizona State Trauma Registry



Alcohol is a frequent contributor to injury events. Of those tested, over 40% had a blood alcohol level above the legal limit. Almost half of the individuals with violence related injuries had a blood alcohol level of *one and a half times* the legal limit. (See Table 6 for details.)

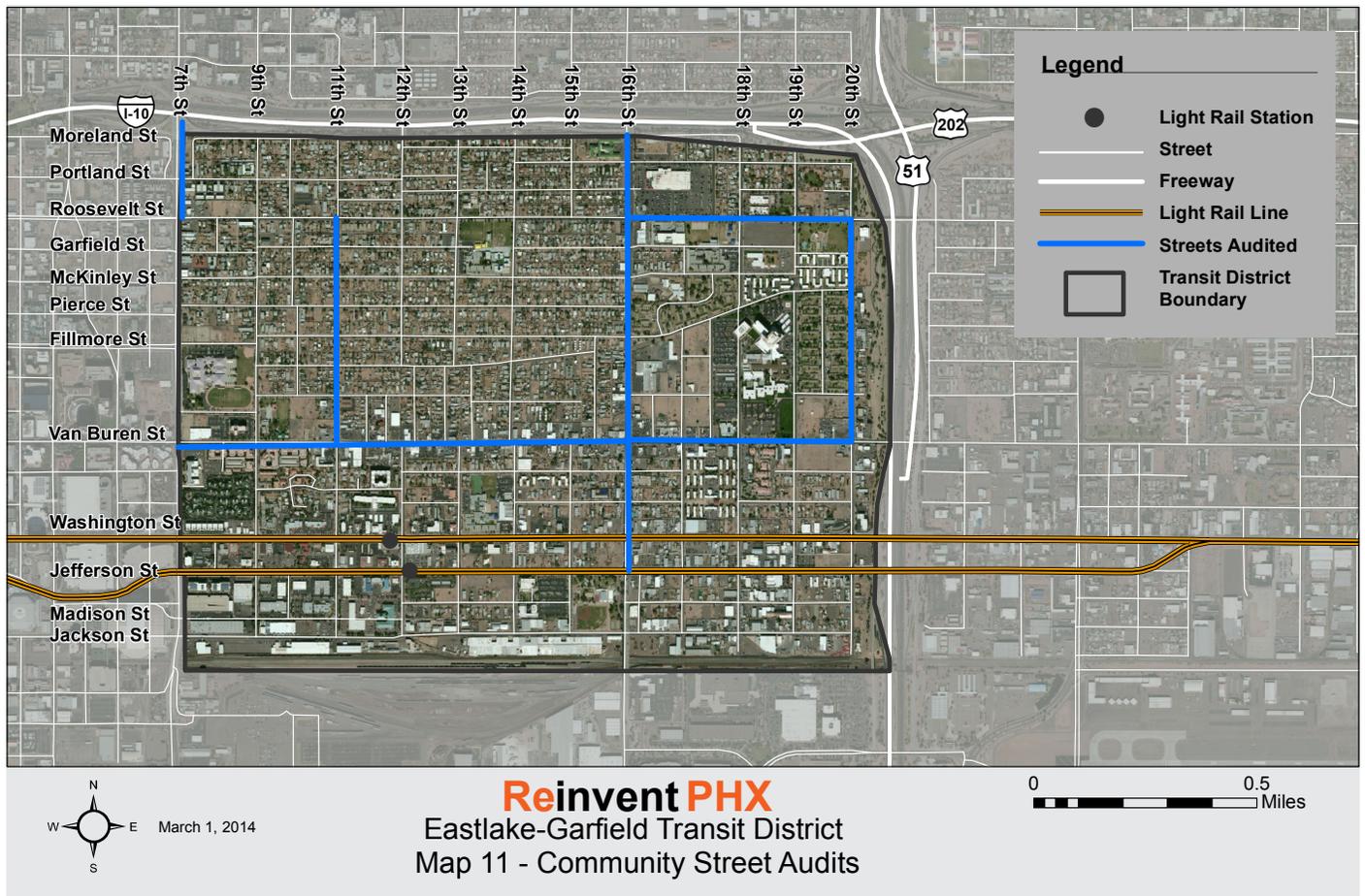
The most common violations were “not using the crosswalk” and “disregarding traffic signals.” More than one-third of the violations resulted from bicyclists and pedestrians violating traffic laws. Only 20% of the collisions did not result in violations issued to a bicyclist or pedestrian. Because of data limitations, we cannot connect vehicular violations to these collisions.

Street Audits and Epidemiological Observations

Street Audits

Workshop participants identified walking routes that are used during their regular routines. (See Map 10.) Streets identified with a green designation represent the most





frequently traveled street segments, with orange and red streets representing lesser use. Forty-three percent of residents at the community workshops reported walking Roosevelt Street, between 16th and 18th Streets at least once a week to run errands. This was identified as the most frequently walked street segment in the district.

Based upon these walking patterns, four street segments were identified for residents to conduct street audits. (See Map 11.) For each segment, two residents volunteered to conduct audits.

Epidemiological Observations

Using injury data, three north-south streets, three east-west streets and one intersection was selected for epidemiological field observation. The purpose of these observations was to identify factors that could contribute to injuries and collisions.

Identifying the “hot spots” or locations with numerous incidents is an important part of identifying specific

locations for street safety improvements. Map 10 (Injuries and Fatalities) illustrates the locations of bicycle, pedestrian and violence-related collisions and injuries. “Hot spots” identified through data analysis and mapping included several areas of high risk. The first is on Van Buren Street, with the intersection of Van Buren and 16th Streets a problem for both bicyclists and pedestrians. Pedestrians are at-risk along Van Buren, for both traffic and violence related injuries, especially east of 15th Street.

A second high-risk area is along 16th Street at the intersections with Roosevelt, Fillmore, Van Buren and Washington Streets. For bicyclists, 16th Street was particularly high risk. Field observations were completed in and around these areas as well as on segments identified by residents in the community workshops.

The following section provides summary information gathered from these audits and the field observations. For more information about the results of these audits and the field observations, see the appendix.



Van Buren Street, from 7th to 20th Streets

Van Buren Street is one of the most important streets in this district, as it carries a significant amount of bicycle and vehicular traffic. Pedestrian traffic is sporadic and low in this segment. Restaurants and small neighborhood stores, auto-repair and tire shops, abandoned buildings and vacant lots line this street segment. Closer to downtown, Van Buren features multifamily housing communities and hotels. Conditions improve as Van Buren Street approaches downtown Phoenix. Key assets along Van Buren Street include St. Luke's Medical Center, Verde Park and the Phoenix Children's Museum.

Both resident auditors did not feel safe at the bus stops on this street "because there are a lot of drunks walking around" and "there are too many homeless people walking around asking for money." One auditor, who uses a scooter because of a disability, expressed the need for "more pedestrian crossings that are more visible" because "signals are not respected." The other resident added, "We also need another stop light between 11th St. and 16th St. or that there be more pedestrian crossings because a lot of children cross between those streets to get to school."

Auditors commented on the lack of safety and felt safety issues were exacerbated by vacant buildings. One auditor commented, "We would like that all the businesses that are vacant are filled because they are dangerous and people can hide there or write graffiti." An auditor suggested that more eyes on the street would counter some of the safety issues: "There can be more cops going around. Also, people can open their doors from their stores. Or there can just be more people walking around."

Van Buren accounted for eight bicycle injuries, 12 pedestrian injuries, and 15 violence-related injuries. Much like 16th Street, most injuries, particularly those involving bicyclists and pedestrians, were concentrated around intersections. Van Buren and 16th Street has the most injuries. Violence related injuries were dispersed along Van Buren Street.

The intersection of 11th and Van Buren Streets is the site of multiple injuries, including a fatal pedestrian injury. The epidemiologist observed well-marked crosswalks and working traffic signals; however, these changes may have been made after the fatality.

	Van Buren Street Audit Findings	Van Buren Street Epidemiological Findings
Condition of bus and light rail stops?	Most in good condition	Some graffiti and tripping hazard at bus stops on 16 th Street
Would you feel safe waiting for a bus or train?	Depends. Do not feel safe when there are drunk individuals around bus stop	Varied with location and nearby businesses
Types of reckless driving behaviors observed:	Not stopping for pedestrians Speeding Running through yellow and red lights	Not stopping for pedestrians Speeding Speeding for yellow lights Right turns on red without stopping
Sidewalks on both sides of street?	Yes	Mostly; some missing sections
Condition of sidewalks:	Most of the sidewalk in good condition Less than 25% of the sidewalk is shaded Buffer between sidewalk and street intermittent Trees, large plants, weeds, bushes, large cracks, bumps or holes obstruct the sidewalk on north side of street Not very wide	Buffer between sidewalk and street intermittent Some nice landscaping Little/no shade
Observations about the neighborhood:	Some poor lighting Some graffiti, vandalism and broken glass Litter Several unleashed or stray dogs Some animal waste Lack of eyes on the street Some evidence of threatening persons or behaviors Heavy traffic Several vacant/undesirable buildings and land uses	Areas of reduced lighting Some graffiti and vandalism Litter Unleashed dogs running loose and causing traffic hazards Heavy traffic Several vacant / undesirable buildings and land uses
Number of people seen:	6 to 8 people walking; one bicyclist on sidewalk	Multiple pedestrians Bicyclists riding on sidewalk
Do you feel safe on this street?	Yes	



Roosevelt Street, from 16th to 20th Streets

Several community assets are located along Roosevelt Street, including Garfield Elementary and Edison Elementary Schools, Ranch Market, the Maricopa County Public Health Clinic and Edison Park.

The resident auditors reported sidewalks being too narrow and a lack of shade in this segment of Roosevelt Street: “The sidewalks should be wider...” and “... needs more trees planted for more shade.” The lack of crosswalks for long stretches on Roosevelt and the absence of traffic lights, especially at the intersection of 20th Street, were other major concerns.

Most of the injuries recorded on Roosevelt Street occurred in and around critical intersections in the district, with the intersection of Roosevelt and 16th Streets being the most dangerous for pedestrians and bicyclists. Five pedestrian-traffic injuries, three bicyclist injuries and two violence-related injuries were reported at this intersection alone. The intersection at 20th and Roosevelt Streets also proved dangerous for both bicyclists and pedestrians.

Roosevelt Street Audit Findings

Condition of bus and light rail stops?	Some in bad condition
Would you feel safe waiting for a bus or train?	Yes, if it is daytime
Types of reckless driving behaviors observed:	Speeding
Sidewalks on both sides of street?	Yes
Condition of sidewalks:	50% of the route is in good condition Less than 25% of the sidewalk can be shaded Not wide enough No buffer between sidewalk and street on south side; some buffer on north side No obstacles obstruct the sidewalk
Observations about the neighborhood:	Poor lighting Noisy Some litter Some vandalism Lack of eyes on the street Some evidence of threatening persons or behaviors Vacant/undesirable buildings and land uses
Number of people seen:	6-7 people walking; one bicyclist on sidewalk; 3 bicyclists on street
Do you feel safe on this street?	Yes, but not at night



16th Street, from Loop 202 to Jefferson Street

In this district, 16th Street is one of the most heavily-traveled corridors, including pedestrian, bicycle and vehicular traffic. Pedestrian and bicycle traffic was observed, including disabled pedestrians along 16th Street. The street accounts for nearly one-third of all injuries and nearly half of the pedestrian injuries.

Several health assets, including Ranch Market and Eastlake Park, are located along 16th Street. These serve not just the district residents, but also those from outside the district. Public housing apartments and a senior center are located on 16th and Villa Streets. Two more senior housing developments are under construction on 16th Street at Jefferson and Portland Streets.

Most of the injuries occurred at major intersections with the nearly one-fourth occurring at 16th and Roosevelt Streets. Another 20% occurred at Van Buren and 16th Streets.

16th Street Epidemiological Findings

Types of reckless driving behaviors observed:	<ul style="list-style-type: none"> Cutting off other drivers Running through yellow lights Running through red lights Speeding
Sidewalks on both sides of street?	Most of segment has sidewalks
Condition of sidewalks:	<ul style="list-style-type: none"> Little/no shade Some buffer between sidewalk and street Some fall/injury hazards Not very wide in places Trees, bushes and weeds obstruct sidewalk
Observations about the neighborhood:	<ul style="list-style-type: none"> Poor lighting Some graffiti, vandalism, broken glass and litter Heavy traffic Vacant/undesirable buildings and land uses
Other Observations:	<ul style="list-style-type: none"> Long distances between crosswalks/traffic lights No bike lanes Poor road conditions for bicyclists, including potholes, cracked or broken pavement and debris including broken glass and gravel Improper bicycling behaviors, including riding against traffic, crossing the road and riding on the sidewalk and ignoring traffic signals Little shade at bus shelters



20th Street, from Roosevelt to Van Buren Streets

Located close to the eastern boundary of the district, this residential street runs alongside the Luke Krohn Public Housing property. This street includes several health assets: Phillip Deacon Catholic Center, Baiz Market and Edison Park.

Traffic on 20th Street and the traffic regulation at the intersection of 20th Street and Roosevelt were critical issues identified in the audit. One resident suggested, “The traffic light needs to be back [as it was removed] to control the flow of traffic. There needs to be speed bumps on 20th St. for the kids’ sake.”

Auditors expressed safety concerns related to the presence of several homeless individuals on this street. Better lighting would increase personal and traffic safety.

The primary injury “hot spots” on 20th Street were at Roosevelt and Van Buren Streets. Between 2008 and 2010 two bicycle injuries and one pedestrian and one violence related injury occurred at each of these intersections.

“There needs to be a light at the corner of 20th St. for pedestrians, they have a hard time crossing with the one stop sign. *Eastlake-Garfield resident.*”

20th Street Audit Findings

Types of reckless driving behaviors observed:	<ul style="list-style-type: none"> Not stopping for pedestrians Speeding Running through yellow lights Cutting off other drivers
Sidewalks on both sides of street?	Most of segment has sidewalks
Condition of sidewalks:	<ul style="list-style-type: none"> 50% in good condition Less than 25% of the sidewalk can be shaded Not very wide No buffer between sidewalk and street No obstacles on sidewalk
Observations about the neighborhood:	<ul style="list-style-type: none"> Very poor lighting Some broken glass Litter Some animal waste Unleashed or stray dogs Lack of eyes on the street Some evidence of threatening persons or behaviors Homeless individuals Some heavy traffic Vacant/undesirable buildings and land uses
Number of people seen:	One bicyclist in bike lane
Do you feel safe on this street?	Yes



11th Street, from Roosevelt to Van Buren Streets

A local bus route, this segment of 11th Street is a busy and important corridor in the Garfield neighborhood. Personal safety is a concern for the resident auditors. Though residents reported feeling safe at the bus stop, they were quick to point out that it was "...because it is daytime." Poor lighting contributed to the lack of safety at night. Stray dogs were noted as a threat to personal safety. As one resident recounts in her audit, "There was a large dog loose and we had to walk on the street to avoid the dog."

Most injuries along 11th Street involved violent incidents. The intersection of 11th and Van Buren Streets accounted for four of these injuries—two bicyclists, one pedestrian and one violence-related injury. Though 11th Street is not a major arterial street, two fatal injuries have occurred on this street segment between 2008 and 2010.

More light should be added and there are a lot of stray dogs. *Eastlake-Garfield resident about 11th Street.*

11th Street Audit Findings

Condition of bus and light rail stops?	Most in good condition
Would you feel safe waiting for a bus or train?	Yes, during the day
Types of reckless driving behaviors observed:	Speeding
Sidewalks on both sides of street?	Yes
Condition of sidewalks:	<p>Good condition</p> <p>Less than 25% of the sidewalk can be shaded</p> <p>Buffer between sidewalk and street</p> <p>No obstacles between sidewalk and street</p> <p>Not very wide</p>
Observations about the neighborhood:	<p>Some poor lighting</p> <p>Some graffiti, vandalism and broken glass</p> <p>Litter and trash</p> <p>Several unleashed or stray dogs</p> <p>Some animal waste</p> <p>Lack of eyes on the street</p> <p>Some evidence of threatening persons or behaviors</p> <p>Some heavy traffic</p> <p>Vacant/undesirable buildings and land uses</p>
Number of people seen:	2 people walking
Do you feel safe on this street?	One resident- yes; Another - no



7th Street from I-10 Interchange to Roosevelt Street

In addition to heavy vehicular traffic, this area sees high pedestrian and bicycle traffic due to its proximity to downtown Phoenix, several densely populated residential areas, K-12 schools and the Arizona State University's and University of Arizona's downtown Phoenix campuses.

Four pedestrian, two bicycle and one violence related injuries occurred in this short segment of 7th Street between 2008 and 2010. Most of the injuries occurred near the intersections of 7th and Roosevelt Streets and 7th and Portland Streets. This area has few crosswalks and heavy traffic.

7th Street Epidemiological Findings

Types of reckless driving behaviors observed:	Speeding Cutting off other drivers
Sidewalks on both sides of street?	Yes
Condition of sidewalks:	Little/no shade No buffer between sidewalk and street Trees, obstruct sidewalk
Observations about the neighborhood:	Heavy traffic
Other Observations:	No bike lanes No crosswalks where pedestrians naturally cross Currently multiple construction projects noted.



Public Transportation

Residents report using the bus system more than the light rail. Given that less than 15% of Eastlake-Garfield residents live within a 5-minute walk of a light rail station, this is not surprising.

Sixty-three percent of survey respondents reported using a car as their only form of transportation, whether it is their own or depending on a neighbor or friend for a ride. Only 12% reported using bicycles as their main mode of transportation; for 35% walking was the primary form of transportation.

One-third of survey respondents reported using buses, while 17% reported using the light rail system. Among those who use public transportation, 21% use it to go grocery shopping.

Workshop participants want to see a new light rail stop at 16th and Washington Streets.

Survey respondents shared concerns about the public transportation system in their district including:

- High cost;
- Inconvenient schedules;
- Inconvenient location of transportation stops;
- Lack of security and shade in and around stops;
- Lack of accessibility for those with disabilities or parents with strollers; and
- Lack of cleanliness.

Dealing with the Heat

Every year the urban areas in Phoenix experience extreme heat conditions. Ambient temperature can be as high as 120 °F with a relative humidity of less than 20%. The excess of hardscape exacerbates the urban heat island effect, where the nighttime temperature can stay above 90 °F (Balling & Brazel, 1987; Klinenberg, 2002). High ambient temperatures are not conducive to overall health, particularly for vulnerable populations such as children and the elderly. The CDC (2005) categorizes extreme heat as a public health issue.

Extreme heat decreases the quality of life and reduces productivity and efficiency (Fanger, 1970). More than one-third of Eastlake-Garfield residents reported summer heat as a limiting factor in walking or exercising outdoors. Unfortunately, heat-related reduction in quality of life plagues low-income families in particular, since they are unable to afford to live in neighborhoods with more trees and less pavement.

As a result of a particularly deadly heat wave in 2004, the city of Phoenix, the Maricopa Association of Governments and the faith-based and nonprofit communities developed the Heat Relief Network to reduce heat-related deaths (Successful Communities Online Toolkit, n.d.). This effort educates the public regarding the dangers of heat-related illnesses and provides hydration, refuge and wellness checks for susceptible populations—homeless, elderly and people with disabilities.

Tree canopies can create a more comfortable outdoor environment. Neighborhoods with greater shade can experience lower outdoor ambient temperatures of more than 10 degrees due to the higher levels of evapotranspiration that results from the high concentration of vegetation.

To better understand thermal comfort in Eastlake-Garfield, a temperature analysis was performed on February 15, 2013, in five locations. Three sites have little or no shade: 20th Street between Roosevelt and Van Buren Streets, and Roosevelt Street between 16th and 18th Streets. The remaining two sites were at Edison Park, one under a tree and the other in an unshaded area of a grassy sports field. (See Figure 9 for locations of the temperature stations and the appendix for the full analysis.)

At the hottest times of the day, the shade at Edison Park reduced temperatures by as much as 28 degrees when compared to unshaded sidewalks along busy streets. Even the unshaded grass at Edison Park was enough to reduce temperatures by as much as 10 degrees, creating a cooler environment for pedestrians and cyclists. (See Figure 10 for details of temperatures over the course of one day.)

Temperatures in Eastlake-Garfield are relatively predictable. The lack of vegetation, high asphalt and concrete density, and lack of tree canopy and water contribute to high temperatures. The temperature difference between 20th Street (103 °F) and the shaded area in Edison Park (75 °F) at 4 p.m. illustrates the impact of shade in creating a more comfortable environment for residents. Even minimal vegetation, such as grass, though unshaded, can lower temperatures by 10 degrees. Temperatures on the same street, can vary by as much as 25 degrees depending on vegetation, traffic and heat-absorbing properties of surface materials. Clearly, vegetation can play an important role in making the environment cooler for residents.

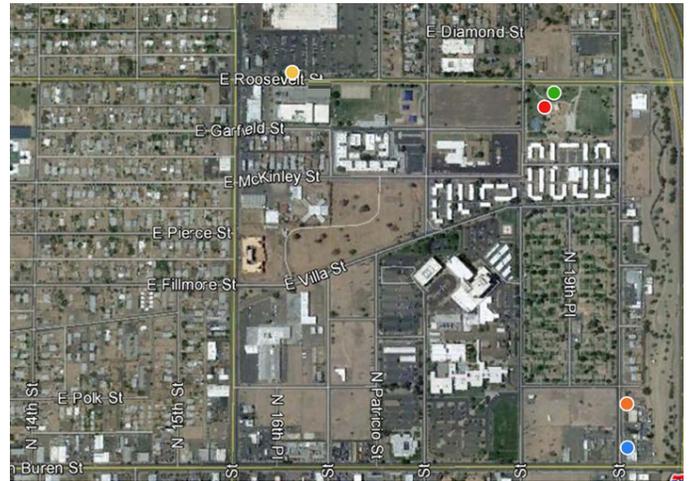


Figure 9. Locations of temperature analysis stations.

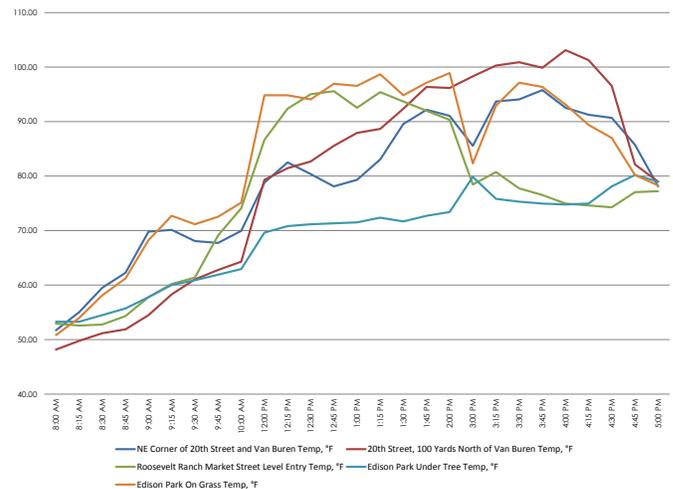


Figure 10. Temperatures variations over a day on several streets in the Eastlake-Garfield district.

Even a small amount of shade provides noticeable relief from hot temperatures on 20th and Roosevelt Streets.



Health Strategy Report

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Healthy Food Strategies

Eastlake-Garfield residents are underserved with regards to accessing healthy food. Just 14% of Eastlake-Garfield residents live within a 5-minute walk of the single supermarket in the district—Ranch Market, located at 16th and Roosevelt Streets. While there are two corner stores that carry a variety of fresh foods, most of the smaller food retailers are predominantly liquor or convenience stores, with few healthy food options. Four of the six food retailers that accept WIC do not carry a wide variety of healthy and affordably-priced food.

Goal: All Eastlake-Garfield residents have access to healthy food.

Measure/Target Indicator	Baseline	Target
Percent of residents who live within a 5-minute walk of a healthy food outlet	35%	90%
Percent of residents within a 15-minute transit ride of a full-service supermarket	TBD	TBD

**To be determined.*

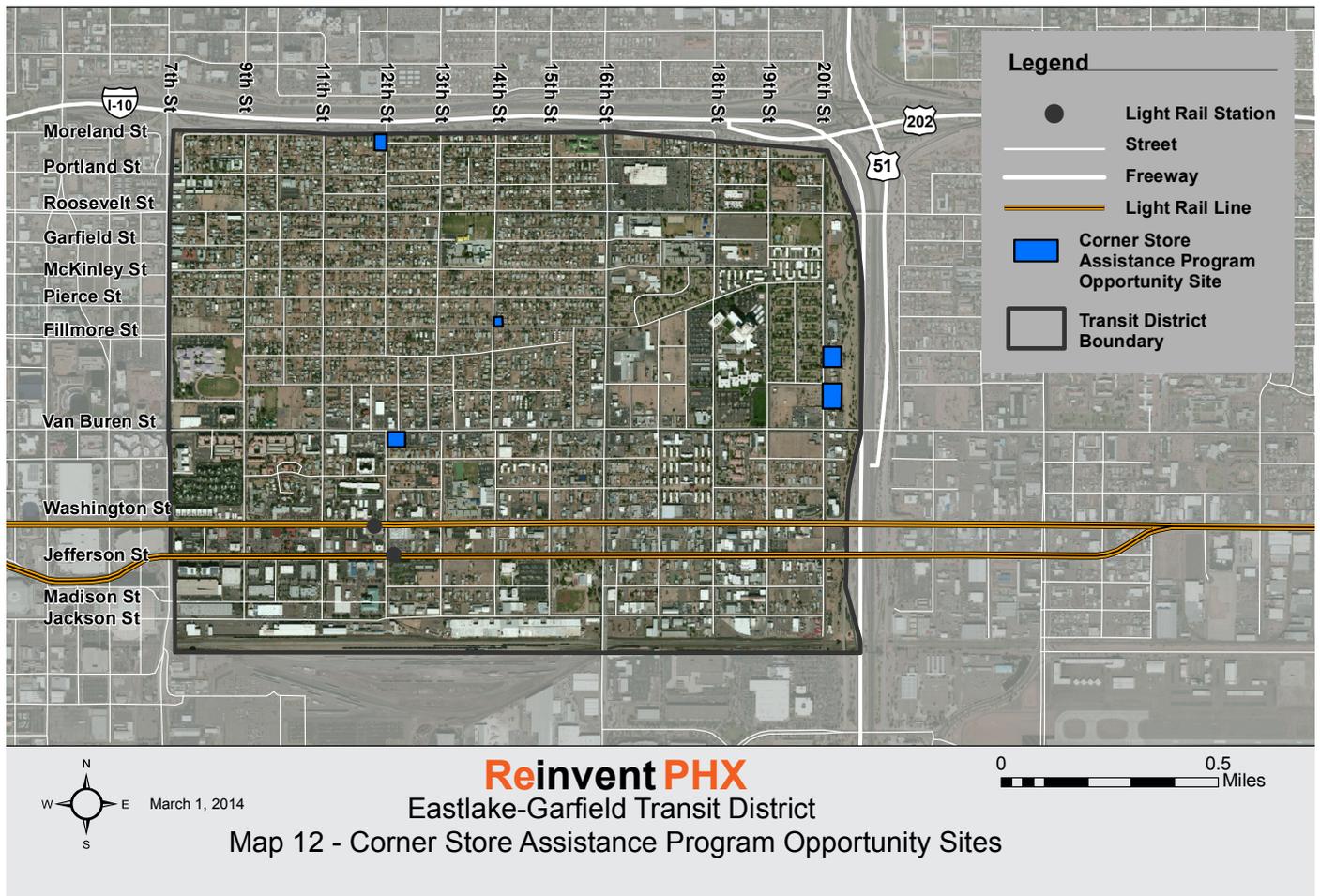
Strategy One: Strengthen the existing retail food environment

Eastlake-Garfield has a solid network of existing retail outlets that can be modified to meet district resident needs. By expanding healthy retail options or WIC coverage of existing retailers, those who live within a 5-minute walk of a healthy food retailer can increase from 35% to 74%.

Corner Stores

Eastlake-Garfield has five convenience or liquor stores that have a limited food selection. Residents report using these stores for small purchases, but an expanded variety of healthy fresh food would improve accessibility. In particular, residents cited La Tolteca as a retailer that should be expanded. Located at Van Buren and 12th Streets, it is a restaurant and bakery that historically carried a limited selection of produce. Recently, it discontinued this offering.

Small modifications, such as increasing the selection of nutritious food, to these existing stores like La Tolteca can positively impact the overall health of a



neighborhood by making healthy food products more available. Some of these retailers may be unaware of the value of stocking healthy food options. Others may need to purchase additional equipment, expand their store footprint or obtain additional training on handling fresh produce.

Other communities have launched financing and marketing programs to promote the conversion of convenience and liquor stores into corner stores that provide a wider array of healthy offerings. Low-interest loans, technical assistance on handling produce, community organizing to identify preferred produce offerings and additional signage are examples of incentives. Baldwin Park, CA, Louisville, KY and Seattle are among the cities that have launched successful programs to increase healthy offerings at corner stores.^{vii} The CDC supports this strategy in reducing obesity (Kettel Khan, et al., 2009).

Map 12 depicts the current Eastlake-Garfield stores that should be targeted for this type of program.

Tools to Implement Strategy One

A brief description of each tool appears at the end of the *Healthy Food Strategies* section.

- Community Reinvestment Act
- Healthy Food Financing Initiative
- New Markets Tax Credit Program
- Special Supplemental Nutrition Program for Women, Infants and Children (WIC)



Reinvent PHX
 Eastlake-Garfield Transit District
 Map 13 - Produce Distribution Corridor Opportunity Sites

WIC Vendors

WIC is an impactful food assistance program that should be used to strengthen the existing retail food environment in Eastlake-Garfield. WIC provides assistance to low-income pregnant or breastfeeding women or families with young children to purchase healthy food, such as milk, fresh fruits and vegetables. Stores that currently accept WIC should be supported to expand healthy food options through programs like the one described previously, and existing healthy food retailers should be encouraged to join this program and other federal food assistance programs.

Currently, Baiz Market, an existing corner store with an excellent selection of healthy food, does not accept WIC. To increase healthy options for all residents, Baiz should be encouraged to participate in the WIC program. Across from Luke Krohn Public Housing, its location (523 N. 20th Street) makes it a particularly strategic site for a WIC vendor.

Fresh Produce Distribution Corridor

Several produce distribution warehouses are situated along Jackson Street, some of which are open to the public for individual sales. (See Map 13 for location.) This area once housed produce co-ops that served the Eastlake Park neighborhood. There is strong community support to re-establish this healthy food resource. To increase access to healthy food, small store fronts should be added to the existing warehouses or the distributors should be encouraged to simply open the doors to the public.

Jackson Street is zoned A-1 (Light Industrial) and A-2 (Industrial), which have the same requirements for outdoor display and sale of merchandise. In order to distribute directly to the public, distribution warehouses would need a use permit from the City.

Recommended Policies

1. Develop a Corner Store Assistance Program to encourage existing convenience stores to seek funding for offering healthier options. As a condition of this program, require participating corner stores to accept WIC and other food assistance programs like the federal Supplemental Nutrition Assistance Program (SNAP).
2. Partner with entities that receive New Markets Tax Credits to fund equipment upgrades for existing food retailers. Encourage these entities to target existing Eastlake-Garfield retailers. Require participating corner stores to accept WIC and other food assistance programs like SNAP.
3. Partner with the Arizona Department of Health Services to improve the selection of healthy food offered at the existing WIC vendors in Eastlake-Garfield. Expand WIC coverage to include Baiz Market.
4. Encourage the produce distributors along Jackson Street to sell directly to the public out of the warehouses. Provide technical assistance in applying for a use permit.

Strategy Two: Create new healthy food outlets

New healthy food options can assume different forms, from community-based gardening initiatives to the development of a supermarket. Regardless of how this is accomplished, the goal is the same: to increase the quantity of affordable healthy food available within the district.

Community Gardens

In recent years, Phoenix has taken successful steps to support community gardens. In 2012, the City adopted a community garden policy that has clear requirements, including property maintenance.^{viii} Phoenix also has excellent examples of community gardens in low-income neighborhoods that face many of the same issues as Eastlake-Garfield. Maryvale on the Move, a multi-year project funded by the Robert Wood Johnson Foundation, has been successful in establishing gardens in Maryvale. Tigermountain Foundation in South Phoenix has started community gardens along with job training for landscapers. Produce from Tigermountain's gardens is distributed among residents and food banks. Along with residents of the Grant Park neighborhood, Phoenix

Revitalization Corporation developed a community garden that has been successful in providing culturally-appropriate produce for low-income residents.

If given space and an opportunity to participate in a community garden, 88% of surveyed residents would be interested. Residents recommended several sites for community gardens, including vacant property next to Edison Elementary and the grounds of St. Luke's Medical Center. (Map 14 shows all recommended sites for community gardens.) Having a dedicated place for gardening would be important for many residents; 50% of survey respondents said they did not have a space for a garden at their home.

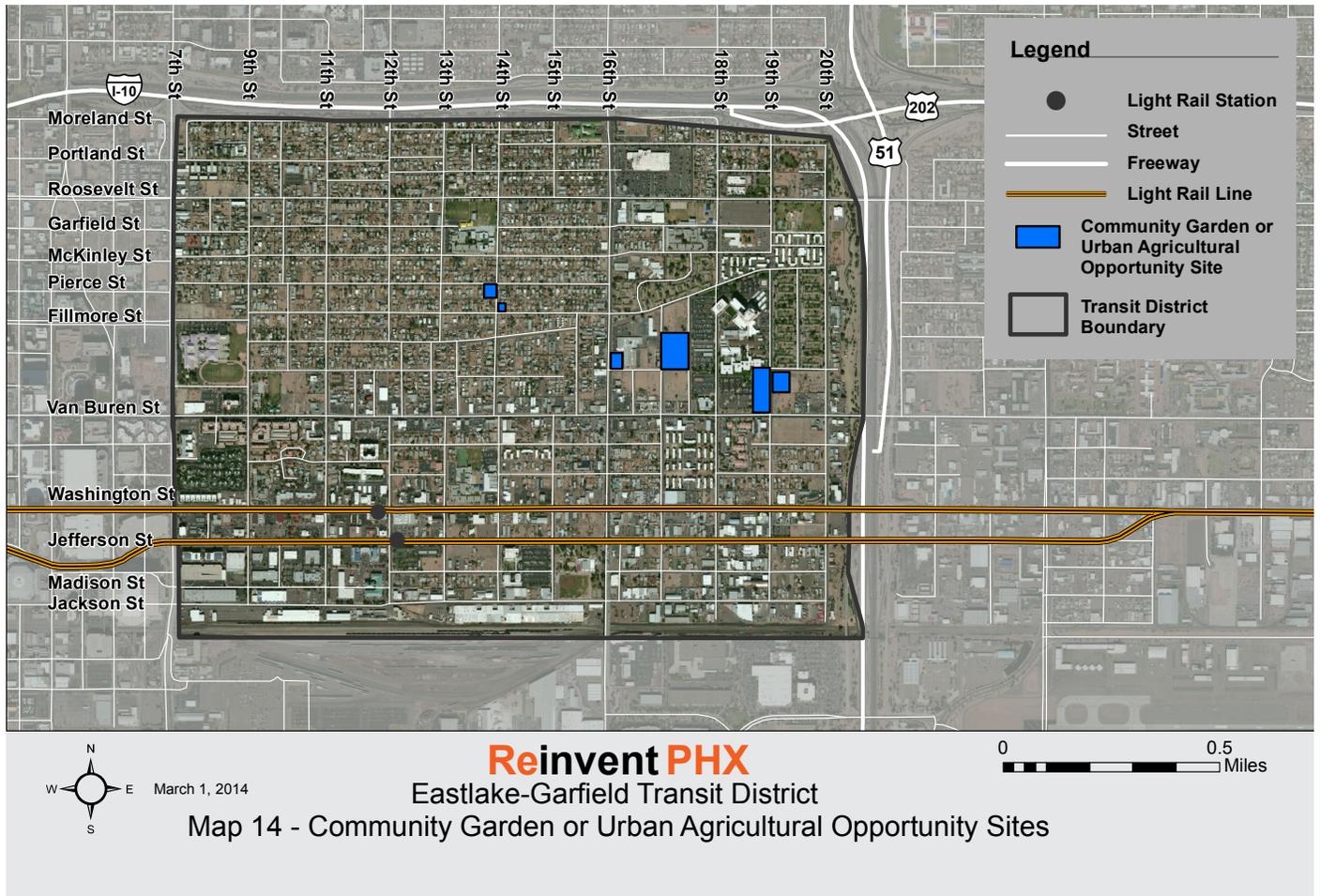
In addition to access to land, water can be cost prohibitive for some residents or for larger scale urban agriculture. The water meter hookup fee, monthly sewer fee and the ongoing cost of water from the city of Phoenix can limit opportunities to establish community gardens.

In addition to a safe place to garden, the other Phoenix examples of successful community gardening have two other commonalities that should be taken into account in Eastlake-Garfield. First, there is a strong lead organization that is trusted by area residents. This organization typically has a strong focus on overall health and wellness. Second, while a backbone organization manages the garden, residents provide the vision. Successful community gardens are resident-driven.

Tools to Implement Strategy Two

A brief description of each tool appears at the end of the *Healthy Food Strategies* section.

- Community Development Block Grant
- Community Food Projects Competitive Grants Program
- Community Reinvestment Act
- Farmers Market Promotion Program
- Healthy Food Financing Initiative
- New Markets Tax Credit Program



Temporary Food Retailers

Temporary food retailers can take a number of different forms, such as mobile grocery stores, fresh produce stands, community supported agriculture drop-off sites and farmers’ markets. By providing a space for healthy food retailers to sell within the community on a regular basis, residents could reduce or completely replace trips by car to the supermarket and decrease dependency on unhealthy food sold at convenience stores or the fast food restaurants that are common in their community. Map 15 depicts recommended sites for temporary food retailers.

Several recommended sites provide unique access to residents within an area of low access to healthy food retailers, including:

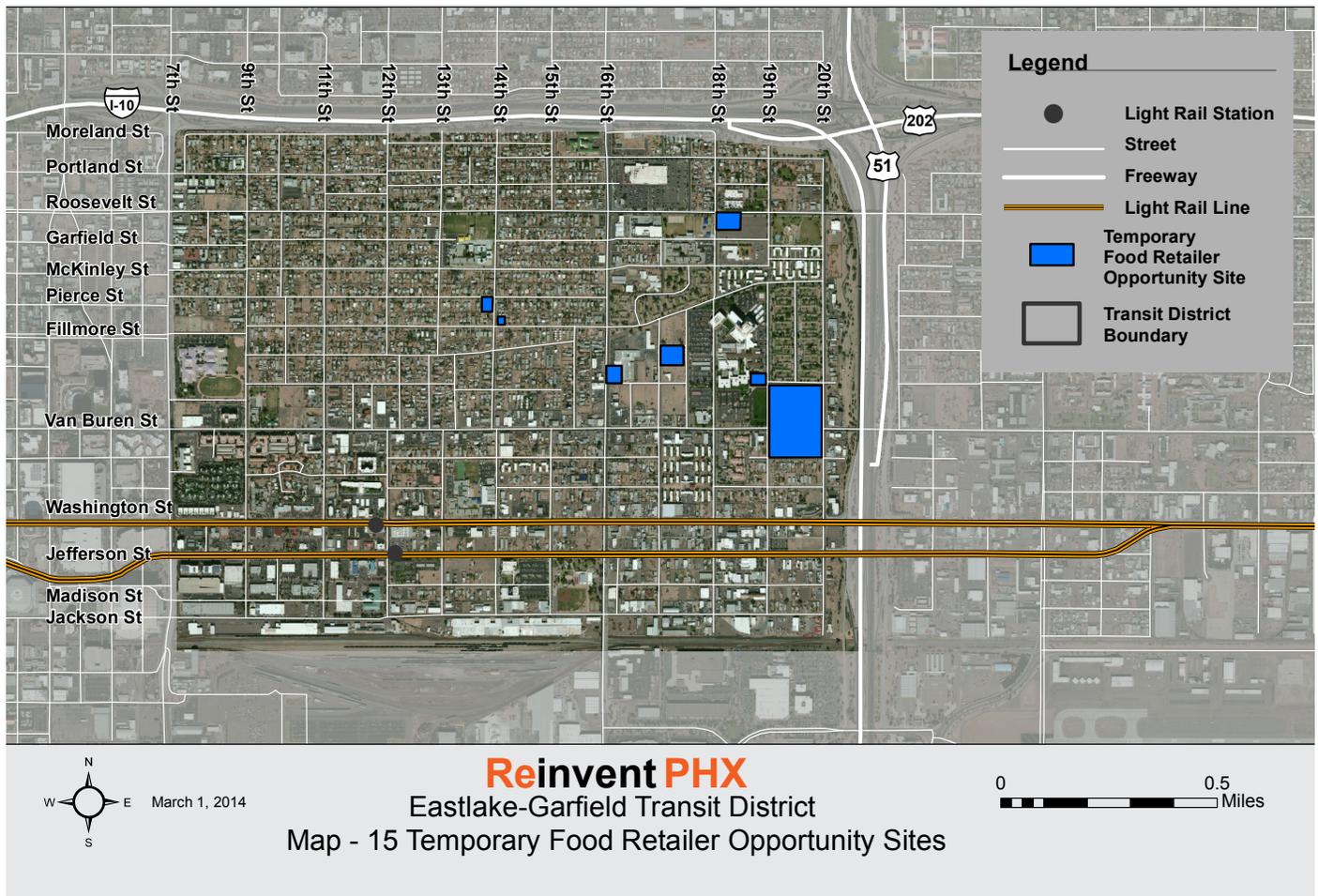
- 16th Street Overpass. This site is located on a City-owned public right-of-way and uses the vacant space underneath the existing overpass. The overpass provides the physical overhead shade structure for a permanent farmers’ market. The site is adjacent to Eastlake Park and within walking and biking access

to several residential neighborhoods. The farmers’ market use will help activate a space that is now considered unsafe by residents.

- St. Luke’s Hospital. This site could be used for any type of temporary food retailer. It is close to Luke Krohn Public Housing and convenient for the many employees of the hospital. Moreover, residents consider St. Luke’s an asset to their community and feel safe on the property.

Mobile Retailers and Grocery Stores

Chicago, Chattanooga, TN, and Madison, WI have successfully supported mobile grocery stores—renovated school or city buses with shelves and display cases instead of seats.^{ix} In Washington, DC, Arcadia’s Mobile Market sells locally-grown produce in a converted school bus.^x Seattle’s Stockbox is a temporary grocery store located in a shipping container.^{xi} These efforts have a goal of improving access to healthy food in communities with few options. They are often spearheaded by nonprofit or community-based organizations and rely on grants for ongoing financial support. In keeping with the goal of increasing access to healthy food, many of



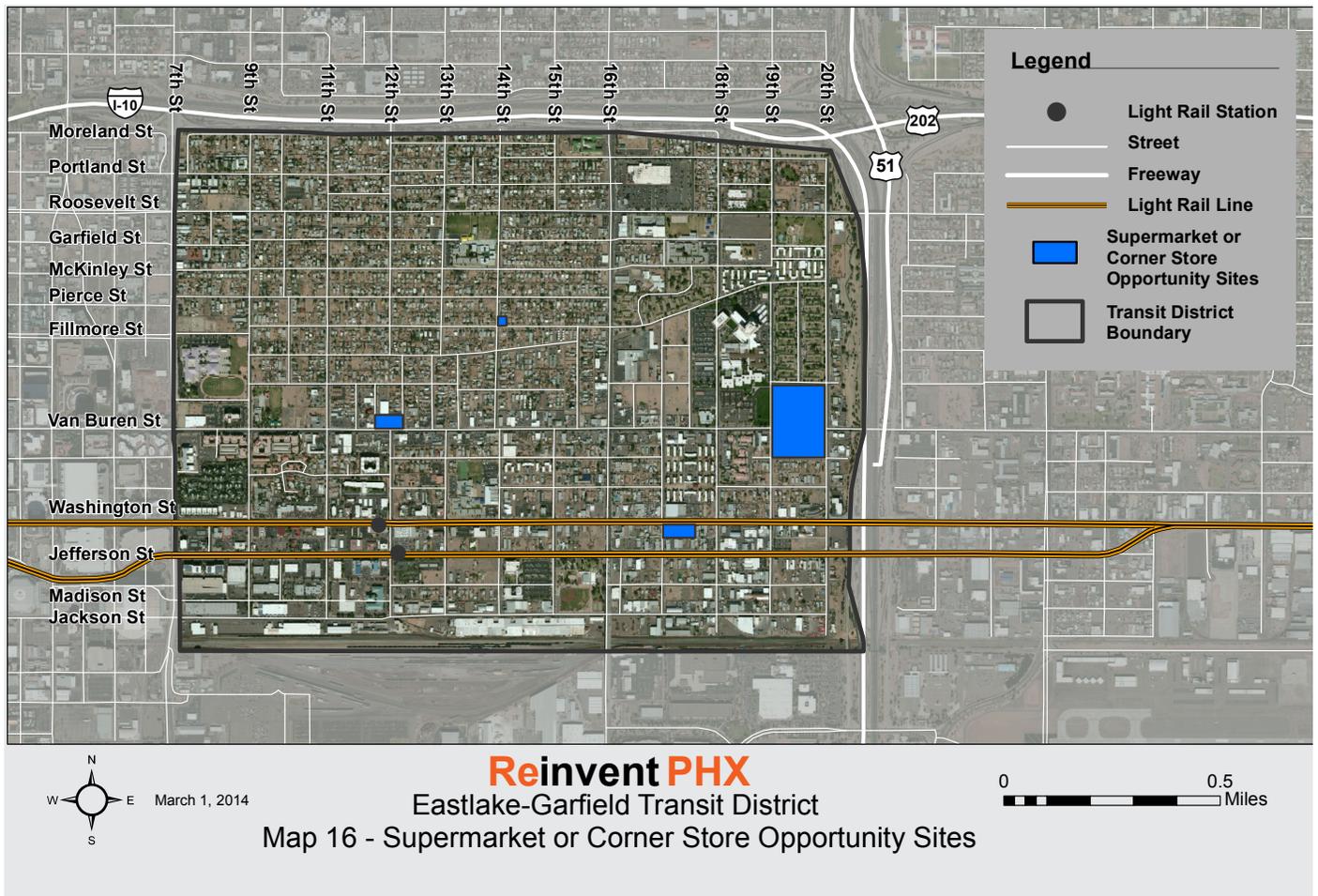
these ventures accept federal food assistance programs, like WIC, and price their food at levels comparable to—or sometimes lower than—conventional supermarkets.

In March, 2014, the Discovery Triangle Development Corporation launched a mobile grocery store—Fresh Express.^{xiii} In addition to fresh produce, Fresh Express bus will provide other health and wellness resources, including health screenings. Discussions with mobile retailers in Phoenix suggest that current zoning and permitting requirements do not pose barriers to their business. However, proactive city policies could actually encourage mobile healthy food retailers in communities with few healthy food opportunities or in areas around light rail stations. New York City’s Green Carts Initiative has a goal of issuing 1,000 additional mobile vending permits for vendors that only sell fresh uncut produce and operate in a lower-income area.^{xiii} These Green Carts have priority on the vendor permit waiting list. The Kansas City Department of Parks and Recreation provides a 50% discount on permits if half of the food meets nutritional standards.^{xiv}

Farmers’ Markets

A group of community stakeholders, including SLHI, is working with the city of Phoenix Planning and Development Department to develop a reasonable and clear zoning policy for farmers’ markets. This policy has been incorporated by city staff into the *Phoenix Zoning Information Guide*.

To ensure that farmers’ markets are affordable to families with lower incomes, the U.S. Department of Agriculture sponsored a grant program that subsidized the purchase of equipment necessary to accept WIC and other food assistance programs like SNAP.^{xv} This equipment is often expensive, resulting in few vendors at farmers’ markets accepting this type of payment. The Arizona Department of Health Services received funding under this federal grant. While it is unclear if this program will continue, it provides a model that could be adopted in communities with little access to healthy food.



Supermarkets and Corner Stores

Limited access to healthy food outlets, coupled with easy access to convenience stores and fast food restaurants, is associated with high rates of obesity and other diet-related chronic diseases. With over 12,000 residents, Eastlake-Garfield has just one supermarket within its boundaries. The Reinvestment Fund, a national leader in community development finance and understanding issues around access to healthy food retailers, estimates that district residents collectively spent about \$13.5 million at supermarkets in 2011 (The Reinvestment Fund, 2011). Because of the limited options in Eastlake-Garfield, most of this was spent outside the district.

Ultimately, residents want an additional supermarket with reasonable prices that carry an array of items that can meet nearly all of their dietary needs, located within a 5- or 10-minute walk of their home. (See Map 16 for recommended sites for future supermarkets or corner stores.) Residents realize this is a long-term vision that may take years to accomplish.

Several sites are identified as opportunity sites for future development of a supermarket or corner store. These sites include:

- 14th and Van Buren Streets. The former site of a pickle factory, residents support adaptive reuse of this property, including a corner grocery store.
- 14th Street and Washington Streets. This property is zoned commercial and responds to the community desire to have a healthy food retailer that can serve the Eastlake Park neighborhood specifically and future senior housing at 16th and Jefferson Streets.
- 16th and Van Buren Streets. Several new housing developments are planned for this area. This area is outside a 5-minute walking radius of a healthy food retailer.

Bringing healthy retail food options to communities like Eastlake-Garfield can be seen as a means for economic and community development. For example, organizations like UpLift Solutions view supermarkets as a community

asset and hub. Through workforce training programs located on-site, supermarkets can provide needed jobs for residents within their community, up to 200 full- and part-time positions (PolicyLink, n.d.). Supermarkets can have in-store amenities that can support residents, like free community meeting rooms, health clinics, affordable financial services (such as checking accounts), and healthy eating and financial literacy classes. All of these services and amenities would be welcome in Eastlake-Garfield.

However, the development process in urbanized and underserved areas can be complicated, especially financing. Developers often cite lower incomes of area residents and higher development and operating costs as factors that make these projects complex. Several states have special programs to attract and launch supermarkets in communities like Eastlake-Garfield. These programs are often funded through state or philanthropic funding or a mix of sources. For in-fill development, many communities rely on tax incentives to attract a supermarket, most notably tax increment financing, a tool that is not available in Arizona. Any supermarket attracted to communities like Eastlake-Garfield will be a unique blend of private and public funds from a variety of sources and incentives provided by the state or community.

Pennsylvania's Fresh Food Financing Initiative has helped develop supermarkets and other fresh food outlets in 78 underserved urban and rural areas, creating or retaining 4,860 jobs while increasing access to healthy food for nearly 500,000 residents (PolicyLink & The Food Trust, 2010). This Initiative was initially funded with \$30 million of state funding, but was able to attract an additional \$120 million in low-interest financing from private sources. The California FreshWorks fund is a public-private partnership loan fund that raised \$264 million to invest in bringing supermarkets and other forms of healthy food retailers to underserved communities, of which approximately \$45 million is from private investors including Dignity Health.^{xvii} The CDC (n.d.) highlights various financing policies that have been initiated to strengthen financing options for healthy food retailers.

Cities can also provide incentives to attract supermarkets to a particular area. These incentives can take many forms, including flexibility with zoning and development regulations; waiving fees, such as permit and impact; discounted city-owned land; site preparation assistance; property tax abatement; and investment in transportation infrastructure, such as street or sidewalk improvements.

xvii

Recommended Policies

1. Develop the necessary partnerships to promote community gardening in Eastlake-Garfield, including partners to provide gardening technical assistance, tools and necessary land.
2. In collaboration with partners and PHX Renews, develop a streamlined process to identify and use city-owned land for community gardens or urban agriculture.
3. Encourage urban agriculture by considering incentives such as a special water rate category, removal of sewer fees, and reduced water meter hookup fees for urban agriculture water users.
4. Develop incentives to encourage temporary healthy food retailers in Eastlake-Garfield. Prioritize the use of vacant lots for this purpose. Reduce fees and application waiting time to target these areas. Partner with the existing PHX Renews initiative.
5. As farmers' markets open in Eastlake-Garfield, work with Arizona Department of Health Services and the Maricopa County Department of Health to purchase equipment that allows these markets to accept WIC and other food assistance programs.
6. Develop public-private partnerships using the tools listed for this strategy to attract a new supermarket in the Eastlake-Garfield district. As a condition of the partnership, require the new supermarket to accept WIC and other food assistance programs including SNAP.

Tools for Implementation of Food Strategies

Community Food Projects Competitive Grants Program

Community Food Projects are designed to increase food security by bringing the whole food system together to assess strengths, establish linkages, and create systems that improve the self-reliance of community members over their food needs. Projects funded by this grant include expanding access to healthy and local foods in a low-income, high-unemployment area by employing teens to develop community gardens and market their produce; establishing a county-wide operation of community kitchens for micro-enterprise development



with low-income participation and leadership; and improving access to healthy foods through a variety of methods, including supermarket development, promoting local produce, a community kitchen and educational programs.

Community Reinvestment Act

The federal Community Reinvestment Act (CRA) encourages banks to invest in lower income communities. The Act requires financial institutions, like banks and credit unions, to provide loans in communities where they have branches. Before CRA, many banks would provide checking and saving services, but not loans, in lower income communities or communities of color. CRA requires financial institutions to proactively assess community needs and develop financial products for communities where it has branches. Partly due to CRA requirements, banks are now more active in providing financing for the development or expansion of businesses in low-income communities, often with favorable rates.



Farmers Market Promotion Program

The Farmers Market Promotions Program offers grants to help improve and expand domestic farmers' markets, roadside stands, community-supported agriculture programs, agritourism activities, and other direct producer-to-consumer market opportunities. Agricultural cooperatives, producer networks, producer associations, local governments, nonprofit organizations, public benefit corporations, economic development corporations, regional farmers' market authorities, and tribal governments are among those eligible to apply.

Healthy Food Financing Initiative

The Healthy Food Financing Initiative can help finance new or improve existing stores that sell healthy food. The Initiative is a set of federal programs that support projects to increase access to healthy, affordable food in communities that currently lack these options. Federal grants, loans and tax credits provide incentives to expand the availability of nutritious food, including developing and equipping small retailers and corner stores.

New Markets Tax Credit

The New Markets Tax Credit program can assist certain community development organizations in developing community assets like healthy food retailers in lower income communities. It is a federal program that focuses on attracting business and real estate investment into lower income neighborhoods and communities. In exchange for a federal tax credit, individuals or corporations make an investment in a community-based organization that has a primary mission of serving the community and has accountability to area residents. As of 2012, Phoenix has six community development entities including the city of Phoenix, Arizona MultiBank, Prestamos Community Development Financial Institution and Raza Development Fund.

WIC Program

The Special Supplemental Nutrition Program for Women, Infants and Children (WIC) is a program administered by the Arizona Department of Health Services that provides vouchers to purchase certain healthy foods, such as milk, whole wheat bread, eggs, fresh fruits and vegetables. WIC assistance targets low-income pregnant, postpartum and breastfeeding women, infants and children up to age five. Not all food retailers accept WIC vouchers. Retailers that accept WIC must agree to carry a certain variety of healthy food.



Recreation Strategies

Goal: All Eastlake-Garfield residents will have access to recreation spaces.

Measure/Target Indicator	Baseline	Target
Percent of residents who live within a 5-minute walk of a park and/or free recreation facility	35%	70%
Percent of residents who report using the local park regularly	TBD	TBD

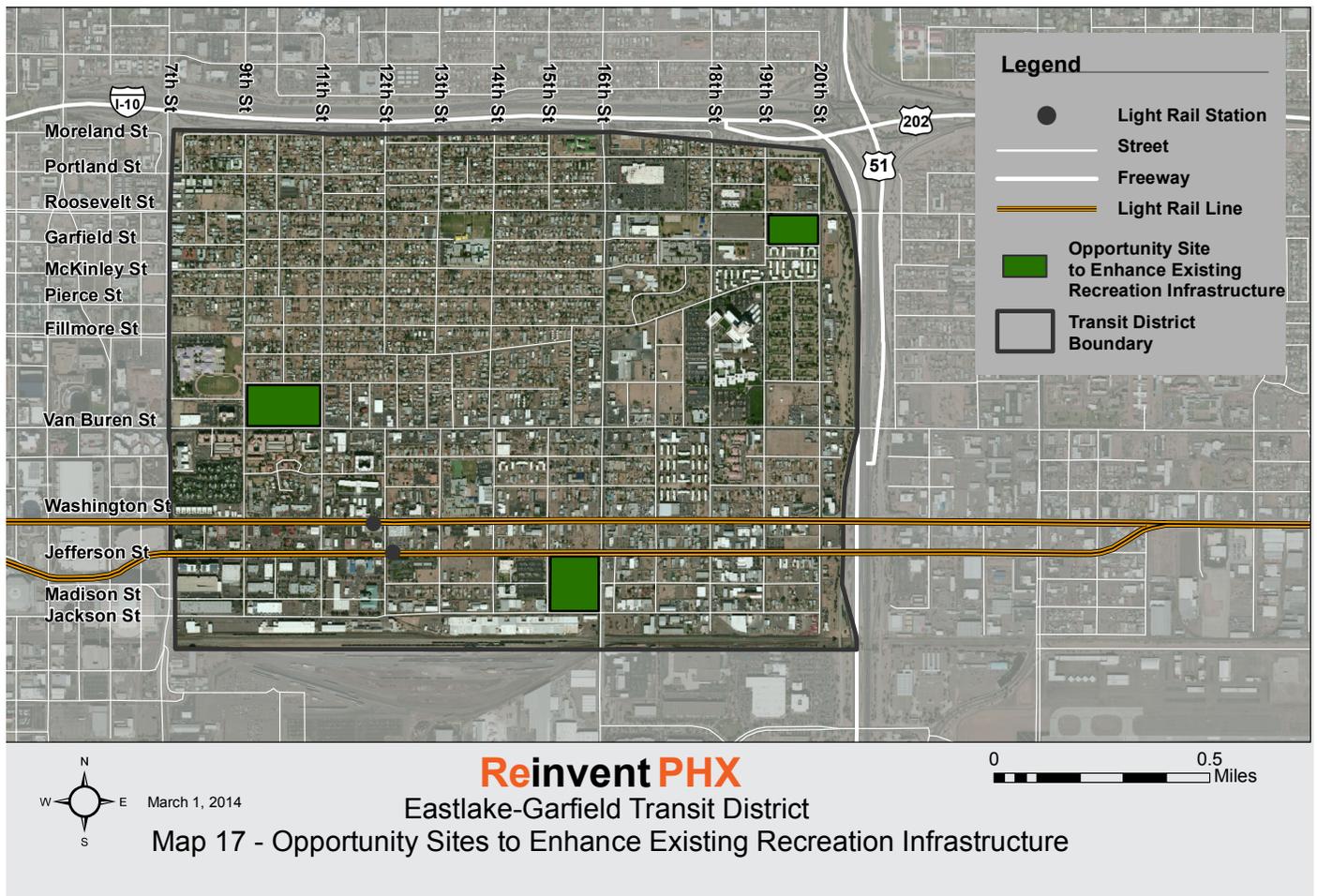
**To be determined.*

Residents conducted audits of three parks—Eastlake, Verde and Edison Parks. The audits found that the quality of the park equipment varied greatly.

- Eastlake Park underwent a recent renovation of the park and community center in 2010. The playground equipment, basketball courts, swimming pool, and community center are in good condition and heavily used by residents.
- Verde Park was built in 1995 and has not undergone a recent renovation, but the equipment as well as the community center is in good condition.
- Of the three parks, Edison Park is in the poorest condition.
- All parks lack drinking fountains near play areas and sufficient shade at play areas, sitting areas and walking paths.

Strategy One: Enhance existing recreation facilities

The Eastlake-Garfield district currently has three public parks that vary in condition from newly renovated to poor quality. (See Map 17.) The public park infrastructure in this district provides a solid base from which to promote activity and health among residents. While the base is strong, some changes should be made to increase use and usability.



Standard Investments at All Parks

Standard investments, such as additional shade and drinking fountains, should be added to all three parks. Researchers have found that the presence of amenities like drinking fountains and shade are associated with higher park usage (Rung, Mowen, Broyles, & Gustat, 2011). Investments should include:

- Additional drinking fountains, with a focus on areas near physical activity equipment.
- Additional shade throughout the parks, focusing on shading play equipment, walkways and benches.
- Additional or brighter lighting, concentrating on areas near play equipment, walkways and seating areas with tables.

Edison Park

According to the park audit, Edison Park is in poor condition. The equipment and splash pad are in disrepair

and residents often feel unsafe at the park. Residents of Luke Krohn Public Housing report using this park, but activities are limited because of poor equipment condition and lack of variety. In particular, residents have expressed the desire to have a community center with a gym, a walking path or track and public restrooms.

Tool to Implement Strategy One

A brief description of each tool appears at the end of the *Recreation Strategies* section.

- Community Development Block Grant

Verde Park

Residents consider Verde Park a strong, positive asset to the community. Surrounded by a fence, some residents want it removed. A walking path or track to provide additional activities for adults and a dog park are additions that would enhance the usability of this park.

Eastlake Park

Residents consider Eastlake Park a strong, positive health asset to the community. Specific additions requested include a walking path or track and additional public bathrooms.

Some residents who did not live in the park's immediate neighborhood were unaware of the programming opportunities or felt unwelcome in Eastlake Park. To encourage usage and increased awareness of the park and its programming, the city of Phoenix should increase marketing and outreach to the broader Eastlake-Garfield district. A recent study of 50 Los Angeles parks found that a small increase in a park's marketing budget, combined with input from a local park advisory board, resulted in a slight increase (12%) in park usage (Cohen, et al., 2013). More signs and reminders in areas outside Eastlake Park could help attract new visitors.

Recommended Policies

1. Implement standard investments at all three parks. These investments should include additional shade, drinking fountains and better lighting to increase the sense of security.
2. Completely renovate Edison Park. Among the updates to include, consider a community center, public restrooms and a walking path. While engaging residents from throughout the district is important, focused effort should be made to engage residents of Luke Krohn Public Housing.
3. Add a dog park to Verde Park. Remove the fence that surrounds the park and extend park hours later into the evening and weekends.
4. Engage the Reinvent PHX Steering Committee to identify additional means of marketing and resident engagement for Eastlake Park in order to increase usage of the broader Eastlake-Garfield district.

Strategy Two: Create additional recreation facilities and opportunities for physical activity

Slightly more than one-third of the population of Eastlake-Garfield lives within a 5-minute walk of a park. When coupled with low incomes and unsafe streets, the majority of residents have limited public recreation options within their community.

Convert Existing School Playgrounds into Public Parks

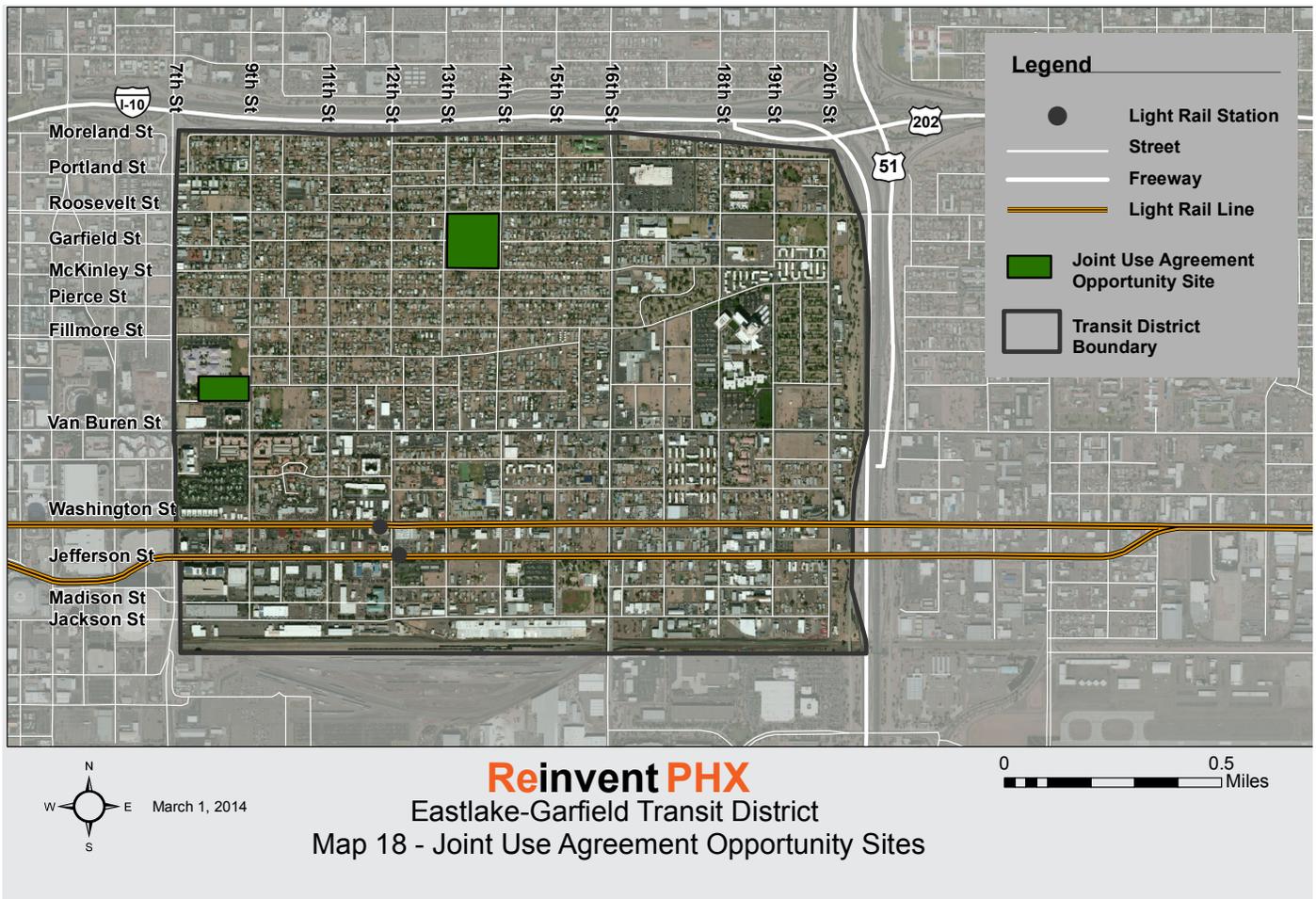
The playgrounds at neighborhood schools are valuable recreation assets that are under-utilized outside of school hours. A funding strategy, such as a joint use agreement, would provide consistent and replicable funding to keep these recreation options open after school, weekends and during the summer. Map 18 indicates potential joint use agreement sites—Garfield Elementary School, Edison Elementary School and ASU Preparatory Academy School.

Residents who use Verde Park want a walking path so that adults will have additional opportunities to be active. Until that can be built, an interim solution would be to establish an agreement with ASU Preparatory Academy School to allow residents to use its track, which is near Verde Park.

For residents who live in the northern tier of Eastlake-Garfield, 16th Street is a barrier to accessing Edison Park. Garfield Elementary School can be an option that would give residents access to a high-quality and safe play area in the northern part of the district.

For residents who live east of 16th Street, Edison Park does not currently meet their recreational needs. Until the necessary changes can be made to Edison Park, Edison Elementary School, within walking distance from the park, can provide a safe recreational facility.

Other communities have turned to joint use agreements to supplement the existing park infrastructure. A joint use agreement between the Tucson Unified School District and the Tucson Parks and Recreation Department allows 12 school playgrounds and recreation facilities to remain open after school and during the summers.^{xviii} During the school year, the school district is responsible for maintenance costs, while the City assumes these responsibilities during the summer months. The average cost to the City is \$4,000 per school.



Construct New Parks

In addition to school parks, other recreation options should be added to Eastlake-Garfield. The district needs additional free and safe recreation facilities that would accommodate various age groups. A long-term goal should be to increase the park acreage per person in Eastlake-Garfield to that of the average for the city of Phoenix (The Trust for Public Land, 2012). Part of the expansion plan should include increased programming for residents, including exercise, and healthy living and nutrition classes. (See Map 19 for potential park sites.)

Temporary Parks

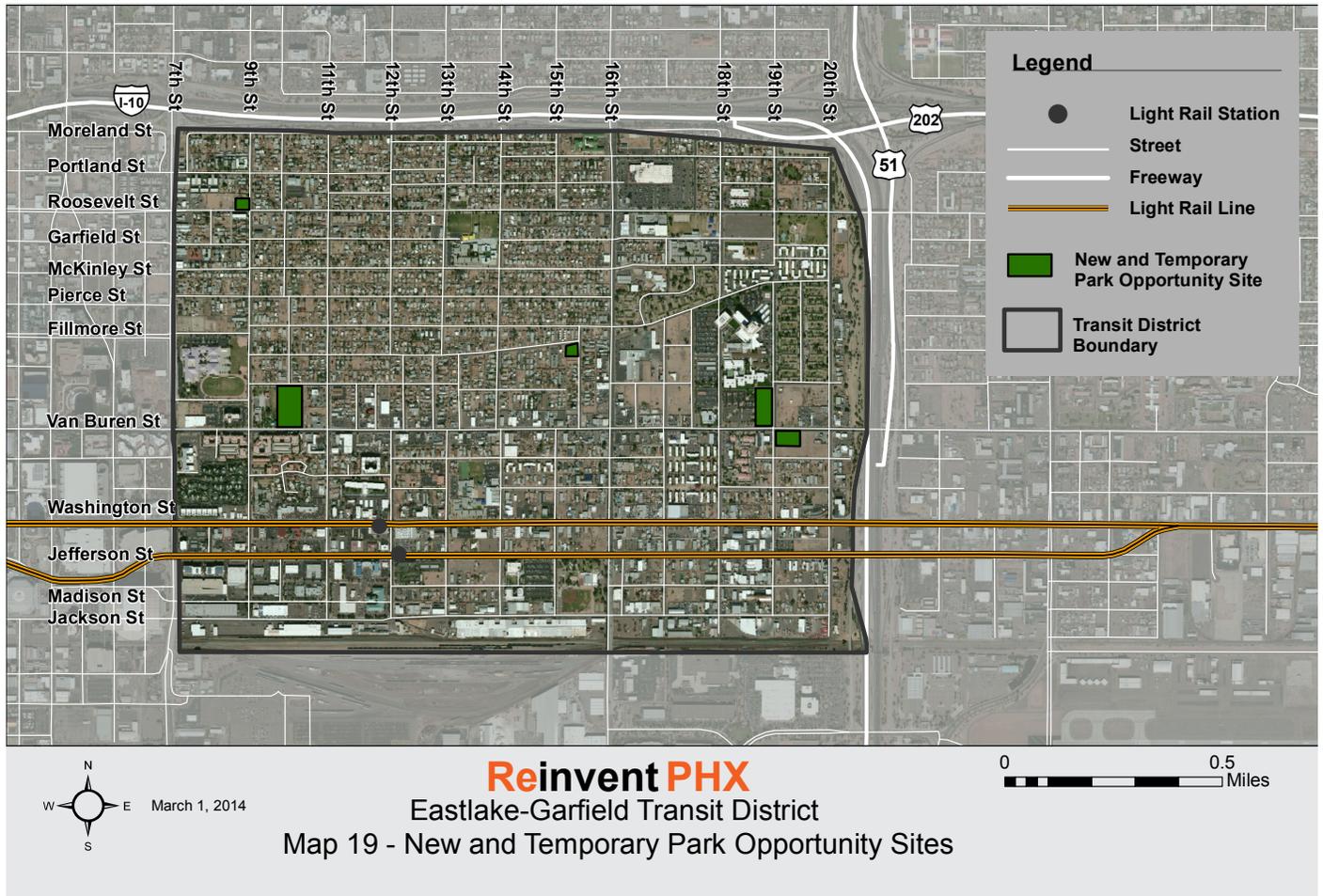
Activating some of the vacant parcels is a less costly alternative to developing a new park. Vacant parcels scattered throughout the district can be transformed into temporary or “pop-up” parks, adding much needed recreation options. Groundwork USA, a national nonprofit that works in underserved communities, has developed a toolbox for municipalities interested in creating temporary park space on vacant land.^{xix} Arizona Forward has highlighted some innovative recreation uses from across the country that might be replicable in Phoenix.^{xx}

One vacant lot was specifically identified as a site for a potential temporary park—12th and Taylor Streets. This part of the Eastlake-Garfield district lacks access to a recreational facility. (See Map 19.)

Permanent Parks

While temporary recreation opportunities provide a valuable community benefit by immediately increasing park options as well as improving a vacant parcel that otherwise functions as a neighborhood nuisance, they are only interim solutions. They do not address the basic issue of the lack of access to active lifestyle opportunities that are critical for both physical and mental health. The best solution for both existing and future residents will be permanent parks and recreational facilities.

Regardless of the approach to expanding parks in Eastlake-Garfield, residents should play an active role in designing them so they can create a space that fits their needs. The Eastlake-Garfield Steering Committee could make initial recommendations about equipment and amenities appropriate for their community, until a longer



public participation process is adopted to include the school districts and neighborhood associations.

with few recreation options, 9th and Roosevelt Streets is another location for a future park.

Map 19 depicts potential sites for future parks. Currently, part of the St. Luke’s Medical Center property—19th and Van Buren Streets—is an undeveloped green space. Adding passive or active recreation amenities would not only provide additional recreation space in an area of the district with few opportunities, but would also further activate Van Buren Street. Also responding to an area

Recommended Policies

1. Until a walking path can be added to Verde Park, execute and fund a multiyear joint use agreement with ASU Preparatory Academy School.
2. Until significant improvements can be made to Edison Park, execute and fund a multiyear joint use agreement with Edison Elementary School.
3. Expand the PHX Renews initiative to activate vacant parcels within Eastlake-Garfield for recreation purposes.
4. Expand park and recreation opportunities for Eastlake-Garfield residents and ensure those opportunities are provided within a 10-minute walk of homes, schools and businesses in order to encourage more physically and socially active lifestyles.

Tools to Implement Strategy Two

A brief description of each tool appears at the end of the *Recreation Strategies* section.

- Joint Use Agreement
- KaBOOM!



Strategy Three: Improve and enhance the physical environment to encourage residents to walk or bicycle

Recreation and street infrastructure are closely linked on several fronts. With well-designed streets, residents would walk or bike to recreation facilities or a neighborhood park. The street itself can be a platform for recreation or active transportation by foot or bike. Moreover, walking and biking on neighborhood streets are simple and inexpensive ways to stay physically active.

Much like the successful Safe Routes to School concept, Safe Routes to Recreation would increase safety infrastructure along key pedestrian and cyclist routes to recreation facilities. The addition or maintenance of sidewalks, bike lanes, crosswalks, drinking fountains, shade and lighting along these key routes would encourage walking and biking to these destinations.



Recommended Policy

1. Ensure that the Safe Routes to Recreation design elements are applied to a 10-minute walking radius around Eastlake, Verde and Edison Parks.

Tools to Implement Strategy Three

A brief description of each tool appears at the end of the *Recreation Strategies* section.

- Community Development Block Grant
- Surface Transportation Program

Tools for Implementation of Recreation Strategies

Community Development Block Grant

This program can be used to fund park amenities, playgrounds, neighborhood streetscapes, landscaping, and other physical improvements in a neighborhood. Eligible applicants include neighborhood associations or other nonprofit organizations in partnership with a city of Phoenix department.

Joint Use Agreement

A joint use agreement is a formal agreement between a school and a city or county that outlines the terms and conditions for the public use of the school's facilities, such as playgrounds, gymnasiums and libraries during after-school hours, weekends and breaks. Joint use agreements address school district concerns regarding cost and liability while simultaneously addressing the need for increased access to safe recreation for community residents.

KaBOOM!

This organization is a national nonprofit that offers a limited amount of funding toward playground equipment and uses the construction of playgrounds as a community building exercise. KaBOOM! also matches nonprofits and municipal organizations with funding partners.

Surface Transportation Program—Transportation Alternatives

This program is a street funding opportunity that helps expand transportation choices and enhance transportation through transportation enhancement activities, including pedestrian and bicycle infrastructure and safety programs, landscaping beautification, historic preservation and environmental mitigation.

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Safe Streets and Public Spaces Strategies

Goal: All residents will have a sense of personal security and feel safe walking or biking in their neighborhood.

Measure/Target Indicator	Baseline	Target
Five percent annual reduction in the rate of injuries and fatalities among bicyclists per 10,000 population ^{xxi}	7.7	4.8
Ten percent annual reduction in the rate of injuries and fatalities among pedestrians per 10,000 population ^{xxii}	9.6	5.7
Percent of residents who report walking or biking as a means of transportation or recreation	TBD	TBD
Percent of residents who report feeling safe while walking or biking in their neighborhood	TBD	TBD

**To be determined.*

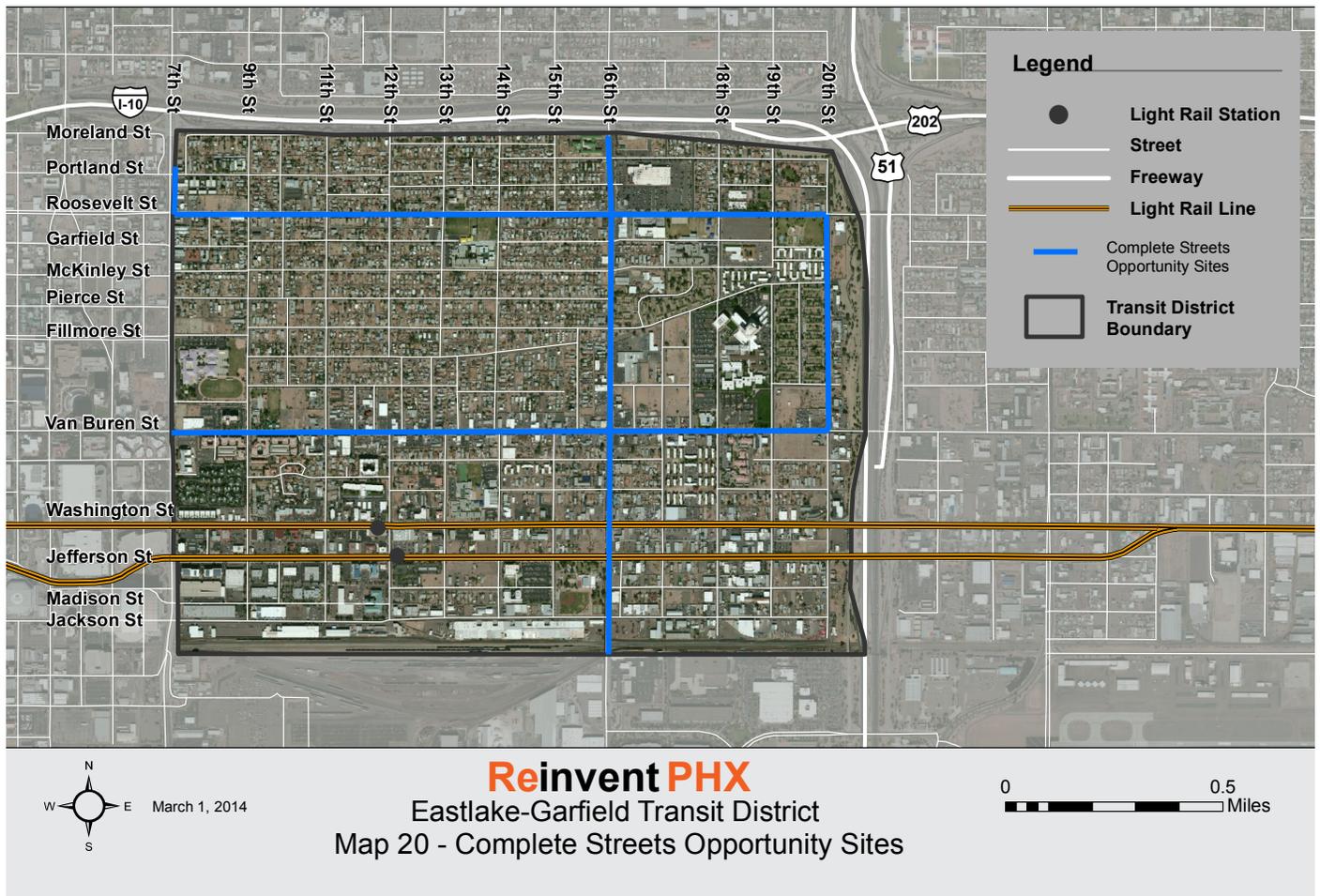
The streets and public spaces of Eastlake-Garfield need attention if they are to connect residents to health assets, or serve as a health asset in themselves. While some residents voiced personal safety concerns, the physical infrastructure itself does not always support or encourage an active lifestyle. Stray animals and vacant properties contribute to an environment of unease in public spaces. Pedestrians and cyclists experience speeding traffic along a number of critical pedestrian and bicyclist routes. Sidewalks along these critical corridors are often in poor repair, in addition to lacking shade or improvements to accommodate those with strollers or wheelchairs.

Strategy One: Implement infrastructure improvements to create safe streets and public spaces

Residents, street audits, field observations and injury data reveal specific street segments and intersections that are unsafe and would benefit from a technical evaluation and the addition of remedial upgrades. This poor infrastructure negatively impacts the health of residents by discouraging physical activity, compromising their safety and inhibiting the use of community assets that can support healthy lifestyle, such as parks, libraries and community centers.

Implement Complete Streets Design Elements on Key Corridors

Van Buren, Roosevelt and 16th Streets are of particular importance as vital transportation corridors within the district as well as connecting the district to the broader community. These streets have the potential to create safe pedestrian and bicyclist connectivity between the three neighborhoods within the district. Investments



should be targeted to establish safe, convenient, accessible and comfortable multimodal transportation corridors that connect neighborhoods to health assets. This holistic view of public streets is often called Complete Streets, as this concept is inclusive of everyone who uses streets, regardless of mode.

Other streets that should be modified to better accommodate pedestrians, bicyclists and transit-riders include: 20th and Washington Streets. Map 20 depicts those corridors that should be prioritized for a complete streets upgrade.

For the Gateway district of Reinvent PHX, Van Buren, Roosevelt and Washington Streets also were identified as key corridors for pedestrians, bicyclists and transit users. Upgrades and modifications along these streets, regardless of the Reinvent PHX district, should be viewed as a whole, with the goal of creating a multimodal corridor connecting several districts.

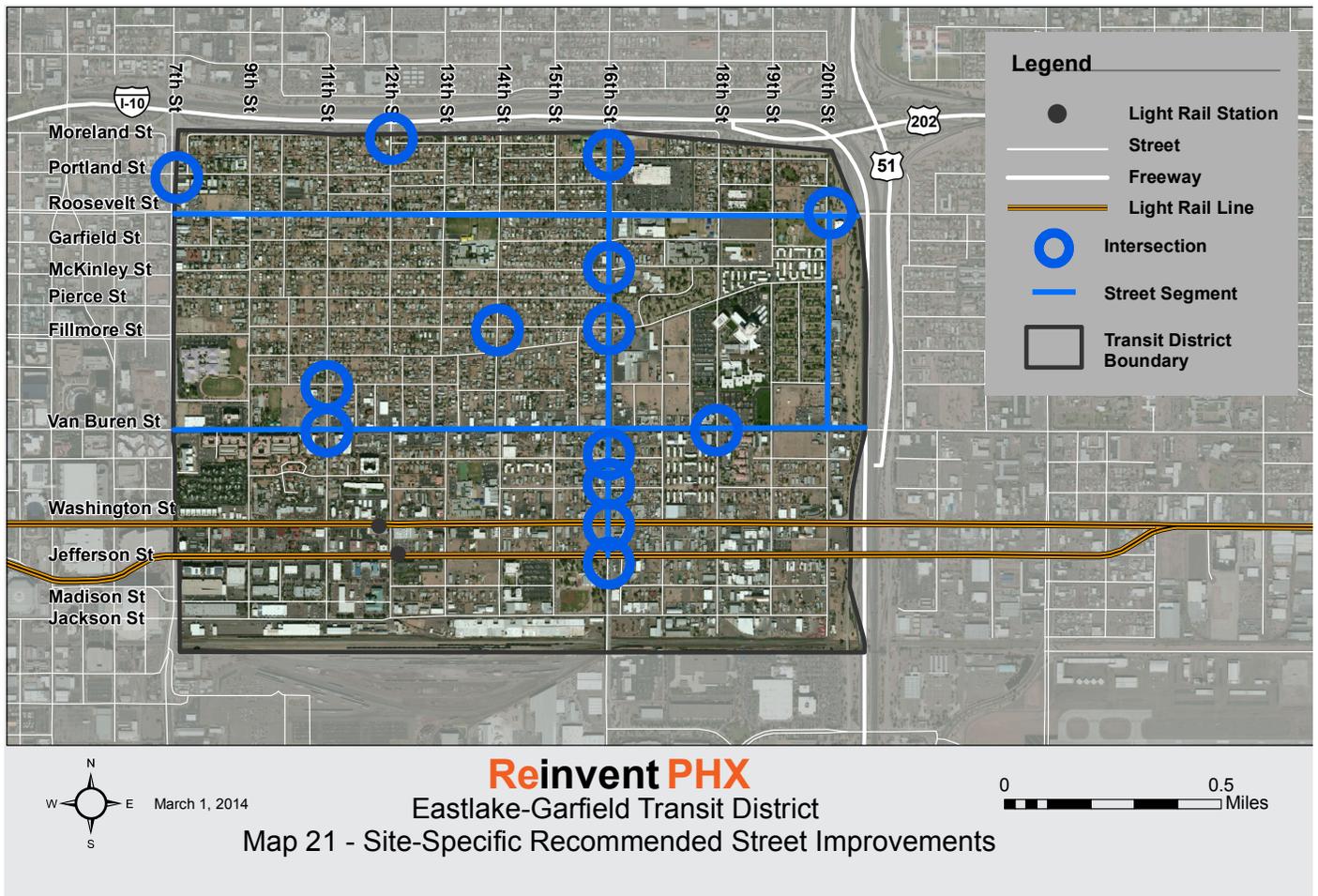
Invest in Safety and Accessibility Retrofits throughout the District

In addition to introducing streets design concepts to key corridors, other targeted investments should be made to increase access to community assets and increase safety for those who walk or bike, as well as increase

Tools to Implement Strategy One

A brief description of each tool is at the end of the *Safe Streets and Public Spaces* section.

- Capital Improvement Program
- Community Development Block Grant
- New Freedom Program
- Partnership for a Healthier America



accessibility to those that face mobility challenges. These sites were identified by workshop participants, analysis of injury data, street audits and epidemiological field observations. (Sites are identified in the table below.)

Improve Shade and Lighting

Like much of Phoenix, Eastlake-Garfield lacks sufficient shade, particularly in areas where residents walk, bike, wait for transit, or exercise. Residents agree that their community needs more shade. As a community of frequent walkers, residents do not have structures or trees that shade frequently-traveled routes. When maintaining or upgrading the City infrastructure, the addition of shade elements should be considered.

While a number of existing resources promote planting and caring for trees in Maricopa County, residents may be unaware of them. Additionally residents with a tight budget may be unable to afford the additional cost of regular watering—a necessity in Phoenix. One example of a volunteer group that supports urban trees is TreePeople.^{xxiii} In addition to general education and tree planting events, volunteers provide care for trees

including watering and maintenance. The Phoenix Shade and Tree Master Plan provides more examples of how other cities have supported and expanded their urban forests.^{xxiv}

When asked about street lighting, residents regularly identified the lack of lighting as a major issue. In fact, some residents indicated additional lighting as a priority over installing sidewalks. Adding more lighting, in addition to ensuring that existing lighting is well-maintained, should be considered throughout the district.

Recommended Policies

1. Prioritize Van Buren, Roosevelt and 16th Streets for Complete Streets upgrades, ensuring that these corridors are convenient, accessible, comfortable and safe for pedestrians, bicyclists and transit users. Washington and 20th Streets should also be considered for a similar upgrade.
2. In addition to the common design elements of Complete Streets, invest in safety and accessibility retrofits in the following areas. (See Map 21)

Intersection or Street Segment	Safety Concern	Recommended Investment	Specifics
Van Buren Street, between 7th Street and Papago Freeway (I-10)	Sidewalks obscured by overgrown vegetation, decreasing visibility for pedestrians, bicyclists and drivers—particularly on the west side	Safe sidewalk	Remove or trim weeds and bushes along sidewalk
	Traffic signal timing is not sufficient for pedestrians and bicyclists to safely get through intersection	Safe bike lane	Increase crossing cycle timing or install pedestrian countdown clock or bicycle dedicated traffic signal ^{xxv}
Van Buren and 11th Streets	Traffic signal timing is not sufficient for pedestrians and bicyclists to safely get through intersection	Safe intersection	Increase crossing cycle timing
Van Buren and 18th Streets	Traffic signal timing is not sufficient for pedestrians and bicyclists to safely get through intersection	Safe intersection	Increase crossing cycle timing
16th Street, between Papago Freeway (I-10) and Jefferson Street	Traffic signal timing is not sufficient for pedestrians and bicyclists to safely get through intersection	Safe bike lane	Increase crossing cycle timing or install pedestrian countdown clock or bicycle dedicated traffic signal ^{xxvi}
16th and McKinley Streets	No convenient crossing at this intersection to connect the Garfield and Krohn neighborhoods	Safe intersection	Install an enhanced crosswalk and/or High-Intensity Activated crossWalk (HAWK) signal
16th and Monroe Streets	Pedestrians frequently cross at this intersection, which is unmarked	Safe intersection	Install an enhanced crosswalk and/or High-Intensity Activated crossWalk (HAWK) signal
16th and Adams Streets	Pedestrians frequently cross at this intersection, which is unmarked	Safe intersection	Install an enhanced crosswalk and/or High-Intensity Activated crossWalk (HAWK) signal
16th and Fillmore Streets	Inadequate pedestrian infrastructure at this intersection to connect the Frank Luke Senior Living Center with the Garfield neighborhood	Safe intersection	Increase crossing cycle timing and install pedestrian countdown clock
16th and Portland Streets	Pedestrians cross at this intersection, which has no pedestrian safety infrastructure	Safe intersection	Install an enhanced crosswalk and/or High-Intensity Activated crossWalk (HAWK) signal
16th and Washington Streets	Signal does not give pedestrians enough time to safely cross the street; new senior housing complex will increase pedestrian traffic	Safe intersection	Increase crossing cycle timing

Intersection or Street Segment	Safety Concern	Recommended Investment	Specifics
16th and Jefferson Streets	Signal does not give pedestrians enough time to safely cross the street; new senior housing complex will increase pedestrian traffic	Safe intersection	Increase crossing cycle timing
20th Street, between Roosevelt to Van Buren Streets	Frequently traveled corridor by residents of Luke Krohn Public Housing	Safe bike lanes	Introduce bike lanes
	Cars are frequently parked in a “no parking” zone, which decreases visibility for pedestrians and motorists and reduces accessibility for those with limited mobility	Safe sidewalks	Enforce no parking zone
	Speeding traffic	Traffic calming	Install traffic calming measures
20th and Roosevelt Streets	Speeding traffic at the corner of a public park	Safe intersection	Install a traffic light or additional stop signs (thereby making it a four-way stop)
Roosevelt Street, between 7th Street to Papago Freeway (I-10)	A narrow street that is frequently used by bicyclists	Traffic calming and/or safe bike lanes	Install traffic calming measures that increase awareness and safety of bicyclists, or install bike lanes where possible
7th and Portland Streets	Pedestrians cross at this intersection, which has no pedestrian safety infrastructure	Safe intersection	Install landscaping or other type of buffer/barrier on 7 th Street, north of Portland Install an enhanced crosswalk and/or High-Intensity Activated crossWalk (HAWK) signal
14th and Fillmore Streets	Pedestrians cross at this intersection, which has no pedestrian safety infrastructure	Safe intersection	Install an enhanced crosswalk and/or High-Intensity Activated crossWalk (HAWK) signal
11th and Polk Streets	Pedestrians cross at this intersection, which has no pedestrian safety infrastructure	Safe intersection	Install an enhanced crosswalk and/or High-Intensity Activated crossWalk (HAWK) signal
12th and Moreland Streets	Pedestrians cross at this intersection, which has no pedestrian safety infrastructure	Safe intersection	Install an enhanced crosswalk and/or High-Intensity Activated crossWalk (HAWK) signal

3. Ensure that the Safe Routes to School design elements are applied to a 10-minute walking radius around Garfield Elementary, Edison Elementary and Faith North Montessori Schools.
4. Match residents with existing no- and low-cost tree resources, including those sponsored by the City, Arizona Public Service Company and Salt River Project. Develop partnerships to assist low-income residents with ongoing maintenance and watering assistance.

Strategy Two: Implement programs that support safe streets and public spaces

A lack of community cohesion, stray animals in the streets and the presence of vacant lots and abandoned buildings create additional barriers for walking and biking in this community.

Community Organizing and Engagement

One step in creating a safer and more cohesive community—and implementing many of the strategies in this document—is providing an organized outlet for residents to identify community concerns and advocate for change at the neighborhood level, such as neighborhood associations. These resident-led groups are often incubators for actions like Block Watch programs or walking groups that increase community safety and improve community and individual health. They also provide a platform for residents to collectively advocate for change in their community and seek city funding for community development projects through Block Watch grants.

Residents in some neighborhoods of the Eastlake-Garfield district rely on neighborhood associations as a means for policy change and advocacy. The city of Phoenix has an existing infrastructure through which to engage neighborhood groups—the Neighborhood Services Department (NSD). NSD has staff that act as a liaison between neighborhood groups and the city government. NSD also has education programs, like Neighborhood College and the Good Neighbor Program that can increase the ability of residents to identify and carry through with solutions to community-identified challenges.

While the Eastlake-Garfield district has several strong neighborhood associations in the Eastlake Park and Garfield neighborhoods, Edison Park residents and

those who live in Luke Krohn Public Housing are not well represented. NSD should assist with creating a new neighborhood association or assist existing neighborhood associations to better engage these residents.

At a national level, the Robert Wood Johnson Foundation’s Healthy Kids, Healthy Communities initiative focuses on changing public policy to reduce childhood obesity through local advocacy efforts. The Foundation’s grantees have documented many of their strategies to advocate for change in the built environment, including access to healthy food and parks.^{xxvii} These strategies can be helpful to Eastlake-Garfield residents.

Stray and Loose Dogs

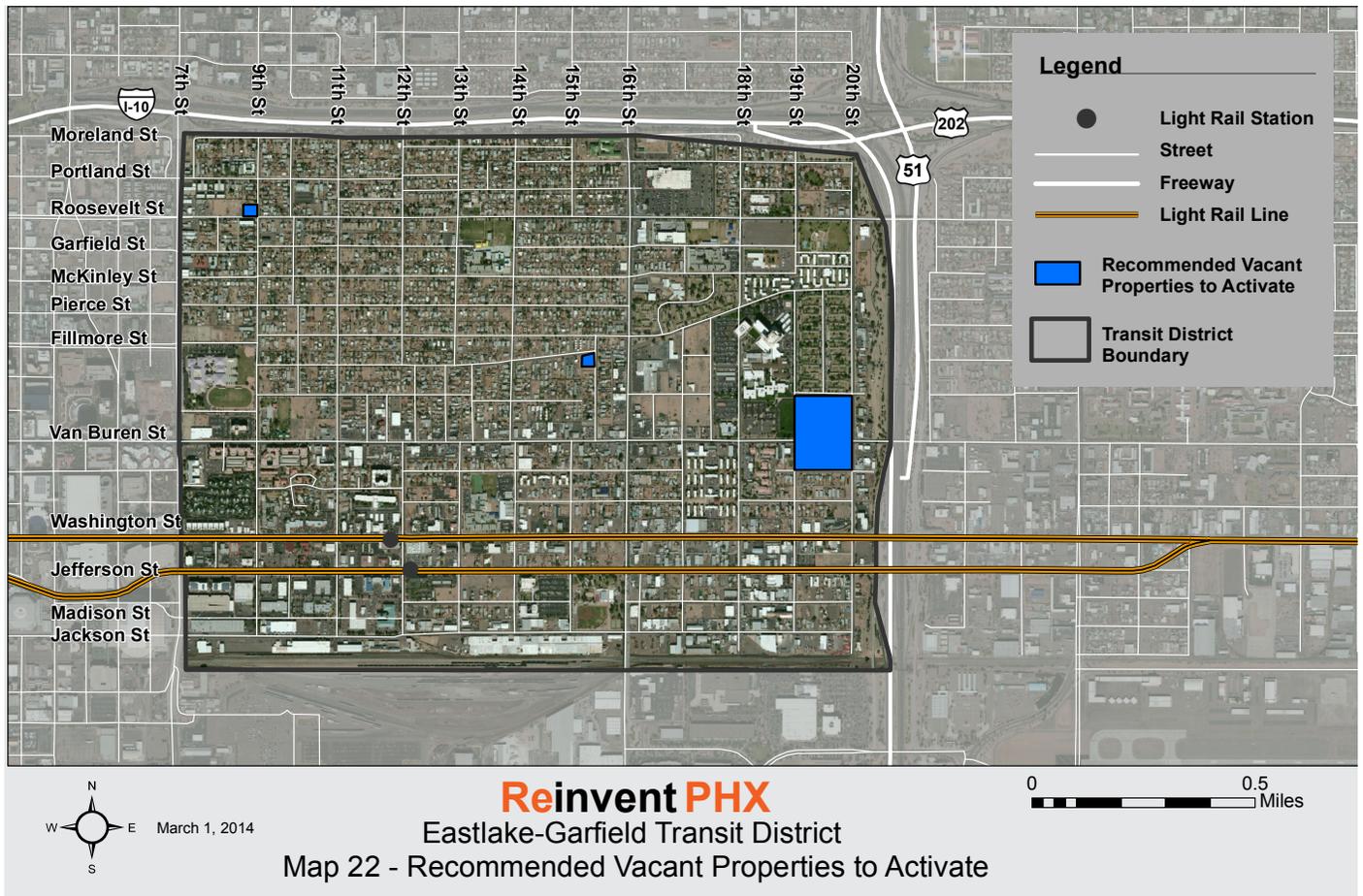
A prime example of what residents would like to see changed in their neighborhoods is the abundance of unleashed and unsupervised dogs. Some of these dogs are strays and some are pets that are allowed to wander freely. Parents will not allow children to play outdoors because of them, and residents are reluctant to walk or bike along streets where they fear hostile dogs. Residents describe a similar problem with feral cats.

In partnership with residents, there is a need to: 1) educate dog owners about leash laws; 2) encourage residents to report stray animals; and 3) increase the frequency of animal control patrols. Addressing the management of these animals in collaboration with the Animal Defense League of Arizona or Humane Society can be both beneficial to community safety and to the safety of the animals.

Tools to Implement Strategy Two

A brief description of each tool is at the end of the *Safe Streets and Public Spaces* section.

- Community Development Block Grant
- Hospital Community Benefit Requirement
- Neighborhood Association
- Partnership for a Healthier America



Activate Vacant Properties

The abundance of vacant buildings and land contributes to criminal activities and detracts from the appearance of the district. Vacant buildings are not maintained and vacant parcels are frequently covered with weeds and garbage. Vacant buildings, if not secure, can become sites for illegal activities, exacerbating safety problems and perceptions. In 2012, the city of Phoenix initiated PHX Renew, which brings temporary public uses to vacant land. When coupled with the lack of healthy food and recreation space, PHX Renew could address several of the community’s most pressing problems by using these sites for the purposes of increasing access to healthy food and recreation. Strategies for pop-up parks and agriculture or gardening are discussed in the previous sections. (See Map 22 for priority vacant lots.)

Eastlake-Garfield Injury Reduction Coalition

Banner Good Samaritan Medical Center is a Level I trauma center that serves the Eastlake-Garfield community. In order to maintain this status, trauma centers must respond to and develop interventions

around injuries that are treated on a regular basis. Through street audits, field observations and injury analysis completed for the Existing Conditions Report, we have a better understanding of the types of traffic-related injuries that occur in Eastlake-Garfield.

Developing a district-level coalition—built around responding to place-based injury data—can lead to appropriate and preventative responses to ongoing injury problems. Activities that could be supported include distribution of bicycle safety equipment, pedestrian safety education and organizing walking clubs. When paired with environmental changes to the streets, this coalition could be a powerful mechanism for targeted public education efforts.

Recommended Policies

1. Work with residents of Edison Park and Luke Krohn Public Housing to integrate into an existing neighborhood association or to form a new neighborhood association.

2. Create a Stray Dog Education Program that will encourage residents to document and report stray animals as well as provide funding to residents to adapt their fences to prevent pets from leaving their yards. Increase efforts to manage stray dogs.
3. Use the PHX Renews Initiative to activate vacant lots within the Eastlake-Garfield district for uses such as community gardens, pop-up parks and plazas. Prioritize the vacant properties at the following locations: 16th and Van Buren Streets; 14th and Washington Streets; and 14th and Fillmore Streets.
4. Create a coalition of residents, law enforcement, fire department, the Street Transportation Department, and the Maricopa Medical Center to develop strategies to reduce traffic-related injuries.

Strategy Three: Increase the quality, access and safety for transit users

As nearly 40% of the households do not own a car, many Eastlake-Garfield residents rely on the bus and light rail systems as a means of transportation. Rider infrastructure should be improved throughout the district. Intoxicated individuals and drug dealers loiter at bus stops. When sheltered, the shade is inadequate during hot months. The infrastructure itself is often poorly maintained and some are without necessary upgrades to meet ADA standards. Some stops have little more than a Valley Metro sign. Shade, seating, lighting and better maintenance are needed at all bus stops.

Tools to Implement Strategy Three

A brief description of each tool is at the end of the *Safe Streets and Public Spaces* section.

- Capital Improvement Program
- Community Development Block Grant

New York City places a priority in getting transit riders safely from the street environment to the transit-rider environment in order to make using the transit system easier and more convenient. Its Safe Routes to Transit program focuses on improving safety and relieving congestion at transit stops as well as improving sidewalks, crosswalks and the overall walking environment around transit stops.^{xxviii}

Develop a Light Rail Stop at 16th Street

The residents of Eastlake-Garfield have expressed a desire to have a light rail station constructed at 16th Street. A station at this location would serve as a connector with the north-south bus service thus providing improved access to light rail service for people living to the north as well as for residents of South Phoenix. This would also enhance access options for customers coming to the farmers' market/produce market envisioned along Jackson Street east and west of 16th Street. Consider coupling the light rail station with a transit center to enhance transfer options from one mode to another.

Recommended Policies

1. Develop and execute a Safe Routes to Transit program.
2. Begin the process with Valley Metro and residents to determine the feasibility of creating a light rail stop at 16th Street.

Tools to Implement Safe Streets and Public Spaces Strategies

Capital Improvement Program

Phoenix has a Capital Improvement Program that provides a roadmap for expenditure of city funds to construct public infrastructure, such as streets improvements, land acquisition to expand the park system and the construction of new police stations. The Capital Improvement Program prioritizes projects and outlines potential funding sources for five-year time increments and is updated on an annual basis. The Program goes through a public hearing process where residents can weigh in on various priorities.

Community Development Block Grant

This block grant can be used to fund park amenities, playgrounds, neighborhood streetscaping, landscaping, and other physical improvements in a neighborhood.



Eligible applicants include neighborhood associations or other nonprofit organizations in partnership with a city of Phoenix department.

Partnership for a Healthier America

This project is a partnership with the Blue Cross Blue Shield Association and provides funding to get kids and communities out and active by creating Play Streets—roads closed to traffic and open to the community to encourage physical activity.

Neighborhood Association

The City of Providence, RI (n.d.) describes a neighborhood association as “a group of residents who meet regularly to accomplish specific goals in their neighborhood. The association may include homeowners, renters, business owners, school faculty or staff, church officials and members of nonprofit organizations. Depending on the goals of the group, meetings may be held twice a year, once a quarter or every month. Neighborhood

associations help identify challenges and concerns, support change and improvement efforts, help resolve conflicts, provide volunteers for community initiatives, represent the neighborhood as a whole to elected officials and find resources to make the neighborhood a better place to live. Before forming a neighborhood association, it is important to define or understand the goals of the proposed neighborhood association.” In other Phoenix neighborhoods, the Neighborhood Services Department has been instrumental in starting or strengthening neighborhood associations, especially when a proactive staff person is assigned.

Hospital Community Benefit Requirement

All non-profit hospitals must dedicate funding to addressing the health needs of the communities they serve. In order to retain a nonprofit status, these hospitals must understand the health needs of area residents and develop a plan for meeting these needs. Depending upon the needs of the community it serves, a nonprofit hospital can fund prevention or education

programs, like nutrition and exercise classes or a farmers' market. Some hospitals have chosen to make investments in community development and broad programs, like affordable housing and job training.

New Freedom Program

This federal program seeks to reduce barriers to transportation and expand the transportation options available to those with disabilities, beyond ADA requirements.

References

- Active Living Research. (2009). Walking and Biking to School, Physical Activity and Health Outcomes.
- Agency for Healthcare Research and Quality. (2010). Emergency Department Visits and Inpatient Stays Involving Dog Bites, 2008. Retrieved December 27, 2012, from <http://www.hcup-us.ahrq.gov/reports/statbriefs/sb101.pdf>
- Arizona Department of Health Services. (2010, March). Deaths from Exposure to Excessive Natural Heat. Retrieved December 17, 2012, from <http://www.azdhs.gov/plan/report/heat/heat09.pdf>
- Arizona Department of Health Services. (2011, December 11). The Obesity Epidemic. Retrieved December 17, 2012, from http://www.azdhs.gov/phs/bnp/nupao/documents/ObesityInArizona_121611.pdf
- Arizona Department of Health Services. (2012, July). Arizona WIC Program Authorized Vendors. Retrieved September 26, 2012, from <http://www.azdhs.gov/azwic/documents/vendors/WICVendorList.pdf>
- Arizona Department of Health Services. (n.d.). The Burden of Cardiovascular Disease in Arizona. Retrieved December 17, 2012, from <http://www.azdhs.gov/azcvd/documents/pdf/az-burden-of-cardiovascular-disease.pdf>
- Arizona Diabetes Coalition. (2008). Arizona Diabetes Strategic Plan, 2008-2013. Retrieved December 4, 2012, from Arizona Department of Health Services: http://www.azdhs.gov/azdiabetes/documents/pdf/az-diabetes-strategic-plan_2008-2013.pdf
- Arizona Health Survey. (2011, October). Healthy Eating and Active Living of Adults and Young Children in Arizona. Retrieved January 15, 2013, from <http://www.arizonahealthsurvey.org/wp-content/uploads/2011/10/ahs-2010-heal-oct11.pdf>
- Babey, S., Brown, E., & Hastert, T. (2005, December). Retrieved October 4, 2012, from Access to Safe Parks Helps Increase Physical Activity among Teenagers: <http://www.healthpolicy.ucla.edu/pubs/Publication.aspx?pubID=159>
- Balling, R., & Brazel, S. (1987). Time and Space Characteristics of the Phoenix Urban Heat Island. *Journal of the Arizona-Nevada Academy of Science*, 75.
- Bhattacharyya, J., Currieb, J., & Haiderc, S. (2004). Poverty, Food Insecurity, and Nutritional Outcomes in Children and Adults. *Journal of Health economics*, 23, 839-862.
- Broad Leib, E. (2013). All (Food) Politics is Local: Increasing Food Access Through Local Government Action. *Harvard Law & Policy Review*, 7, 321-341.
- Brownson, R., Brennan Ramirez, L., Hoehner, C., & Cook, R. (2003). Analytic Audit Tool. Retrieved October 15, 2012, from Active Living Research: <http://www.activelivingresearch.org/node/10616>
- Center for Neighborhood Technology. (n.d.). H+T Affordability Index. Retrieved January 25, 2013, from <http://htaindex.cnt.org/map/>
- Centers for Disease Control and Prevention. (n.d.). *State Initiatives Supporting Healthier Food Retail: An Overview of the National Landscape*. Retrieved from Centers for Disease Control and Prevention: http://www.cdc.gov/obesity/downloads/healthier_food_retail.pdf

- Centers for Disease Control and Prevention. (2005). Heat-Related Mortality - Arizona, 1993-2002 and United States, 1979-2002. Retrieved October 1, 2012, from Morbidity and Mortality Weekly Report: <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5425a2.htm>
- Centers for Disease Control and Prevention. (2009). Differences in Prevalence of Obesity among Black, White and Hispanic Adults, U.S. 2006-2008. Retrieved December 19, 2012, from Morbidity and Mortality Weekly Report: <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5827a2.htm>
- Centers for Disease Control and Prevention. (2012). Adult Obesity facts. Retrieved October 9, 2012, from <http://www.cdc.gov/obesity/data/adult.html>
- Centers for Disease Control and Prevention. (2012). Health Effects of Limited Access to Healthy Food: Obesity, Chronic Disease and Poor Nutrition. Retrieved December 5, 2012, from <http://www.cdc.gov/healthyplaces/healthtopics/healthyfood/obesity.htm>
- Centers for Medicare and Medicaid Services. (2007). Top 31 Elective Inpatient Hospital DRGs, 2006 Data. Retrieved January 25, 2013, from <http://www.cms.gov/Research-Statistics-Data-and-Systems/Research/HealthCareConInit/Hospital.html>
- Cheng, E., Chen, A., & Cunningham, W. (2007, November). Primary Language and Receipt of Recommended Health Care among Hispanics in the U.S. *Journal of General Internal Medicine*, 22(Suppl 2), 283-288.
- City of Phoenix. (2010). *Tree and Shade Master Plan*. Retrieved June 13, 2013, from http://phoenix.gov/webcms/groups/internet/@inter/@dept/@parks/documents/web_content/071957.pdf
- City of Phoenix Police Department. (2012). Uniform Crime Reporting Violent Crimes, Calendar Year 2012. Retrieved from City of Phoenix Police Department: http://phoenix.gov/webcms/groups/internet/@inter/@dept/@police/documents/web_content/099359.pdf
- City of Providence, Mayor's Office of Neighborhood Services. (n.d.). *Neighborhood Association Tool Kit*. Retrieved from City of Providence: <http://www.providenceri.com/efile/101>
- Cohen, D., Han, B., Derosé, K., Williamson, S., Marsh, T., & McKenzie, T. (2013, November). Physical Activity in Parks: A Randomized Controlled Trial Using Community Engagement. *American Journal of Preventive Medicine*, 45(5), 590-597. doi:10.1016/j.amepre.2013.06.015
- Cohen, D., McKenzie, T., & al, e. (2007). Contribution of Public Parks to Physical Activity. *American Journal of Public Health*, 509-514.
- Cohen, D., McKenzie, T., Sehgal, A., Williamson, S., Golinelli, D., & Lurie, N. (2007, March). Contribution of Public Parks to Physical Activity. *American Journal of Public Health*. 97(3), 509-514. doi: 10.2105/AJPH.2005.072447
- County Health Rankings. (n.d.). Data and Methods, Our Approach. Retrieved February 12, 2013, from <http://www.countyhealthrankings.org/our-approach>
- Devancey, B. (2007). WIC Turns 35: Program Effectiveness and Future Directions. Retrieved December 7, 2012, from <http://www.earlychildhoodrc.org/events/presentations/devaney.pdf>
- Ewing, R., Schmid, T., Killingsworth, R., A., Z., & Raudenbush, S. (2003). Relationship between Urban Sprawl and Physical Activity, Obesity and Morbidity. *American Journal of Health Promotion*, 18(1), 47-57.
- Fanger, P. (1970). *Thermal Comfort, Analysis and Applications in Environmental Engineering*. Lyngby, Denmark: McGraw-Hill Book Company.

- Fish, J., Ettner, S., Ang, A., & Brown, A. (2010, November). Association of Perceived Neighborhood Safety on Body Mass Index. *American Journal of Public Health, 100*(11), 2296-2303.
- Flores, G. A.-K. (2005, July/Aug). Limited English Proficiency, Primary Language Spoken at Home, and Disparities in Children's Health and Healthcare: How Language Barriers are Measured. *Public Health Reports, 120*(4), 418-430.
- Frank, L., Andresen, M., & Schmid, T. (2004). Obesity Relationships with Community Design, Physical Activity and Time Spent in Cars. *American Journal of Preventative Medicine, 27*(2), 84-96.
- Halfon, N., Larson, K., & Slusser, W. (2012). Associations between Obesity and Comorbid Mental Health, Developmental and Physical Health Conditions in a Nationally Representative Sample of US Children Aged 10 to 17. *Academic Pediatrics*.
- Hamilton, B., & Erickson, C. (2012, Summer). Urban Heat Island and Social Work: Opportunities for Intervention. *Advances in Social Work, 13*(2), 420-430.
- Han, J., Merrit, R., & Olmstead, N. (2005). The Burden of Cardiovascular Disease in Arizona.
- Harlan, S., Brazel, A., Prashad, L., Stefanov, W., & Larsen, L. (2006). Neighborhood Microclimates and Vulnerability to Heat Stress. *Social Science and Medicine*(63), 2847-2863.
- Health by Design. (n.d.). How Walkable Is Your Neighborhood? Retrieved October 15, 2012, from http://www.healthbydesignonline.org/documents/WalkabilitySurvey_HbD.pdf
- Hodges, E.A. (2003). A primer on early childhood obesity and parental influence. *Pediatric Nursing, 29*(1):13-16.
- Jenerette, G., Harlan, S., & Stefanov, W. (2011). Ecosystem Services and Urban Heat Riskscape Moderation: Water, Green Spaces, and Social Inequality in Phoenix, USA. *Ecological Applications, 21*(7), 2637-2651.
- Jernigan, D., Sparks, M., Yang, E., & Schwartz, R. (2013). Using Public Health and Community Partnerships to Reduce Density of Alcohol Outlets. *Preventing Chronic Disease*. doi:10.5888/pcd10.120090
- Kettel Khan, L., Sobush, K., Keener, D., Goodman, K., Lowry, A., Kakietek, J., & Zaro, S. (2009, July 24). Recommended Community Strategies and Measurements to Prevent Obesity in the United States. Retrieved October 9, 2012, from *Morbidity and Mortality Weekly Report*: <http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5807a1.htm>
- Klinenberg, E. (2002). *Heat Wave: A Social Autopsy of Disaster in Chicago*. Chicago: The University of Chicago Press.
- Leadership for Healthy Communities. (2011). A Guide for Local and State Leaders Working to Create Healthy Communities and Prevent Childhood Obesity. Retrieved October 11, 2012, from Leadership for Healthy Communities: [http://www.leadershipforhealthycommunities.org/images/stories/LHC_Action_Strategies_Toolkit_100222\[1\].pdf](http://www.leadershipforhealthycommunities.org/images/stories/LHC_Action_Strategies_Toolkit_100222[1].pdf)
- Leadership for Healthy Communities. (2012, February). Marking the Connection: Linking Policies that Prevent Hunger and Childhood Obesity. Retrieved December 17, 2012, from http://www.leadershipforhealthycommunities.org/images/stories/lhc_hunger_obesity_02.14.12.pdf
- Lee, H. (2012, April). The Role of Local Food Availability in Explaining Obesity Risk among Young School-Aged Children. *Social Science and Medicine, 74*(8), 1193-1203.
- Miles, R. (2008). Neighborhood Disorder, Perceived Safety and Readiness to Encourage Use of Local Playgrounds. *American Journal of Preventive Medicine, 34*, 275-281. doi:10.1016/j.amepre.2008.01.007

- Morency, P., Gauvin, L., Plante, C., Fournier, M., & Morency, C. (2012, June). Neighborhood Social Inequalities in Road Traffic Injuries: The Influence of Traffic Volume and Road Design. *American Journal of Public Health*, 102(6), 1112-1119.
- Phoenix Police Department. (2012). Crime Statistics and Maps. Retrieved from City of Phoenix: http://phoenix.gov/webcms/groups/internet/@inter/@dept/@police/documents/web_content/099359.pdf
- PolicyLink. (n.d.). *Access to Healthy Food*. Retrieved from http://www.policylink.org/site/c.IkIXLbMNJrE/b.7634003/k.519E/Access_to_Healthy_Food.htm
- PolicyLink & The Food Trust. (2010). *The Grocery Gap*. Retrieved from <http://www.policylink.org/atf/cf/%7B97C6D565-BB43-406D-A6D5-ECA3BBF35AF0%7D/FINALGroceryGap.pdf>
- PolicyLink and Prevention Institute. (n.d.). *The Transportation Prescription: Bold New Ideas for Healthy, Equitable Transportation Reform in America*.
- Rosenheck, R. (2008, November). Fast food consumption and increased caloric intake: a systematic review of a trajectory towards weight gain and obesity risk. *Obesity Reviews*, 9(6), 535-547. doi:10.1111/j.1467-789X.2008.00477.x
- Rung, a., Mowen, A., Broyles, S., & Gustat, J. (2011). The Role of Park Conditions and Features on Park Visitation. *Journal of Physical Activity and Health*, 8(Suppl 2), S178 -S187.
- Saelens, B., Salis, J., Black, J., & Chen, D. (2003). Neighborhood Based Differences in Physical Activity. *American Journal of Public Health*(93), 1552-1558.
- Shay, E., Spoon, S., & Khattak, A. (2003). Walkable Environments and Walking Activity. Retrieved December 14, 2012, from <http://www.stc.utk.edu/STCresearch/completed/PDFs/walkfinal.pdf>
- Stockbox Neighborhood Grocery. (n.d.). Retrieved from Stockbox Neighborhood Grocery: <http://stockboxgrocers.com/about/>
- Successful Communities Online Toolkit. (n.d.). Phoenix, Arizona Heat Relief Network. Retrieved January 3, 2013, from <http://scotie.sonoraninstitute.org/component/content/article/168-phoenix-az-heat-relief-network.html>
- Surgeon General of the United States. (2012). *Overweight and Obesity: What You Can Do*. Retrieved October 9, 2012, from http://www.surgeongeneral.gov/library/calls/obesity/fact_whatcanyoudo.html
- Taggart, M., Chaney, M., & Meaney, D. (n.d.). *Vacant Land Inventory for Urban Agriculture*. Retrieved from Cleveland-Cuyahoga Food Policy Coalition: <http://cccfoodpolicy.org/sites/default/files/resources/Vacant%20Land%20Inventory%20for%20Urban%20Agriculture%20-%20Report%20for%20Urban%20Land%20Ecology%20Conference.pdf>
- The Reinvestment Fund. (2011). *Limited Supermarket Access (LSA) Status, as of 2011*.
- The Trust for Public Lands. (2006). Retrieved October 4, 2012, from *The Health Benefits of Parks*: http://www.eastshorepark.org/HealthBenefitsReport_FINAL_010307.pdf
- The Trust for Public Land. (2012). *City Park Facts*. Retrieved June 13, 2013, from <http://cloud.tpl.org/pubs/ccpe-cityparkfacts-2012.pdf>
- The WABSA Project. (2003, October 29). *Assessing and Improving Your Community's Walkability and Bikeability*. Retrieved October 12, 2012, from <http://www.unc.edu/~jemery/WABSA/documents/wabsa%20>

guidebook%2003-1029.pdf

Transportation Alternatives. (2011). *Play Streets: Best Practices*. Retrieved from http://transalt.org/files/news/reports/2011/PlayStreets_BestPractices.pdf

Transportation Research Board; Institute of Medicine of the National Academies. (2005). *Does the Built Environment Influence Physical Activity? Examining the Evidence*. Retrieved January 8, 2013, from Transportation Research Board of the National Academies: <http://onlinepubs.trb.org/onlinepubs/sr/sr282.pdf>

U.S. Census Bureau. (2010). Summary File 1.

U.S. Department of Agriculture, Economic Research Service. (2009). *Access to Affordable and Nutricious Food: Measuring and Understanding Food Deserts and their Consequences*, Report to Congress. Report to Congress. Retrieved October 11, 2012, from http://www.ers.usda.gov/media/242675/ap036_1_.pdf

U.S. Department of Health and Human Services. (n.d.). *Social Determinants of Health*. Retrieved March 1, 2013, from Healthy People 2020: <http://www.healthypeople.gov/2020/topicsobjectives2020/overview.aspx?topicid=39>

U.S. Department of Housing and Urban Development. (n.d.). *Affordable Housing*. Retrieved January 25, 2013, from http://portal.hud.gov/hudportal/HUD?src=/program_offices/comm_planning/affordablehousing

Vartanian, L. S. (2007, April). *Effects of Soft Drink Consumption on Nutrition and Health: A Systematic Review and Meta-Analysis*. *American Journal of Public Health*, 97(4), 667-675. doi:10.2105/AJPH.2005.083782

Victoria Transport Policy Institute. (2010). Retrieved October 4, 2012, from *Evaluating Public Transportation Health Benefits*: http://www.apta.com/resources/reportsandpublications/Documents/APTA_Health_Benefits_Litman.pdf

Weiss, C., Purciel, M., Bader, M., Quinn, J., Lovasi, G., Neckerman, K., & R. A. (2011). *Reconsidering Access: Park Facilities and Neighborhood Disamenities in New York City*. *Journal of Urban Health*, 88(2), 297-309.

Whyte, W. H. (1980). *The Social Life of Small Urban Spaces*. New York: Project for Public Spaces.

Work Group for Community Health and Development at the University of Kansas. (2012). *The Community Toolbox*. Retrieved September 26, 2012, from <http://ctb.ku.edu/>

Endnotes

- i. A number of issues make identification of the impact of chronic disease difficult, particularly at the local level. The majority of information about chronic disease is reported at the national, state or county level. In Arizona, however, a robust reporting system, that captures hospital and emergency department admissions, allows data to be narrowed down to a smaller geographic area. This information reports conditions that may have led to hospitalization, such as heart disease or cancer. Often a person is hospitalized with multiple conditions, such as heart disease and cancer. This hospitalization data gives us one view of the health of a community.

Hospitalization data has limitations. This data only reports those who have been admitted to a hospital within Arizona and does not include psychiatric facilities, federal hospitals (such as military and Department of Veteran Affairs' hospitals) or hospitals located on tribal land. It does not account for those who have received care in a physician's or any other care provider's office, an emergency room (without being admitted to a hospital), or in a hospital outside of Arizona. Some data, such as race and ethnicity, is not consistently reported. Additionally, the data are based on discharges, so a patient may be counted more than once if hospitalized more than once in the same year. Lastly, because health statistics vary considerably from year-to-year in a small geographic area, it is not advisable to compare

to larger areas, such as at the state or federal level, when looking at only one year of data.

- ii. Categories of stores are based upon site visits by the health team. The definitions of the types of stores are drawn from Examining the Impact of Food Deserts on Public Health in Detroit (Mari Gallagher Research & Consulting Group, 2007).
- iii. Finding and documenting these types of resources is difficult, since there is no central data repository, the data system is self-reported and incomplete, and definitions of these food resources differ. During our workshop, some residents identified other locations of what they termed as community gardens. These were informal, backyard vegetable gardens grown by residents and distributed among friends. These sites were not accessible to a large number of residents and not a consistent or reliable source of healthy food.
- iv. The methodology used to identify restaurants, including fast food and “sit down” restaurants, included a Google search, followed by a windshield survey. Like much of the food environment, this is a snapshot in time meant to provide context rather than exact details about the restaurants.
- v. Staff from the city of Phoenix Planning and Development Department noted that shade had recently been added to the seating areas around the pool, but not over the pool itself.
- vi. All traffic related injury data were from either the Arizona Department of Transportation’s Safety Data Mart or the Arizona Department of Health Services State Trauma Registry and were matched resulting in an unduplicated count.
- vii. For more information about these programs, go to <http://www.healthykidshealthycommunities.org/node/675>.
- viii. The city of Phoenix’s Community Garden Policy Guidelines can be found at: http://phoenix.gov/webcms/groups/internet/@inter/@dept/@dspd/documents/web_content/pdd_pz_pdf_00348.pdf.
- ix. More information about programs in these communities, go to <http://www.freshmoves.org/>, <http://chattanoogamobilemarket.org/>, and <http://www.marketonwheels.com/index.html> respectively.
- x. Information can be found at <http://arcadiafood.org/programs/mobile-market>.
- xi. Information can be found at <http://stockboxgrocers.com/about/>.
- xii. Information on the Discovery Triangle and Fresh Express can be found at <http://www.discoverytriangle.org/fresh-express/>.
- xiii. More information on the Green Cart Initiative can be found at: <http://www.nyc.gov/html/doh/html/diseases/green-carts.shtml>.
- xiv. The policy can be found at <http://www.kcmo.org/idc/groups/parksandrec/documents/parksrecreation/012710.pdf>.
- xv. More information about this program can be found at <http://content.govdelivery.com/bulletins/gd/USDAO-78ddc5>.
- xvi. More information about this program can be found at <http://www.cafreshworks.com/Index.html>.
- xvii. A brief description of development incentives can be found at <http://www.policylink.org/site/c.1kIXLbMNJrE/b.7677419/k.C869/Policy.htm>.
- xviii. Information can be found at http://kaboom.org/docs/documents/pdf/playmatters/Play_Matters_Tucson.pdf.
- xix. Groundwork’s toolbox can be found at <http://research.ncl.ac.uk/engscc/assets/pdf/toolkit.pdf>.
- xx. Information can be found at http://www.arizonaforward.org/pdf/ASU_SGSUP_Placemaking_and_Community_

Building_Project.pdf.

- xxi. Injury and fatality rates were calculated by computing an average annual number of injuries and fatalities based on the available years of data from the sources—three years for City Collision data and five years for the Arizona State Trauma Registry data. The rate was calculated as follows: $(\text{Average number of injuries and fatalities}) / (\text{Total population for district}) \times 10,000$
- xxii. Injury and fatality rates were calculated by computing an average annual number of injuries and fatalities based on the available years of data from the sources—three years for City Collision data and five years for the Arizona State Trauma Registry data. The rate was calculated as follows: $(\text{Average number of injuries and fatalities}) / (\text{Total population for district}) \times 10,000$
- xxiii. Information on TreePeople can be found at <http://www.treepeople.org/>.
- xxiv. The City of Phoenix Tree and Shade Master Plan is at http://phoenix.gov/webcms/groups/internet/@inter/@dept/@parks/documents/web_content/071957.pdf.
- xxv. Bicycle-specific traffic lights are an emerging practice. More information can be found at: <http://www.ssti.us/2012/12/increasing-bicycle-mode-share-leads-to-growing-need-for-bicycle-specific-traffic-signals/>.
- xxvi. Bicycle-specific traffic lights are an emerging practice. More information can be found at: <http://www.ssti.us/2012/12/increasing-bicycle-mode-share-leads-to-growing-need-for-bicycle-specific-traffic-signals/>.
- xxvii. An advocacy resource guide for grantees can be found at http://www.healthykidshealthycommunities.org/sites/default/files/ALBD%20Advocacy%20Resource%20Guide%20May%202010-updated%20Aug%202010_0.pdf.
- xxviii. For more information about Safe Routes to Transit, go to <http://www.nyc.gov/html/dot/html/pedestrians/safertstransit.shtml>.