Out of the Loop:
Transit Deserts, Health, and Well-Being in Chicago

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Abstract:

This project explores access to public transportation in the city of Chicago through the Chicago Transit Authority's light-rail train network, referred to as the 'L'. Using this network, we investigated the correlation between areas lacking transit access, or "transit deserts," in relation to health and well-being throughout the city. To identify this correlation, we identified and mapped four public health and well-being indicators across the city: pharmacies, green space, government assisted food programs, and public technology. These maps were compiled, and census tracts were grouped to determine Key Underserved Areas (KUAs), which indicated that that parts of the city are lacking access to both public transportation and well-being resources. With these findings, we were able to articulate that populations that lacked access to public transit were also often populations lacking access to public health and well-being indicators. These populations largely consisted of ethnic minority and low-income Chicago residents. Lastly, we reviewed plans of CTA improvement and development, and discussed their benefits and shortcomings, in regards to better serving our KUAs in the city of Chicago.

Introduction:

Public transit is a vital resource that can limit and extend opportunity through general access, travel time, and greater spatial relationships within urban areas. According to Stephanie Farmer, an associate professor in the Sociology Department at Roosevelt University, "public transportation, as one crucial component of a city's transportation network, enables the mobility and flow of people and goods that make cities livable" (Farmer 2011, 1154). Our research frames public transit as an integral part of the urban experience, and a benefit that should have universal and equitable access within a city. However, access to public transit in urban space is not at all equal: there are regions that are poorly served by public transportation, referred to as "transit deserts." The concept of transit deserts is largely based on the concept of food deserts: "applying it to public transportation enables spatial patterns to emerge regarding service provision and service need" (Jiao and Dillivan 2013, 24). In this way, our research focuses on ideas of justice in urban settings.

In our research, we aim to identify areas that could be considered transit deserts within the city of Chicago. Using spatial analysis, we will create four maps with the goal of linking these transit deserts with areas of the city that have lesser access to public resources. Through this process, we aim to interpret how transit accessibility coincides with and affects local disparities in health and well-being. Important factors that contribute to health and well-being that we will engage in our maps and analysis are access to pharmacies, green space, government assisted food programs, and public technology. Additionally, we will supplement our analysis by collecting qualitative data through interviews. We intend to articulate that the populations underserved by public transit also lack access to public resources, and that these groups are the ones who need these services the most. With this knowledge, we will review future plans while examining which areas and populations they benefit. Ultimately, we will suggest areas that are in particular need of new transit development.

Our spatial analysis of Chicago's transit-scarce regions will first and foremost evaluate resident access to the light-rail train system in Chicago, called the 'L.' This evaluation will involve creating four maps, each of which will cover one of the four elements that we have listed above as indicators of health and well-being. Broadly, these cover topics of health, food, environment, and education. By examining access to each of these indicators and comparing their spatial variation with Chicago's existing transit infrastructure, we will document spatial relationships between public transit and well-being. We will supplement this analysis by collecting primary data through interviews with stakeholders in Chicago's transit system, including community organization leaders. Finally, we plan to assess a variety of CTA plans for new development using the information that we have gathered regarding transportation, health, and urban justice.

In the following pages, we will assess secondary sources that we believe will inform our research. An overview of the Chicago Transit Authority's history will provide essential context for the production of transit deserts. We will also highlight issues of gentrification and uneven development in urban space, which are processes that produce the forced movement of vulnerable, transit-dependent populations into peripheral areas that lack access to public transit. We will also review literature that directly addresses the issues of transit deserts in Chicago, which includes discussions about CTA development plans, transit-vulnerable populations, and job access. Lastly, we will outline relevant literature pertaining to each health and well-being indicator (Pharmacies, green space, government assisted food programs, and public technology) and their (perhaps potential) relationship with public transit.

Literature Review:

I. Transportation and Inequality

i. The Chicago Transit Authority

The Chicago Transit Authority (CTA) began operation as an independent government agency in 1947, when the Chicago Rapid Transit Company and the Chicago Surface Lines streetcar system were bought and combined by the state legislature (CTA, "Facts at a Glance"). Today, the CTA's infrastructure is the second-largest public transit system in the country. It operates over 150 bus routes along with eight elevated train lines (Fig. 1). In 2011, the system provided over 530 million rides within the city and surrounding suburbs, encompassing over 234 square miles (CTA, "Facts at a Glance").

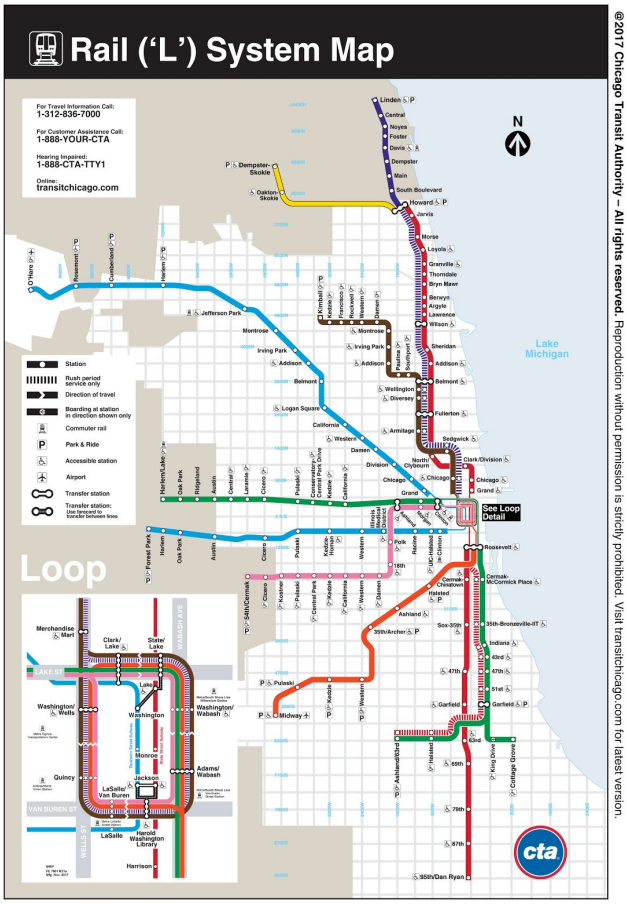

Figure 1. Source: http://www.transitchicago.com/maps/

The CTA's system evolved regionally over time. While the Northern, Northwestern, and Southern regional quadrants of Chicago all have had varying levels of access to rapid transit service, the southwest side had been largely neglected for years (McDonald and Osuji 1994, 262). It was not until the implementation of the Orange Line, which runs from Midway Airport to the Loop, in 1993 that the CTA 'L' train lines reached areas on the Southwest side-- areas inhabited mostly by ethnic minorities and low-income residents. Taking a closer look at Figure 1, one can observe the Orange Line's position within the city. Imagining the absence of the Orange Line, one can see just how large of an area was affected by a lack of CTA 'L' services. The historic negligence that the South, West, and Southwest Sides experience in not having equitable access to CTA 'L' services will be relevant in synthesizing further literature under

subsequent headings. This trend supports the idea that underserved communities are commonly also classified as transit deserts.

Stephanie Farmer makes several important observations about the CTA's aging infrastructure. In 2011, according to the Office of the Auditor General, about 78% of Chicago's light-rail fleet was at retirement age. Because of this, Farmer notes that further CTA development, regardless of its location, is in direct conflict with renovating and modernizing its current system. "Routine slow zones, service delays, train derailments, deteriorating infrastructure, and aged rolling fleet testify to the recent troubles the transit agency has experienced in just maintaining the infrastructure it already operates" (Farmer 2011, 1167). Due to safety concerns that stem from train derailments, the CTA has implemented 'slow zones' on almost 20% of its entire system, which nearly double travel times from the Loop to peripheral areas. This is an issue that we will not directly address in our research, but the implications that the aging system has for future development will certainly influence our concluding suggestions.

ii. Gentrification and Urban Inequality

One thing that is common to many cities, both in the United States and around the world, is that they develop in an uneven matter. Farmer explains several factors that produce uneven development: "(1) the embedding of capital accumulation processes in space; (2) historical class, social, and political relations contingent to a geography that privileges some places, social groups, or activities over others; (3) the pre-existing built environment; (4) institutional and political policies implemented in localities; and (5) consumption preferences" (Famer 2011, 1155). One significant contribution to uneven development in Chicago, with regards to housing, is gentrification.

Gentrification in Chicago has been a habitual practice of private property management companies and local government forces since the 1970s. "The development of luxury

consumption spaces, and a surge of tourism have placed pressure on local agencies to expand" (Farmer 2011, 1157). Turning cheap properties into hubs of wealth helps increase city revenue and revitalizes depreciated urban neighborhoods. Despite these advantages, gentrification has a wide range of consequences. The word gentrification was coined in 1964 by Ruth Glass, who stated that when gentrification occurs, the "social character of the district is changed." When the renewal and rebuilding of older homes, apartments, and retail property occurs within a space, that space starts to attract a new demographic population. As this reinvestment escalates, rent prices increase. Middle to high-income individuals are able to afford the rising prices, and low-income individuals are pushed out. In urban settings like Chicago, this ultimately concentrates low-income populations together, with less access to goods and services and fewer means to gain mobility. "Together, the revalorization of downtown real estate markets and policies dismantling public housing are creating new residential patterns in Chicago: affordable housing is shifting to the city's periphery" (Farmer 2011, 1169). One such consequence of living in a community with cheap housing is lack of access to public transportation.

Jeffrey Linn (2002) links gentrified areas of Chicago with their proximity to the transit system. In Chicago, this gentrification started in 1975 in the downtown area, or "the Loop," and moved like a wave to the Northwest area of the city. Before this era of gentrification began, however, there were multiple periods of human migration to the city. After World War II, cars became available to high and middle class households. This caused a huge flux in suburbanization, allowing people to live in residential neighborhoods with larger, individual homes and drive their cars to work in the city. Because of this large-scale migration to the suburbs, downtown areas lost their wealthy and middle-class populations, which caused a decline in the quality development of the inner city.

A few decades later, automobile costs lowered, and more people were able to migrate to the suburbs. As suburb populations increased, so did land competition and commute time to the city. This created a new period migration: affluent individuals were heading back to the city, and taking public transit to work. Farmer describes this income migration: “As real estate developers and creative class workers mobilize their political and financial power to outcompete lower income groups for rights to the (central) city, they are pushing working-class and minority residents to the margins of the city” where “public transit service is meager” (Farmer 2011, 1158).

Linn defines “Chicago Transit” as the system of elevated train stations that lie on the transit lines that intersect in the Central Business District (2002, 180). The most affluent residents in the city live closest to the Central Business District, especially on the northern edges of the city, can quickly and easily take public transit to this area to work. Linn hypothesizes that, “transit access was a spur to gentrification in northwest Chicago between 1975-1991….properties close to transit experience significant gains in property value changes versus properties located farther from transit” (Linn 2002, 189). This increased rent dislocated past residents who can no longer afford rent prices in their neighborhood. In combination with complicated processes of housing discrimination, this results in groups of carless, low-income populations living in transit deserts: “Former public housing residents tend to be more transit dependent than the general population and yet they are precisely the ones who are forced out of the Central Area, the most transit-rich part of the city…. By being pushed to the geographic margins, poor Blacks are moving to areas of the city that have a declining job base and sparser public transit services to access job centers in the city or more prosperous suburbs, thus exacerbating the jobs-housing spatial mismatch” (Farmer 2011, 1169).

iii. Transit Deserts and Uneven Development in Chicago

As stated previously, the eight elevated train lines within Chicago intersect in the Central Business District, where stops are more frequent and line transfers are possible. While the CBD is Chicago's largest job center, and investment there is justifiable, the lack of transit investment outside of this region has had a significant impact on the mobility of working-class populations. In the case of Chicago, neighborhoods that have a far lesser access to transit are generally located on the south and west sides. "On average, South Side residents have the longest commutes in the city because the Red Line ends thirty-five blocks from the city limits. The CTA says it now takes South Side residents 20% longer on average to get to work than it does for commuters traveling from other parts of the city" (Farmer 2011, 1166). The Developing Communities Project (DCP), a faith-based organization based at the terminus of the southbound Red Line, advocates for expansion to the city limits. Farmer recounts this from her interview with Mike Evans, the DCP Associate Director: "this [Central Area] is one of the most transit-served areas in the city. People already get moved around very well. They get around better than most people do. Outside the Loop you got a transportation desert ... . Forget enhancing the system, give us basic needs." As illustrated here, it is clear that public transportation planning and development both contributes and relates to the production of urban inequality.

One example of "enhancing the system" instead of providing for the basic needs of peripheral needs is the Central Area Plan (CAP). This plan was developed based on the idea of making Chicago a "global city," or a world-class city that is welcoming to further development, tourists, and international visitors. The plan would involve the construction of a "Circle Line" that connects several lines of the elevated train system on the near-west side of the city, and would ultimately encompass an westwardly expanded urban landscape. While the CTA is still debating the exact route that the Circle Line will take, most proposals show the track running from the

Blue Line in the north to the Red Line in the south, encircling major destinations like Chinatown, the United Center, and the Michigan Avenue shopping district (Fig. 2).

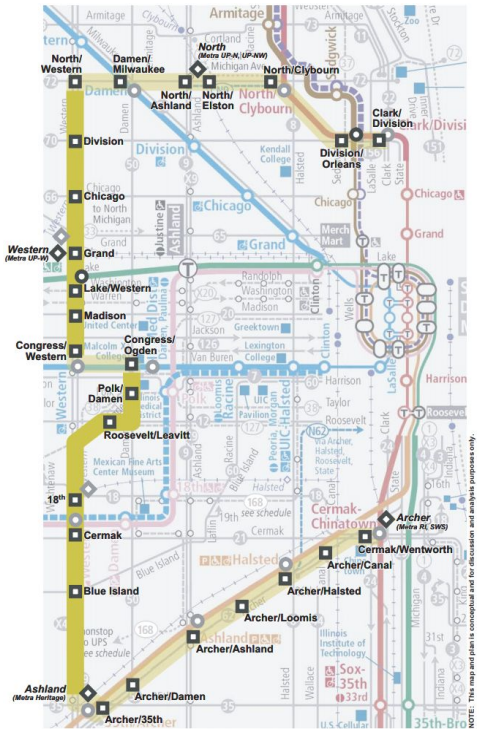

Figure 2. Source: http://www.transitchicago.com/news_initiatives/planning/circle.aspx

The near-west region of Chicago that surrounded by the circle line is where “The CAP seeks to intensify the volume of buildings and population density in an area that already experiences high levels of congestion due to the intersection of four major highways, several rail freight lines, and numerous public transportation routes” (Farmer 2011, 1161). The CAP gained favorable traction over ideas like the Mid-City Transitway, which was proposed to run North-South on the far west side of the Chicago and would have connected far more peripheral populations to the rest of the city. Considering the scarce funds that the CTA operates its projects within, the decision to focus on further investing in the Central Area of the city very clearly prioritized wealthy, elite populations over actual Chicagoans. Farmer explains: “The CAP details improvements it deems necessary to enhance mobility in the central area, including exclusive bus rapid transit lanes, new train routes, and an intermodal transit hub... if the CAP is realized, the city and Chicago

Transit Authority will be sinking the preponderance of transit capital over the next decade into an area that constitutes approximately 20% of the total landmass and population of the city" (Farmer 2011, 1161). Low-income, minority populations that live outside of the central region have little use-value for initiatives like the CAP. While investment into public transportation is certainly important, policies like this further isolate vulnerable populations into transit deserts. However, Farmer notes that transit infrastructure has the potential to do the opposite: "In a more egalitarian policy-making environment, public transportation policy can be a means to reduce the effects of hyper sociospatial racial segregation" (Farmer 2011, 1158).

iv. Transit-Dependent Populations

The populations that live in regions with lesser access to transit are significantly less likely to own cars than other populations due to a variety of class and race-related factors. Unfortunately, due to demographic characteristics, transit-dependent populations are more likely to reside in areas classified as transit deserts. Junfeng Jiao and Maxwell Dillivan (2013, 36) articulate, "Transit-dependent populations mark an increasingly important demographic of people who often are marginalized from society and excluded from access to employment, retail, and overall participation in society." This exclusion from society recalls earlier mentions of this paper that refer to public transit as a driver of mobility and opportunity not only for individuals, but also the city as a whole. Genevieve Giuliano (2005, 69) echoes this: "transit is critical to the economic well-being of the nation's largest central cities, and mobility is critical to the poor, the elderly, the disabled, and those who cannot or will not drive." Marcia Lowe discusses the pitfalls of car dependency, noting that urban automobile use is not sustainable. She advocates for planning that is centered on human movement as opposed to private, car transport; this implies an increased use of public transportation that can be supplemented with walking and cycling. Additionally, she explains that large cities in the United States boast much

lower transit ridership data when compared to European and Asian cities of similar populations - she argues that this reflects automobile dependence. Drawing on these points, she concludes that “in both rich and poor countries, serving the needs of people who do not have cars is crucial for creating a sustainable transport system” (Lowe 1990, 273). Unfortunately, the current spatial arrangement of transit access in Chicago means that the very same people who live in transit-scarce regions are limited to using public transit in order to access good and services, as well as commute to work.

v. Job Access

In their article, “Within Cities and Suburbs: Racial Residential Concentration and the Spatial Distribution of Employment Opportunities across Sub-Metropolitan Areas,” Michael Stoll, Harry Holzer, and Keith Ihlanfeldt detail their study of the spatial relationship between job availability and job access. They note that commuting times to work via public transit are usually much higher than private forms of transportation, especially when commuting to white suburbs, where low-skilled, entry-level employment is more frequently found. This suggests that that “real wages net of travel time costs are significantly reduced if workers living in black or Latino central city areas travel to low-skill jobs in white suburbs by public transit” (Stoll, Holzer, and Ihlanfeldt 2000, 217). Occasionally, jobs are inaccessible altogether due to distance from public transportation stops. shows that with the understanding that “transportation planners commonly define distances that are less than a quarter of a mile away from a public transit stop as accessible and those farther away as inaccessible...nearly half of all low-skill jobs in white suburbs are inaccessible by public transportation” (Stoll, Holzer, and Ihlanfeldt 2000, 217). This definition of inaccessibility will be utilized in our research, as we identify transit deserts in Chicago.

II. Planning Decisions, Public Transport, and Public Well-being

Access to public transit can both influence and have a correlative relationship with access to resources that provide health and wellness benefits to residents of a city. Often, the link between these two element is socioeconomic status. As we've highlighted so far, low-income and minority populations with little access to transit links are often the most dependent on it in order to access basic goods and services, which are located outside of their neighborhoods. For example:

> Commercial sector disinvestment makes African-American, Latino, immigrant, and working-class communities more dependent on public transit to access the meager and dispersed services in their communities. Additionally, transit infrastructure has the potential to spawn transit joint development that can contribute to more economically viable communities. (Farmer 2011, 1164)

In the following sections, selected indicators will be analyzed in terms of their spatial relationship to vulnerable, transit-dependent populations. Again, these indicators are pharmacies, green space, government assisted food programs, and public technology.

i. Pharmacies

One of the indicators of health and well-being we are observing in order to analyze the relationship between transit deserts and areas that lack access to public resources is that of pharmacies because of their function as an important health service. To inform our own research, we are drawing from previously written works on access to health care services as well as studies on transportation accessibility. The literature we are building on includes case studies conducted in the City of Chicago (which will enlighten our own research covering the same extent), as well as spatial-analysis and GIS based papers that evaluate how accessible health care is via transit, and how areas that are serviced by institutions such as clinics, pharmacies, and hospitals.

In their cross-comparison of previous health care access studies, Syed, Gerber, and Sharp (2013, 987) found that “3.6 million people do not obtain medical care due to transportation barriers” and of this observed population, “individuals were more likely to be older, poorer, less educated, female, and from an ethnic minority group.” In the case of an incredibly segregated Chicago, the relevance of race, income, and education is especially astounding. From the Syed, Gerber, and Sharp’s conclusions, we want to see how transportation barriers can affect communities in Chicago, and whether there would be evident socio-economic impacts. To do this, we turned our attention to Chicago case studies regarding either health care, transit, or both.

In a primarily spatially/GIS-based study conducted in Chicago in 2003, Luo and Wang observe three major areas of Chicago “enjoy the best accessibility,” including the ‘Loop’, (downtown Chicago), Lincolnwood on the far Northside, and Chicagoland western suburbs near Elmhurst-Oak Brook-- that last of which are part of Cook County but not in the City of Chicago. These areas are also not among the most minority or low-income residential areas in the city. On the opposite end of the spectrum, Luo and Wang found that areas with poor accessibility to healthcare include the South and areas near Midway Airport, on the southwest side of the city (Luo and Wang 2003, 876). The areas Luo and Wang refer to as the bulk of Health Professional Shortage Areas here, again, are largely low-income and minority areas. While their paper does not explicitly look at aspatial indicators like race, ethnicity, income, and education as factors into their otherwise spatial science oriented, their conclusions do help inform our intel on these areas of the city in relation to health and helps compare this distribution to the general demographic makeup of a segregated Chicago.

Luo and Wang follow up their 2003 GIS-based study of health care access in Chicago with a subsequent paper on healthcare access in the broader setting of Illinois, but with

additional considerations for aspatial or non-spatial elements. After establishing that “significant economic, linguistic and cultural barriers exist (for population-group HPSAs), [imply] the need for consideration of nonspatial factors,” Luo and Wang made modifications to their initial spatially oriented study. Luo and Wang make use of the following 5 variables: demographic variables such as age and sex, socioeconomic status (poverty, home ownership, median income), environment (“households with an average of more than 1 person per room, housing units lack basic amenities” which may contribute to ill health), linguistic barrier and service awareness (specifically looking at nonwhite minorities, education attainment, linguistically isolated families), and finally, transportation (vehicle ownership and populations dependent on public transit). Because of the larger extent of their research study, Luo and Wang find that “[physician] shortage areas based on population groups are mostly concentrated in urban areas” (Luo and Wang 2005, 143).

Looking back at the regions Luo and Wang observed to be Health Professional Shortage areas, the South Side and Southwest Midway Airport regions, another health-related study conducted by researchers at the University of Illinois in Chicago (UIC) find similar, low-access trends in these areas. In their paper about pharmacy deserts, or areas with low access to pharmacies, Qato et al. (2014, 1962) found that pharmacy deserts are “clustered primarily on the south and west sides of Chicago in segregated black and Hispanic communities.” The pattern of low access to pharmacies and health care persists in the South and Southwest regions of Chicago across these separate studies published almost a decade apart.

Qato et al. (2014, 1958) “found that throughout the period 2000–2012 the number of pharmacies was lower in segregated minority communities than in segregated white communities and integrated communities.” They further elaborated that “geographic accessibility of pharmacies varies based on the racial and ethnic composition of the city’s

neighborhoods, with the poorest access seen in segregated black and Hispanic neighborhoods. Such disparities appear to be worsening over time" (Qato et al. 2014, 1964). Qato et al.'s findings mirror those of Luo and Wang's, moreso their aspatial re-analysis of Health Professional Shortage Areas than in their relatively spatially focused 2003 publication. As far as Qato et al.'s point about pharmacy desert disparities worsening over time, we can look at the potential trajectory issues of access to health care can have on implementation of better public transit 'L' services-- especially when considering how dependent some group populations are of public transportation.

Throughout the observed study period, the researchers at UIC ultimately found that "the availability of pharmacies was significantly greater in segregated white communities and integrated communities, compared to segregated minority communities" (Qato et al. 2014, 1960). As we consider the regions highlighted by multiple studies as generally low-access (whether in terms of transit, health care, or both), it is important to acknowledge that "race and ethnicity also are associated with being transportation disadvantaged." "African Americans and Hispanics have lower mobility and use public transit at higher rates than does the general population," population groups that make up the aforementioned regions highlighted by these studies (Wallace et al. 2005, 77). With this information, we can approach our own research with specific segregated communities in mind. We can also address whether a relationship between transit access and access to health and well-being resources are issues that need to be addressed simultaneously, or at the very least, issues that need to be considered when implementing further expansion plans.

The health and transit-related literature reviewed for this particular section overwhelmingly points to the south and west/southwest side of Chicago-- areas that have historically housed low-income populations and ethnic minorities-- as regions that lack access to

basic transportation needs and health-care. In our examination and attempt to assert that transit deserts and areas that lack access to health and well-being resources are inherently connected, we find that these studies will be particularly insightful. We hope to shed light onto issues of inequity in Chicago, and likewise hope that future plans to expand CTA 'L' stations will consider better serving transit-dependent, high-need communities, and communities that have been historically underserved by public services.

ii. Environment and Green Space

Another indicator of health and well-being that we are employing in our research is access to nature and green space. While not typically thought of as a direct health issue, planning that includes elements of the natural environment has an effect on mental health and wellbeing, as well as on the way that people interact within public space. Nancy Wells, Gary Evans, and Yizhao Yang (2010, 126) explain: "Planners influence the size of the yards around homes; the configuration of neighborhoods; the number and character of parks and open space in a community; the quality of the air and water; the character, height, and density of housing; and the overall character of our communities. Planning also affects the distribution of environmental quality across neighborhoods, cities, towns, and wider regions." Setting aside space for town and city parks, as well as urban gardens, is one way to increase the amount of nature and green space members of a given community have access to.

There is a consensus among urban researchers this regular access to the natural environment improves cognitive functioning, particularly by capturing involuntary attention to relieve mental fatigue. One study in Chicago highlighted the restorative effects of nature by assigning 145 residents of public housing to similar buildings with different levels of environmental surroundings, such as trees and grassy areas. By measuring levels of functioning and well-being, "residents living in settings lacking vegetation reported more procrastination in

dealing with their major life challenges and indicated that their problems were more severe, long-standing, and insoluble" (Wells, Evans, and Yang 2010, 127). Parks also have physical benefits, and contribute to human health by encouraging exercise through walking, biking, and playing sports.

Access to green space and its effect on human health are also an important indicators for socioeconomic status. This illustrates the importance for environmentally-focused planning: "Trees and natural areas may also be a mechanism to draw people together, enhance social connections, and bolster a sense of community. Studies of low-income urban residents have found that spaces with trees and vegetation are associated with more social interaction and stronger neighborhood social ties among both younger and older adults" (Wells, Evans, and Yang 2010, 127). This kind of planning ideology also fights against unequal environmental exposure in low-income and racial minority communities.

The general quality and upkeep of parks and natural space directly influences how frequently it is used and how much it benefits the community. In minority neighborhoods, particularly in Chicago, these spaces are often neglected with regards to maintenance and overall condition. This not only deters people from enjoying the park, it also creates a space where safety is often a concern. In some areas, public urban parks have become places that are susceptible to and associated with crime. Stodolska et al., in their study of Mexican-American perceptions of public parks in Chicago, found that:

> Interviewees also observed that parks might serve an important function of helping to fight crime in the community. Parks were perceived as ideal places in which to provide sport and recreation programs for the children. Such programs would offer an opportunity to engage in productive activities and to form positive associations, which could counterbalance the influence of the gang culture. (Stodolska et. al 2011, 116)

In this way, socioeconomic status becomes a key link between access to nature and access to public transportation. As our research progresses, we anticipate that areas with little

green space will often also exist within transit deserts. It's also worth noting that through processes of "environmental racism," low-income, minority communities in urban areas also face increased exposure to pollution and insufficient sanitation; they lack or are denied access to ecological resources that other communities take for granted. Some interviewees in Stodolska et al.'s study noted that "natural environments in minority communities are frequently nothing more than "wastelands," full of trash and graffiti-clad walls" (Stodolska et al. 2011, 117). This concept of environmental racism also relates to transit, as "the path of light-rail or heavy-rail trains tends to be located adjacent to middle-class White neighborhoods while dedicated bus rapid transit, which tends to be slower and generates more air pollution than trains, tends to be developed for African-American, Latino, immigrant, and working-class communities" (Farmer 2011, 1163-4).

In addition to intersecting spatially with transit-scarce areas, areas of Chicago that have fewer parks and green spaces are also affected by lack of access to transportation. The similar characteristics of transit desert residents, transit-dependent populations, and the Mexican-American subjects of Stodolska study are clear. Many interviewees mentioned that in order to experience quality natural environments, one needs to travel to the distant suburban locations" (Stodolska et al. 2011, 117). Additionally, "Access to suburban park spaces...was hindered by the lack of automobiles among many people and inability to afford gas (individual-level characteristic related to the lower SES of the interviewees), or to obtain a driver's license due to their undocumented status" (Stodolska et al. 2011, 117). If these populations live within a transit desert, they are effectively isolated from green space and the benefits that come with it.

iii. Government Assisted Food Programs

In 2014, 1,302,885 Cook County residents, about ¼ of the county's population and over half of which also reside within the city of Chicago, participated in Illinois' food stamp program, SNAP (Supplemental Nutrition Assistance Program). This program assists individuals who do not have the ability to afford food for themselves or their family. SNAP reduces statewide hunger, and increases many individuals' health and well-being. Because food is a necessity that no human can live without, SNAP is especially important in helping to fill that void. Despite this, many low-income individuals in Chicago that do not own cars or live in areas with poor public transit access have to overcome spatial barriers in order to secure food. In this section, we will discuss the importance of SNAP, barriers that may keep individuals from using their SNAP cards, and the reasons for including farmers' markets in our map of SNAP acceptance.

Chicago residents who qualify for SNAP receive an Illinois Link card that works and looks a normal debit card. Individuals are able to check out at qualifying food stores with this card, however, there are requirements for a store accepting SNAP. The food store has to sell at least seven varieties of food in each of these categories (meat, poultry or fish, bread or cereal, vegetables or fruits, and dairy products) on a regular basis.

Many households rely on this food program to feed themselves and their family every day. Many of these struggling households in the United States are households with children, many with single parents. These households are struggling to pay for necessities that their children need, and the SNAP program allows them to spend their limited money on other necessities besides food. In a 2014 study, James Mabli used pre-existing facts from the USDA (United States Department of Agriculture) on the SNAP program combined with 3000 completed surveys from households using the SNAP program to discover key findings about child food security. With a "large sample size, carefully structured quasi-experimental research design, and

robust and statistically significant findings, this study provides convincing evidence of the association between SNAP and improved child food security" (Mabli 2014, 618) When a family can rely on SNAP to purchase food for their family, they are able to use their limited funds on other important necessities such as education costs, rent, health care, internet and utility bills, and transportation. "SNAP plays a vital role in the overall low-income safety net. Ensuring that benefits remain robust and that SNAP public outreach efforts continue are of great importance" (Mabli 2014, 617).

However, there are other ways in which SNAP use can improve: increasing the amount of individuals who use their SNAP allowances at farmers' markets. In their article, "Farmers' Market Shopping and Dietary Behaviours among Supplemental Nutrition Assistance Program Participants," Jilcott Pitts et al. explain: "Despite the fact that shopping at farmers' markets is a cost-effective way for individuals of limited income to purchase and consume recommended amounts of fruits and vegetables, there are barriers to farmers' market shopping" (Jilcott Pitts et al. 2015, 2408). These barriers keeping SNAP participants from shopping at farmers' markets contribute to the "lack of ability to redeem SNAP benefits at markets and lack of transportation to markets" (Jilcott Pitts et al. 2015, 2408).

If a family lives in a transit desert, and does not live near a SNAP accepting farmers' market, they have two unfavorable options: take a fair amount of time to get to that market or don't go at all. In a survey, SNAP participants stated that the largest barrier when trying to shop at the farmers' market is, ''Does not accept SNAP/food stamps/EBT'. One way to improve financial and social access is by expanding SNAP/EBT access and promotion at farmers' markets" (Jilcott Pitts et al. 2015, 2412). Most households using SNAP are households with children, many of those with single parents, working long hours to keep up with bills. Low-income families do not have multiple hours to travel and shop at a SNAP market. Opening

SNAP accepting farmers' markets in transit deserts would allow participants to shop in their own neighborhood. This would increase the shopping ability and access to healthy and fresh food. We will include farmers markets that accept snap in our analysis.

When an individual has the opportunity to shop at a farmers' market, they have access to many different varieties of fresh fruits and vegetables. Many farmers' markets provide produce that is organic, locally grown, and recently harvested, all of which benefit a consumer's health. Based on a large scale survey, Jilcott Pitts states that there is a "positive association seen between farmers' market shopping and produce consumption also suggests that efforts to increase farmers' market shopping among low-income consumers could improve diet quality and health" (Jilcott Pitts et al. 2015, 2412).

In regards to nutrition, the health and well-being of transit desert residents can increase in one of the two ways: increased amounts of SNAP accepting farmers' markets located in low-income, transit-scarce neighborhoods, or increased transit development in areas of the city that are poorly served by public transit. This would provide a higher percentage of these residents access to fresh and healthy food in their current, low-access neighborhood. Therefore, residents would increase their fruit and vegetable consumption, a benefit to physical health. Without these access solutions, those living in transit deserts are missing out out on an important public health service.

iv. Public Technology

Our last selected indicator of health and well-being for the purposes of our research is education, and further, public technology. While many may claim that we have moved into an era which relies solely on digital technology or that libraries will quickly approach a day when they are no longer a public necessity, that is wholly untrue. In fact, with the ever-shifting digital landscape, libraries are more important than ever, particularly from a spatial point of view and

how they ultimately relate to public transit, or lack thereof, in both urban and rural spaces. Along with this rise of digital technology has come the notion of the “digital divide,” a term coined by Lloyd Morrisett, in which he differentiates the information “haves” and “have-nots” (Hoffman 2000).

In a 2015 speech in Cedar Falls, IA, President Barack Obama stated “today, high-speed broadband is not a luxury, it’s a necessity” (White House Archives). Since 2009, government investments have resulted in over 100,000 miles of infrastructure for networks and 45 million more Americans have now adopted broadband. Through the ConnectED initiative under President Obama, goals have been set to connect 99 percent of students to broadband in educational settings. Beyond this, through the American Recovery and Reinvestment Act (ARRA) a total of $7.2 billion for broadband was utilized, however this infrastructure was mainly in rural areas rather than urban areas. Many American cities were sidestepped with this public policy. While some smaller amounts of the ARRA funds have been used for training and access in low-income urban neighborhoods, efforts to create affordable access to Internet in communities with high need have not been funded (Mossberger 2012, 772). In fact, according to a report issued by the Council of Economic Advisers, studies show that “there is substantial within-city variation in Internet adoption, and this variation is strongly correlated with household income” and that “income and geography help explain the digital divide.” Ultimately, they state that “closing the gap - between those who experience these social and economic benefits from Internet use, and those who do not - will require further efforts to reduce barriers in affordability, relevance, and computer literacy” (Council of Economic Advisers). Additionally, the digital divide extends beyond access, into the production of digital content that could assist individuals in finding employment.

Beyond efforts to close the digital divide, libraries and public access technology (PAT) are of ever growing importance to a variety of groups. As Larra Clark of the American Library Association states, **"**... the question 'do we need libraries now that we have the internet?' continues to plague the library community" (Clark 2007, 62)**.** She goes on to explain that according to a 2007 study that "73% of libraries report they are the only provider of free public internet access in their communities" (Clark 2007, 62) and that "...17.4 percent of communities have another public access point on which they can rely beyond the library" (Bertot 2009, 287-288). However, the importance of libraries also stretches to reasons of *how* and *why* users may need to access free, public internet. In Karen Mossberger's work, she explains that

> Less connected individuals, who do not have broadband at home, may manage to go online in various ways. Many, with and without home Internet connections, find a technology lifeline at libraries, community centers, and other places offering public access. Such public access sites offer training, support, and help finding information online. Additionally, they can build social capital as community gathering places and spaces for collective learning. (Mosserger 2012, 2496)

Furthermore, John Bertot outlines reasoning for public internet usage, claiming that

> "Around the United States, public library Internet access is relied upon by a wide range of segments of the community for a range of reasons - job seeking, educational resources, genealogy research, travelers looking to keep in touch with their families, e-government access, emergency information, and countless other activities in both everyday and extreme circumstances." (Bertot 2009, 286)

Specifically, libraries frequently offer "...licensed databases (85.6 percent), homework resources (68.1 percent), digital reference or virtual reference services (57.7 percent), e-books (38.3 percent), and audio content such as podcasts and audiobooks (38 percent." (Bertot 2009, 288).

It is clear that libraries are an institution of importance to various groups and offer an expanding array of service as we move deeper into a digital-dependent realm. However, with this comes the digital divide; while there have been efforts nationally to mitigate it, as discussed above, it is still prevalent in urban centers such as Chicago. One key part of the digital divide stems from a lack of education for those who do not have the skills and knowledge to use these

ever-changing technologies effectively. Mossberger explains, “Also required are the skills to use technology effectively…This includes technical competence to use the necessary hardware and software, as well as the information literacy needed to find, comprehend, evaluate, and apply the online information” (Mossberger 2012, 2496).

Recently, many government and non-profit groups have taken steps to reduce the Chicago digital divide, such as the City of Chicago and Connect Chicago. With a lack of funding from the ARRA, these groups have worked to provide Internet access and training to the Chicago community through several initiatives. Connect Chicago is an organization that has a steering committee with representatives from Chicago Public Library, the Innovation and Technology Department for the City of Chicago, Smart Chicago Collaborative, Chicago Public Schools, and other prominent groups. Connect Chicago describes itself as “a cross-sector civic leadership initiative that seeks to make Chicago the most digitally skilled, connected, dynamic city in America.” 250 public locations throughout the city have already been implemented that train residents in computer usage, offer free Internet access and, strive for residents to “improve their health, education, and economic potential through technology.” In comparison, the City of Chicago and Mayor Rahm Emanuel have developed the Chicago Technology Plan which is founded on a “commitment to modern infrastructure, smart communities, and technological innovation” with one of their key goals being to “increase options for digital access across the city” (City of Chicago).

Finally, there are strong effects and implications when it comes to access to public technology, ultimately tying into well-being. In Karen Mossberger’s work, she states:

> Not having access to broadband applications limits an individual's ability to participate in 21st century American life. Research indicates that Internet use enables both political and economic participation in a number of ways, and that exclusion from this technology can exacerbate existing inequalities experiences in low-income urban communities, acting to further detach individuals from the mainstream of society. (Mossberger 2012, 773-774)

Through this, it is clear that the issue of internet access is a highly spatialized one, and is not longer just a frivolous amenity, but a true necessity in the current times. Additionally, while one might assume that it is easy enough to stay connected especially with the growing prevalence of smartphone usage to access the internet, that is not necessarily enough, which is why home broadband access and/or proximity to public technology remains vitally important. In Mossberger's studies, she writes:

> Moreover, smartphones are not bridging the gap in disadvantaged communities. Multilevel statistical models show inequality in both Internet access and economic and political activities across geographic areas or communities. Technology disparities that are patterned by place have implications for opportunity and equity at the neighborhood levels. (Mossberger 2012, 2492)

Clearly, access to internet, public technology, training, and resources remains important, especially in an ever-expanding digital age. With relations to one's well-being, health, job status, education, public participation, community-building and more, being digitally knowledgeable and present is a key part of public wellness, even if often assumed otherwise.

Some current challenges in the realm of public access technology are outlined by John Bertot in a case study of 35 public libraries. He emphasizes that the "quality of Internet and public commuting access is becoming a considerable strain on libraries as the services and content of future Internet platforms and applications...continue to require greater bandwidth and computing capacity." His findings show that "there was a range of technology budgets in the public libraries interviewed - from no technology budget, to a substantial technology budget, and many points in between." Ultimately, Bertot emphasizes that public access technology services are a key offering but that the "extent to which public libraries can continue to absorb, update and expand their PAT depends on the resolution of a number of staffing, financial maintenance and management, and building barriers" (Bertot 2009, 89) To put it simply as one librarian described, the PAT environment is like "being a gerbil on a treadmill. You go round and round

and never really arrive," a clear likening to how there is a perpetual cycle for libraries to plan and implement different PAT resources and services, followed by unending and evolving planning and implementation as technologies rapidly change (Bertot 2009, 86).

Overall, it is clear that libraries serve an important role, including offering Internet access, technology training, and a host of other PAT services. Beyond this, it is clear that Chicago residents have unequal access to internet and low rates of broadband adoption in various areas, primarily those in neighborhoods with high economic need. Ultimately, libraries and technology resources are of dire importance to one's well-being in order to successfully engage within their communities and offering pathways and tools to success in the realm of jobs and education in this modern digital age. Seeing as many of the residents who lack access to internet and adoption of home broadband are minorities and those who reside within low-income areas, this likely coincides with the prevalence and spatial locations of transit deserts. Thus, the prevalence of library and public technology locations can be utilized in examining where they exist in relation to transit lines, and determining if they do indeed fall within the aforementioned Chicago transit deserts.

Methods:

As previously mentioned, our research calls for the creation of four separate choropleth maps for each of our indicators, accompanied by a final quintile ranked map that combines the ranks of a census across all four indicators for the spatial analysis portion of our project. These maps highlight the spatial distribution of our selected indicators of health and well-being, using census tracts as our enumeration units. In order to illustrate how transit systems both coincide with and influence access to these resources, we will overlay the Chicago Transit Authority's light-rail 'L' lines over each choropleth map. In a short explanation following each map, we will

explain significant takeaways that will inform our analysis. Our summary map will depict overall access to both transit and public health and well-being resources. Contiguous census tracts that fall within the lowest quintile class break will be grouped, to further inform our analysis.

To complement our map-based visual analysis, we are reaching out to individuals associated with the Chicago Transit Authority as well as community organizers and activists for interviews. Through these interviews, our goal is to gather the perspectives of CTA representatives and community representatives alike. The community leaders that we've reached out to have interested based in public transit activism and non-profit community organizing. For example, Kimberly Wasserman-Nieto of the Little Village Environmental Justice Organization (LVEJO) has worked extensively with LVEJO organizers to "reinstate a job access bus line, build on the recent victory of a new 23 acre park to be built in Little Village, and continue the 10 plus year campaign that won the closure of the two local coal power plants to fight for remediation and redevelopment of the sites" (LVEJO, n.d.). Wasserman's socio-environmental activism, paired with her previous work in advocating for more accessible transit in her Southwest community, can inform our research by providing us with the perspective of communities that bear (or have beared) the burdens of transit inaccessibility.

We have decided to use interviews instead of surveys/questionnaires in order to collect more personal information about the Chicago Transit lines and their accessibility to Chicago residents. "Unlike a questionnaire, the aim of an interview is not to be representative (a common but mistaken criticism of this technique), but to understand how individual people experience and make sense of their own lives" (Clifford, French, and Valentine 2010, 111). While interviewing, new topics may come up from interview to interview that brings us new insight into our question at hand. While we will have standard questions to ask all interviewees, we hope that each interviewee brings us new information on the topic of access and ideas for system

improvement. “This sort of conversation offers that chance for the researcher and interviewee to have a far more wide-ranging discussion than a questionnaire would allow” (Clifford, French, and Valentine 2010 111). We will carefully consider the way that we pose our questions to interviewees, so that they feel comfortable to answer in their own original way. It is extremely important to “Try not to phrase questions which impose an answer on your interviewee. ‘Tell me about…’ is an effective way of encouraging interviewees to talk about an use in their own words” (Clifford, French, and Valentine, 2010 121). This strategy aims to prevent receiving answers that are influenced by the interviewer's words.

Picking questions to ask is another key part of the interview planning process. We have created two sets of key questions to ask. The selection of the set depends on which group of people the interviewee is in (Chicago Transportation Authority employees vs. Chicago community members). These key questions come with follow up inquiry, in order to understand the interviewees opinions to the fullest. The follow up questions, “may include descriptive questions which ask for information on activities/experiences’ structural questions which focus on how and when events occur; and thoughtful questions which explore meanings, feelings and opinions” (Clifford, French, and Valentine 2010, 119). The follow up questions hone in on specific interests of the interviewee and specific topics that would ideally be of value to our research topic.

Results:

The following set of maps depict each of our selected health and well-being indicators by representing a total count per census tract. Each map also includes an inset, depicting the Loop, and an overlay of the CTA’s ‘L’ lines. The phenomena represented in our four maps are pharmacies, green space, SNAP locations, and public technology. While each map looks

different, there are several trends, the most important being that each public health and well-being indicator is abundant in the Loop. In our analysis that follows these results, we will highlight areas with the least access to our well-being resources through a summary map, produced using a quintile ranking process. Ultimately, these findings will be contextualized with important insights from our interview with community activist, Kimberly Wasserman-Nieto.

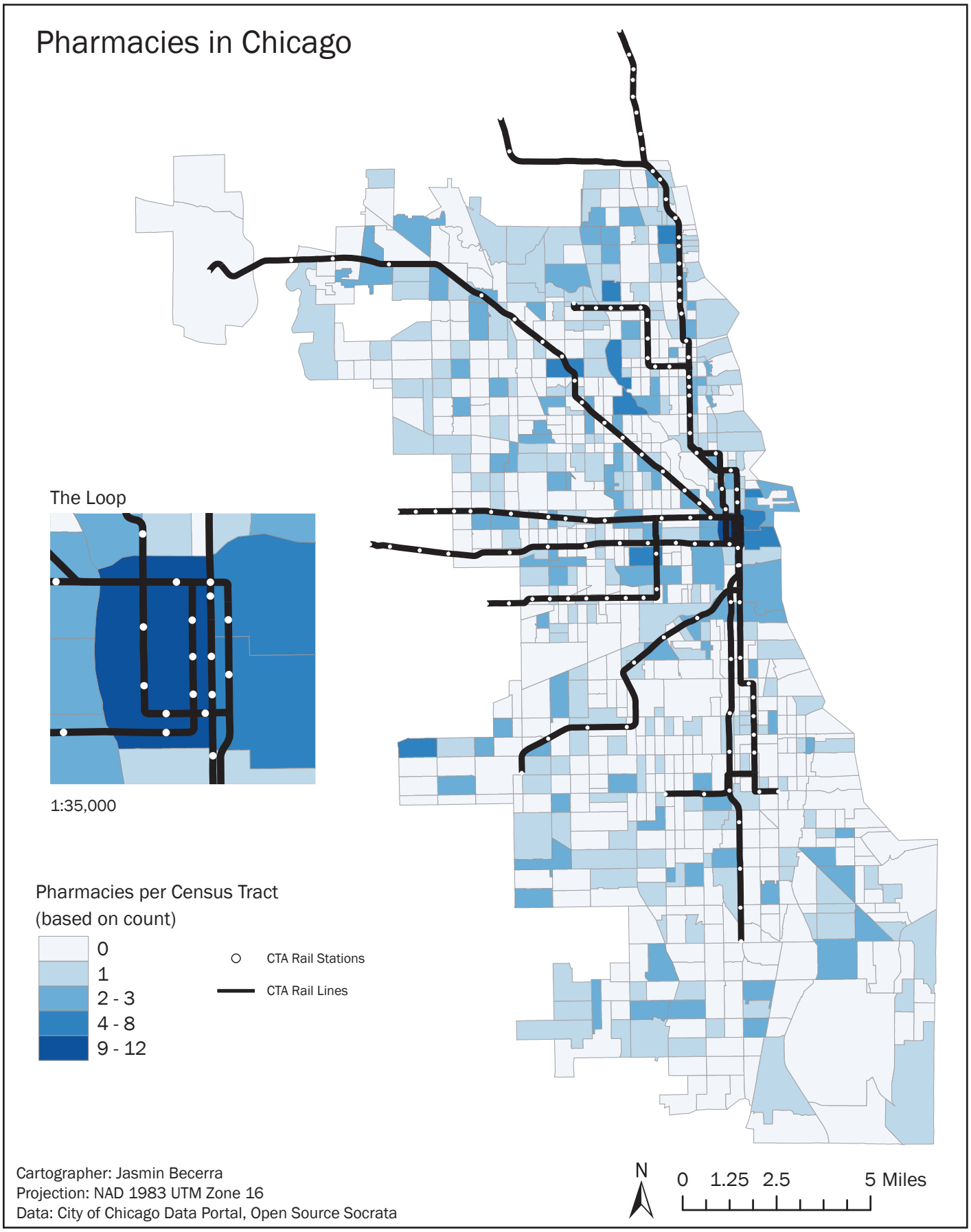
Pharmacies in Chicago
The Loop
1:35,000
Pharmacies per Census Tract
(based on count)
0
1
2 - 3
4 - 8
9 - 12
CTA Rail Stations
CTA Rail Lines
Cartographer: Jasmin Becerra
Projection: NAD 1983 UTM Zone 16
Data: City of Chicago Data Portal, Open Source Socrata
N
0 1.25 2.5 5 Miles

Figure 3

The map above (Figure 3) is a visual representation of pharmacies in the City of Chicago. The map depicts the distribution of pharmacies per census tract based on count computations.

As visible on the map, the census tracts with the highest count of pharmacies appear to be concentrated near the Loop. There are a few pockets of census tracts with relatively dense counts of pharmacies outside of the Loop (including outlier census tracts with medium to high counts of pharmacies on the far Southwest Side -- regions with significant low-income minority populations where one might otherwise expect low counts of pharmacies), but census tracts with more than four pharmacies are mostly dispersed along the northern half of the city and near the Loop/downtown area. The inset map of the Loop emphasizes this particular cluster well when compared to the larger map of the entire Chicago area.

While present on the North Side, South Side, and Southwest Side, clusters of census tracts with zero pharmacies are overwhelmingly located on the southern half of the city, while those present in the North Side tend to be intermixed with census tracts with a count of one or greater. Looking specifically at the overlay of train lines, one can observe that there are more census tracts with low counts of pharmacies between the Orange Line and Red Line on the South Side, between the Orange Line and Pink Line on the Southwest Side, and the area surrounding the Red and Green lines (mostly east and south of these rail lines) on the far South Side. Areas in the northern half of the city with low access to pharmacies include the regions between the Blue Line and Green Line on the Northwest Side.

Overall, most contiguous census tracts with little to no access to pharmacies lie in locations away from existing rail lines as depicted on the map. With little to no access to rail lines nor adequate access to pharmacies to purchase medicine and prescription drugs per the results displayed on the map, these areas are left severely underserved.

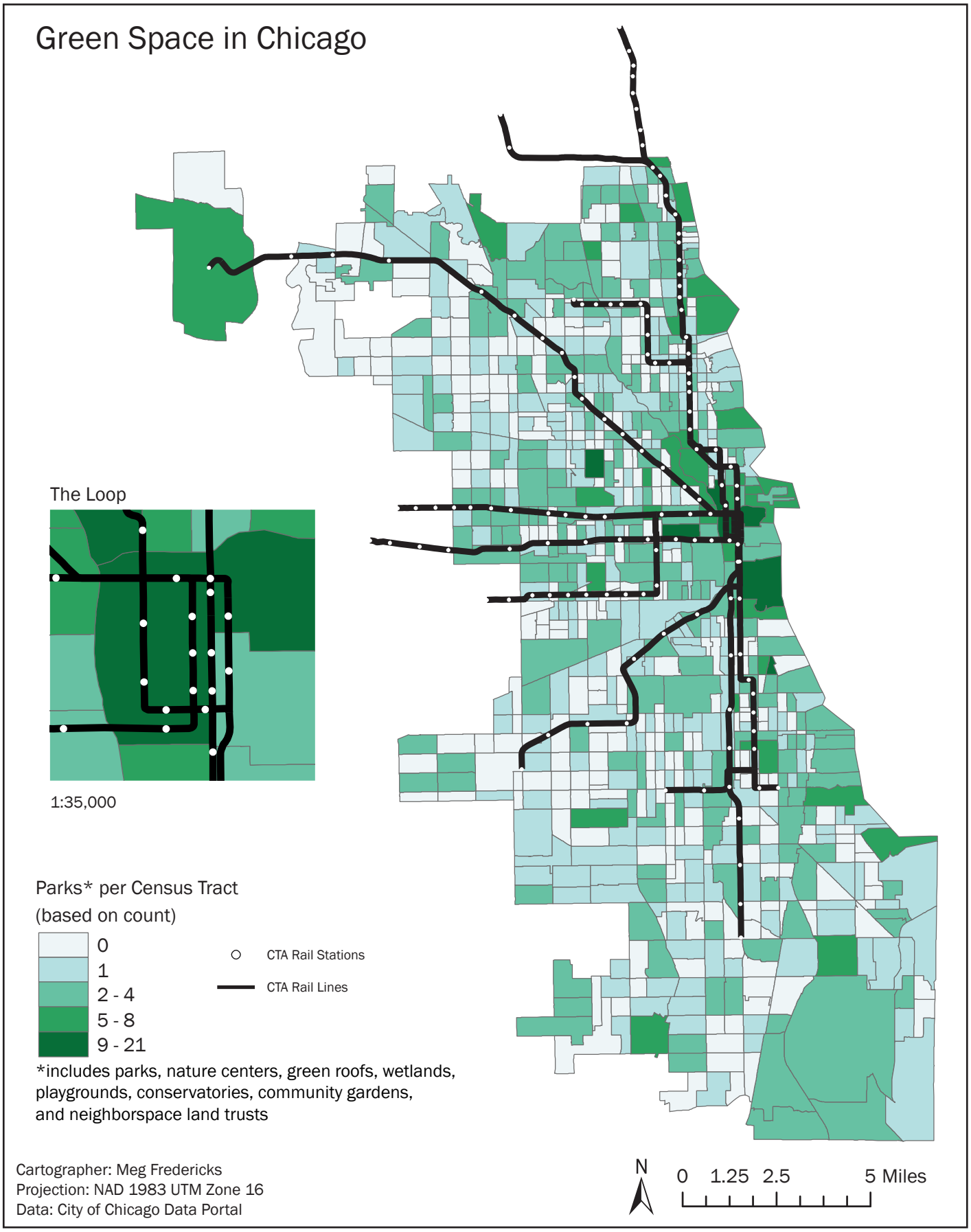
Green Space in Chicago
The Loop
1:35,000
Parks* per Census Tract
(based on count)
0
1
2 - 4
5 - 8
9 - 21
CTA Rail Stations
CTA Rail Lines
*includes parks, nature centers, green roofs, wetlands, playgrounds, conservatories, community gardens, and neighborspace land trusts
Cartographer: Meg Fredericks
Projection: NAD 1983 UTM Zone 16
Data: City of Chicago Data Portal
N
0 1.25 2.5 5 Miles

Figure 4

This map (Figure 4) depicts the variation of public access to green space in Chicago. For the purposes of this analysis, green space refers to areas designated by the City of Chicago as parks, nature centers, green roofs, wetland, playgrounds, conservatories, community gardens, and Neighborspace Land Trusts, which refers to protected community garden areas. This data is represented by the number of each of these phenomena within each census tract. It's apparent on the map that the highest densities of these green spaces are found closer to the Loop. It also appears that generally, there are more designated park and green spaces on the North side of the city than the South side. Also, there is a consistent amount of green space along the shoreline, which can likely be attributed to lakeside parks and beaches. As the CTA train lines extend outward from the city, they are closely related to incidences of green space, up until a certain distance, when green space becomes scarce altogether. While there are pockets of scarcity on the northwest region of the city, between the green and blue lines, most of the census tracts that fall in the lowest class break, with no designated "green space" within them, are located in the south and southwest regions of the city.

The areas in close proximity to the ends of the southbound Red, Green and Orange Lines fall within the lowest class break as well. Large, consecutive segments of the space between these two lines also fall within that classification. One of these contiguous areas with no parks or green space are on the far South side. Perhaps the largest and most striking uninterrupted segment lacking parks and green space is the area just south of the last Orange Line stop, which wraps both father west, and east around along the south side of the Orange Line back towards the city. The spatial distribution of green space on this map of the city of Chicago ultimately suggests that many transit-scarce regions also lack access to the natural environment, and the physical, mental, and social health benefits that come along with it.

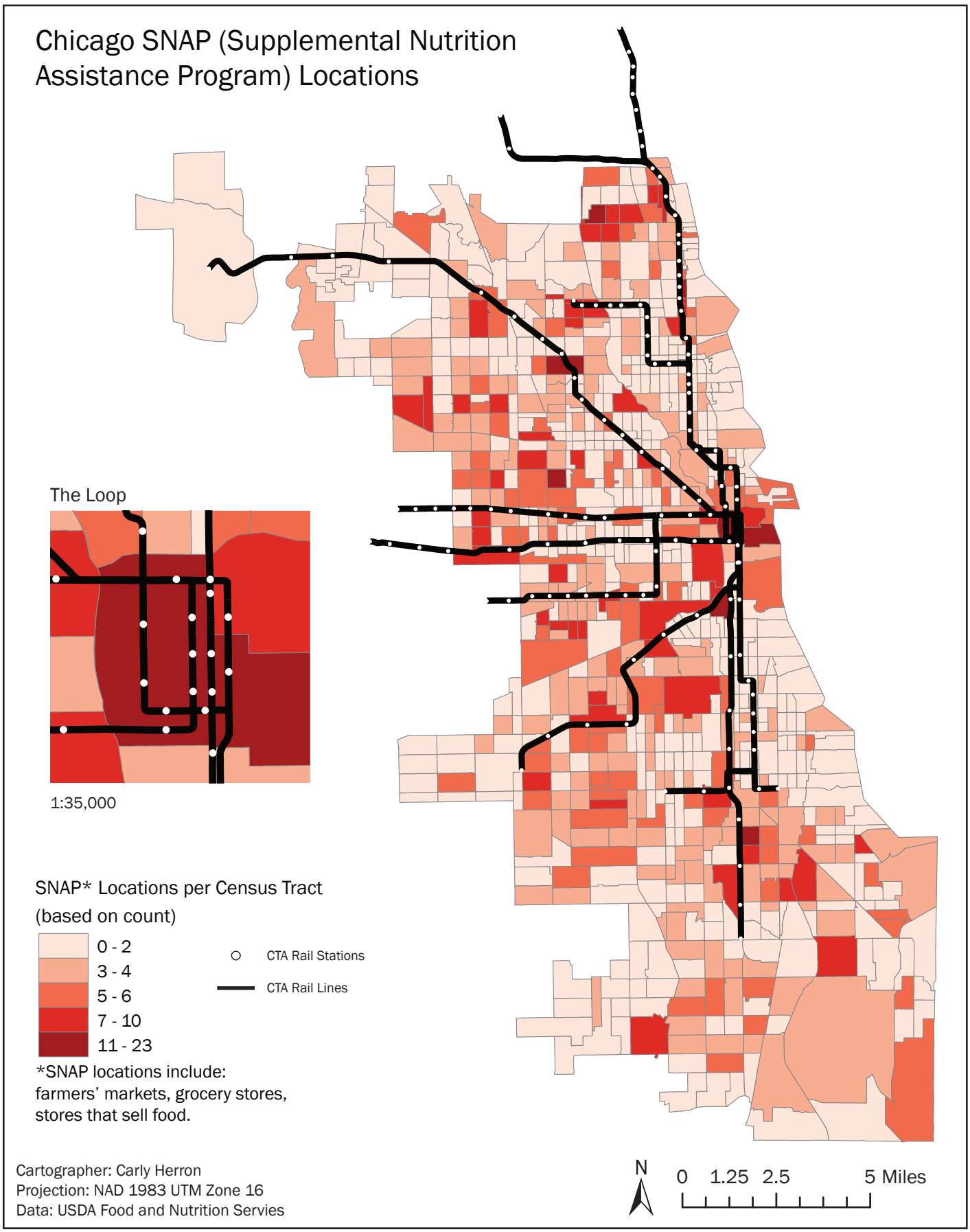
Chicago SNAP (Supplemental Nutrition Assistance Program) Locations
The Loop
1:35,000
SNAP* Locations per Census Tract
(based on count)
0 - 2
3 - 4
5 - 6
7 - 10
11 - 23
CTA Rail Stations
CTA Rail Lines
*SNAP locations include:
farmers' markets, grocery stores,
stores that sell food.
Cartographer: Carly Herron
Projection: NAD 1983 UTM Zone 16
Data: USDA Food and Nutrition Servies
N
0 1.25 2.5 5 Miles

Figure 5

The map above (Figure 5) shows all the locations that accept SNAP (Supplemental Nutrition Assistance Programs) in the city of Chicago. There are 2,167 locations set in this map, ranging from farmers markets, grocery stores, to stores that sell food. SNAP locations need to be available those who need it, in order to assist the underserved communities in a city. If low-income individuals do not have SNAP locations in their neighborhoods, they need to be able to get to those places using public transportation. Because of this, we will now focus on low-income regions, lacking both SNAP locations and 'L' stops within walking distance: south, southwest, and the northwest transit deserts that have little to no SNAP locations in their census tract.

There are many transit deserts in Chicago with 0-2 locations that accept SNAP, depicted in the map with a light pink. These low-access areas tend to group together, particularly on the south, southwest, and northwest side. Directly south of the Loop, there is a large transit desert containing a grouping of census tracts with 0-2 SNAP locations. Between the Red and Orange lines, there is a large transit desert containing many chunks of census tracts with 0-2 SNAP locations. This correlation between transit desert and SNAP underserved areas also occurs in many census tracts between the Blue and Green lines. Overall, many south, southwest, and northwest regions in the city are transit deserts, underserved by SNAP, therefore, isolating residents from the health and wellbeing associated with purchasing food.

Looking to the southwest and southernmost tacts, on the border of the city proper, we reach severity; multiple of these light pink regions on the edge of the city proper have 0 SNAP locations. Also, the CTA 'L' lines do not reach this area of the city. The further away the census are from the 'L' lines, the larger the problem becomes. This maps shows that some of the poorest neighborhoods, furthest away from public transit, also have no access to SNAP

locations in their neighborhood. And as we said before, these are the citizens who need SNAP most.

One outlier we found is the larger square census tract on the southwest side, with 7-10 SNAP locations. While this census tract is located in a transit desert, it has plenty of food stores that accept SNAP in the area. This is benefits the health and wellbeing for residents in and surrounding this census tract in particular.

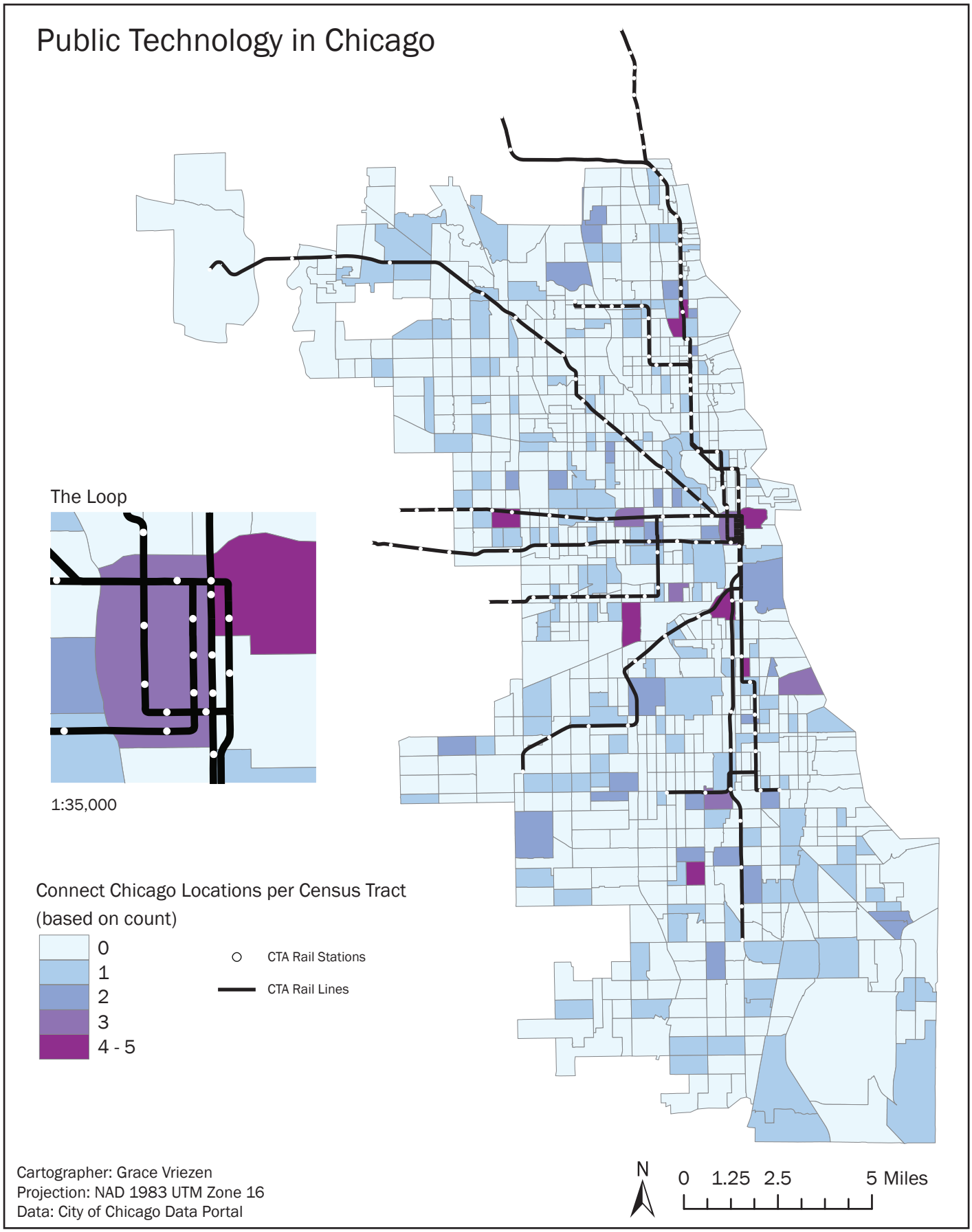
Public Technology in Chicago
The Loop
1:35,000
Connect Chicago Locations per Census Tract
(based on count)
0
1
2
3
4 - 5
CTA Rail Stations
CTA Rail Lines
Cartographer: Grace Vriezen
Projection: NAD 1983 UTM Zone 16
Data: City of Chicago Data Portal
N
0 1.25 2.5 5 Miles

Figure 6

The map above (Figure 6) depicts “Connect Chicago” locations throughout the city, taken from the City of Chicago Data Portal. These locations are defined by as “a loose network of more than 250 places in the city where internet and computer access, digital skills training, and online resources are available - for free” (Chicago Data Portal). This map shows the data displayed as the number of locations within each census tract. As anticipated, many of the public technology resources are found near the Loop, as seen in the inset portion of the map. Furthermore, an abundance of areas with no public technology resources can be seen in the areas with the lightest blue. While these areas do tend to fall throughout the entirety of the city, it should be noted that there are more areas interspersed with public technology locations in the North Side of Chicago, whereas the South Side has larger swatches of contiguous tracts without any technology resources. Particularly, these areas lie south of the Red Line and the periphery of the nearby the Green Line. Comparatively, the area between the blue and brown line in the North Side also has several tracts lacking public technology access, but is interspersed with more tracts with at least *some* Connect Chicago locations.

While 259 Connect Chicago locations may seem like an adequate amount of public technology access for a city of its size, the map shows strong indications of a fragmented spatial distribution of these locations, potentially affecting those who do not reside in proximity to train lines. This can further exacerbate such transit inequalities for those who are part of minority groups and/or reside within a low income area. Overall, it is clear that the transit-scarce southern side of Chicago lacks adequate access to public technology. The overall spatial distribution of public technology and train lines throughout the city ultimately suggests that there are key areas lacking access to mental and social health benefits afforded by public technology, thus having larger implications in terms of the potential for economic, educational, and political involvement of residents.

Analysis:

I. Composite Spatial Summary

After producing four individual maps covering our selected health and well-being indicators, we compiled our collective data in order to determine our **Key Underserved Areas** (KUA)**,** as illustrated below in Figure 7.

The first step of carrying out a spatial analysis of our mapped well-being indicators was by implementing a quintile ranking process. The purpose of this process is to compile each health and well-being indicator into one comprehensive measure in order to create an overall indicator for well-being. This was done by examining each of the five class breaks on the maps, and assigning a value from one to five, with one being assigned to the lowest class break, and five to the highest class break. This allowed for an overall range, with the lowest possible measure being zero and highest measure of 20. Given our data, our comprehensive measure of well-being indicators fell between four and 19, with higher values showing areas with a high level of overall well-being.

The next step of the spatial analysis process was to implement walkability buffers. As based on the literature of Stoll, Holzer, and Ihlanfeldt's discussion of transit and access, we set the distance of a walkable area to one quarter mile. By implementing these buffers, it allowed for the exclusion of various census tracts that fell within a walkable proximity to L lines.

After implementing the quintile ranking process and adding the walkability buffers, the final step of analysis was to group polygons together in order to determine where each KUA is located. This was done by first removing the stroke around each of the census tracts in order to create a clearer visual indicator of how each census tract runs together contiguously. From this, were were able to examine the areas with common values. We identified each area that had multiple polygons with the lowest well-being ranking, indicating these areas by outlining them in

blue. With this process, we included any that were contiguous, excluding those that fell in the area of a walkability buffer. Overall, this allowed for us to create a strong visual indicator of where each KUA falls within the city of Chicago.

The final step of the spatial analysis process was to examine each KUA and cross-check it with various Chicago neighborhoods, as supplied by Chicago Data Portal. By creating a map of each neighborhood and overlaying each KUA into the map, followed by an examination of the race and income data of each area, this allowed insights into the overall context of each KUA.

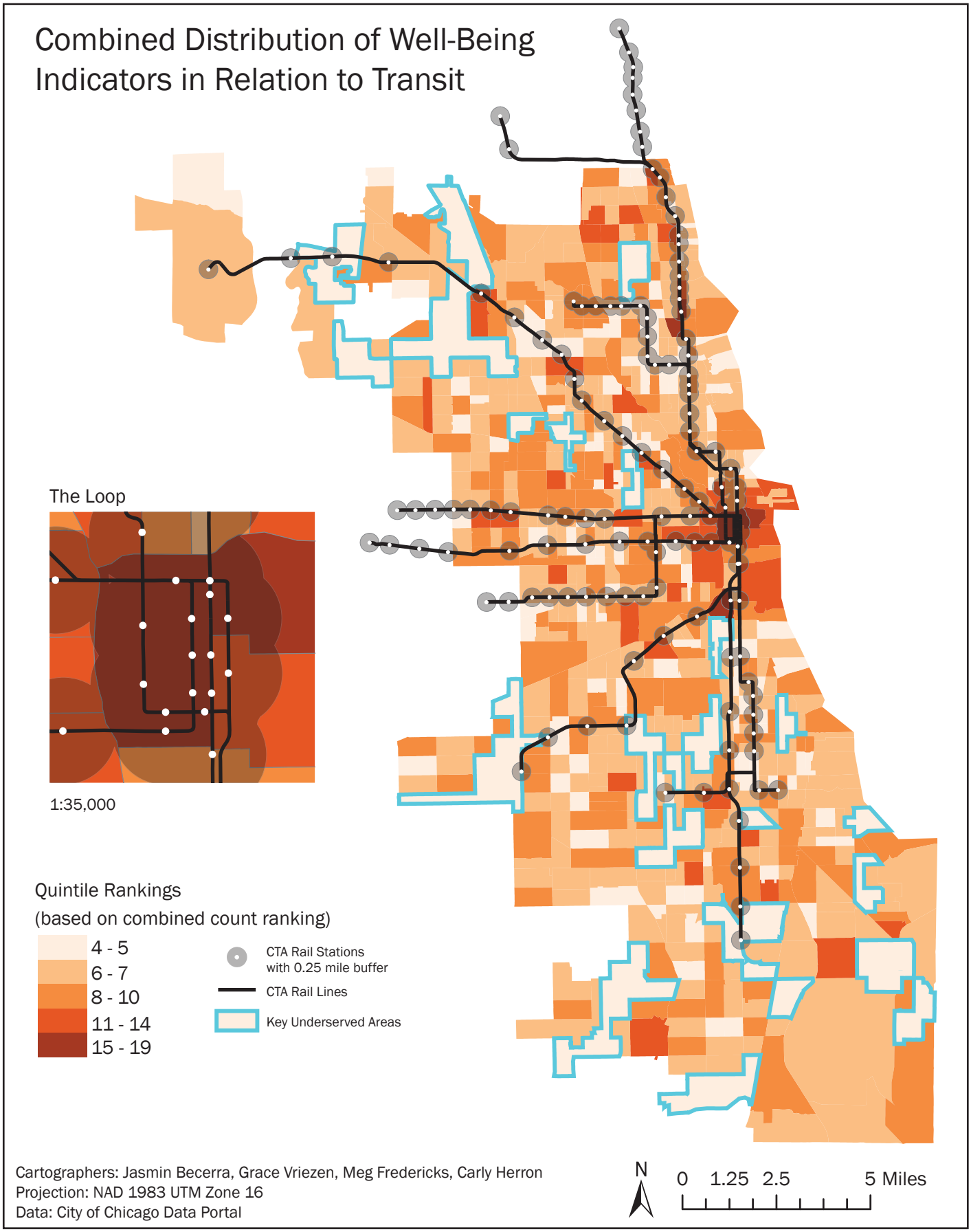
Combined Distribution of Well-Being Indicators in Relation to Transit
The Loop
1:35,000
Quintile Rankings
(based on combined count ranking)
4 - 5
6 - 7
8 - 10
11 - 14
15 - 19
CTA Rail Stations with 0.25 mile buffer
CTA Rail Lines
Key Underserved Areas
Cartographers: Jasmin Becerra, Grace Vriezen, Meg Fredericks, Carly Herron
Projection: NAD 1983 UTM Zone 16
Data: City of Chicago Data Portal
N
0 1.25 2.5 5 Miles

Figure 7

II. Interview Insights

To complement our quantitative and map-based visual analyses, we interviewed Goldman Prize-winning community activist and executive director of the Little Village Environmental Justice Organization (LVEJO), Kimberly Wasserman-Nieto. Figure 8 depicts a word cloud of the most frequent words and phrases from our interview.

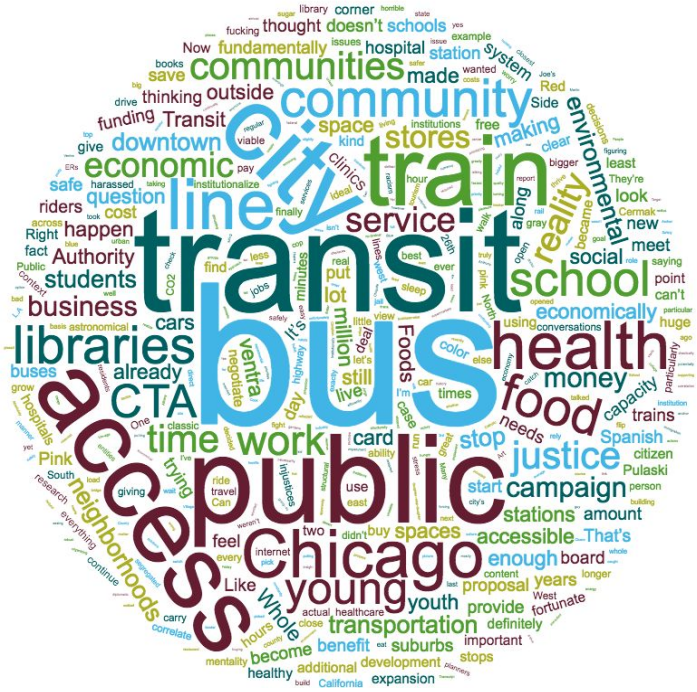

Figure 8. Word cloud of Kimberly Wasserman-Nieto Interview. November 2017.

Wasserman-Nieto was eager to share with us the story of LVEJO's campaign for a 31st street bus, an effort to improve transit services in Little Village. They faced several obstacles along the way; LVEJO had to shift their social justice approach into a business-oriented proposal that would appeal to the CTA in order to be taken seriously, and also experienced difficulties collaborating with Bridgeport activists-- an issue Wasserman-Nieto partly attributes to underlying tensions between communities in an otherwise segregated city.

LVEJO's mission for the 31st street bus campaign was to not only make buses accessible to residents of Little Village, but to provide convenient transit for people commuting

to work/local businesses, and a safe mode of transportation for youth to commute to the Little Village Lawndale High School. She feels that African-American students and students not from the western side of Little Village "[have] a higher chance of being assaulted or attacked walking through certain parts of the neighborhood" (Wasserman-Nieto Interview 2017). As such, safety for youth of color was a frequent concern for Wasserman-Nieto when evaluating the city's current rail lines.

In addition to safety, Wasserman-Nieto emphasizes the need for affordable transit for communities struggling with both economic barriers and accessibility to health centers and public resources. Such improvements and changes can help improve conditions of disparity--especially for residents living in food deserts, or in communities with sparse library and educational resources.

Wasserman-Nieto cited CTA fares as an immense economic burden for community members looking to utilize train services:

> "The ever increasing cost of the train also is a huge burden to community members. If our pay isn't going up, but the cost of transit and gas and transportation *is*, that's going to become unstable at some point. It already is. So I think people are definitely biking more, walking more-- and walking in temperatures and conditions that aren't the safest for them. Or also having to buy crappy cars, and investing their money into that. The economic stress that puts on people… [pause]" (Wasserman-Nieto Interview 2017).

The alarming cost to utilize train services essentially pushes community members to spend more money on gas, or walk in dangerous conditions which ultimately compromises their safety.

In regards to economic stress, Wasserman-Nieto explains her frustrations with how easily people can correlate stress with economy, but not to the environmental injustices that accompany both:

> "I think a lot of times people don't correlate-- they correlate stress with economy but they also don't correlate the environmental injustices that go along with that. So, if you're already stressed, being economically disadvantaged-- most likely if you're a person of color, you're gonna be economically disadvantaged in an environmentally unjust community. So on top

> of that, you're also having more health issues across the board. The air you're breathing is probably not gonna be the cleanest, the access to good food is not gonna be the best. So how do low-income communities of color who are already dealing with environmental injustices, and dealing with economic injustices, where do they catch a break?" (Wasserman-Nieto Interview 2017).

Here, the different layers of disadvantages and injustices stack up and create a weight of burden for communities-- especially communities of color. In linking transit to economic barriers, stress, and environmental justice, Wasserman-Nieto helps us highlight that public transit access issues *are* public health and well-being issues.

One of the specific examples of economic burden that Kimberly Wasserman-Nieto cites is the inaccessibility of Ventra as a CTA fare card system. Commuters can purchase and load Ventra transit cards using Ventra Vending Machines (pictured in Figure 9), which are available at train stations though also available online and at Currency Exchanges. However, these alternative methods often come with additional charges, according to Wasserman-Nieto.

Figure 9. Image of two commuters at a Ventra Vending Machine. Jasmin Becerra. November 2017.

Since there are no train stations in Little Village, there are no Ventra Vending Machines accessible to this neighborhood. Wasserman-Nieto strongly expresses her desire for Ventra Vending Machines to reach Little Village, because the current lack of access to these machines does not foster the use of public transit for community members:

> "The ventra stations need to be in Little Village. Like actual ventra stations where where folks aren't being charged additional costs to load a card, or put money on your card, or even buy a new card. Because you can't even load their cards. If you don't have internet access, if you don't have the apps to do that, the only way you can do that is cash. And cash is king in our neighborhood" (Wasserman-Nieto Interview 2017).

In evaluating the accessibility of the Ventra fare card system, not only does the lack of access for Chicago residents living far away from train stations worry Wasserman-Nieto, but also raises concerns about how this system affects those who do not have internet access and or the convenience of owning debit/credit cards.

Overall, Kimberly Wasserman-Nieto criticizes the CTA as being more business-oriented than being an actual public service. She evaluates the new Washington/Wabash station (Figure 10), a $75 million investment for the city, as something that seems to be designed more for tourist attraction as opposed to reconstruction and development that can benefit Chicagoans.

Figure 10. Image of signage at the Washington/Wabash Station. Jasmin Becerra. November 2017.

Wasserman-Nieto acknowledges that the stations in the Loop really do need to be fixed, she understands why the new Washington/Wabash station in the Loop was built, but is not on board with “investing a ridiculous amount of money [there] versus where money truly needs to be invested in" (Wasserman-Nieto Interview 2017). She places the extension of the Red Line and reconstruction of Green Line stations on the West Side as things that should be priorities over a $75 million downtown stop.

Wasserman-Nieto’s evaluation of the Washington/Wabash station as something that is designed for tourism is supported by the signage all over the station advertising things such as The Magnificent Mile and Millenium Park, as pictured in Figure 10. Wasserman-Nieto understands the need for developments such as this, and supports the idea of outsiders visiting the city, but asks why the city must “prioritize people who don’t even live here over the people who live here” (Wasserman-Nieto Interview 2017).

Ultimately, Kimberly Wasserman-Nieto urges that people talk about transit oriented development, food justice, public resource accessibility together, and in the context of health, economic. and social justice:

> “So everything from transit oriented development to our food, to our libraries, to our clinics, all of those decisions and all of that access to those spaces need to be talked about in the context of health. In the context of economic and social justice. Because if we only close our lens to, “do people have access to healthy food?” or, “do people have access to these things?” we miss the bigger picture of what the unintended consequences of those actions could be. Or those might not actually be the right solutions for a community.” (Wasserman-Nieto Interview 2017).

Beyond identifying disparities across the City of Chicago, Wasserman-Nieto wants others to reflect on whether solutions put in place within neighborhoods does more good than harm, and whether proposed solutions fit a particular neighborhood at all.

Discussion:

I. Neighborhood Context

After determining our key underserved areas, we looked further into their spatial distribution across the Chicago area. We identified several of these areas among the groupings as a whole, and did some further research to learn more about the demographics of each neighborhood. Race and income statistics, pulled from Statistical Atlas, were especially important to providing further context for the locations that our KUAs were spread across. According to much of the selected literature that we reviewed as part of our research, city residents with little access to transit, as well as our selected well-being indicators, typically resided in ethnic-minority and low-income communities.

This overlay process provided us with some important insights into the neighborhoods that our KUAs were located within (Figure 11). One pair of neighborhoods of particular interest were New City and Englewood, which share a north-south border. Combined, these regions contained four KUAs, which cover significant portions of each. New City and Englewood are situated between the Orange and Red Lines, and together, they occupy almost 8 square miles.

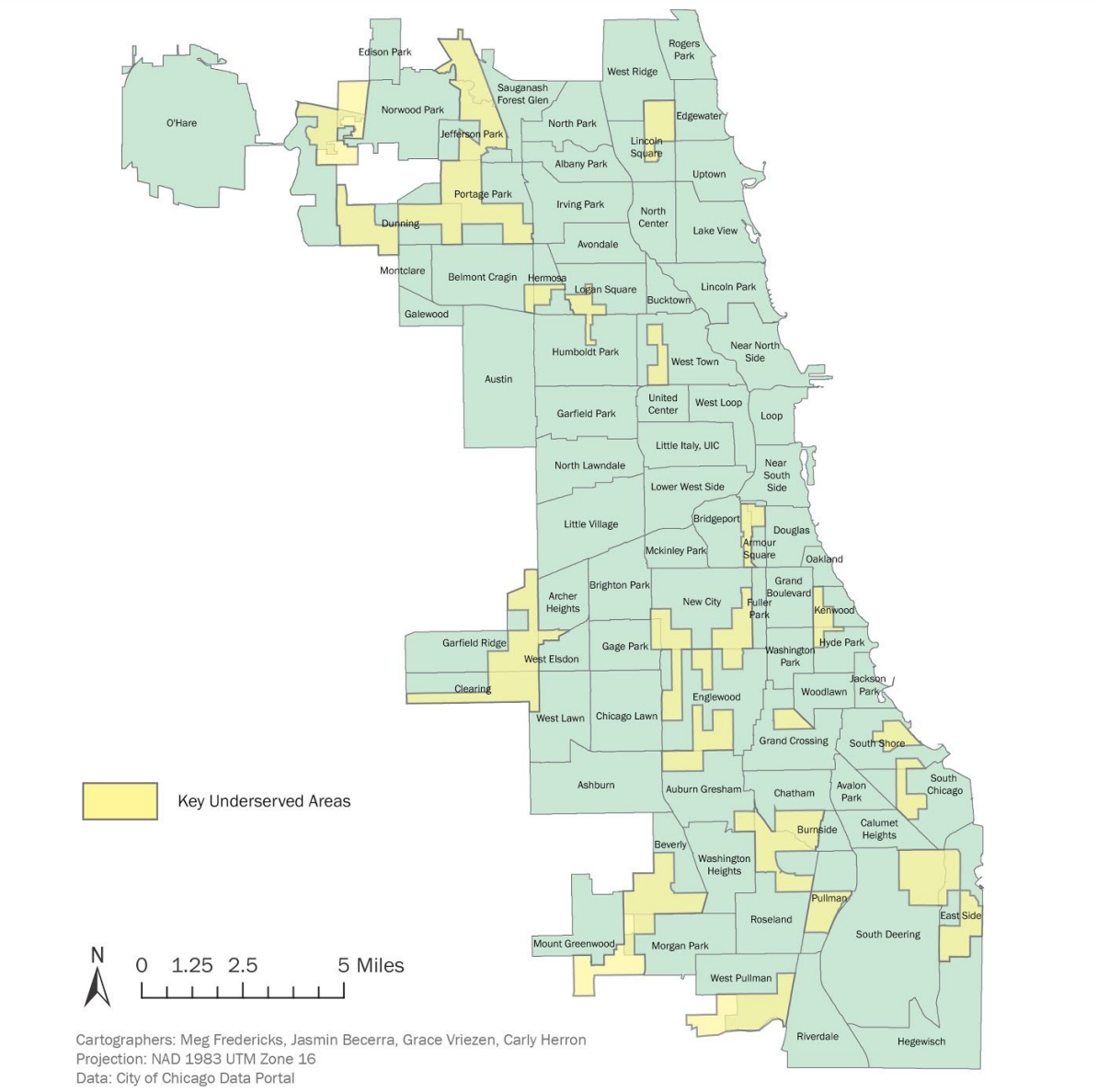

Figure 11

New City is the historic home of the Union Stock Yards, which employed many European Immigrants living in the area during the nineteenth and twentieth centuries, until they shut down operations in the 1960s and 70s (Gellman, 2005). In more recent years, Hispanic populations have settled in the neighborhood. Today, New City's population is 56.5% Hispanic, 28.3% black, 12.8% white, and 2% Asian. The median income in the neighborhood is $33,200 ("Overview...New City", 2015). According to the US Department of Housing and Urban

Development, in 2017, incomes under $63,200 in the Chicagoland region qualify to the designated as “low-income,” with $39,500 as the threshold for “very low-income,” and $24,600 as the threshold for “extremely low-income.” In this case, New City can be classified as a “very low-income” neighborhood. To a more intense degree, according to Statistical Atlas, Englewood’s median income was $27,374 in 2015, which also falls within the “very low-income” category, albeit much closer to “extremely low-income” than New City. In the last several decades, Englewood has been a site of revitalization projects, struggling with crime and a population that has been steadily decreasing since the 1930s (Stockwell, 2005). Generally speaking, those who have the means to leave the neighborhood and move to the suburbs have done so. In 2015, Englewood’s population was 96.6% black, with all other ethnicities making up less than 1% each (“Overview...Englewood”).

The Roseland neighborhood is located on the far South Side, and contains the terminus of the Southbound Red Line at 95th/Dan Ryan. As the neighborhood extends southwards, transit options grow scarce, and one of our KUAs appears. Roseland has long been in a period of economic decline (Reiff, 2005), although its median income is slightly higher than those previously mentioned, at $38,000, falling just beneath the threshold for “very low-income.” According to Statistical Atlas, the majority of Roseland’s population is black, at 96.9%, with a 1.1% white population, and all others comprising less than 1% in 2015.

The neighborhood of Pullman is a National Historic Landmark, known for the influence of its namesake, George Pullman. It used to house a large immigrant workforce in its planned community (Reiff, 2005). Today, Pullman’s median household income is $43,500, classifying it as “low-income”. Situated on the far South side, 82.2% of its population is black, 8.6% is white and 8.4% is Hispanic (“Overview...Pullman,” 2015).

Portage Park is an interesting case, falling on the far Northwest end of the city. This

neighborhood's median household income is $57,031 ("Community Data Snapshot: Portage Park," 2017). While this is classified as "low-income" within the city, the population has been slowly growing the past few years, and is increasingly being marketed as a destination within the city, especially in tandem with wealthier surrounding neighborhoods, like Irving Park and Forest Glen. In 2015, Portage Park's population was 50.3% white, 41.8% Hispanic, 2.2% Asian, and 1.3% black ("Community Data Snapshot").

One significant outlier that we noticed after comparing our KUAs to neighborhood boundaries is Beverly. According to Ellen Skerrett (2005), Beverly is "one of Chicago's most stable middle class districts." This is reflected in its median household income of $92,000, which is well above the "low-income" threshold ("Overview...Beverly," 2015). The racial makeup of the neighborhood's population is 57.1% white, 35.1% black, 5.6% Hispanic, and 1.7% mixed; most of the black population is concentrated on the East side of the neighborhood area, closer to Washington Heights, which has a strong majority black population and a significant decrease in median household income.

Generally speaking, the gathered neighborhood race and income data reinforces what we already know about the demographics of populations that are routinely denied access to public health and well-being resources. In an extended version of our research, looking into the historical contexts of each neighborhood that a KUA is found in would be ideal to reinforce our conclusions.

II. Uneven Development and Gentrification

Gentrification and the concept of an "ideal citizen" became revealing themes throughout our interview with Kimberly Wasserman-Nieto. When evaluating public transit in relation to grocery store access, Wasserman-Nieto was relieved to say that Little Village is fortunate to not be a food desert. However, she did express a concern for communities that have no other

option but “travel outside of their neighborhood to access healthy food. And access any food in general” (Wasserman-Nieto Interview 2017). She specifically discusses the new Whole Food store in Englewood as a development she would fear for her own community.

The presence of establishments like Whole Foods “could cause displacement and gentrification. In Englewood, because are so hungry for the economic-- they’re willing to-- and we get that” (Wasserman-Nieto Interview 2017). For Wasserman-Nieto, the pushback largely lies in the following questions she raises: “Do folks here know how to grow their own food? Can they be lifted up?...How do we give folks a chance versus always having to rely on the corporation to save us-- to save our food system, to save the economy of our neighborhoods?” (Wasserman-Nieto Interview 2017).

Likewise, Wasserman-Nieto sees recent transit development to be strongly influenced by what “can bring the ideal citizen, and push out the non-ideal citizen,” referring to the promising development of real estate and condos, and pushing out communities like Little Village.

> “The Morgan stop on the Pink Line was more economical, why? Because that is transit oriented development. That could bring condos. That can bring real estate. That can bring the ideal citizen, and push out the non-ideal citizen. Which is who? Us, as a community.” (Wasserman-Nieto Interview 2017).

Wasserman-Nieto believes that recent transit developments contribute to the displacement and gentrification of communities.

III. Assessing Transit Plans

i. CTA Planning and Expansion

Using findings from our spatial analysis, as well as our interview, we can assess CTA’s current Planning and Expansion Projects. These plans, available to the public, allow the reader to learn more about future projects that could expand CTA services. There are several portions of this plan that target different regions of the city. While some planned expansions and

renovations target wealthier areas located outside of the city, there are some portions of the CTA's plan that benefit our Key Underserved Areas. While the North Side of the city contains 'L' lines that reach past the city proper, the south and southwest sides are lacking 'L' lines within the city proper. Many southern neighborhoods in the city are located further south then where the Red Line's terminus reaches, creating a large area vacant of transit connections. These south and southwest areas are also areas where many Key Underserved Areas are found.

One segment of the CTA's plan calls to extend the Red Line 5.3 miles south (Figure 13). Similarly, the Orange Line Extension Project (Figure 12) would extend the transit line from the Midway Station at Midway International Airport to 76th Street, adding about 2.8 miles. The extension of the Orange and Red Lines, going south and southwest, would reach areas of the city that are not currently served by the 'L.' The plan provides greater transportation access to low-income, underserved communities, and would help with current transit disparities on the South Side of Chicago,especially compared to the North side of the city.

While some of the lines in the CTA's Planning and Expansion Projects are helpful for the Key Underserved Areas in Chicago, there are several extension projects in the works to increase service to wealthy and already well-served areas. These projects include the extension of Blue and Yellow lines, going north (Yellow), and northwest (Blue). Both of these lines already extend beyond the city limits, serving a mostly suburban population. These extended lines would not address Chicagoans most in need of public transit.

Figure 12
http://www.transitchicago.com/assets/1/planning/Orange_Line_Extension_LPA.pdf

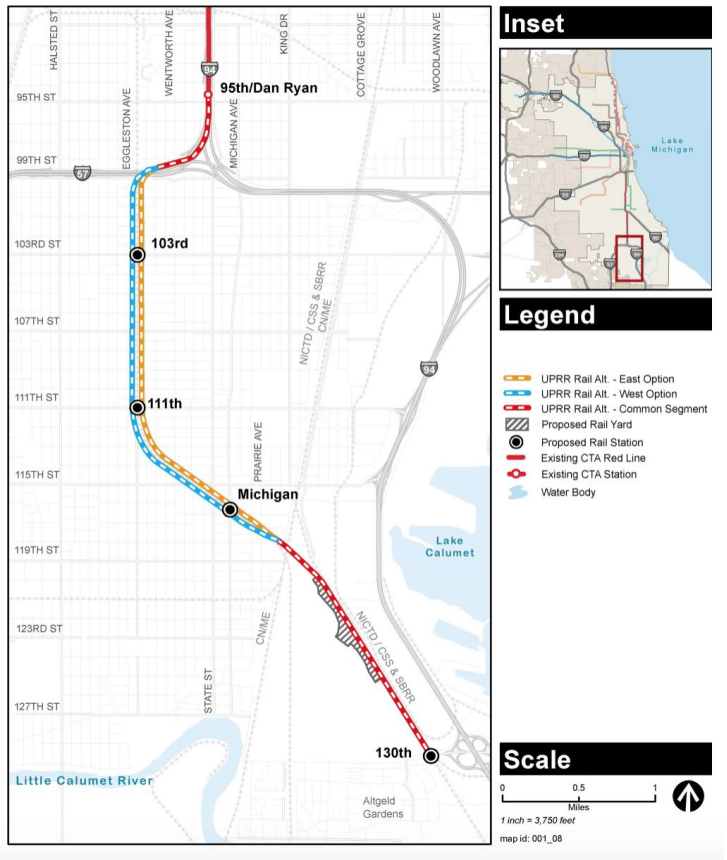

Figure 13
http://www.transitchicago.com/assets/1/planning/RLEProjectMap.pdf

Another disadvantage of these projects is the lack of connection between the lines. While extending the Orange and Red Lines would be beneficial to many, there is still a large transit gap between these two lines. A connection between them would be necessary to supply this underserved area with light-rail train access. This concept can also be applied to the Yellow and Blue extension plans. There are a multiple Key Underserved Areas located between these two lines. A connection between these two lines would be also necessary in order assist the northwest's Key Underserved Areas.

ii. TransitFuture

TransitFuture is a large-scale plan (Figure 14), created by The Center for Neighborhood Technology (CNT) and the Active Transportation Alliance (ATA). It plans to create multiple north-south lines, using bot that connect already existing lines to each other, and extend already existing lines. The overall goal of this huge undertaking, is to improve commute time all over the city, connect riders to job centers, create jobs, and help grow Chicago's local economy. Given its broad scope there are many benefits to this plan. If implemented, many of our Key Underserved Areas would be assisted by new line extensions and newly created connecting lines.

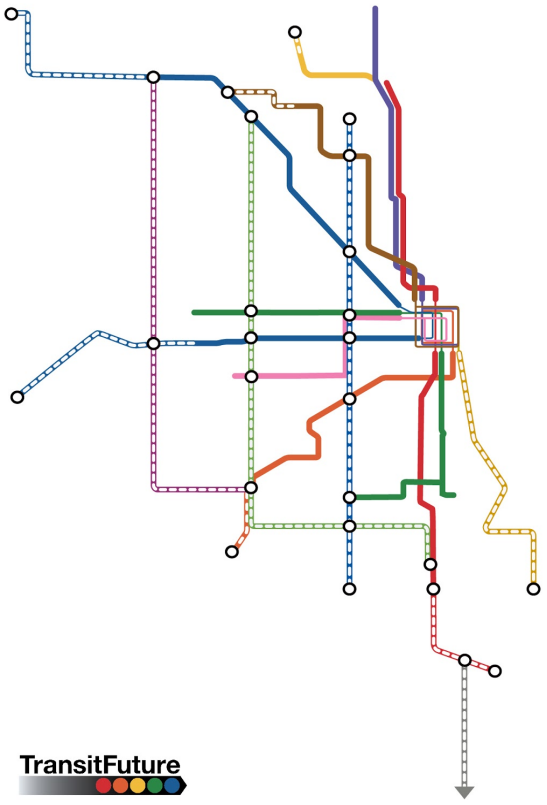

Figure 14: http://transitfuture.org/

The connection between the Orange and Red Lines (see green, "Lime" Line) would assist individuals in the southwest Key Underserved Areas, such as neighborhoods like Englewood

and New City. This “Lime Line” creates access for northwestern Key Underserved Areas residing between the Blue and Orange lines, in neighborhoods such as Portage Park, Jefferson Park, and Dunning.

The extension of the Red Line and the addition of a south-branching Yellow Line along the lakeside would increase access for residents living on the far south side of the city proper. Currently there are many South side neighborhoods that do not have ‘L’ connections reaching far enough south. This would be a large improvement for those southern neighborhoods lacking in CTA infrastructure. The new lines and developments would connect to many already existing lines, giving South Chicagoans more access to job centers residing in and near the Loop. In addition, these lines and connections would improve overall ride time throughout the city. TransitFuture’s initiative is is an all-encompassing transit plan.

There are a few realistic shortcomings to this plan. This is a huge undertaking, that would require billions of dollars. While TransitFuture is teaming up with a lot of organizations, businesses, and private donors, Cook County would still be supplementing a lot of the costs. A lot of this money would most likely come from a city tax increase, potentially causing partisan disagreements within local government.

IV. Future Plans:

With this project we have the possibility to expand and refine it in multiple ways. Two key points of expansion include removing non-residential areas and industrial areas from our map data, as this is does not pertain to the goal of identifying transit access for residents throughout Chicago. For example, in the map depicting access to green space, the level of green space in the Northwestern most part of the map falls into the highest classification break. However, this is due to the census tract encompassing all of O’Hare airport, thus giving a false sense of what constitutes green space for residents.

Beyond this, future plans include to expand our research methods to carrying out more interviews and surveys, particularly with CTA employees and riders. As indicated in our discussion of limitations below, we encountered a roadblock with connecting with the CTA, despite multiple efforts via email.

Finally, we would expand the scope of our research to focus on our findings of KUAs. Having identified the KUAs as well as the various neighborhoods that they fall into, it would be worthwhile to carry out more research which can ultimately offer additional insights into transit inequalities throughout the city. This could take the form of additional interviews with neighborhood associations and councils, interviewing residents in each neighborhood, as well as gathering more data through neighborhood surveys. Ultimately, by expanding the scope of our research to include the CTA themselves as well as neighborhoods within KUAs, we will be able to better understand current approaches to transit, existing transit inequalities that persist on a neighborhood level, and how this can truly affect personal well-being and health in the day-to-day lives of many individuals.

V. Limitations:

Our research topic was a huge undertaking, given the time frame that we performed it within. One of our most significant limitations was lack of contact with the CTA. While we would've liked to have direct communication with the Chicago Transit Authority, time and personable connections were limiting factors. We did not have the ability to interview or talk in person with a staff member at the CTA, as originally wished. Additionally, given that our site setting was Chicago, and we were based in Madison, we were not able to visit as frequently as we would have liked. However, most of our team is originally from the Chicago area, and quite familiar with the CTA system. We were able to get direct data from Chicago organizations and data portals, but our time in the actually city was limited. We all visited Chicago intermittently,

throughout the few months that the project spanned. We were able to take pictures of the 'L' system, and see riders first hand, but we were unable to make direct connections. If we were residing in Chicago during the scope of the project, our team would have been able to conduct surveys with CTA riders and observe rider behavior. This would allow us to understand the transit system and its riders on a more personable and first hand level.

In addition to the light-rail train system, the Chicago Transit Authority also operates a bus service. As stated on the CTA website, there are 1,800 buses that operate over 140 routes traveling along 2,230 miles (CTA, "Facts at a Glance"). Because of the extent of buses in the city, and our limited project time, we decided to leave the bus system out of our project. The bus system is a very useful and widespread part of the CTA, however, it is not as efficient as 'L' system. The 'L,' and rail transit in general, are more direct and travel at faster speeds than the buses. Residents all over the city have access to CTA bus lines; it is an equal-access form of transportation throughout Chicago. However, as we have described throughout our paper, many key underserved areas do not have access to the more efficient form of transportation ('L' lines) offered by the CTA. Higher income and well-served residents have built their communities around the 'L' lines, through the process of gentrification. This is why we focused on the disparity of the 'L' line locations; they differ in access, in correlation to income and resources.

With more time, our team would have been able to complete a more encompassing portrayal of the Chicago Transport Authority. This would include inclusion of bus lines, interviews with CTA staff, and collect in-person survey and observation data.

Conclusion:

Based on our research, it is clear that both the south and southwest areas of Chicago contain a large number transit deserts, and also have little to no access to public health and

well-being resources, which lack a location in close proximity to residents, as indicated by our composite ranking map. This combination of factors means that residents do not have adequate accessibility to the 'L' system, as well as pharmacies, green space, government assisted food programs, and public technology. As further discussed in our interview with Kimberly Wasserman-Nieto, increased access to public transit would also mean better, safer access to public resources, especially those integral to health and well-being. Designing transit systems with this goal in mind would not only affect individual neighborhoods and communities, but would also have the potential to bring about change on a city-wide scale.

With Key Underserved Areas (KUAs) located primarily in areas with significant low-income and/or minority populations, it is imperative that transit infrastructure is extended or improved to benefit these communities. If an extension of transit proves to be infeasible, economically or politically, ensuring the presence of public resources within or near KUAs should also be taken into consideration. Furthermore, after comparing our research findings to the CTA's Planning and Expansion Projects and the TransitFuture Plan, we are able to determine that the CTA Plan appears to be somewhat effective with regards to extending the Red and Orange Line. However, although it presents economic and political roadblocks, the TransitFuture proposal is a better option when examining the KUAs around and between the Red and Orange lines, as well as the "Lime Line" in the northwest region of the city.

Overall, our research confirms that prevailing public health and well-bring inequalities in Chicago also exist within the realm of transit accessibility, coinciding and interacting with spatial distributions of race and income. Existing plans aside, it is clear that the south and southwestern regions of Chicago are in need of increased access to both transportation links and well-being resources. In order to ensure safe, healthy, and educated lives for its residents, the city of Chicago must better serve these populations.

Acknowledgements:

This research was made possible thanks to the accessibility of data from the City of Chicago Data Portal and the USDA, Kimberly Wasserman-Nieto for her insightful stories and interview, and Professor Bill Gartner for providing direction and guidance.

Appendix:

Appendix 1.1

Interview Transcript:

Kimberly Wasserman-Nieto
Friday, November 17, 2017

Jasmin Becerra:

Can you tell me a little bit about your public transit campaign, at LVEJO, to Expand the 35th street bus?

Kimberly Wasserman-Nieto:

Public transit was one of the topics that community members picked for us to work on. And that was simply just based on access to public transit. The biggest things folks were complaining about was bus bunching, which is groups of buses all leaving at the same time or all coming at the same time and then having to wait an astronomical amount of time for the next bus. And just bad scheduling of buses. As we started to do our work, as 31st street particularly started to grow business-wise, and as the high school was built, and more industry started, and more restaurant and stores started to pop out, folks started to talk more about a need for a 31st street bus to take them to and from work, and particularly in our case it was our young people wanting to get access to the high school much safer. So, particularly African American students, or students that didn't come from the West Side of Little Village had a high chance of being assaulted or attacked walking through that part of the neighborhood-- so the campaign in all technicality started just people wanting better transit.

So for the longest time, we organized with the high school students getting them access to the bus. As high school students they had done research around how many other high schools were in the city, and how close in proximity the closest bus stop was to the high school. And what the found was that, Little Village Lawndale High School in particular was actually the farthest from a bus stop than any other high school.

Most other high schools had a bus stop within a 1-2 block radius, and ours was at least 4 blocks away. Like, you'd have to go over the bridge to Cicero, and that was actually the closest bus stop, versus the Pulaski one, or even 26th street.

So that was very interesting to us. But that was the only kind of research we had done. We didn't really do any more research beside that, and our goal at the point had been again to get the bus service for the high school students, but pulling on the hearts of CTA, getting them to feel sorry for young people-- not even sorry, getting them want to provide safe public transit for high school students apparently was not a winnable argument. And so, for about 5 years we just kept getting nowhere and getting nowhere and getting nowhere. So finally, I want to say in about 2012, we decided to change up our strategy. We completely restarted the campaign again, and this time what we decided to do was really have a clear analysis of who was the Chicago Transit Authority. And more importantly, who sits on the board of the Chicago Transit Authority. I think we got really caught up in the fighting for social justice and lost track of the actual organizing tactics and how you do the work. So, we reset, and as we started to analyze the Chicago Transit Authority, it became very clear that their board and their business directive as a board was very much business. That the CTA, like many other public institutions in Chicago, were no longer about serving the public good. But more about their bottom line when it came to making money. And what's really interesting about that notion is that these entities, Chicago Transit Authority, the Board of Education, and all these institutions are not made to make money, they are simply made to provide a service.
We then had to articulate our argument along those lines.

We got a lot of shit for that. Because many, especially in Chicago, many social activists believe that that social justice argument should be enough. And the reality is that, especially, when you are confronting systemic issues like structural racism, that shit ain't gonna fly. You have to meet folks where they're at, and you have to meet them with a capitalistic approach, which is what sells to them, right? SO that's what we did.
We had our usual youth summer internship, but in this case what we did was not just hire youth interns from high schools, we also specifically brought on college students with an urban planning background. And our goal was really to put an urban planning hat to the campaign, which was understanding how many businesses were on 31st street, how many of them were transit riders or could become transit riders, what where their hours of business, what was their potential customer base during those hours of business. What were the bus lines that crossed the 31st street bus that could potentially connect bus riders to other folks. We requested, from the Chicago Transit Authority, a copy of bus line proposals. They have planners who put together bus line proposals. And that bus line proposal was how we then created our proposal for the 31st street bus, using the exact same language, right, the same school of thought that these planners had used.
So over the course of about a year, the interns that we had and the youth that we had did all of those surveying. We originally had intended to do it from Little Village all the way to the lakefront, 31st street all the way across the board. But when we approached the

Bridgeport community, it was very clear that, um, the racism in Bridgeport was still very rampant and it became very evident that we were going to have to fight our own fight. It also became very clear that Bridgeport was not the same school of thought that we were. Which is, they wanted the bus line because it was the right thing to do, they weren't necessarily willing to do all the work that we had done. And in fact, expected us to do all the work that we had done in Little Village in Bridgeport, and that shit was not happening.
So when they started to question our organizer for being a woman, when they started to not want to use our logo because it was too ethnic, and they had a white supremacy supporters that they did not want to mess with. And then they didn't want to negotiate with CTA. When we had done our proposal CTA was like, "this is actually pretty good, let's sit down and talk". When we sat down with CTA, our proposal only captured Little Village. It did not capture anything outside of Little Village. So what does CTA do? CTA was like "instead of giving you a full 31st street bus, we'll just give you the 35th street bus, and extend it into Little Village, and then the only people who are gonna get a bus are you". And [Bridgeport] walked out of the meeting. And I was like, "you choose to walk out and you choose not to negotiate, I can't do shit for you. It is not on me to negotiate for your community. I don't represent your community." So they, to this day, are still pissed with use. They still feel that we sold them out. They can feel however they want, we got a bus line.
And part of this too was going to Martin Sandoval, who was our state senator, and he is also the head of the transportation committee for the state. So part of our campaign was to go to him, he represents us, the 31st street bus was in his district, he fully supported it, and he is the one that got us the meeting with the transit authority.
We went into the meeting with the Chicago Transit Authority, we presented our proposal, and that's when they were like "this is one of the best bus proposals we've ever seen"-- because it articulated their philosophy, it was their school of thought. So they then approved a 180 day experimental trial on the bus and then it became permanent.
Now, this or last year, the folks in Bridgeport finally got them to do something. What was it? I want to say maybe extend the bus at night, they got them to do something in Bridgeport with the bus line that helped them, but it took them like 4 years, 5 years after we got our victory. But it definitely was a real turning point for our organization-- at least for me as executive director, because it was the moment that we stopped just being a bunch of hard asses, and showing up at people's front door with like 200 people and shutting shit down, to trying to be proactive, diplomatic and trying to at least negotiate before having to bring that card out, before always having to be a tough guy. And it worked. That was really helpful for us in being able to move forward in a different capacity as an organization.

Jasmin Becerra:

So moving from bus accessibility, how would you evaluate CTA train services to and from Little Village?

Kimberly Wasserman-Nieto:

I think CTA made a really bad mistake when they got rid of the blue line, and made it the pink line. There's a high proportion of folks who work out in the Northwestern suburbs that

come from Little Village, who fundamentally slept on the blue line anywhere from Pulaski through California and then took it all the way to O'Hare, to Cumberland, to any of those stops. So these folks probably got an additional 30-45 minutes worth of sleep on the train.

Right, you take into that consideration, that a lot of these folks also work 2nd or 3rd shift. That sleep to them is fundamentally important. And so, by disrupting their transit system and access, reliable and quick access, now they have to go on the pink line, go downtown, switch trains, go down the stairs, and catch a completely different train. So that's one thing.

And I think that was a huge impediment to people in our neighborhood. One, being able to rely on public transit for more than just getting you around, but also being a safe space to be able to sleep, or just be calm. Because now you have more hustle and bustle. The ever increasing cost of the train also is a huge burden to community members. If our pay isn't going up, but the cost of transit and gas and transportation *is*, that's going to become unstable at some point. It already is. So I think people are definitely biking more, walking more-- and walking in temperatures and conditions that aren't the safest for them. Or also having to buy crappy cars, and investing their money into that. The economic stress that puts on people… [pause]

I think a lot of times people don't correlate-- they correlate stress with economy but they also don't correlate the environmental injustices that go along with that. So, if you're already stressed, being economically disadvantaged-- most likely if you're a person of color, you're gonna be economically disadvantaged in an environmentally unjust community. So on top of that, you're also having more health issues across the board. The air you're breathing is probably not gonna be the cleanest, the access to good food is not gonna be the best. So how do low-income communities of color who are already dealing with environmental injustices, and dealing with economic injustices, where do they catch a break? That's why our work is so fundamentally important.

We may not recognize that, but public transit is at heart, an environmental justice issue, because it allows people the ability to know they have reliable transportation. Even if it's to get food, to get to the hospital, to get their child to school everyday, to find employment. And it's one less thing they should have to worry about-- in a world where they have to increasingly worry about their immigration status, the way they look, what they're wearing. Are they going to be harassed for being a person of color? Any mirage of things they're already going to have to deal with.

So I think the train service in particular, in Chicago, has the potential to provide people with economic justice if it was done in a manner that reflected where the city's growth is. For the longest time, we supported what was called the silver or grey line in Chicago. Which was-- there's an abandoned rail line that goes from the north, up by Howard, all the way around to the Pink Line, Blue Line, Orange Line, and then to the Green and Red Line. It's an abandoned rail line that goes all around the city. And the longest time, the city had thought it would be the only way that they could actually connect all of the trainlines outside of downtown. And what this does is, because there's so much economic growth in the suburbs of Chicago, what does it look like to get people their cars out of the highway and to-- any of those trains can take you to that [gray] line and then from that [gray] line, you

can go from Howard all the way down to the South Side. Right, that was not economically viable to the city of Chicago.

The Morgan stop on the Pink Line was more economical, why? Because that is transit oriented development. That could bring condos. That can bring real estate. That can bring the ideal citizen, and push out the non-ideal citizen. Which is who? Us, as a community. So what the city has chosen to do, is instead of doing development that can benefit the city at large and provides some sort of social and economic justice, they have chosen to once again do the classic [?] development which displaces and gentrifies communities. And makes it ideal for the real estate market to come in. And the city to continue to profit in a capitalistic manner versus transportation for everybody so that everybody can thrive.

Jasmin Becerra:

That's almost exactly where the next question is going--so, you kind of already touched on this, but for residents in Little Village how accessible is commuting to work via train?

Kimberly Wasserman-Nieto:

It's not. It's not at all. I mean, the reality is that the Pink Line isn't even in Little Village. The Pink Line is technically in North Lawndale. You have to cross a viaduct to get to the Pink Line. Most people don't feel very comfortable, because why, viaducts separate most communities in our neighborhood. It is a boundary, it is another imaginary boundary-- a border that we implement on ourselves, and we already have historical context around borders as a community. Both from where we come from, migrating to this country, many many many different ways. But then on top of it, our own city institutionalizes, or continues to institutionalize the notion of boundaries by building the city as segregated as it is.

So right now, to get to the train, you either have to take the bus or you have to be brave enough to walk, from Little Village up to North Lawndale and get on the train. Many people do both. Many people on many occasions do both. They don't like it, but they do it. And that's why for us, the 31st street bus was so important. Because, between the 26th street bus, the only other bus that you can find going east to west is the Archer bus. So you're talking about a 3-mile gap in Little Village with no east to west bus service. And the bus is slow, the bus is going to get stuck in traffic. At least for me, I grew up on the 60 [26th street bus], it would take me an hour to an hour and a half, an hour and forty-five sometimes, to get from downtown to Little Village or the other way-- the fastest is probably like 35 minutes. The train is 20 minutes, you know what I mean? That's huge.

So I think the reality is that the train is not accessible because of distance, because of structurally racist planning that the city has institutionalize and we continue in our head. But thirdly, the reality is the payment system for CTA and the ventra system is incredibly problematic for people in our neighborhood. If you do not have a checking account, your only option is to go to a train station and up your ventra, or you go to a currency exchange. Currency exchange, you're going to get charged an additional fee.

The Ventra stations are at the train stations. Those are not in our neighborhood. So technically, there is no ventra station in Little Village. Yet we use public transit, like most other neighborhoods. So that doesn't promote public transit. The ventra stations need to be in Little Village. Like actual ventra stations where where folks aren't being charged additional costs to load a card, or put money on your card, or even buy a new card. Because you can't even load their cards. If you don't have internet access, if you don't have the apps to do that, the only way you can do that is cash. And cash is king in our neighborhood.

So things like that where folks don't realize we don't have the privilege of internet and debit and credit card-- how are you meeting people where they're at?

Jasmin Becerra:

And when your ventra card goes negative, like it cancels out and you have to buy a new one.

Kimberly Wasserman-Nieto:

You have to buy a new one, exactly. And so it's that process all over again. Do people have that capacity, do they have that time? And should they be required to go through those things? Again, if this is a public institution, a public common, that's for the good of people, then that should be as easy as possible for people to access.

Jasmin Becerra:

On the same line of thought, how accessible to commute to health clinics--

Kimberly Wasserman-Nieto:

So one of the things that's interesting about Little VIllage is that we have a shitload of health clinics. That's not to say they're all great, or good in any capacity. But we do actually happen to have two of the better county clinics in Little Village. Jorge Prieto health center, and the South Lawndale clinic on Albany. I only happen to know because I'm the the daughter--step-daughter of a doctor. But I happen to know that those two are actually of the better clinics in the whole county system. So I will say that we actually have really good, on both the east and the west side of Little Village, we actually have access to really good, quality health care. Only problem is, you gotta wait fucking 3 months to get an appointment. But-- regardless...

We do have access to a lot of health care, whether or not it's good healthcare is one thing. Two, our hospitals, there's a hospital district-- it's off of Ogden, off of Cermak. You can't get to those without a car. I mean you can technically take the Cermak bus, but that thing takes like every 15-30 minutes. It doesn't run on the weekends. The hours are on it are absolutely ridiculous. As is the Ogden bus.

In order for most people to get to the hospitals, they're not going to Cook County, Rush-- they're going to Mt. Sinai and Saint Anthony, that are right here near the Neighborhood, and unfortunately those two happen to be some of the worst hospitals in the country. In all fairness, they're absolutely horrific as hospitals. If you rate them.

Folks are using ERs as their everyday clinics. More and more ERs are becoming folks' access to healthcare. They're having to drive to these spaces, walk to these spaces, and many times, having to go outside of their neighborhood or outside of the city, in thinking that those spaces are gonna be better for them healthcare wise. They don't have access to it, they can't get to it. If they're going to drive somewhere, they might as well drive to a better hospital in a better neighborhood or a Catholic hospital or a Christian hospital.

Jasmin Becerra:

What about commuting to libraries?

Kimberly Wasserman-Nieto:

Kedzie, Pulaski are on busy intersections, young people, folks can take the bus there. I think the bigger issue, similarly to public transit, is the public libraries-- they close at 5pm. They're not open every day. They all don't even have librarians anymore. The same question becomes, what is the purpose of libraries? If you're both cutting transit and you're cutting libraries, because you're not seeing the direct link in public libraries and health. Public libraries and environmental justice. Public libraries and social and economic justice. Then you're not really appreciating what libraries have to offer. Libraries offer you not only the space of growing your knowledge, they give people access to the internet, ability to apply for jobs, daycare, childcare, any number of things. For some folks it's find out medical situations at the library, learning how to protect themselves-- or just a safe space in general.

So how we kind of change the mentality of the opportunity of public libraries, just like thinking about public transit. How can they foster a healthier neighborhood, a safer neighborhood. How are folks hosting conversations at the library in the evenings for folks to come to, and see the space as a community space.

So I think the access to libraries is important, but also question, are libraries even able to meet the needs if they're not open when people need them to be open.

Jasmin Becerra:

In addition to that, do you think the libraries in Little Village have the amenities that they should?

Kimberly Wasserman-Nieto:

I don't think they're big enough. I definitely don't think they're big enough. I don't think they have enough books. I've been in both of them fairly recently, and the feedback we've heard from folks is that there's not enough books in Spanish. To meet the range of folks we have-- not everyone needs children's books in Spanish. We have elders who want to read in Spanish, and can read content in Spanish. Do we have the biographies of the Pope in Spanish, do we have good reading content?

So one, I think it's lack of actual good content that meet the needs of these communities. And I think two, the lack of programming-- there is some programming,

don't get me wrong, these librarians are hustling and doing the best that they can with the limited resources that they have-- but again, these are institutions in our communities, and how are we supporting them, upholding them, and having them become-- why are we not having conversations about violence at libraries, or conversations about public health. Why aren't public libraries hooking up with community gardens, and having like, mercados outside. How are we using these spaces to promote public health in our communities, versus just "oh, it's just a library, we have to have one but we're going to resource it as little as possible."

Jasmin Becerra:

So, my final question in that string of related questions, is-- how accessible is commuting to grocery stores and farmers markets using the train lines?

Kimberly Wasserman-Nieto:

So, the fortunate part of Little Village is that we have grocery stores. We are very fortunate to be one of the few low-income communities of color that is not a food desert. We have access to corner stores that have good food.

[BREAK]

Our neighborhood does have access to healthy food. So, in that sense, folks don't have to travel very far. Now, the last time we did an assessment of grocery stores, most of them all carry organic things of some capacity. A few years ago, they weren't interested in doing the organic thing. Now they're all, even La Chiquita, they all carry whole wheat bread, and gluten-free stuff, and almond milk. Now, that's not to say that folks need a Trader Joe's or a Whole Foods.

One of the things that we've been working on as an organization is to say, we don't need a Trader Joe's or Whole Foods. One, because we know how to grow our own fruits and vegetables, and we should be lifting up that capacity in our own community, and helping people develop a way out of poverty through economic justice. By growing their own foods and figuring out how to do that as a business. Our pushback to the city has always been, "don't bring us your anchor stores of Target" or those things, because we know that the economic power and the health is in our own neighborhood. We've been taught to eat healthy, we have good culture of food components that we just need to lift up and carry in our community. So how do we uphold those traditions, versus starting to teach people how to count calories, or not being honest about the reality of sugar, and the role that sugar plays in our history, and the oppression of our people. You want to talk about food, let's really talk about food and the role it plays.

In that sense, we've been very fortunate. But many other communities aren't as fortunate. Other communities do have to travel outside of their neighborhood to access healthy food. And access any food in general. Their corner stores have processed food, chips, and shit like that. But our corner stores have meat and fruit-- most other corner stores don't have that.

So this is how they're bringing Whole Foods to the Woodlawn-- no, to Englewood. And Englewood is saying "yes! Give us a store", and we're saying "No, we don't want the store!". Because we recognize that, in our neighborhood, that could cause displacement and gentrification. In Englewood, because are so hungry for the economic-- they're willing to-- and we get that. But part of our pushback is to say, how are we working with those community members in that neighborhood to understand what they're skillset is. Do folks here know how to grow their own food? Can they be lifted up? Can they start their own supermarkets? How do we give folks a chance versus always having to rely on the corporation to save us-- to save our food system, to save the economy of our neighborhoods?

That's literally where we are as a city. Rahm is continually looking to City Bank, Whole Foods, Amazon to save us. When we have people in our neighborhoods who can do that same saving, and collectively save all of us at the same time.

So, I think that, because the mentality is to displace folks and bring that ideal citizen. Perhaps they don't have a car, which is why they wanted the Whole Foods by the Red Line, so that folks could shop, eat, and live. And that's not for people who live in that neighborhood now. That [wouldn't be] for the people living in Little Village now. The idea is, "how do you displace those folks and bring in…"

So everything from transit oriented development to our food, to our libraries, to our clinics, all of those decisions and all of that access to those spaces need to be talked about in the context of health. In the context of economic and social justice. Because if we only close our lens to, "do people have access to healthy food?" or, "do people have access to these things?" we miss the bigger picture of what the unintended consequences of those actions could be. Or those might not actually be the right solutions for a community.

Jasmin Becerra:

And going off city investments, this past September the CTA opened up the new fancy Washington/Wabash 'L' station

Kimberly Wasserman-Nieto:

Ah, yes, I've been on there once.

Jasmin Becerra:

Which is a $75 million investment. Who benefits from this expansion?

Kimberly Wasserman-Nieto:

Downtown people I guess. I mean, I get it. The city is trying to-- tourism-- they're trying to get people to take the train. But I think this is another example-- I, these stations are definitely, they need to be fixed, they're decrepit, I get it. But I think this is a classic example of where you're investing a ridiculous amount of money versus where money truly needs to be invested in. I look at public transit in the city, and I look all of the Green Line stops along the expressway on the West Side. All of those train stations should

have been opened decades ago. Why do those people not have access to the train? But downtown is getting a $75 million train stop? If you think about the Red Line extension, which has been 30+ years in the making, and finally now they're building the Red Line extension. What does that mean for those folks?

I think of the bus service. The reality is that the bus service is still shit in Chicago. Like, great to see CTA tracker. Great to see all these things. But bus bunching still happens. And the cost of CTA is still astronomical. So, how are we making investments in those places? So that we're activating folks actually taking transit. And being able to appreciate $75 million stops. But are mostly young people in Little Village going to be checking that spot out? No, they're not. So for me, the better investment is to say, "how are we providing all young people in the city of Chicago who are, I don't know 16 and younger, free transportation in the city of Chicago. Because that's what's going to economically generate our city, from our perspective. Make that $75 million investment in our young people, versus making that in one train stop.

So I think a part of this, we get it, they want folks to come here, they want folks to take the train. They talk about that bullet train from like downtown to O'Hare so people can get there faster. And it's just like, people just need to get to school safely. Like, how are we thinking about them? Right, first and foremost. I'm all down for visitors, I'm all down for people coming to check us out, but until our folks can get around safely, why am I prioritizing people who don't even live here over the people who currently live here, and whose taxes we're taking to pay for these things.

I think it's just a classic example of pet projects. And the city's view of what is economically viable, versus what people truly feel is economically viable.

Jasmin Becerra:

So you slightly touched on this, but related to that, how do Little Village residents benefit from that expansion specifically?

Kimberly Wasserman-Nieto:

I don't think they do, honestly. I mean, the reality is, the pink line, yeah, it goes through there, but is it accessing us to further educational opportunities? Is it accessing us to jobs? [Are] there things around there that folks can-- the Art Institute, is the Art Institute accepting young people from our high schools for free every day?

Again, I get the build itself, but until we start to deal with all the structural issues that come along with public transit, like are young people being harassed on trains? Like, we know for a fact that on bikes, African American youth are getting ticketed and harassed more than anybody else. So, how are these train stops and these projects dealing with some of those institutional racisms that then could lead-- if those, if that wasn't there, then folks could benefit from that train station. Our young people would greatly benefit from going downtown on a regular basis and not be harassed by 5-O. But they don't. They don't go there.

So I think this is part of that bigger question, where else could those resources be used?

Last thing I'll say, case and point, the new cop academy they want to build-- $95 million they want to spend on a cop academy on the West Side of Chicago. And folks are like "we need jobs, we need recreation, we need schools," so again, who is making these decisions? What's the priority? And where does the average Chicago citizen get to weigh in about how the money that our broke-ass is, yet we manage to find all the money to do all this work. We're even being told that the city is broke, yet at the same time we're spending $75 million on a train station. So that doesn't equate. It doesn't add up. I think fundamentally, as a city, we just want to understand what our finances, so that we can then hopefully say, "let's pick out our own priorities" versus having this little man pick them out for us.

Jasmin Becerra:

And related to that, what kind of expansions do you want to see reach Little Village.

Kimberly Wasserman-Nieto:

Definitely. I think more bus expansions. I think a more robust Cermak bus, having a 24/7 31st street bus, is drastically needed. Having better times of buses going North and South. Everyone complains constantly about Pulaski, California, right? I think just having much better public transit bus service in Little Village would be clutch. Right now, there's a California bus that goes by the jail, but that's the only bus-- so people are really limited even in accessing the jail. As horrible of an institution that is, the reality is thousands of people access that space on a regular basis.

I think more importantly, and fundamentally, the cost of public transit. I think public transit needs to be accessible to our community members, to our young people. And there is no reason why our young people should even have to pay for public transit, in our honest opinion. Young people in other cities get free transit passes if they're enrolled in school. That should be a no-brainer for us a city. If you want to make it easy and accessible and safe, then young people should be able to ride the buses and trains for free-- along with our seniors and our veterans. How do we start to institutionalize the transit authority, as again, as a service that provides to us that is not a business. Institutionally it's just about providing people with safe transit.

Jasmin Becerra:

Do you think train expansion specifically, would be something that would ever reach Little Village.

Kimberly Wasserman-Nieto:

I don't see how, to be honest with you. We only have one train line that runs through our neighborhood. So unless there's more trains, I don't see how. But I do think there are additional train services that can be provided, like the [gray] line again, that can

allow people to access, not always having to go downtown, but to give people the ability to access the city and other spaces. And more importantly, as displacement and gentrification continue to happen, as we're forcing poor people into the suburbs, how are we providing them, and connecting them with the city? I know we don't want to think about those things, but the reality is that the decisions the city is making is causing that to happen. And we need to be honest about the fact that the suburbs are not made for public transit. They were made for a generation of people that wanted to get out of the city and be in their car. And that's no longer the case. So those are transit deserts.

So how are we thinking about those suburbs not just in regards to public transit but green infrastructure, heat, islands, just any number of things. Those huge houses are coming out to be incredibly energy efficiently horrible. All those people figuring that out want to come into the city, to smaller living, smaller units, into condos, right? Who is going to live out there now? Us, that's who they're gonna put out there. So we're gonna have to deal with those astronomical costs, we're gonna have to deal with no transit. How are we including that narrative as part of this as well.

Jasmin Becerra:

Are there any specific areas in Chicago that you think would benefit from transit expansion, if not Little Village?

Kimberly Wasserman-Nieto:

Absolutely. I think all neighborhoods would, from better bus service and better train service. I think that allows people to again, be able to commute, access educational opportunities, work opportunities, and be able to just -- the reality is that, the more you can travel and learn about other neighborhoods and about other entities, the less segregated and less racially motivated as a city we become. I think naturally, that then encourages tourism. That naturally encourages folks to come here.

But when you perpetuate youth violence by not doing youth employment, when you perpetuate environmental injustice-- not funding public transit is all part of that. It's an attempt to keep people in their communities and not get them to come out of their neighborhoods. Self-implode in their own neighborhoods. Until the city has cover to come in and say, "we're buying everything out, we're putting in a Whole Foods…" So how do we push back against that narrative? And really, it's about giving people access.

We shouldn't have to explain what access we need, or where we need to get it to. The fact is, people should be able to go wherever the fuck they want. So just provide them the access to get around. What they do with it and how they use it is none of our fucking business. I guess like everything else, it's none of our fucking business-- but, at the end of the day, again, we have to get out of that mentality about "how many riders is [?]," -- doesn't matter. Even if it means that just one person is able to access, then we have that fundamental responsibility to do that.

So I think across the city, both on a cost front and just on a more efficiency level, there's tons that could be done. Increasing the amounts of buses, the times they run, 24/7, the hours they run, all of those things can only help in Chicago.

Jasmin Becerra:

Definitely. Thank you so much for your insight. It's amazing to see just how connected these things really are. With public transit, environmental justice pointers, public health and well-being. That being said, thank you so much for the interview.

Kimberly Wasserman-Nieto:

Yeah-- my pleasure!

Jasmin Becerra:

If you have any people that you think we should talk to next--

Kimberly Wasserman-Nieto:

Um, the only thing I would recommend to you guys, if you want to check out-- I don't know how much on public health they did, but the movement, no, *carajo* -- what is their name? They're in L.A.. If you look up the L.A. bus riders union, they did a lot of -- I don't know how much is actually connected to health, but I would highly recommend checking them out if they do have anything related to health. We joined their campaign-- they had a national campaign where they were trying to get the federal government to flip its highway funding and its public transit funding. So right now, it's like 80/20. 80% goes to highway funding, 20% goes to public transit. And what they were saying was, flip that. Give 80% of your funding to public transit, and 20% to highways. They had really great visualizations around-- the amount of people you can put on a bus, how many cars is that equivalent to? 'Cause that's the other thing we did in our report. We talked about amount of CO2 reduction, and that's because environmentalists (not environmental justice people, environmentalists) like to talk about CO2 removal by the ton-age. People in our neighborhood don't really talk about that. In our neighborhood, it's really about real-life impacts, like can your kid breathe. These guys like to talk about "how much CO2 are we removing for the environment" -- so that's how we laid out our report. Which was to say, "if you remove this amount of cars off the street in Little Village…," that's a direct health correlation. If you provide better and more active bus transportation, how many cars can you get off the street?

So thinking about that from a health perspective-- when we talk about the bus campaign, young people at the beginning were like "yeah, I get it from a transportation view," but when we start to talk about the health components-- how many cars, their health, their safety, how their eating habits have changed-- once they start to correlate-- then it's no longer just about a bus. It starts to really become about a way of life. What are the things that we need to thrive in our communities? For a lot of people, they think public transit is just about a bus ride or train ride-- it's really about people's livelihoods and their well-being.

So it's just, really, I think, giving folks a much more holistic view of what we mean when we talk about transit, versus what people *think* we mean when we talk about it.

Index (Interview):

Note: Page numbers refer to pages in this paper.

Appendix 1.2

Quintile Composite Rankings for Well Being Indicators

Census Tract FID	Pharmacies	Public Technology Access	Parks and Green Space	SNAP Locations
0	2	1	3	4
1	2	1	2	2
2	3	5	3	5
3	1	1	1	3
4	4	2	3	1
5	1	1	2	3
6	1	1	2	1
7	1	1	1	1
8	2	2	3	2
9	1	2	3	1
10	1	1	1	2
11	2	1	4	2
12	2	2	2	1
13	1	1	3	1
14	3	2	1	2
15	2	2	2	1
16	2	1	1	2
17	3	1	1	1
18	3	1	1	1
19	1	3	1	3
20	1	1	3	1
21	3	1	2	1
22	1	2	1	2

Census Tract FID	Pharmacies	Public Technology Access	Parks and Green Space	SNAP Locations
23	1	1	2	4
24	1	1	1	1
25	1	1	1	2
26	1	1	3	1
27	4	1	3	2
28	2	1	1	3
29	3	3	1	4
30	3	1	3	4
31	2	1	3	1
32	3	1	3	4
33	1	2	2	2
34	1	1	1	2
35	1	1	2	1
36	3	4	3	3
37	1	1	3	1
38	1	1	1	1
39	3	3	1	5
40	1	1	1	4
41	1	1	3	1
42	2	1	3	2
43	1	1	3	1
44	1	1	3	1
45	2	1	1	3
46	1	1	2	1
47	2	1	2	2
48	1	2	1	4

Census Tract FID	Pharmacies	Public Technology Access	Parks and Green Space	SNAP Locations
49	1	2	2	1
50	2	1	2	1
51	1	1	2	1
52	1	1	2	3
53	1	1	1	1
54	2	1	2	1
55	2	1	1	4
56	1	1	1	2
57	3	1	1	4
58	3	1	3	1
59	1	1	1	3
60	1	1	3	4
61	3	1	2	2
62	1	1	3	2
63	1	1	2	1
64	2	2	4	1
65	2	1	3	1
66	1	1	3	2
67	1	1	2	4
68	2	2	3	3
69	2	1	2	1
70	2	1	1	2
71	1	1	3	2
72	1	1	2	1
73	1	1	2	2
74	1	1	2	1

Census Tract FID	Pharmacies	Public Technology Access	Parks and Green Space	SNAP Locations
75	3	1	1	3
76	1	1	2	2
77	1	1	3	1
78	1	2	1	1
79	1	1	2	3
80	2	1	2	1
81	1	1	1	2
82	1	1	2	3
83	1	1	2	1
84	2	2	2	4
85	1	1	1	1
86	1	2	3	1
87	1	1	2	1
88	2	2	3	1
89	3	3	1	1
90	2	1	5	3
91	5	4	5	5
92	2	1	3	1
93	1	1	1	2
94	1	1	2	1
95	3	1	3	2
96	3	2	3	4
97	3	1	3	3
98	1	1	3	3
99	1	1	3	1
100	1	1	3	1

Census Tract FID	Pharmacies	Public Technology Access	Parks and Green Space	SNAP Locations
101	2	1	1	1
102	1	1	2	1
103	2	1	4	1
104	1	1	2	1
105	2	1	3	2
106	3	1	2	2
107	1	1	4	2
108	1	2	4	2
109	4	1	3	1
110	3	3	2	3
111	1	1	3	2
112	1	1	2	1
113	1	2	1	1
114	1	1	2	1
115	1	1	1	1
116	1	1	1	1
117	2	1	1	4
118	2	1	3	1
119	1	1	1	4
120	1	2	3	2
121	2	1	2	2
122	1	2	3	4
123	1	1	3	1
124	1	1	1	2
125	2	1	2	4
126	2	1	3	1

Census Tract FID	Pharmacies	Public Technology Access	Parks and Green Space	SNAP Locations
127	1	1	1	1
128	3	2	3	3
129	2	1	1	2
130	1	2	1	1
131	1	2	4	2
132	1	2	3	4
133	1	1	4	1
134	3	2	1	4
135	1	1	2	4
136	2	2	3	4
137	4	1	3	5
138	2	2	1	1
139	3	2	3	3
140	1	2	2	4
141	1	1	2	1
142	1	1	1	1
143	1	1	1	1
144	1	1	2	2
145	1	1	1	4
146	1	1	2	1
147	2	1	2	1
148	3	1	1	2
149	1	2	2	3
150	2	1	1	1
151	1	2	2	2
152	2	1	1	1

Census Tract FID	Pharmacies	Public Technology Access	Parks and Green Space	SNAP Locations
153	1	1	3	1
154	1	1	2	1
155	1	2	1	4
156	1	1	3	2
157	4	1	4	2
158	3	1	4	3
159	3	1	2	3
160	1	2	3	1
161	1	1	3	1
162	1	2	3	1
163	1	1	1	1
164	3	1	2	2
165	1	2	3	3
166	3	3	3	1
167	2	2	4	2
168	3	1	1	1
169	1	1	1	1
170	2	2	2	2
171	1	1	3	2
172	1	1	1	1
173	1	1	3	2
174	1	3	3	3
175	2	2	3	3
176	1	2	4	1
177	1	1	3	1
178	1	2	1	1

Census Tract FID	Pharmacies	Public Technology Access	Parks and Green Space	SNAP Locations
179	1	2	3	1
180	1	1	1	1
181	1	1	1	3
182	1	2	1	3
183	1	2	3	1
184	1	1	1	1
185	1	1	1	2
186	1	2	1	1
187	3	1	3	2
188	1	1	2	3
189	1	2	1	1
190	2	1	3	1
191	3	1	3	4
192	3	1	4	1
193	3	2	1	4
194	1	2	2	2
195	1	1	1	2
196	3	1	3	2
197	1	2	2	2
198	1	1	2	3
199	1	1	3	3
200	2	1	2	2
201	1	1	1	1
202	1	1	1	4
203	1	5	2	3
204	1	1	1	1

Census Tract FID	Pharmacies	Public Technology Access	Parks and Green Space	SNAP Locations
205	1	1	1	1
206	2	1	4	1
207	2	1	2	1
208	1	1	3	1
209	1	1	3	2
210	1	1	2	1
211	1	1	1	1
212	2	1	1	1
213	2	2	2	2
214	1	2	3	2
215	1	1	1	1
216	1	1	2	1
217	1	2	3	2
218	1	1	4	1
219	1	4	3	1
220	1	1	1	1
221	3	1	3	1
222	1	1	1	1
223	2	1	2	2
224	1	2	1	1
225	1	2	1	1
226	2	1	1	4
227	1	1	2	1
228	1	1	2	2
229	2	1	2	1
230	1	1	2	1

Census Tract FID	Pharmacies	Public Technology Access	Parks and Green Space	SNAP Locations
231	1	1	1	1
232	1	2	3	1
233	2	1	1	2
234	1	2	2	1
235	3	2	1	3
236	2	2	1	1
237	3	1	1	2
238	1	1	2	1
239	4	1	2	4
240	2	5	4	4
241	2	1	3	3
242	2	1	2	1
243	2	1	1	3
244	1	2	1	4
245	1	1	1	1
246	2	1	1	2
247	1	2	1	3
248	1	1	3	1
249	2	2	3	1
250	1	1	3	1
251	3	2	4	4
252	3	1	2	3
253	1	1	1	2
254	1	2	1	2
255	3	1	1	2
256	3	1	2	2

Census Tract FID	Pharmacies	Public Technology Access	Parks and Green Space	SNAP Locations
257	2	1	3	4
258	2	1	3	3
259	3	2	3	4
260	2	2	1	2
261	1	1	1	1
262	1	2	2	3
263	2	1	3	1
264	3	1	3	3
265	1	1	1	1
266	1	1	4	1
267	1	1	3	1
268	1	1	1	2
269	3	1	1	1
270	2	1	3	2
271	1	1	1	1
272	2	1	2	1
273	2	1	3	1
274	1	1	1	1
275	1	1	1	2
276	1	1	2	2
277	1	1	1	1
278	1	1	1	1
279	2	2	1	1
280	1	1	2	1
281	1	1	1	2
282	3	1	3	3

Census Tract FID	Pharmacies	Public Technology Access	Parks and Green Space	SNAP Locations
283	1	1	1	1
284	2	2	3	1
285	2	1	3	4
286	3	1	3	1
287	1	3	1	2
288	1	1	1	1
289	1	2	1	2
290	1	1	1	2
291	2	2	1	4
292	1	1	1	2
293	1	1	1	3
294	2	1	1	1
295	1	2	2	1
296	1	1	1	1
297	1	1	2	1
298	1	3	2	1
299	1	1	1	1
300	2	1	5	1
301	3	1	3	3
302	1	1	1	3
303	1	1	1	4
304	1	2	2	1
305	2	1	2	3
306	1	2	2	2
307	2	1	3	1
308	3	1	2	1

Census Tract FID	Pharmacies	Public Technology Access	Parks and Green Space	SNAP Locations
309	3	1	3	3
310	2	1	1	1
311	1	1	2	4
312	1	1	1	1
313	1	1	1	1
314	3	1	2	3
315	2	1	3	1
316	2	1	1	2
317	2	3	2	2
318	2	3	1	3
319	3	1	4	4
320	1	1	2	2
321	1	1	2	2
322	3	1	1	1
323	1	1	2	1
324	1	1	2	1
325	1	1	2	1
326	1	1	1	1
327	1	1	3	1
328	1	1	1	3
329	1	1	3	1
330	2	2	1	2
331	1	3	1	3
332	2	1	2	2
333	1	1	1	1
334	1	1	3	1

Census Tract FID	Pharmacies	Public Technology Access	Parks and Green Space	SNAP Locations
335	1	2	1	1
336	1	1	2	1
337	1	1	1	1
338	1	2	1	1
339	1	1	4	2
340	1	1	1	1
341	3	1	1	2
342	1	2	1	3
343	1	2	1	2
344	1	1	1	2
345	1	1	1	1
346	1	1	3	2
347	1	1	2	2
348	1	1	1	2
349	2	1	1	1
350	1	1	1	1
351	1	1	2	1
352	1	1	1	1
353	2	1	1	1
354	3	1	1	2
355	1	1	3	1
356	2	1	3	2
357	2	1	1	4
358	2	1	2	3
359	1	1	1	1
360	1	2	2	2

Census Tract FID	Pharmacies	Public Technology Access	Parks and Green Space	SNAP Locations
361	1	1	3	1
362	1	1	2	1
363	1	1	1	3
364	1	4	3	3
365	2	1	3	1
366	4	1	3	5
367	2	2	3	2
368	2	2	3	1
369	1	1	3	2
370	3	1	3	1
371	2	1	2	2
372	1	1	2	1
373	3	3	5	3
374	1	1	1	1
375	1	1	2	1
376	1	2	2	1
377	2	1	4	4
378	2	1	2	1
379	3	2	2	1
380	1	1	1	2
381	1	1	2	4
382	1	1	4	3
383	1	1	1	1
384	2	1	2	1
385	2	2	2	1
386	1	1	1	1

Census Tract FID	Pharmacies	Public Technology Access	Parks and Green Space	SNAP Locations
387	1	1	2	1
388	1	2	1	1
389	2	1	2	1
390	1	1	2	2
391	2	1	1	2
392	1	1	1	1
393	2	1	1	1
394	1	1	3	1
395	1	1	2	2
396	2	1	2	2
397	1	1	1	1
398	1	2	1	1
399	1	2	3	2
400	1	1	4	1
401	1	1	2	1
402	2	1	1	1
403	1	1	1	1
404	1	1	3	1
405	1	3	2	2
406	1	1	1	2
407	1	1	1	1
408	1	1	3	1
409	1	1	1	1
410	1	1	3	1
411	1	1	1	1
412	1	1	2	1

Census Tract FID	Pharmacies	Public Technology Access	Parks and Green Space	SNAP Locations
413	1	1	2	1
414	2	1	1	1
415	2	1	3	1
416	1	1	2	1
417	1	1	1	1
418	1	1	2	1
419	1	2	1	2
420	1	1	4	2
421	1	2	1	1
422	3	1	2	1
423	1	1	1	1
424	2	1	3	2
425	1	1	3	1
426	1	1	2	1
427	1	1	1	1
428	1	1	1	1
429	1	1	2	1
430	2	1	1	2
431	1	1	1	1
432	1	1	2	2
433	1	1	2	2
434	3	4	3	4
435	2	3	2	3
436	1	1	2	1
437	1	1	2	1
438	1	1	2	2

Census Tract FID	Pharmacies	Public Technology Access	Parks and Green Space	SNAP Locations
439	1	1	2	1
440	1	1	3	1
441	2	2	3	1
442	1	1	2	1
443	1	1	1	2
444	1	1	1	1
445	1	5	1	1
446	1	2	1	1
447	2	3	1	2
448	2	1	2	1
449	2	1	2	1
450	1	1	1	3
451	2	1	2	1
452	3	1	1	1
453	2	1	2	2
454	2	1	2	4
455	3	3	3	5
456	1	1	1	1
457	1	2	1	1
458	2	1	1	1
459	2	1	1	2
460	1	1	2	1
461	2	1	4	2
462	1	1	1	1
463	1	1	1	1
464	1	1	2	2

Census Tract FID	Pharmacies	Public Technology Access	Parks and Green Space	SNAP Locations
465	1	2	2	1
466	1	1	2	1
467	1	1	3	1
468	1	1	3	1
469	2	2	3	1
470	1	1	1	1
471	1	1	3	1
472	2	1	2	1
473	1	2	3	5
474	1	1	1	4
475	1	1	1	1
476	1	1	1	1
477	1	1	2	1
478	2	2	3	3
479	1	1	1	2
480	3	1	3	4
481	2	1	3	2
482	1	2	1	1
483	1	1	1	2
484	1	1	1	3
485	2	1	1	1
486	3	5	2	2
487	1	1	2	1
488	3	2	3	3
489	1	1	1	2
490	2	1	1	1

Census Tract FID	Pharmacies	Public Technology Access	Parks and Green Space	SNAP Locations
491	2	1	2	2
492	3	1	1	1
493	1	1	2	2
494	3	3	2	1
495	1	1	2	3
496	2	2	3	2
497	2	1	2	3
498	2	1	3	2
499	3	1	2	3
500	2	1	3	1
501	1	1	3	1
502	1	1	2	1
503	1	1	1	1
504	1	1	2	2
505	2	1	3	1
506	3	2	2	1
507	1	1	1	1
508	1	2	2	1
509	2	3	3	3
510	1	1	3	2
511	1	1	1	2
512	2	1	1	2
513	1	1	1	2
514	1	1	1	3
515	2	1	1	1
516	1	1	1	1

Census Tract FID	Pharmacies	Public Technology Access	Parks and Green Space	SNAP Locations
517	3	1	1	3
518	1	1	3	1
519	1	3	1	1
520	1	3	2	1
521	3	2	1	2
522	1	1	2	1
523	1	1	3	2
524	1	1	3	3
525	1	1	2	1
526	1	1	2	1
527	1	1	2	1
528	1	1	2	2
529	1	1	2	1
530	1	1	2	1
531	2	1	3	1
532	1	2	1	2
533	1	1	3	1
534	1	1	2	1
535	4	2	3	2
536	1	2	2	1
537	1	1	2	2
538	3	1	3	2
539	2	1	3	1
540	2	1	2	2
541	2	1	1	1
542	3	2	3	3

Census Tract FID	Pharmacies	Public Technology Access	Parks and Green Space	SNAP Locations
543	1	1	1	1
544	3	1	2	1
545	2	1	1	1
546	1	1	2	1
547	1	1	3	1
548	3	2	1	2
549	1	1	1	1
550	1	1	1	1
551	1	1	1	1
552	1	1	2	1
553	1	1	1	1
554	1	1	1	1
555	2	1	1	1
556	1	1	1	1
557	3	1	1	2
558	2	2	3	1
559	1	1	1	1
560	1	1	4	1
561	2	2	2	3
562	3	1	2	2
563	2	1	3	3
564	2	1	1	2
565	1	1	1	1
566	1	2	3	1
567	1	1	1	1
568	1	1	2	2

Census Tract FID	Pharmacies	Public Technology Access	Parks and Green Space	SNAP Locations
569	1	1	1	2
570	3	1	2	1
571	1	3	2	2
572	2	1	1	1
573	1	1	3	2
574	2	2	1	2
575	2	1	1	1
576	3	2	2	2
577	1	3	1	1
578	1	1	4	1
579	4	5	5	4
580	2	1	3	1
581	1	3	5	1
582	2	1	3	1
583	1	2	3	3
584	2	1	1	4
585	1	1	3	1
586	2	3	1	1
587	4	1	3	1
588	1	1	1	1
589	1	1	3	1
590	1	2	3	1
591	1	1	2	2
592	1	3	2	2
593	1	1	1	1
594	2	1	2	2

Census Tract FID	Pharmacies	Public Technology Access	Parks and Green Space	SNAP Locations
595	1	1	2	2
596	2	2	3	2
597	2	1	2	2
598	1	1	1	3
599	3	1	3	2
600	1	1	3	1
601	2	2	3	3
602	1	1	2	1
603	1	1	2	1
604	3	1	2	2
605	1	1	1	1
606	3	2	1	2
607	1	1	1	1
608	2	1	1	1
609	1	1	1	1
610	1	2	3	1
611	2	1	2	1
612	2	1	1	2
613	1	1	1	1
614	2	1	1	2
615	1	1	3	1
616	1	1	1	1
617	1	1	2	1
618	2	1	3	1
619	2	1	3	1
620	1	1	2	1

Census Tract FID	Pharmacies	Public Technology Access	Parks and Green Space	SNAP Locations
621	1	1	1	1
622	3	2	1	2
623	1	1	2	1
624	1	1	1	2
625	2	1	3	3
626	1	1	3	1
627	3	1	3	1
628	1	2	1	1
629	1	1	2	1
630	1	1	3	1
631	2	1	1	2
632	1	3	2	1
633	3	3	2	5
634	1	1	4	1
635	2	1	4	2
636	1	1	1	1
637	1	1	1	3
638	1	1	2	2
639	2	1	1	2
640	1	1	2	2
641	2	2	3	2
642	1	2	2	1
643	1	1	3	1
644	1	1	1	1
645	1	1	1	1
646	1	1	3	1

Census Tract FID	Pharmacies	Public Technology Access	Parks and Green Space	SNAP Locations
647	1	1	1	1
648	1	1	1	1
649	1	1	2	2
650	1	1	2	1
651	3	1	5	3
652	2	1	1	1
653	1	1	3	1
654	1	1	3	1
655	1	1	3	1
656	3	2	2	3
657	3	1	1	2
658	1	1	3	2
659	1	1	1	1
660	1	1	2	1
661	1	2	3	1
662	1	1	2	2
663	1	1	2	1
664	1	2	1	1
665	2	1	2	2
666	1	2	3	1
667	1	1	4	1
668	1	1	3	1
669	2	1	4	2
670	1	1	1	3
671	1	2	3	1
672	1	1	3	2

Census Tract FID	Pharmacies	Public Technology Access	Parks and Green Space	SNAP Locations
673	3	2	3	4
674	1	1	1	2
675	1	1	2	1
676	2	1	2	1
677	1	1	2	1
678	1	1	2	1
679	2	1	2	2
680	3	1	3	1
681	3	1	2	1
682	2	1	2	1
683	2	1	1	2
684	1	1	2	1
685	1	1	2	1
686	1	1	1	2
687	2	1	2	1
688	1	1	2	1
689	1	1	2	1
690	1	1	1	1
691	2	1	1	1
692	1	1	2	2
693	2	1	3	2
694	1	1	2	3
695	3	5	3	2
696	1	2	2	2
697	1	1	1	1
698	2	2	1	1

Census Tract FID	Pharmacies	Public Technology Access	Parks and Green Space	SNAP Locations
699	2	1	1	1
700	1	1	1	1
701	3	1	3	1
702	2	1	2	1
703	1	1	3	1
704	2	1	2	1
705	1	3	3	3
706	1	1	1	1
707	2	1	2	2
708	2	1	2	2
709	1	1	1	1
710	3	1	3	1
711	1	2	1	1
712	2	1	2	1
713	2	1	1	1
714	1	2	1	1
715	1	1	1	3
716	1	2	1	1
717	1	1	1	2
718	2	1	2	2
719	1	2	2	1
720	1	1	1	2
721	2	1	2	1
722	1	2	2	1
723	1	1	3	1
724	1	1	3	1

Census Tract FID	Pharmacies	Public Technology Access	Parks and Green Space	SNAP Locations
725	2	1	1	2
726	1	3	3	1
727	3	1	1	1
728	1	1	2	1
729	1	2	2	1
730	2	1	2	1
731	1	1	3	1
732	1	2	2	1
733	3	1	1	1
734	3	2	3	1
735	1	2	1	3
736	2	2	2	2
737	2	1	1	3
738	1	1	2	2
739	1	2	1	3
740	1	1	2	1
741	2	2	1	1
742	3	1	2	2
743	2	1	1	2
744	2	1	1	1
745	1	1	3	1
746	2	1	3	1
747	2	1	3	1
748	2	1	3	2
749	2	1	3	2
750	2	2	2	2

Census Tract FID	Pharmacies	Public Technology Access	Parks and Green Space	SNAP Locations
751	2	2	1	2
752	1	1	2	2
753	1	1	2	2
754	2	1	2	2
755	1	1	1	1
756	1	1	3	1
757	1	1	1	1
758	1	1	1	1
759	1	1	2	1
760	2	1	3	1
761	1	1	1	1
762	1	1	1	3
763	1	2	1	2
764	1	1	3	1
765	1	1	1	1
766	1	1	1	2
767	1	1	1	1
768	3	1	1	1
769	2	1	3	1
770	1	2	2	1
771	2	1	3	1
772	2	1	2	3
773	2	1	1	2
774	1	1	2	1
775	2	1	3	3
776	1	1	1	3

Census Tract FID	Pharmacies	Public Technology Access	Parks and Green Space	SNAP Locations
777	2	2	1	2
778	3	1	2	1
779	2	1	1	1
780	1	1	2	1
781	2	2	4	2
782	1	1	1	1
783	3	1	4	4
784	1	1	2	1
785	3	3	3	2
786	2	2	2	3
787	1	1	1	1
788	1	1	1	1
789	1	2	3	1
790	1	1	1	1
791	1	1	1	1
792	3	1	2	3
793	1	1	2	2
794	1	2	2	1
795	1	1	3	1
796	1	1	3	1
797	1	1	3	1
798	1	1	3	2
799	1	1	3	2
800	1	1	2	1

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