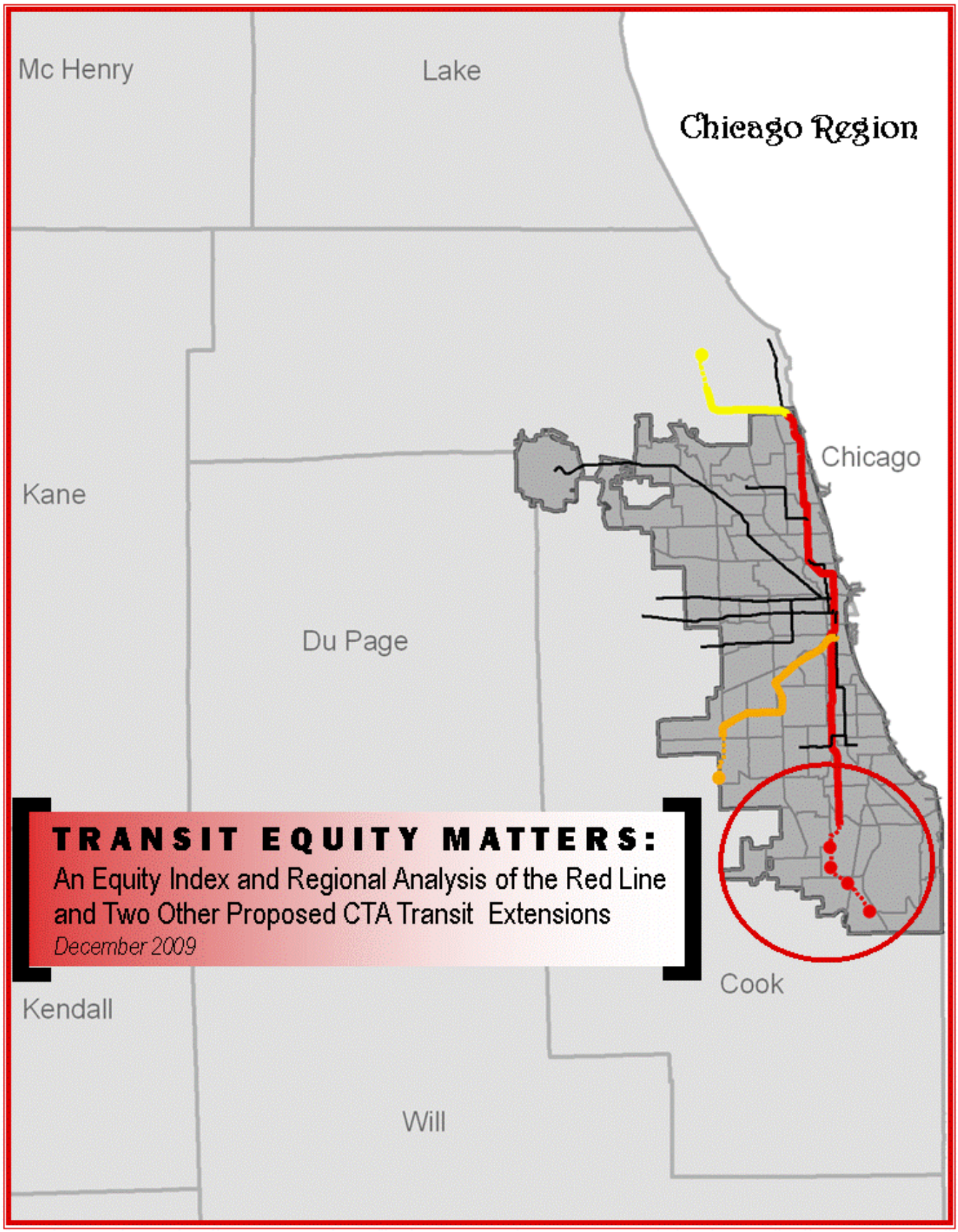

TRANSIT EQUITY MATTERS:

An Equity Index and Regional Analysis of the Red Line and Two Other Proposed CTA Transit Extensions

December 2009

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UIC UNIVERSITY OF ILLINOIS AT CHICAGO
Nathalie P. Voorhees Center for Neighborhood and Community Improvement
COLLEGE OF URBAN PLANNING & PUBLIC AFFAIRS

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The research for this report was conducted by a research team assembled by the Voorhees Center. The team includes Voorhees Center co-directors, staff, faculty from the urban planning program, and graduate research assistants. The research team was closely assisted by a project team composed of a number of experts representing the sponsoring organization, Developing Communities Project, Inc. (DCP), and a representative of the Regional Transportation Authority (RTA). The project team met with the research team monthly during the project year and offered feedback and comments throughout the process. A Technical Advisory Panel (TAP) of experts met with the research and project teams periodically and offered advice during the research process and provided comments on the draft report.

The Voorhees Center is grateful for the commitment and hard work of all involved in this process and acknowledges their contribution to the successful completion of this project. Special thanks goes to DCP for initiating the project and being instrumental in securing the funding, and to the Regional Transportation Authority for its generous funding of the project, through its Community Planning Program as well as the staff support provided throughout the process.

This report was approved by the Board of Directors of Developing Communities Project, December 2009.

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Executive Summary

Transportation is an important component of daily life for all households. It provides access to resources that are necessary for living a healthy and prosperous life. Generally, it represents the second highest expense next to housing and is of high priority because it facilitates access to work, a key feature of financial self-sufficiency.

Transportation plays an important role in revitalizing and supporting underserved communities. The U.S. Department of Transportation (DOT) recognizes this, and in addition to safety and mobility, identifies fundamental environmental justice principles that should guide policy considerations.

Northeastern Illinois has the nation's second largest transit system complemented by an extensive road and highway network. Maintaining, improving and expanding transit infrastructure is mainly under the jurisdiction of the Regional Transportation Authority (RTA) and its service boards: the Chicago Transit Authority (CTA), Metra and Pace.

To ensure that adequate and safe transit options are available in Northeastern Illinois, twenty-three major capital improvement recommendations are identified as priorities in the 2030 Regional Transportation Plan (RTP). They include 10 CTA and 13 Metra projects (improvements and extensions to all existing lines, and two new rail lines). All proposed projects are major capital investments with regional impacts; and all have merit and warrant due consideration.

The focus of this study, the proposed Red Line Extension, is one of the major CTA lines recommended for improvement under the New Starts program. The Red Line crosses the City from north (7400) to south (9500) for approximately 20 miles. The Red Line is the most travelled CTA line, representing 30% of total CTA ridership, second only to the ridership in the Loop on all lines.

The Red Line began its service in 1969 and plans to extend it to the southern city limits were made shortly thereafter but then tabled for decades to come. In 2002, Developing Communities Project, Inc., began organizing to promote the proposed Extension.

Activities around the proposed Red Line Extension have progressed this past year with the beginning of the Alternatives Analysis process by the CTA which documented the need in the area and identified the following as goals for the Red Line Extension:

- reduce travel times to jobs for far south side and south suburban residents,
- improve performance at the existing terminal, and
- create opportunities for economic development initiatives.

The proposed Red Line Extension includes 5.3 miles of new route from the existing 95th Street station to a new terminal at 130th Street. Four new stops are planned along with new bus terminals and parking facilities at each station.

For purposes of this study, the proposed Red Line Extension is evaluated in comparison to similar extension projects participating in the New Starts process – the CTA's Orange and Yellow Lines. The evaluation is primarily based on analysis of existing conditions, employment opportunity potential and transit-oriented development (TOD) potential.

Equity Index

In order to understand and document existing conditions, the team developed a regional Equity Index with 19 indicators based on environmental justice and livability principles. These indicators provide a general snapshot of conditions in the region to help gauge regional equity needs. The index is intended to be used as a tool by communities and decision makers to make informed choices on investments to advance regional equity. We believe that the Equity Index methodology and manner of analysis employed in this study can inform capital planning decisions in our region and elsewhere.

The 19 indicators are categorized into three groups: transportation equity, environmental justice and livable community potential. Areas are determined to be of greater need based on the following general assumptions.

Transportation equity: Areas with high concentrations of transit dependent populations and areas with high travel times to work are in greater need and are priority areas for increasing transit investments because transit dependent populations stand to benefit most from transit investments. The following demonstrates that the region covered by the proposed Red Line Extension has a greater proportion of transit dependent residents compared to the region as a whole:

- Twenty-four percent (24%) of households are without cars compared to a 12% regional mean.
- Seventeen percent (17%) of the working population travel in excess of 60 minutes to work compared to a regional mean of 6%.
- Fourteen percent (14%) of the population are elderly (65+) compared to 11% regional mean.
- Nineteen percent (19%) of the population have disabilities compared to a 12% regional mean.
- Seventy-three percent (73%) of households are low-income compared to a 49% regional mean.

The Red Line Extension area scores 8 out of 10 in the transportation equity index, higher that the Orange Line which scored 0 and Yellow Line which scored a 1. It has a significantly higher number of transit dependent populations experiencing longer travel times that would immensely benefit from the Extension.

Environmental social justice: Areas with high concentrations of minority (non-white and/or Hispanic) and low-income (earning below 80% of Area Median Income) populations are in greater need regionally and are priority areas for locating transit investments because a high proportion of low-income and minority populations tend to be transit users.

The Red Line Extension also scored high on the environmental justice index with a score of 4 out of 4, again higher than the Orange (2) and Yellow Line (-1) Extension areas. It has more minority and low-income populations with a greater likelihood of requiring transit to access jobs and other resources.

Livable community potential: Areas with high concentrations of unhealthy economic, housing and environmental conditions are in greater need regionally and are priority areas for locating investments including but not limited to transportation investments because areas most in need would benefit most from coordinated investments.

In this category as well, the Red Line Extension area scored higher with 20 out of 24 points indicating a need for comprehensive investment strategies.

When all indicators are considered, the Red Line Extension impacts an area that is of high priority with a score of 32 out of a possible 38 points. With multiple social, economic and environmental concerns, the Red Line Extension area is an opportune location for coordinated efforts to make more efficient use of resources and to advance equity and sustainability.

Regional Impact

Transportation performance

Ridership: The Red Line Extension is expected to serve more riders and to generate greater revenue while costing less on a per capita basis compared to the Orange and Yellow Line Extensions:

- The ridership on the Red Line accounts for 30% of ridership system-wide, second only to the Loop.
- Estimated new ridership for the Red Line Extension is 12.7 million, compared to 3 million for the Orange and 2 million for the Yellow Line Extensions.
- Capital costs for the Red Line are estimated to be less with $87 per person compared to $133 and $135 per person for the Orange and Yellow Lines, respectively.

Travel time: The daily traffic to and from the south Chicago region to downtown is high with 300,000 vehicles on the I-94 Dan Ryan and 26,000 vehicles along arterial streets; increases of 10% for expressways and 20-30% for local arterials are estimated by 2030.

Residents living in the vicinity of the proposed terminal station at 130th and Stony Island currently travel 28 minutes just to get to the 95th Street station. Travel into downtown from that station is an additional 25 minutes which results in an overall travel time of 62 minutes.

The construction of the Red Line Extension to 130th will eliminated the need for a transfer and is estimated to save 20.5 minutes (33%) for area residents traveling to the downtown Jackson station. This compares to 16.5 and 11 minute time savings for the Orange and Yellow Line Extensions, respectively.

Accessibility: System-wide there are 6,713 parking spaces available. Nine percent (592) of those spaces are located at the Howard station on the north end of the Red Line. Zero parking spaces are available along the Dan Ryan Branch of the Red Line. Both the Skokie Branch and Midway Branch have parking spaces available at nearly all stations. The construction of the Red Line Extension includes the creation of a 1,500 parking spaces at intermediate and terminal stations. The addition of parking spaces will enhance access to Chicago for south suburban residents and will also likely ease congestion on the Bishop Ford Expressway.

According to the Regional Transportation Asset Management System (RTAMS) database, 60% of stations system-wide are accessible to persons with disabilities. Along the Red Line 40% (12 stations) are ADA accessible to disabled individuals while both the Orange Line Branch (8 stations) and Yellow Line Branch (1 station) are 100% accessible.

Access to employment centers (jobs): Access to jobs in the northwest Skokie and Evanston employment clusters is longest from the 95th Street station compared to access from Midway on the Orange Line and Dempster on the Yellow Line. Measured in average travel time, access to job centers from the Red Line terminal station (95th Street) is 92.5 minutes compared to 88.9 minutes for the Orange Line and 84.56 minutes for the Yellow Line terminal stations.

In addition to inadequate access to jobs, the lack of nearby jobs in south Chicago and south suburbs contribute to the high travel times. Among the proposed Red, Orange and Yellow Line Extensions, the Red Line Extension has the least number of jobs available within a 1-mile buffer of the impact area with approximately 1,900 jobs (per station) compared to 11,223 at the Ford City location and 10,166 at the Old Orchard location, stations on the Orange and Yellow Lines, respectively.

The Red Line Extension area also has the most workers commuting to Chicago for work. Of 25,408 working residents in the Red Line Extension area, 60% commute within Chicago to work (majority traveling to the Loop) compared to 44% from the Orange Line and 34% from the Yellow Line Extension areas travelling to Chicago to work.

Transit-oriented development (TOD)

While transit-oriented development alone may not guarantee development and development benefits, it can be used to guide development around transit stations. Transit makes land accessible and more valuable. This, coupled with transit supportive zoning, pedestrian scale, land availability, tax subsidies, and a positive economic climate can play an important role in helping to revitalize an area; such opportunities exist in the proposed Red Line Extension area.

TOD potential: The Red Line Extension area has significant transit-oriented development potential compared to the Yellow and Orange Line Extension areas. Barriers to transit-oriented development are minimal at the 103rd, 111th and 116th stations: all have pedestrian level scale, transit supportive zoning (residential, commercial and mixed use) and existing tax subsidies.

Overall, 11% of parcels within a ¼ mile of all stations are vacant. An additional 11% are also exempt which includes city owned and institutional land and have partnership potential for development. The creation of a transit station at 116th and Michigan could bolster current development plans for the area and stimulate development interest. The station at 130th, with the proposed park-n-ride facility, could open up access to the southern suburbs and stimulate employment opportunities and access.

Housing: The area surrounding the proposed Red Line Extension has a median home value of $125,000. Increasing employment opportunities through transit investments could help bridge the jobs and housing mismatch in the area as this area has ample affordable housing but limited employment.

Consumer spending leakage: All proposed transit station locations on the Red Line Extension have consumer spending leakage totaling $177 million within ½ mile of the stations. This represents significant development opportunities for the area. On the other hand, both the Orange and Yellow Line terminals have surpluses.

Summation

It is commonly understood that coordinated public investments in areas with the greatest need can help balance regional equity and advance sustainability. Based on a thorough examination of existing conditions and transit-oriented development potential with regard to the proposed Red, Orange and Yellow Line extensions, the Red Line Extension demonstrates the greatest priority in terms of balancing existing inequities, expanding access to jobs and offering the most potential for transit-oriented development.

Introduction

Background

Transit Equity Matters: An Equity Index and Regional Analysis of the Red Line and Two Other Proposed CTA Transit Extensions is a study aimed at identifying transportation equity issues in the region and identifying transit-linked opportunities for economic and community development in the Greater Roseland community area . The study was initiated by Developing Communities Project, Inc. (DCP), a faith-based organization that serves Chicago's Greater Roseland community areas on the far south side. DCP was incorporated in 1986 under the leadership of its first executive director, then community organizer and now president of the United States Barack Obama, as a vehicle for grassroots leaders to impact decision-making around issues that affect their lives. DCP has mobilized thousands to advocate for programs, services and public policies to meet the needs of the community's high population of disadvantaged and underserved residents.

DCP's vision is to see Greater Roseland become a safe community flourishing with jobs, achieving schools and students, supportive services and businesses, affordable housing, and accessible transportation. DCP, recipient of the 2007 Community Organizing Award and a 2006 Shore Bank Faith-Based Community Impact Award, works through its current programs, organizing campaigns and community partners to achieve this vision. Since 2003, DCP and its Red Line Oversight Committee (ROC) have led the charge for transportation and economic justice by promoting the extension of this rapid transit line from its current terminus at 95th Street and the Dan Ryan Expressway through Greater Roseland to near 130th Street and Stony Island Avenue, Chicago's far south side city limits.

The *Transit Equity Matters* Project includes four phases:

- Phase I. A sub-regional comparative analysis of transit investments in the region and their potential for positive impact on regional equity issues.

- Phase II. A community involvement phase, which capitalizes on six years of vigorous organizing of community and stakeholder support for the CTA's Red Line Extension capital project through "community visioning and development workshops" aimed at immersing community residents and stakeholders, with planning professionals and community organizers, in the process of drafting a vision and goals for community and regional development in the impact areas of the Red Line Extension;

- Phase III. A community economic and workforce development phase that will identify policy options in these areas; and

- Phase IV. The establishment of a Red Line Extension funding pool for the state and local match required to draw down federal funding for the planning and construction of the Red Line Extension.

Purpose and Report Layout

The focus of this report is Phase I which was funded through the Regional Transportation Authority Community Planning Program. It is a sub-regional comparison of transit investments in the region and their potential for positive impact on regional equity issues.

The report is divided into three main sections:

Section 1: Regional Transportation Choices. This section outlines regional planning in northeastern Illinois and the Federal Transportation Administration's New Starts program for funding transportation investments. Additionally this section describes current transit extension proposals in the northeastern Illinois region.

Section 2: Regional Equity Index. In order to compare the potential impacts of transit investments on regional equity, regional equity issues had to be identified. This was done with the construction of a regional Equity Index. The Index consists of 19 indicators and is designed to highlight social, economic and transportation challenges in the region. The region is defined as the 7 counties in northeastern Illinois with transit options from either CTA or Metra. This includes Cook, Lake, DuPage, Will, Kane, Kendall and McHenry County.

The Equity Index includes:

a) Transportation equity indicators.
b) Environmental justice indicators.
c) Livable community indicators.

Areas with high social, economic, environmental and transportation challenges are identified as priority areas for investment. If balancing regional inequities is a regional goal, areas with high inequities are priority areas. This concept is in line with current regional planning initiatives. The most relevant example of this concept is addressing the challenges with balancing the jobs and housing mismatch. The Chicago Metropolitan Agency for Planning (CMAP) has suggested 3 ways to address the mismatch and regional inequity in their recent *Go To 2040* regional snapshot of jobs and housing balance. CMAP suggests:

- Job creation should be encouraged in areas that have ample affordable housing.
- Affordable housing should be encouraged in areas that have ample jobs.
- Transportation connections should be improved between affordable housing and job centers.[1]

Section 3: Regional Impact Assessment. This section describes current conditions and conditions if the extensions were to be built. It also examines the transit-oriented development potential of the Red Line Extension. The Red Line Extension to 130th and Stony Island is compared regionally to two other Chicago Transit Authority (CTA) proposed extensions (Orange Line Extension to Ford City Mall and Yellow Line Extension to Old Orchard Mall) to help assess the potential for positive impact on regional equity issues.

[1] Jobs & Housing Balance, CMAP Regional Snapshot, Go To 2040, 2009.

Transit-oriented development potential is assessed by examining the following factors in the areas surrounding each proposed transit station:

a) Development potential of land.
b) Transit supportive conditions.
c) Economic climate.

1. Regional Transportation Choices

1.1 Regional Planning

There are over 30 sources of funds that can be utilized for improving and maintaining the transportation system in the northeastern Illinois region.[2] One such program is the Federal Transit Administration's (FTA) discretionary New Starts program. The Red, Orange and Yellow Line Extension alternatives compared in this report have all been funded through the New Starts program.

Projects eligible for New Starts funding include rapid rail, light rail, commuter rail, automated guideway transit and facilities for exclusive bus use. Recipients compete for these funds nationally and projects are recommended for funding if they are part of a regional transportation planning process.

The Safe Accountable, Flexible, Efficient Transportation and Equity Act: a Legacy for Users (SAFETEA-LU) directs the FTA to evaluate and rate candidate projects as they move through five formal planning processes: Alternatives Analysis, Environmental Impact Statement, Preliminary Engineering, Final Design and Construction.[3] Completing these steps allows the sponsoring transit agency to seek funding but it does not guarantee the appropriation of funds.

Projects participating in the New Starts program in the Chicago region are also part of the *2030 Regional Transportation Plan* (2030 RTP), a coordinated multimodal transportation plan for meeting the needs of the region through 2030. Development of the 2030 RTP is coordinated by the Chicago Metropolitan Agency for Planning (CMAP) which is responsible for better integrating planning efforts around issues pertinent to land use and transportation for the northeastern Illinois region. The plan identifies major capital projects for the region which includes Cook, DuPage, Kane, Kendall, Lake, McHenry and Will County. The region comprises more than 8.1 million people and has an employment base of 4.3 million.[4] CMAP works with government and transit agencies to develop and prioritize projects of regional significance.

Northeastern Illinois has the nation's second largest transit system and is complemented by an extensive road and highway network.[5] Maintaining, improving and expanding transit infrastructure is mainly under the jurisdiction of the Regional Transportation Authority (RTA) and its service boards: the Chicago Transit Authority (CTA), Metra and Pace.[6]

Currently there are twenty-three major capital improvement recommendations listed in the 2030 RTP. Projects include 10 CTA transit improvements and 13 Metra proposed projects (improvements and extensions to all existing lines and two new rail lines). All projects are warranted in their individual ways. All improvements are, like the Red Line Extension, major capital investments with regional impacts.

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[2] CMAP Transportation Improvement Program Summary 2007-2012.
[3] United States Department of Transportation, Federal Transit Administration, Introduction to New Starts http://www.fta.dot.gov/planning/newstarts/planning_environment_2608.html.
[4] CMAP Transportation Improvement Program, Chapter 1 http://www.catsmpo.com/prog/tip/chapter1_07-12.pdf.
[5] CTA Red Line Extension Alternatives Analysis Locally Preferred Alternative Report, August 2009.
[6] CMAP Transportation Improvement Program Summary 2007-2012.

One proposed project participating in the New Starts process that also has potential impact in the Greater Roseland area is the Metra SouthEast Service (SES). The proposed 33-mile SouthEast Service as currently designed would operate on four different railroad rights-of-way extending from the south suburbs to the downtown Chicago LaSalle Street station. According to Metra, the new line is to include 12 new station stops. One of the stations proposed is located in the vicinity of 115th Street which is also the area of the third station proposed for CTA Red Line Extension. While both of these proposed projects impact the same geography, their ridership, costs and operations are different.

For the purposes of this project the Red Line Extension is compared to the Orange and Yellow Line extensions; these three lines are all CTA projects currently participating in the New Starts process. Details on the decision criteria used and the history of each CTA line can be found in Appendix A.

1.2 Transit Extension Proposals

The Red Line

The Red Line was put into operation in 1969. Plans to extend the Red Line to the southern city limits were made shortly thereafter but then tabled for years to come. In 2002, Developing Communities Project, Inc., began organizing residents around the extension of the Red Line through the community. Organizing included a petition drive to put an advisory referendum on the ballot. Six thousand residents signed it, allowing it to be put on the November 2004 ballot. In 2004, the referendum was supported by 38,000 voters in the 9th and 34th wards. In 2006, the CTA board approved an Alternatives Analysis study for the proposed Extension. Results of the study were presented for comments at three public screenings. Opportunities for public input generated 451 comments from residents and stakeholders in the community.[7] A Locally Preferred Alternative (LPA) was chosen through the process and approved by the CTA board in August 2009.

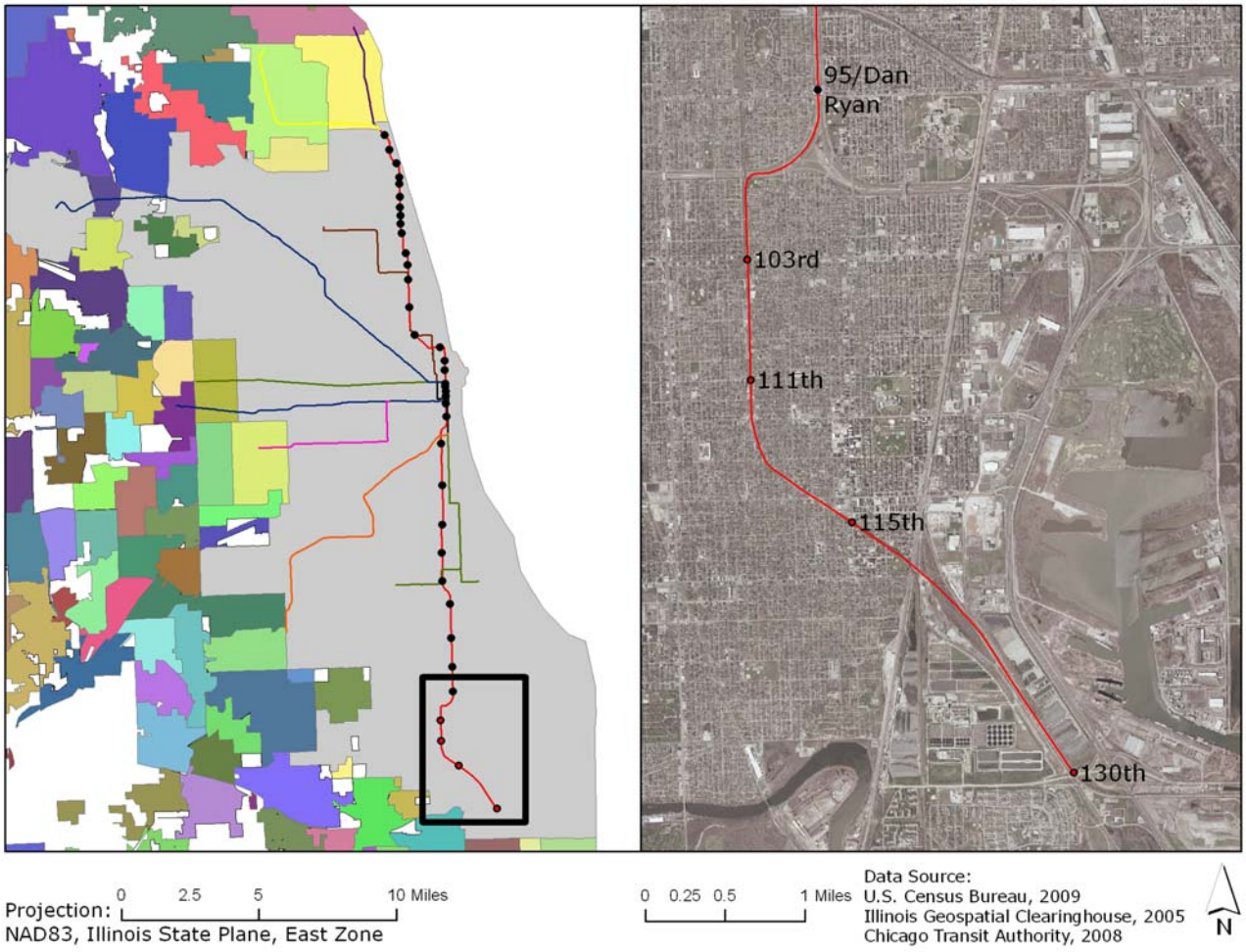
The Red Line Extension LPA includes 5.3 miles of new route from the existing 95th Street station to a new terminal at 130th and Stony Island. Four new stops are planned along with new bus terminals and parking facilities at each station. The LPA route chosen during the Alternatives Analysis of the New Starts process is a heavy rail transit line that would operate as an elevated structure following I-57 west to the Union Pacific Rail Road (UPRR) corridor between 99th Street and 119th Street at which point it transitions to at-grade and terminates in the vicinity of 130th and Stony Island. The LPA was approved by the CTA board on August 12, 2009, allowing the route to progress into the second phase of New Starts which includes the Environmental Impact Study (EIS). The direction (east or west) of the UPRR corridor and the exact location of the 130th Street station are to be evaluated further during the EIS.

[7] Chicago Transit Authority Yellow Line Extension Alternative Analysis Public Comment Database, 2009.

According to the Alternatives Analysis, the purpose of the Extension is to reduce travel times to jobs for the far south side and south suburban residents, to improve performance at the existing terminal and to create opportunities for economic development initiatives. Needs are based on the following considerations:

- Lack of park-n-ride facilities, passenger drop-off and poor pedestrian facilities limit access.
- Measurable delays resulting from poor performance of current system.
- Safety issues resulting from congested bus and passenger conditions in the area.
- Narrow arterial streets and frequent at-grade freight rail crossings impact roadway performance.
- Study area population is highly transit dependent, minority and low-income.[8]

Figure 1 Red Line Extension Locally Preferred Alternative[9]



[8] CTA Red Line Extension Connecting 95th Street to 130th Street. Environmental Impact Statement Scoping Information, September 2009.
[9] Locally Preferred Alternative approved by CTA board on August 12, 2009.

The Orange Line

The Orange Line to Midway was put into operation in 1993, although plans for transit service to Midway Airport were discussed as early as the 1940's. Financial restrictions made it impossible for the line to continue to Ford City as planned but layout and location of the Midway terminal were constructed so as to facilitate a future expansion.[10] In 2006, the CTA board approved an Alternatives Analysis study for the proposed extension. Results of the study were presented for comments at two public screenings. Opportunities for public input generated 158 comments from residents and stakeholders in the community.[11] A Locally Preferred Alternative (LPA) was chosen through the process and approved by the CTA board in August 2009.

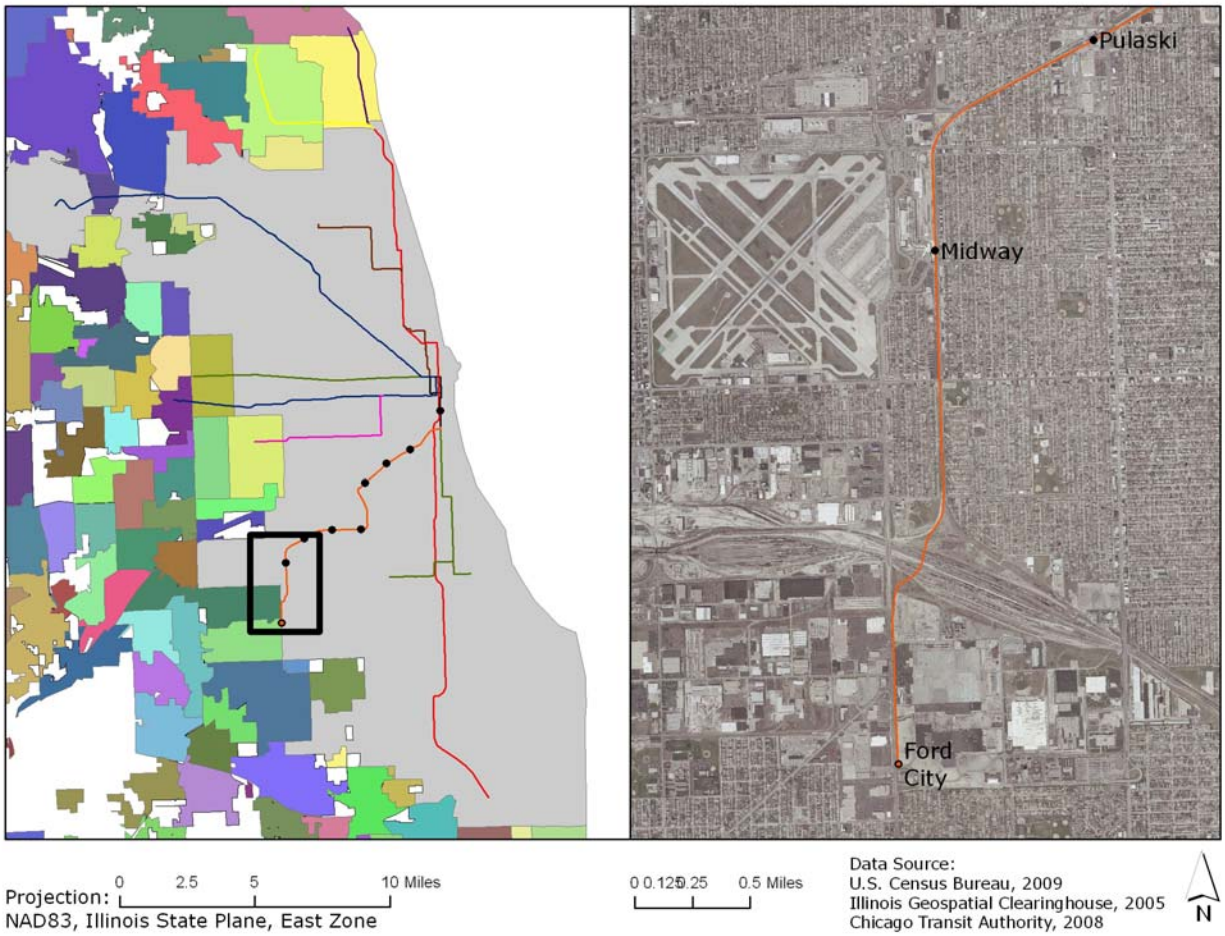
The CTA is proposing to extend the Orange Line 2.3 miles south to the Ford City Mall. The LPA route chosen during the Alternatives Analysis phase of the New Starts process is a heavy rail transit line to Ford City terminating at 76th and Cicero Avenue. The LPA was also approved by the CTA board on August 12, 2009, allowing the route to progress to the second phase of New Starts which includes the Environmental Impact Study (EIS). The LPA route is partly in a trench and at-grade along the Belt Railway Company (BRC) of Chicago right-of-way until approximately 6400 south where it transitions to an elevated structure above Marquette Road, across the BRC clearing yard and along Cicero to terminate at 76th and Cicero. The proposed Ford City Mall station would include a park-n-ride facility and a new bus terminal. A potential future CTA station is identified in the vicinity of Marquette Road and Knox Avenue but is not included in this phase of development.

According to the Alternatives Analysis, the purpose of the Extension is to improve access to the existing Orange Line for southwest side and southwest suburban residents, support ongoing economic developments efforts and strengthen transit for the reverse commute market. Needs are based on the following considerations:

- Access to the Orange Line is currently constrained by limited parking.
- Access to the Orange Line by bus or auto is unreliable due to congestion.
- Few uncongested roadways are available for access to the current Orange Line limiting mobility for residents and businesses.[12]

[10] http://www.chicago-l.org/operations/lines/orange.html.
[11] Chicago Transit Authority Orange Line Extension Alternative Analysis Public Comment Database, 2009.
[12] CTA Orange Line Extension Connecting Midway to Ford City. Environmental Impact Statement Scoping Information, September 2009.

Figure 2 Orange Line Extension Locally Preferred Alternative[13]



[13] Locally Preferred Alternative was approved by CTA Board on August 12, 2009.

The Yellow Line

The Yellow Line was in operation in the 1940's and then stopped for low usage. In 1963 service was reinstated and the terminal station was developed as a demonstration of how public transportation could serve the suburbs. The service was developed to coordinate with local bus routes and provided a parking lot, drop off area and bus turnarounds.[14] The Village of Skokie and the City of Evanston have been actively involved in studies researching potential infill station sites. In 2006, the CTA board approved an Alternatives Analysis study for the proposed extension. Results of the study were presented for comments at two public screenings. Opportunities for public input generated 226 comments from residents and stakeholders in the community.[15] A Locally Preferred Alternative (LPA) was chosen through the process and approved by the CTA board in August 2009.

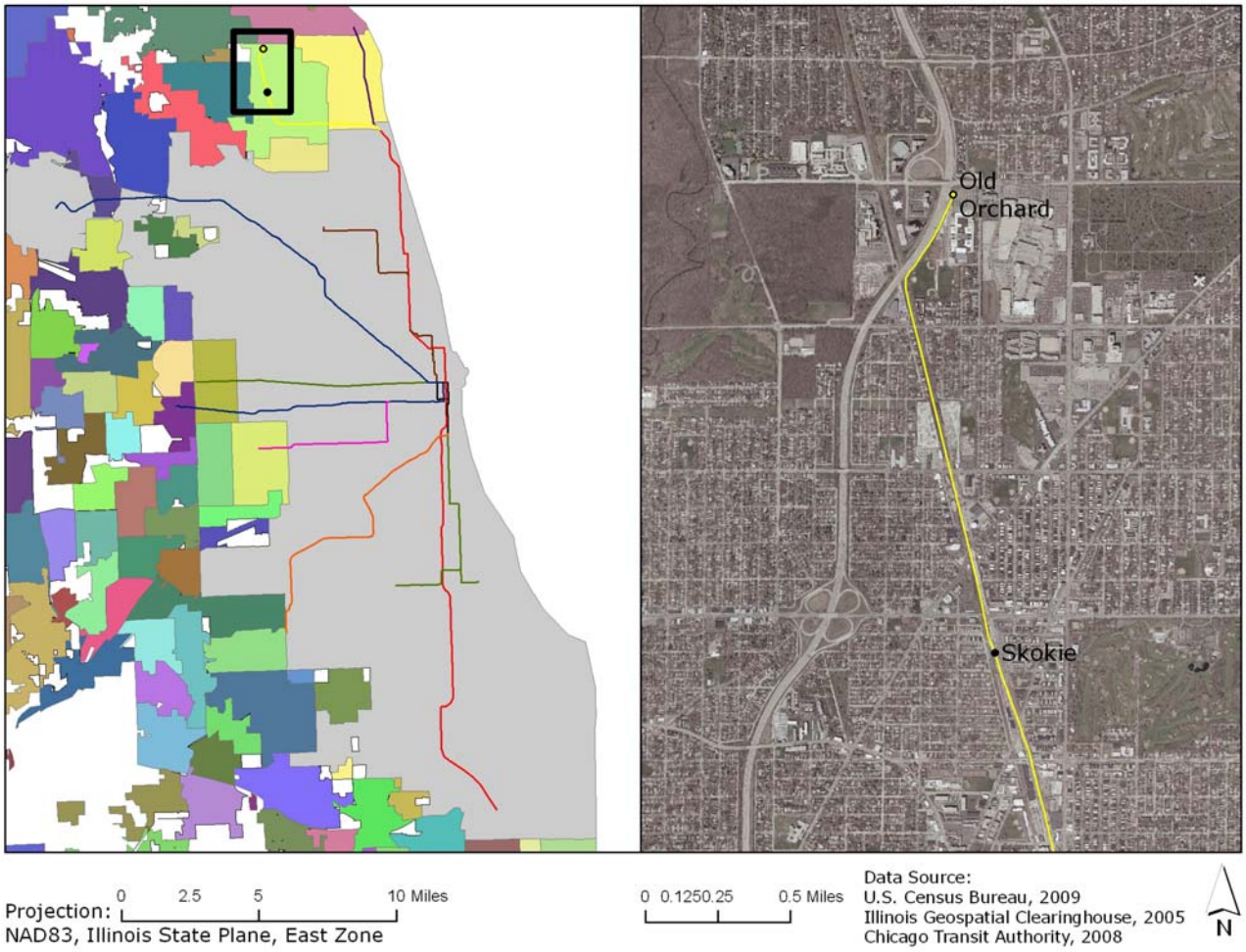
The proposal to extend the Yellow Line would link the current Skokie station at Dempster Avenue to the Old Orchard Mall area. The Extension is 1.6 miles and does not include any intermediate stops. The LPA proceeds northbound within the UPRR right-of-way from Dempster to Golf Road. It then curves and parallels the Eden's Expressway to the proposed terminal location on the south side of Old Orchard Road. The Extension includes 2 new stations. The Dempster station would be completely rebuilt to accommodate large length trains and bi-directional ridership. The terminal station would be located east of the expressway and in the northwest portion of the Niles North High School property. A multi-story parking structure with dedicated student and commuter parking spaces would offset the parking space displaced by the station.

According to the Alternatives Analysis, the purpose of the Extension is to improve transit accessibility and provide mobility options and also to support the Village of Skokie's land use plans. Needs are based on the following considerations:

- Significant reverse commute to the project area.
- Travelers make multiple transfers to reach activity and employment centers in the project area.
- Alternatives will help avoid continued growth in congestion.[16]

[14] Chicago-L (2009) Yellow Line. http://www.chicago-l.org/operations/lines/yellow.html.
[15] Chicago Transit Authority Red Line Extension Alternative Analysis Public Comment Database, 2009.
[16] CTA Yellow Line Extension Connecting Dempster Station to Old Orchard Road. Environmental Impact Statement Scoping Information, September 2009.

Figure 3 Yellow Line Extension Locally Preferred Alternative[17]



[17] Locally Preferred Alternative approved at CTA Board Hearing on August 12, 2009.

2. Regional Equity Assessment

2.1 Equity Index Description

Transportation is a necessary component of daily life for all households. It provides access to all resources that are necessary for living a healthy and prosperous life. As such, it is generally the second highest household expense next to housing. Commuting to work accounts for only one-sixth of daily trips but is a high priority because it enables access to employment, a key feature of financial self-sufficiency.[18]

The role transportation can play in revitalizing and supporting underserved communities is recognized by the U.S. Department of Transportation (DOT) and the Federal Transit Administration (FTA) in their efforts to include environmental justice language in program and funding priorities. Environmental justice principles are founded on Title VI of the Civil Rights Act of 1964 and strengthened by President Clinton's Executive Order on Environmental Justice in 1994. Environmental justice principles have been embodied in many laws and regulations such as the National Environmental Policy Act of 1969 (NEPA) and the Transportation Equity Act for the 21st Century (TEA-21), among others.

In addition to safety and mobility being the U.S. Department of Transportation's two top priorities, DOT describes three fundamental environmental justice principles to be relevant for transportation planning and to the mission of the agency. Environmental justice principles for transportation programs include:

1) To avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority and low-income populations.
2) To prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations.
3) Ensure full participation by all potentially affected communities.[19]

While the above principles capture the need to invest in low-income and minority communities, DOT's recent interagency partnership with the U.S. Department of Housing and Urban Development (HUD) and the Environmental Protection Agency (EPA) adds another dimension to guide how transportation investments are made. The Interagency Partnership for Sustainable Communities was formed to help improve access to affordable housing, more transportation options and lower transportation costs while protecting the environment. Six guiding "livability principles" have been developed to coordinate federal transportation, environmental protection and housing investments at each agency. The principals would: 1) help promote equitable development and 2) help address challenges of climate change.

[18] Commuting to Opportunity: The Working Poor and Commuting in the United States. Metropolitan Policy Program at Brookings, February 2008.
[19] US Department of Transportation Environmental Justice http://www.dotcr.ost.dot.gov/asp/ej.asp.

The livability principles for transportation, housing and environmental programs include:

1) Provide more transportation choices.
2) Promote equitable affordable housing.
3) Enhance economic competitiveness.
4) Support existing communities.
5) Coordinate policies and leverage investment.
6) Value communities and neighborhoods.[20]

The Equity Index is regional in scope, is based on the aforementioned environmental justice principles and the livability principles and includes 19 indicators. The region is defined as the seven counties in northeastern Illinois with transit options from either CTA or Metra. This includes Cook, Lake, DuPage, Will, Kane, Kendall and McHenry County. The Index is intended to be used as a tool to advance regional equity issues. It was developed for this project to help community residents and decision makers make informed choices on investments including transportation infrastructure investments.

The indicators were chosen not only for transportation equity but also for social equity, economic and environmental health and education stability to provide a more comprehensive picture of community conditions. Although the focus of the study and the Index is transit equity, other areas of community health that may benefit from transit investments are explored. The 19 indicators are categorized into three groups: transportation equity potential, environmental justice potential and livable community potential. Areas identified to be high priority on the Equity Index should also be a high priority for any transportation, housing and environmental planning project, program or investment.

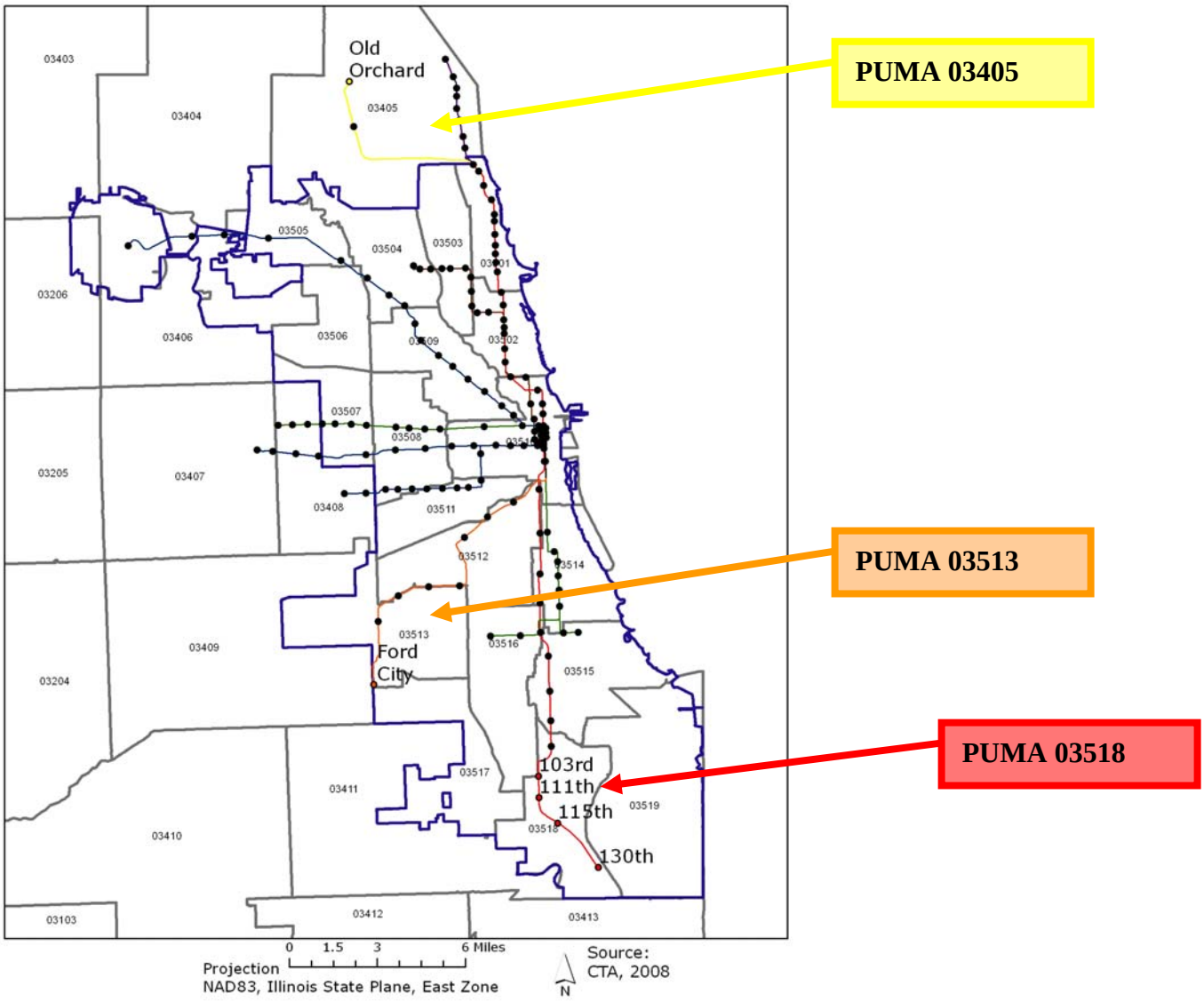
The data for the areas underlying the proposed extension locations are scored for each indicator. The geography used for this Index is Public Use Microdata Area (PUMA) and the data is the 2005-07 Public Use Microdata Sample (PUMS) data available from the U.S. Census.

The CTA Extensions examined in this study are scored for each indicator according to the PUMA in which they are primarily located. The scored PUMA's include:

- Orange Line Extension – PUMA 03513
- Red Line Extension – PUMA 03518
- Yellow Line Extension – PUMA 03405

[20] Department of Transportation (DOT) Secretary, U.S. Department of Housing and Urban Development (HUD) Secretary and Environmental Protection Agency (EPA) Administrator announce interagency partnership for sustainable communities. News Release. June 16, 2009 www.hud.gov.

Figure 4 Proposed CTA Extensions with PUMA Geography



Based on the indicator, the area is identified on a priority scale and scored using a 5-point scale (2, 1, 0, -1, -2) where 0 is the mean within 1 standard deviation of the region. Areas determined to be of greater need are of high priority and are scored in positive numbers. Areas of less need are lower priority and are scored in negative numbers.

Index Assumptions

Areas determined to be of greater need are based on the following general assumptions:

1. Transportation equity. Areas with high concentrations of transit dependent populations and areas with high travel times to work are in greater need and are priority areas for increasing transit investments because transit dependent populations stand to benefit most from transit investments.

2. Environmental social justice. Areas with high concentrations of minority (non-white and/or Hispanic) and low income (earning below 80% of area median income) are in greater need regionally and are priority areas for locating transit investments because low-income and minority populations are higher users of transit.

3. Livable community potential. Areas with high concentrations of unhealthy economic, housing and environmental conditions are in greater need regionally and are priority areas for locating investments. This includes, but is not limited to, transportation investments because areas most in need would benefit most from coordinated investments.

Index Components

Transit equity potential

1. Transit dependent and deprived.

Transit dependency is measured with 5 indicators. For a community to be livable and transit supportive it should provide ample transit options for populations most in need of transit.

1.1 Transit dependent is measured by population that is disabled.
1.2 Transit dependent is measured by households with 0 cars.
1.3 Transit dependent is measured by population that is elderly.
1.4 Transit dependent is measured by population that is a high school student.
1.5 Inadequate access is measured by excessive travel time to work.

Environmental justice potential

2. Environmental and social justice potential.

Environmental justice identifies areas where high minority and/or low-income populations reside. Areas with higher proportion of low-income and/or minority populations than the regional mean are scored a positive number indicating the area is a priority area.

2.1 Low-income is measured by population earning under 80% Area Median Income.
2.2 Minority is measured by population of "non white" and/or Hispanic.

Livable community potential

3. *Economic equity potential.*

Economic equity is measured with 3 indicators for this index. For a community to be livable and economically healthy it should have low unemployment, thriving business and economically stable households.

3.1 Economic health is measured by population unemployed.
3.2 Business health is measured by extensive business vacancy.
3.3 Economic stability is measured by estimated high cost loans.

4. *Housing equity potential.*

Housing equity is measured with 5 indicators. For a community to be livable and housing healthy it should have stable, safe and affordable housing conditions.

4.1 Affordability is measured by cost burdened households.
4.2 Affordability is measured by rent burdened households.
4.3 Housing instability is measured by foreclosure risk.
4.4 Housing market condition is measured by vacancy.
4.5 Availability of affordable low-income housing as measured by Housing Choice Voucher usage.

5. *Education equity potential.*
Education equity potential is measured with 2 indicators. For a community to be livable and supportive of higher education it should have low high school drop out rates and low school mobility rates.

5.1 Education support is measured by high school drop out rate.
5.2 Education stability is measure by school mobility.

6. *Health and environmental equity potential.*
Health and environmental equity potential is measured with 2 indicators. For a community to be livable and environmentally supportive it should provide ample green space and minimal health risks.

6.1 Environmental space is measured by park space per capita.
6.2 Healthy housing is measured by estimated lead risk in housing.

Index Methodology

The Equity Index makes use of standardized scores as a means of comparing conditions across a regional geography. Standardized scores allow for comparison across regions by looking at the range or distribution of values, and then comparing individual values and their distance from mean values. Standardized score values represent how many standard deviations from the mean the value is for a particular area, and is calculated as the z-score statistic for each geographic area unit.

Z-score statistic

The standard score is

$$z = \frac{x - \mu}{\sigma},$$

where:

x is a raw score to be standardized;
μ is the mean of the population;
σ is the standard deviation of the population.

We then use these standardized scores to interpolate index scores with each category representing a 1 standard deviation increment:

Z-score	**Index score**
< -1.5	-2
-0.5 - -1.5	-1
-0.5 - 0.5	0
0.5 – 1.5	1
> 1.5	2

2.2 Index Indicators

Data for 19 indicators are mapped in the section to follow. Indicators are presented in three sections:

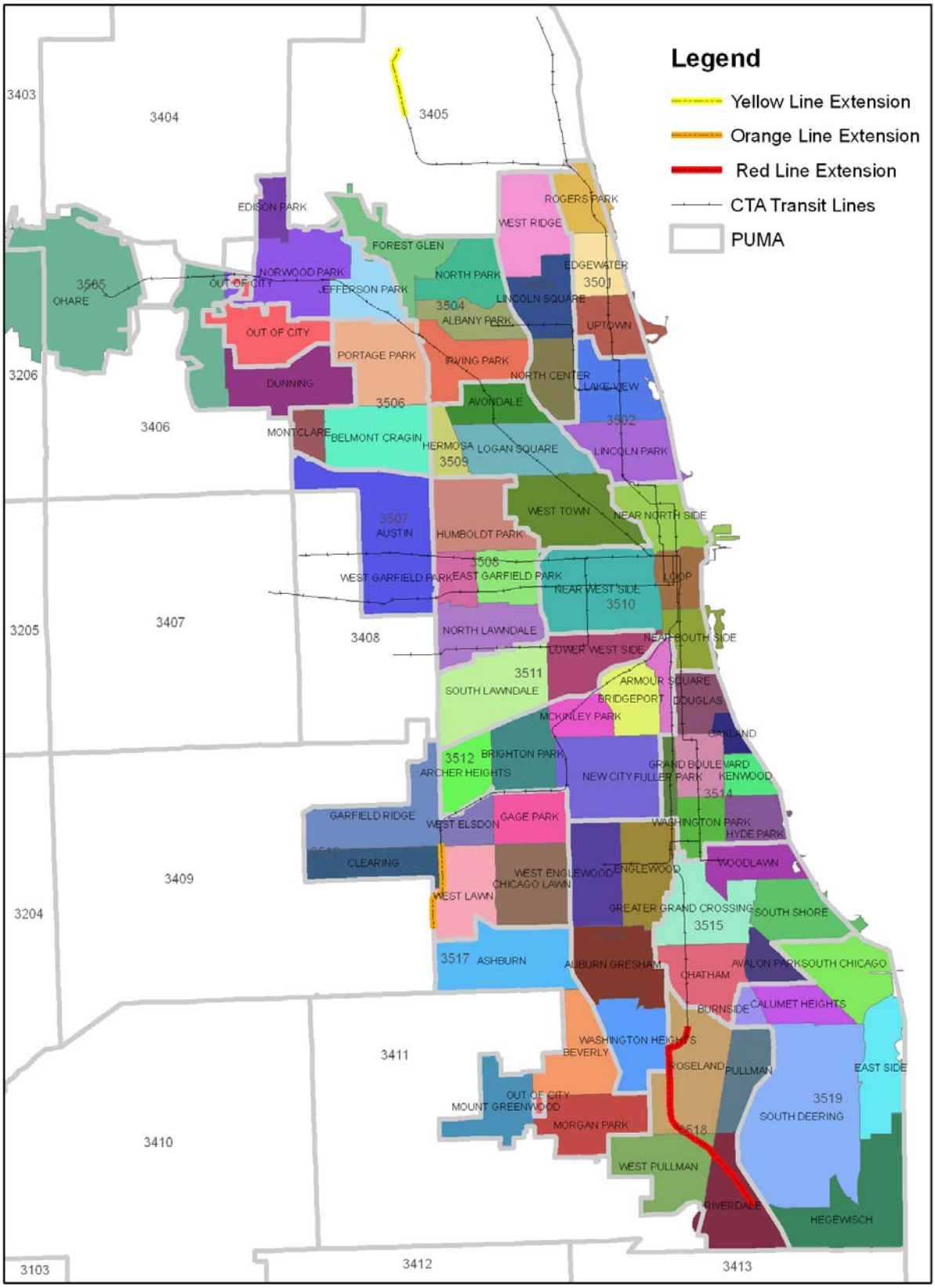
1) Transportation equity potential.
2) Environmental justice potential.
3) Livable community potential.

Alongside each map there is a score box with the indicator score for the area underlying each of the 3 CTA proposed Extensions (impact areas). The scores represent a level of priority where positive scores indicate an area of greater need and therefore of higher priority and negative scores indicate areas of lesser need regionally and are therefore a lower priority.

← Priority For Advancing Regional Equity →				
High	Med high	Neutral	Med low	Low
+2	+1	0	-1	-2

A reference map including PUMA geography and the Chicago Community Areas associated with each PUMA is illustrated in Figure 5. A list of Chicago Community Areas associated with each PUMA can be found in Appendix B.

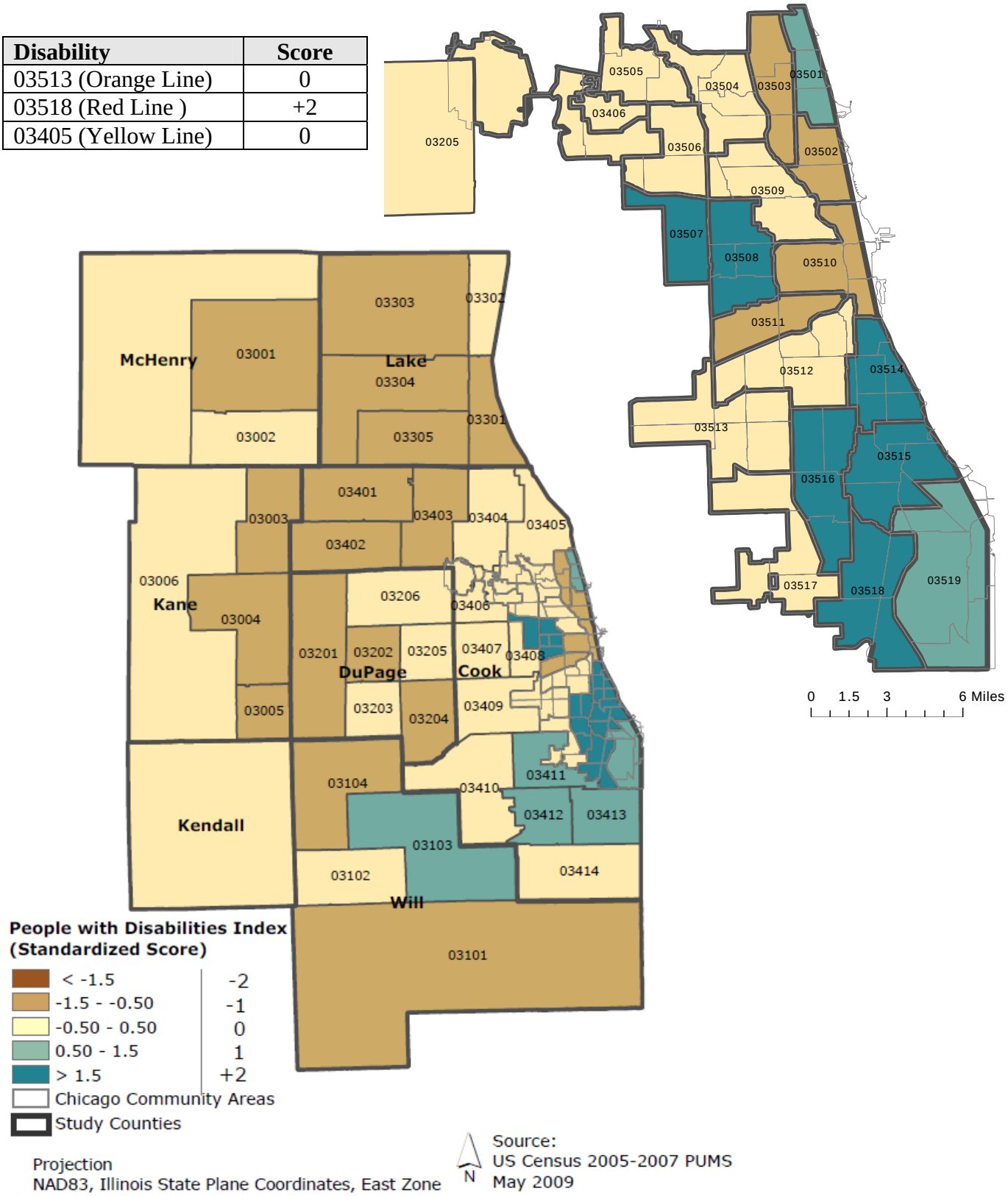
Figure 5 Chicago Community Area and PUMA Reference Map



Transportation Equity Potential

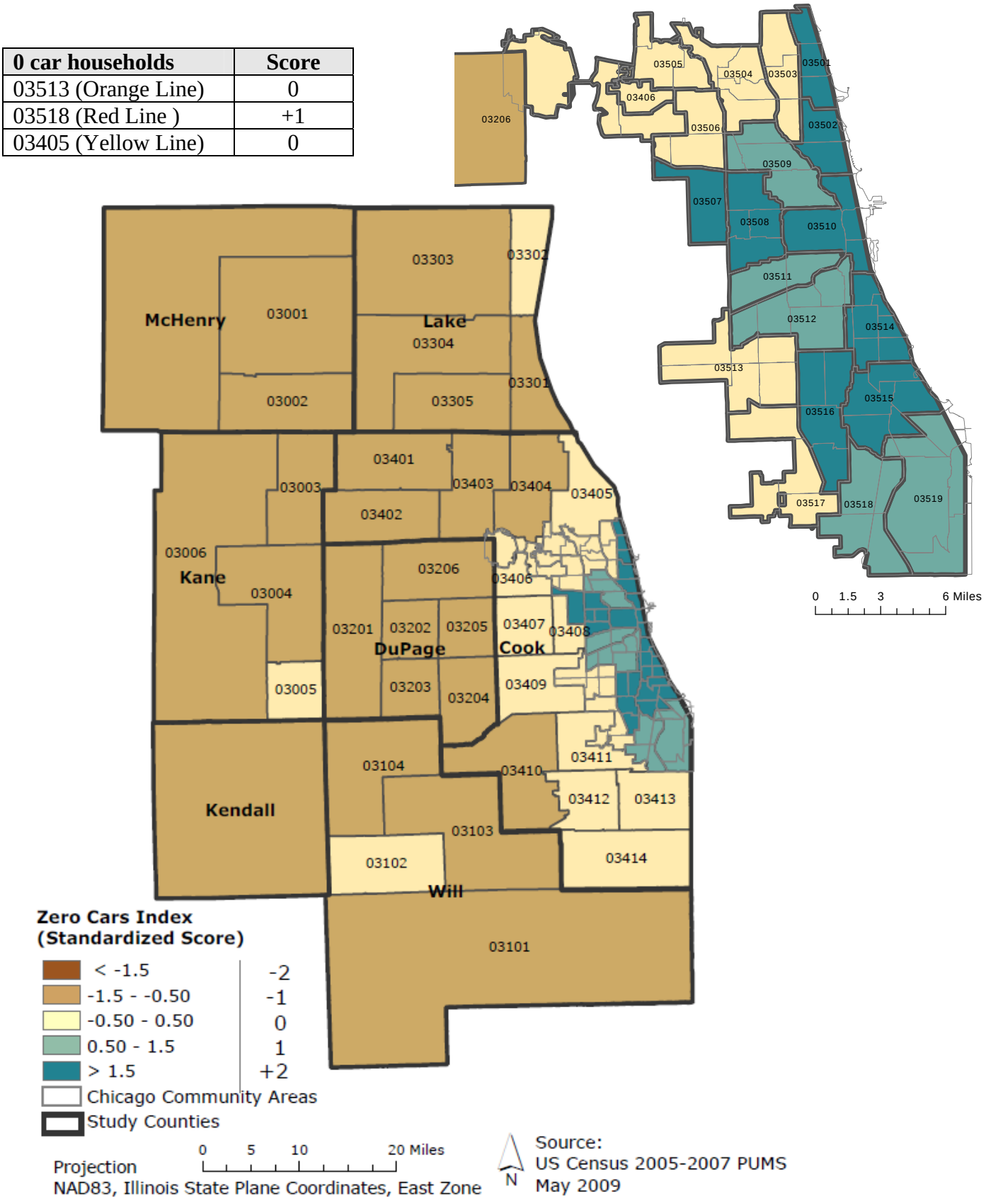
1.1 Transit Dependency measured by population that is disabled. Areas scoring on the positive scale have higher concentrations of people with disabilities than the region.

Disability	Score
03513 (Orange Line)	0
03518 (Red Line)	+2
03405 (Yellow Line)	0



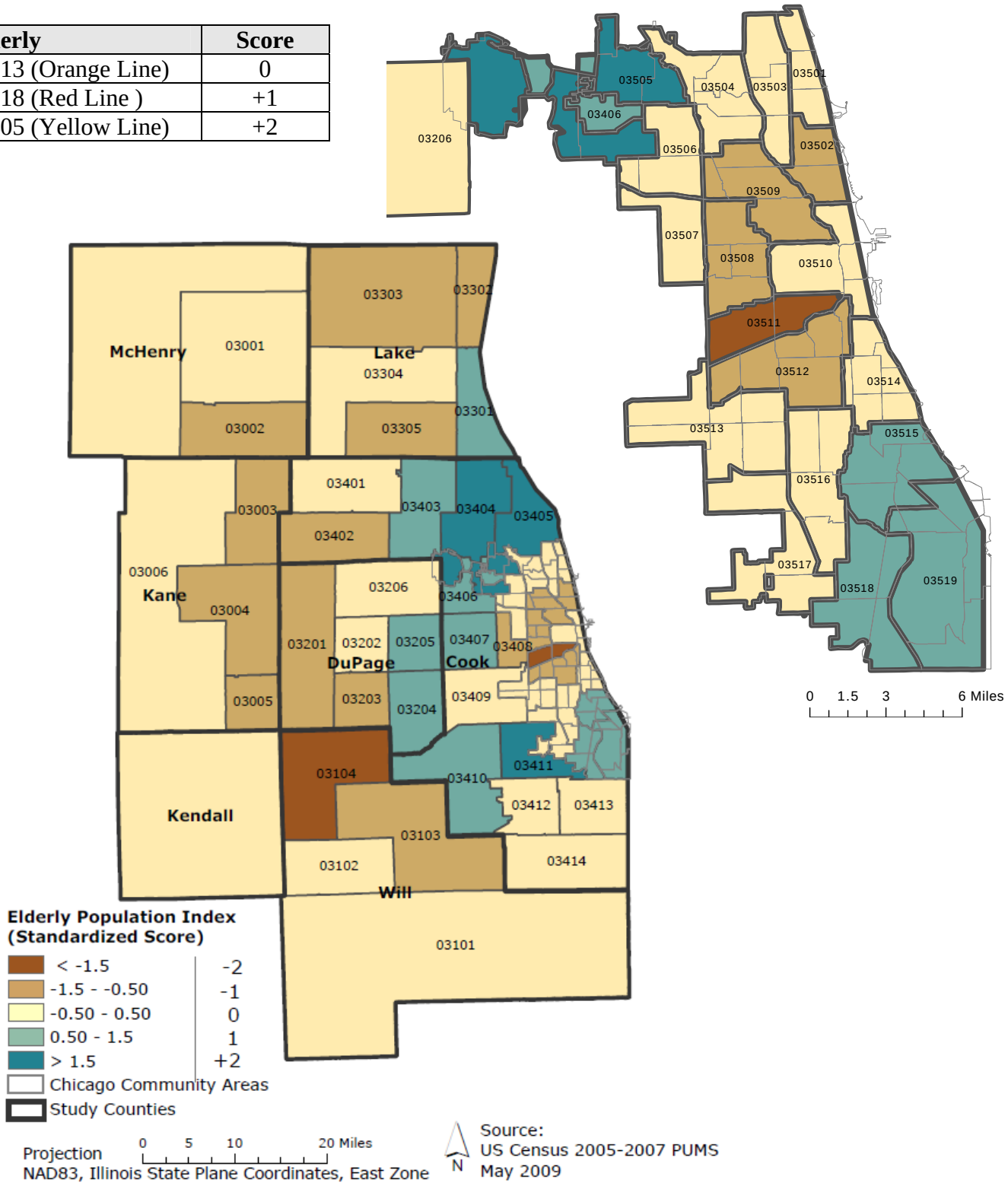
1.2 Transit Dependency measured by percent of households with zero cars. Areas scoring on the positive scale have higher concentrations of households with zero cars than the region

0 car households	Score
03513 (Orange Line)	0
03518 (Red Line)	+1
03405 (Yellow Line)	0



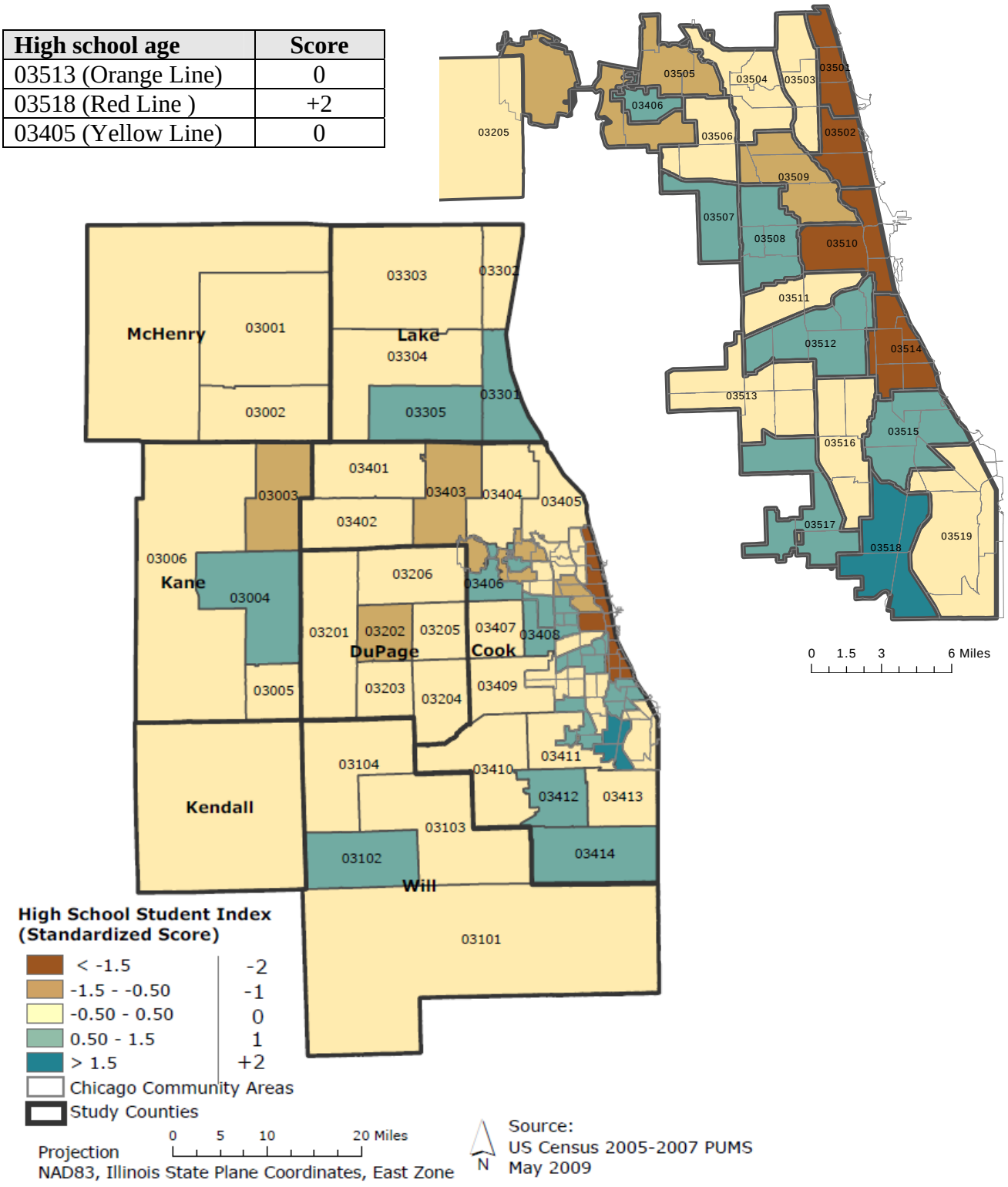
1.3 Transit Dependency measured by percent of population that is elderly. Areas scoring on the positive scale have higher concentrations of elderly than the region.

Elderly	Score
03513 (Orange Line)	0
03518 (Red Line)	+1
03405 (Yellow Line)	+2



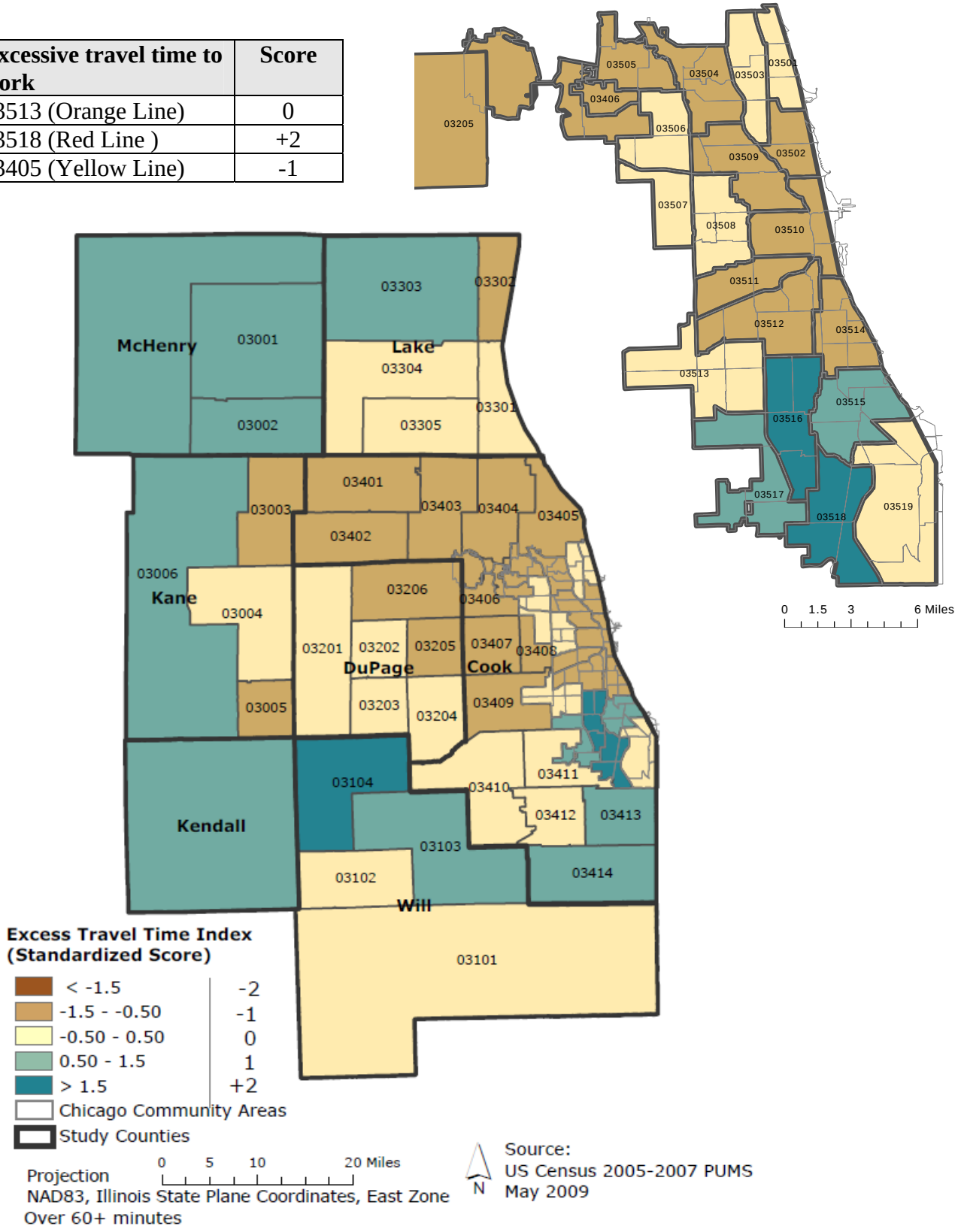
1.4 Transit Dependency measured by percent of school aged population that is attending high school. Areas scoring on the positive scale have higher concentrations of high school students than the region.

High school age	Score
03513 (Orange Line)	0
03518 (Red Line)	+2
03405 (Yellow Line)	0



1.5 Inadequate Access measured by excessive (60+ minute) travel time to work. Areas scoring on the positive scale have higher concentrations of workers with excessive travel than the region.

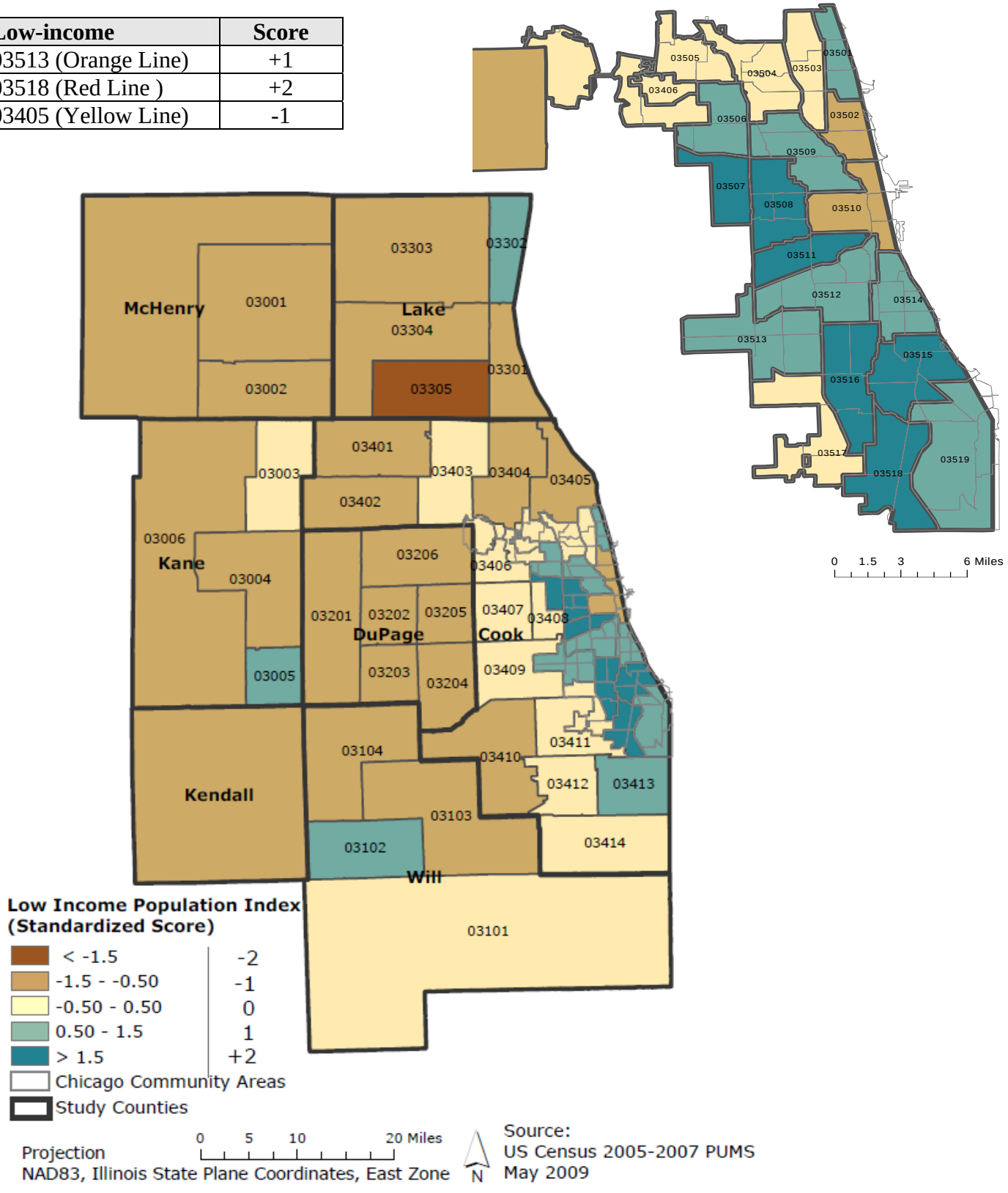
Excessive travel time to work	Score
03513 (Orange Line)	0
03518 (Red Line)	+2
03405 (Yellow Line)	-1



Environmental Justice Potential

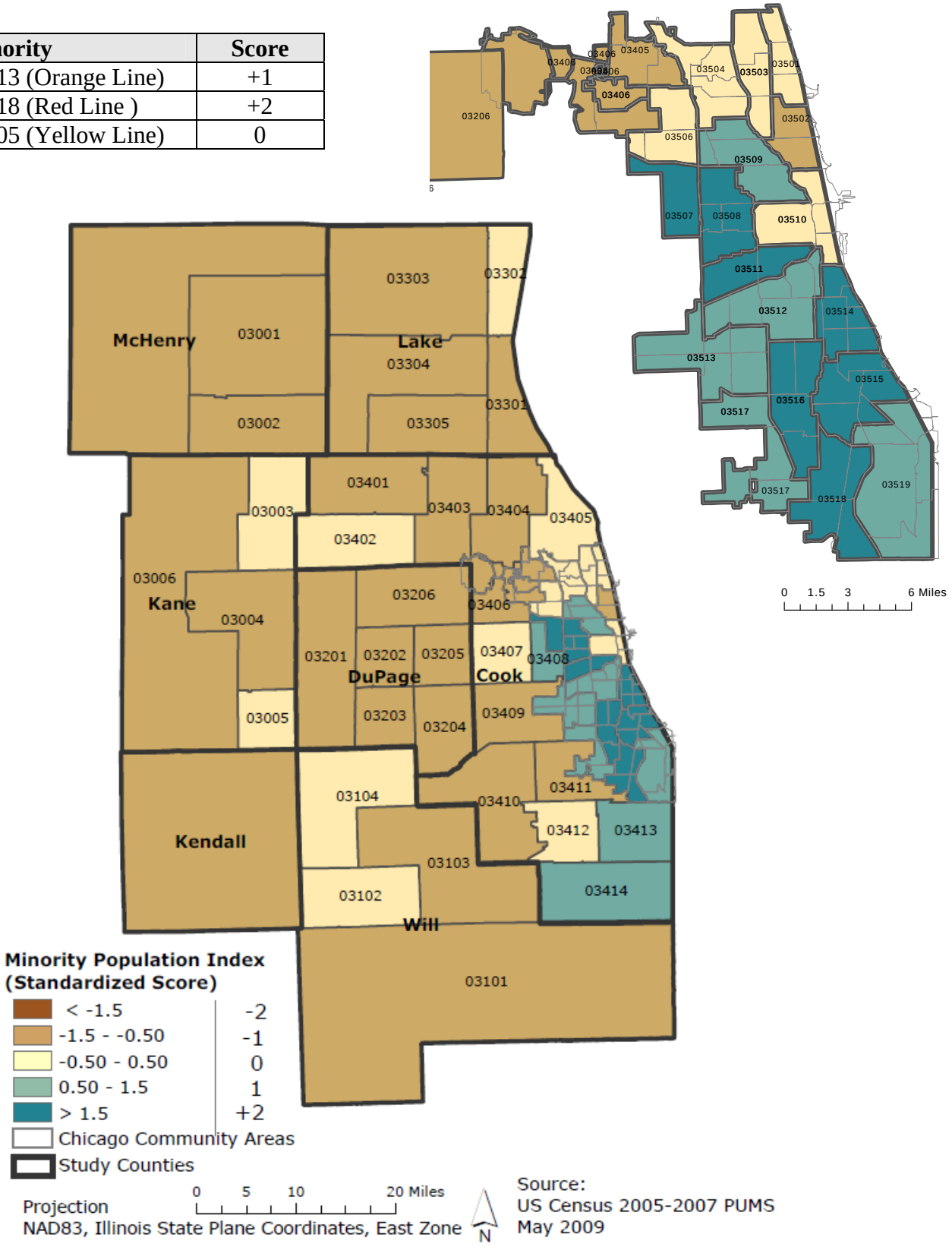
2.1 Low-income defined as households with annual earning below 80% area median income, which in 2007 was $69,800 for a family of four for the region. Areas scoring on the positive scale have higher concentrations of low-income households than the region.

Low-income	Score
03513 (Orange Line)	+1
03518 (Red Line)	+2
03405 (Yellow Line)	-1



2.2 Minority is defined as any one "non-white" and/or Hispanic. Areas on the positive scale have higher concentrations of minority populations.

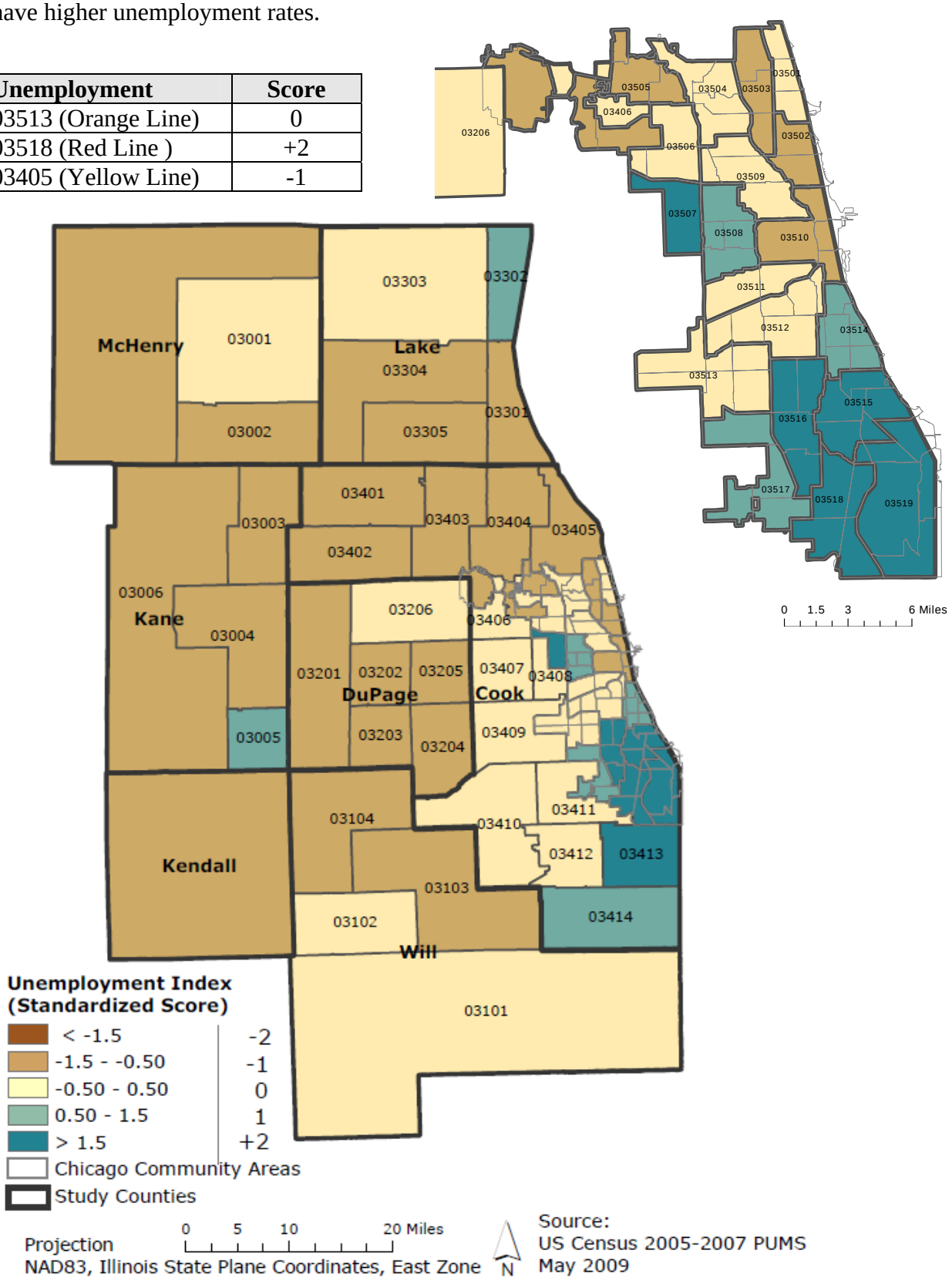
Minority	Score
03513 (Orange Line)	+1
03518 (Red Line)	+2
03405 (Yellow Line)	0



Livable Community Potential

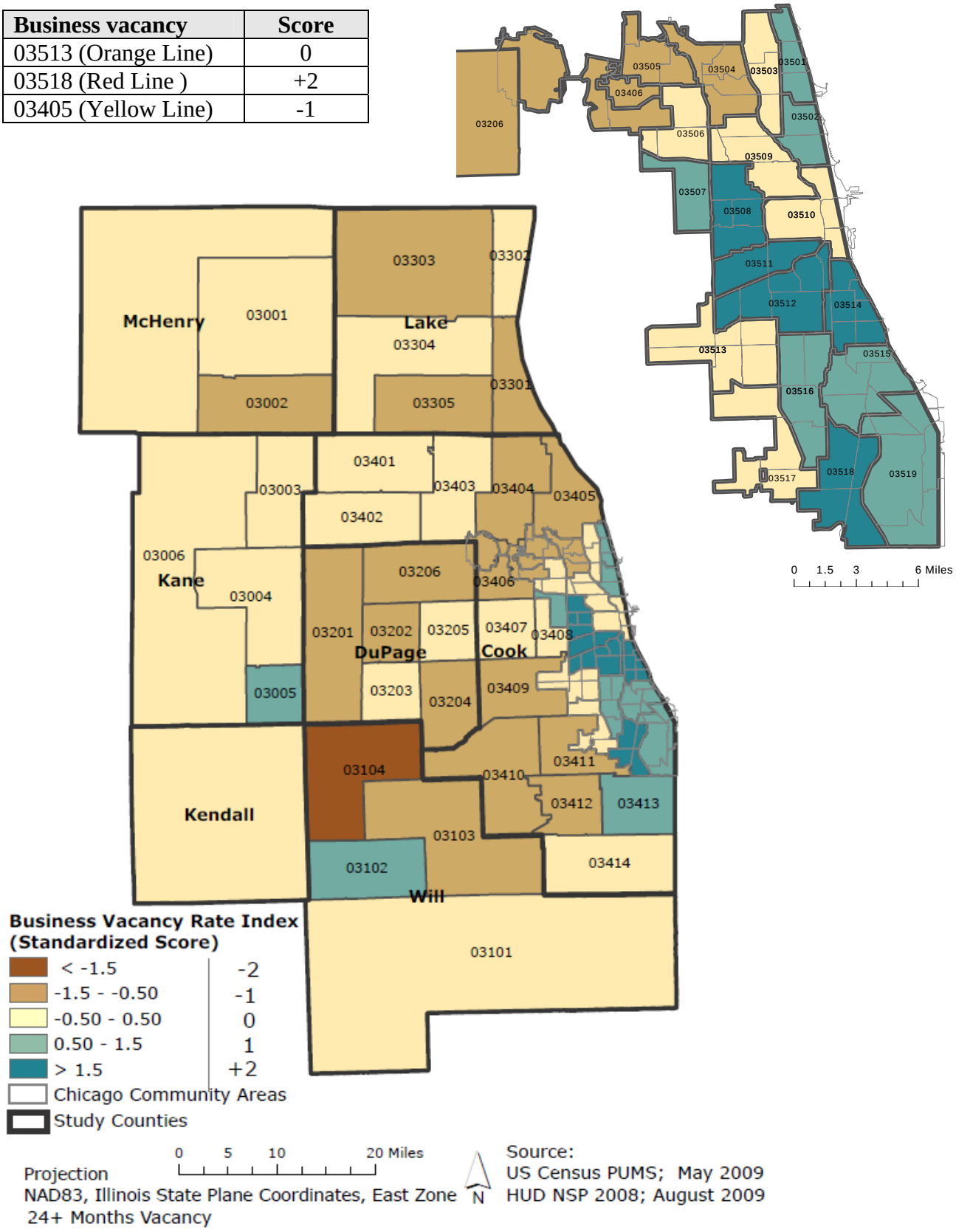
3.1 Economic Health is measured by unemployment in the area. Areas scoring on the positive scale have higher unemployment rates.

Unemployment	Score
03513 (Orange Line)	0
03518 (Red Line)	+2
03405 (Yellow Line)	-1



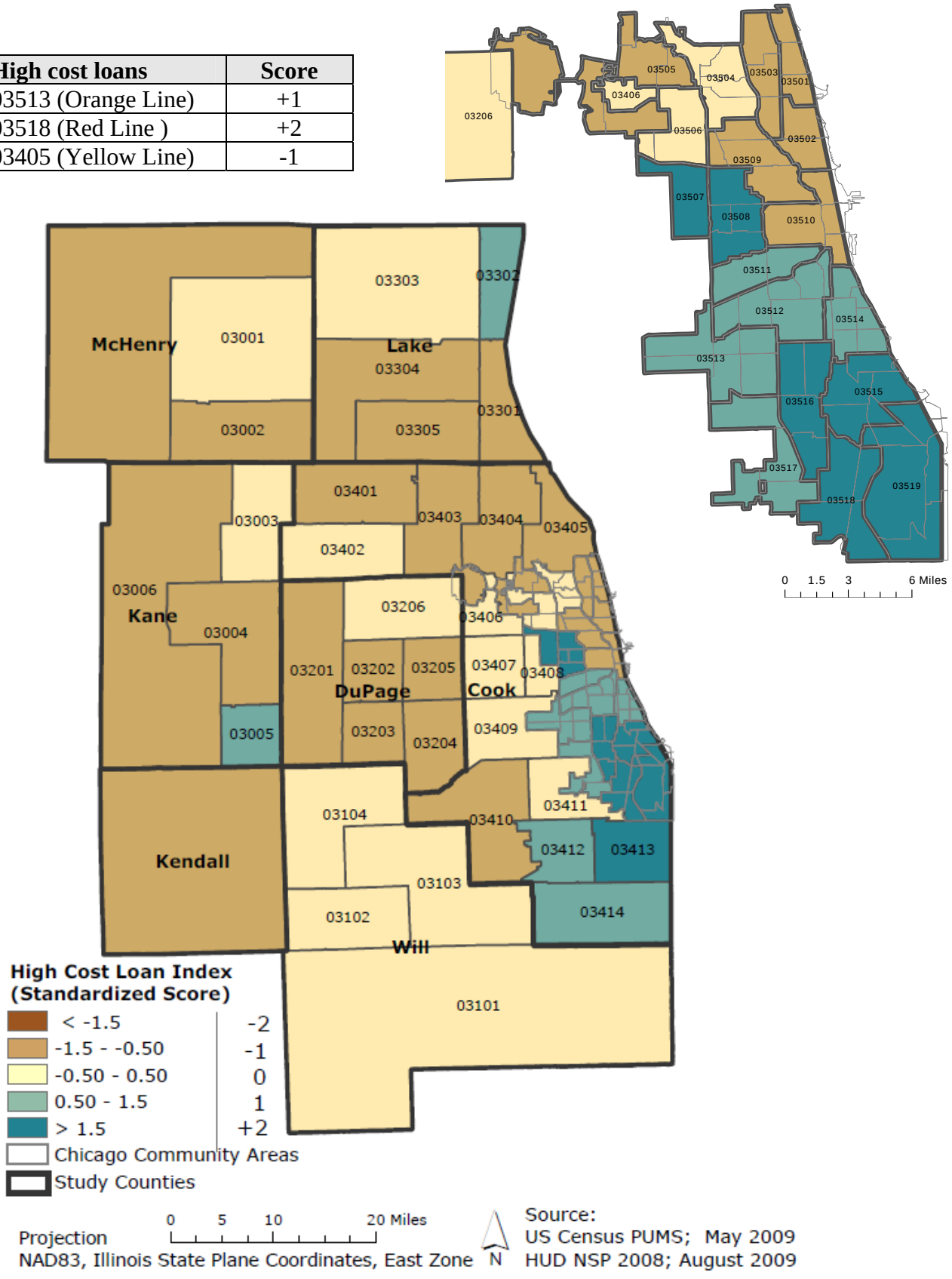
3.2 Business Health measured by extensive business vacancy in a community. Areas that have a high percentage of extensive (longer that 24 months) business vacancy are scored positive on the priority scale.

Business vacancy	Score
03513 (Orange Line)	0
03518 (Red Line)	+2
03405 (Yellow Line)	-1



3.3 Economic Stability measured by estimated number of high cost loans in the area. A high rate of unaffordable loans in a community is an indicator of declining economic stability. Estimates of high cost loans are provided by HUD and derived from Home Mortgage Disclosure Act (HMDA) data.

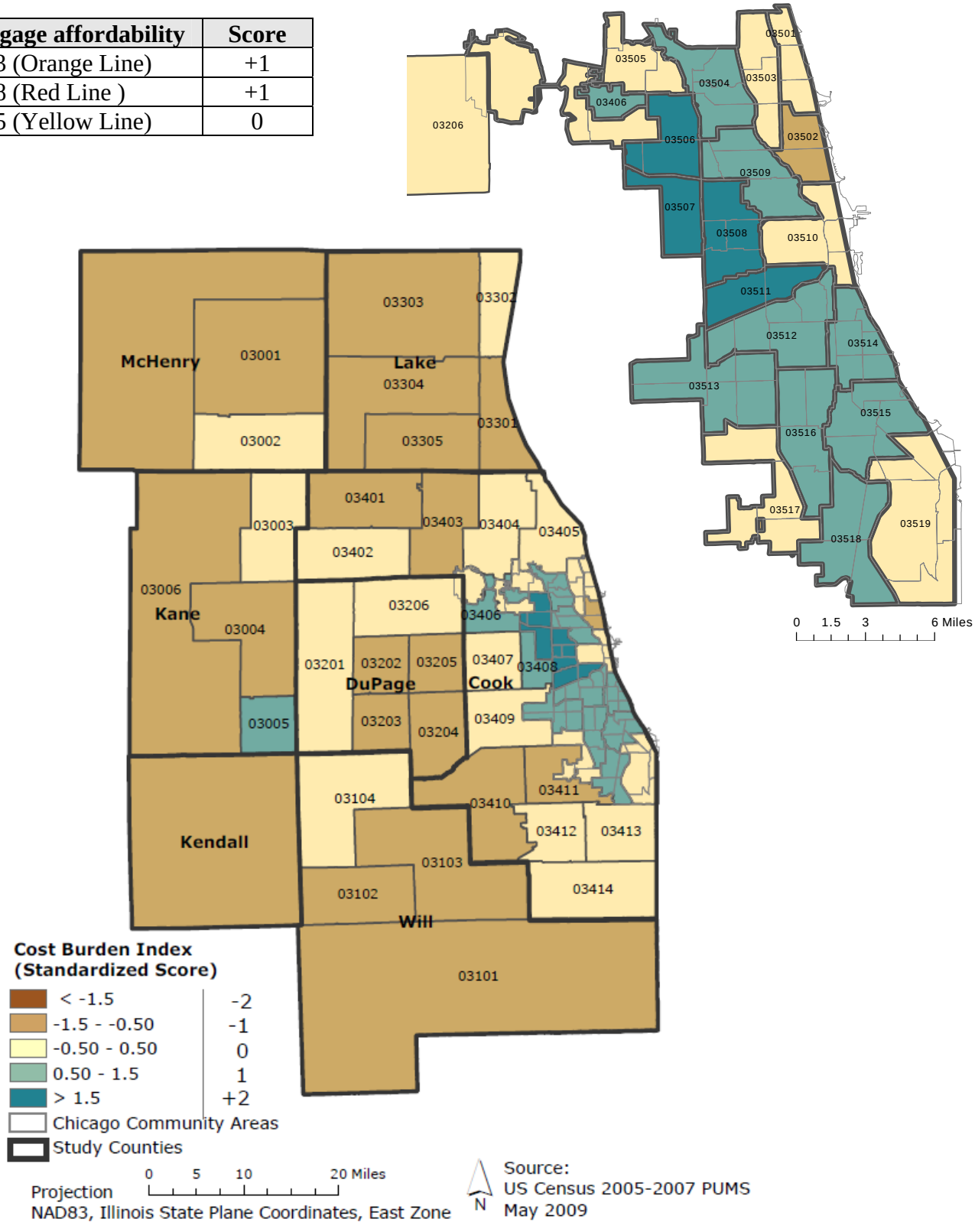
High cost loans	Score
03513 (Orange Line)	+1
03518 (Red Line)	+2
03405 (Yellow Line)	-1



Housing Equity Potential

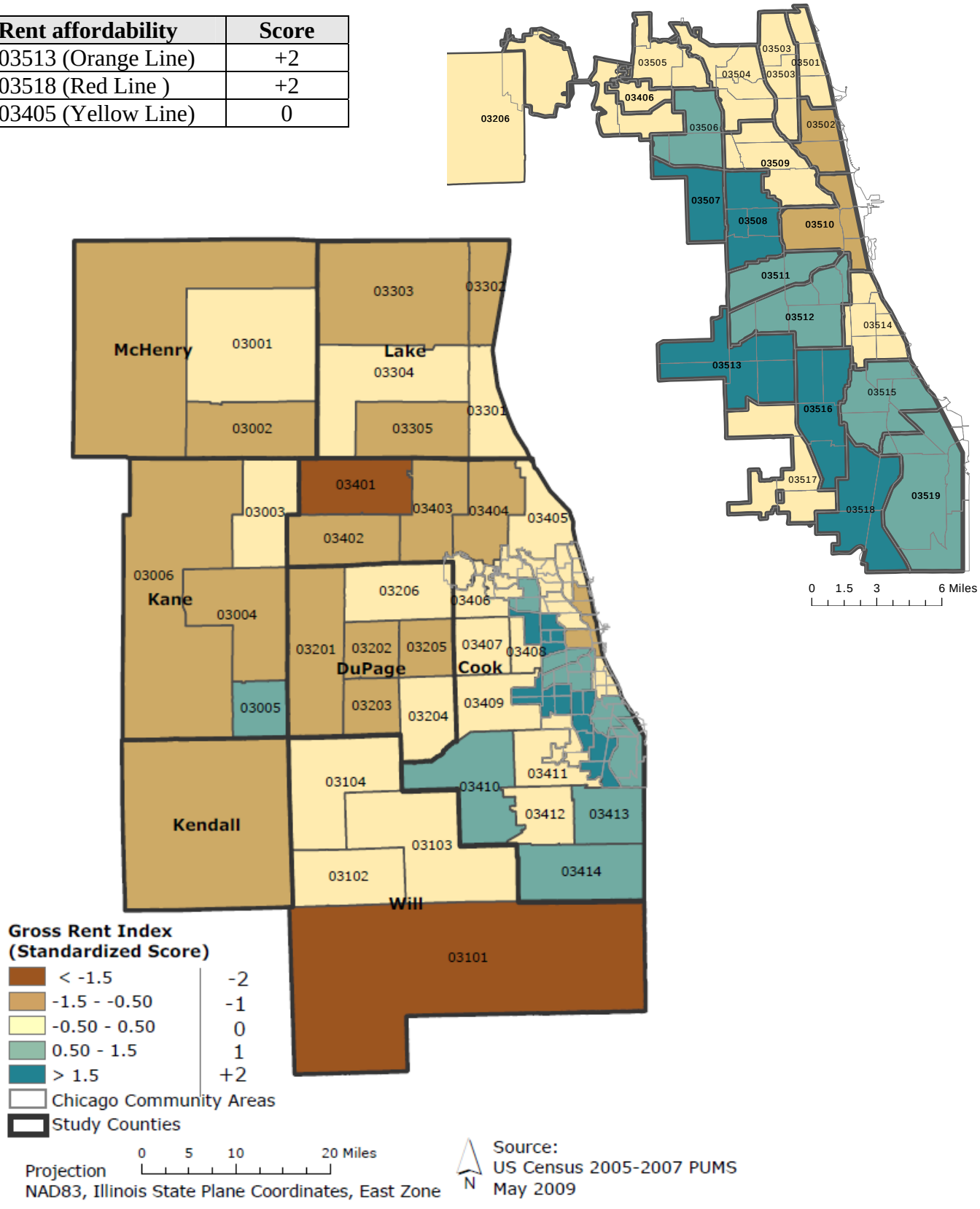
4.1 Mortgage Affordability is measured by the percent of cost burdened households. Cost burdened households are defined as those paying in excess of 30% of their income on housing costs.

Mortgage affordability	Score
03513 (Orange Line)	+1
03518 (Red Line)	+1
03405 (Yellow Line)	0



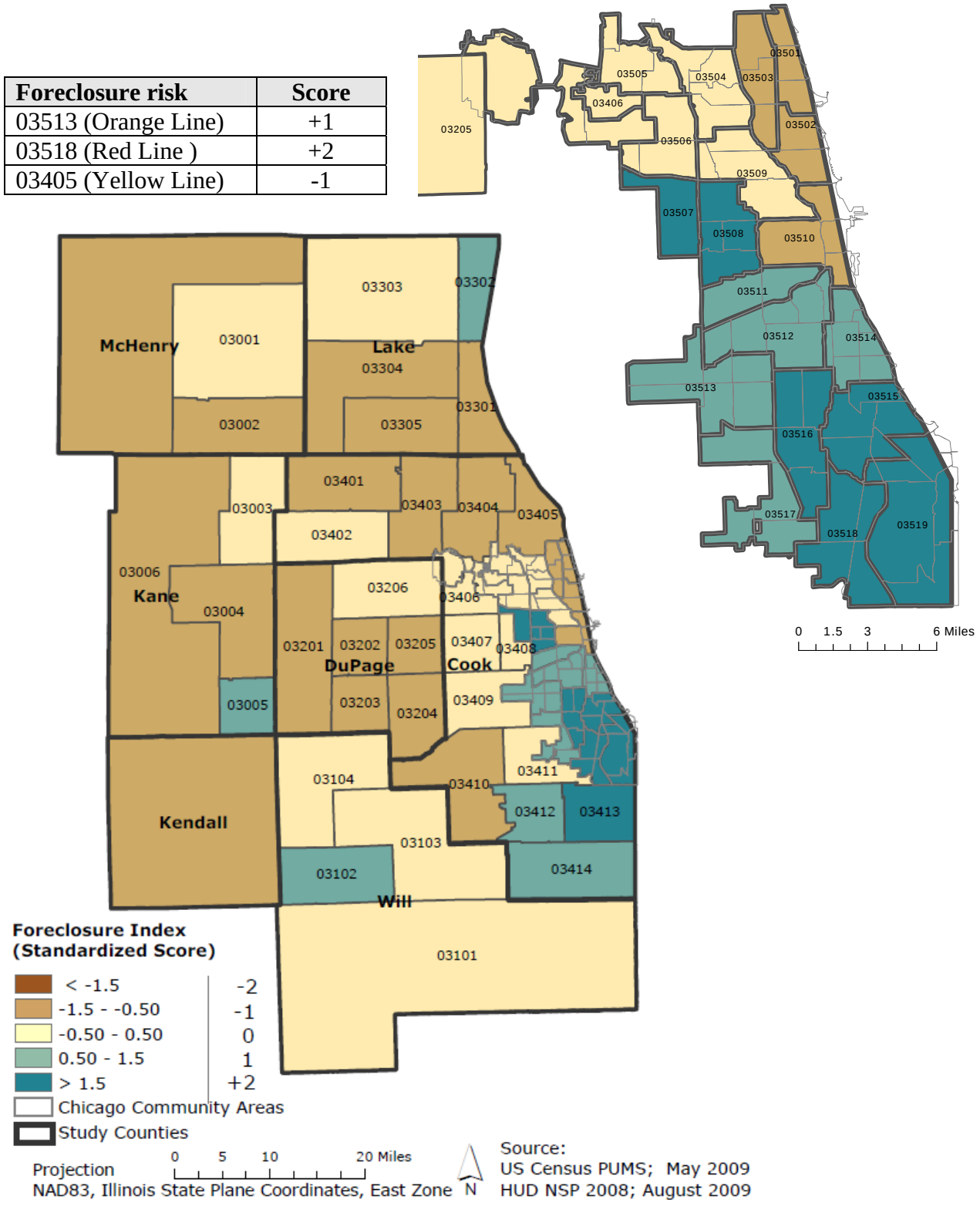
4.2 Rent Affordability is measured by the percent of rent burdened households. Rent burdened households are defined as those paying in excess of 30% of their income on housing costs. Areas with higher rent burdens than the region are scored on the positive scale.

Rent affordability	Score
03513 (Orange Line)	+2
03518 (Red Line)	+2
03405 (Yellow Line)	0



4.3 Housing Instability is measured by homes at risk of foreclosure. Areas with higher foreclosure risks than the region are scored on the positive scale.[21]

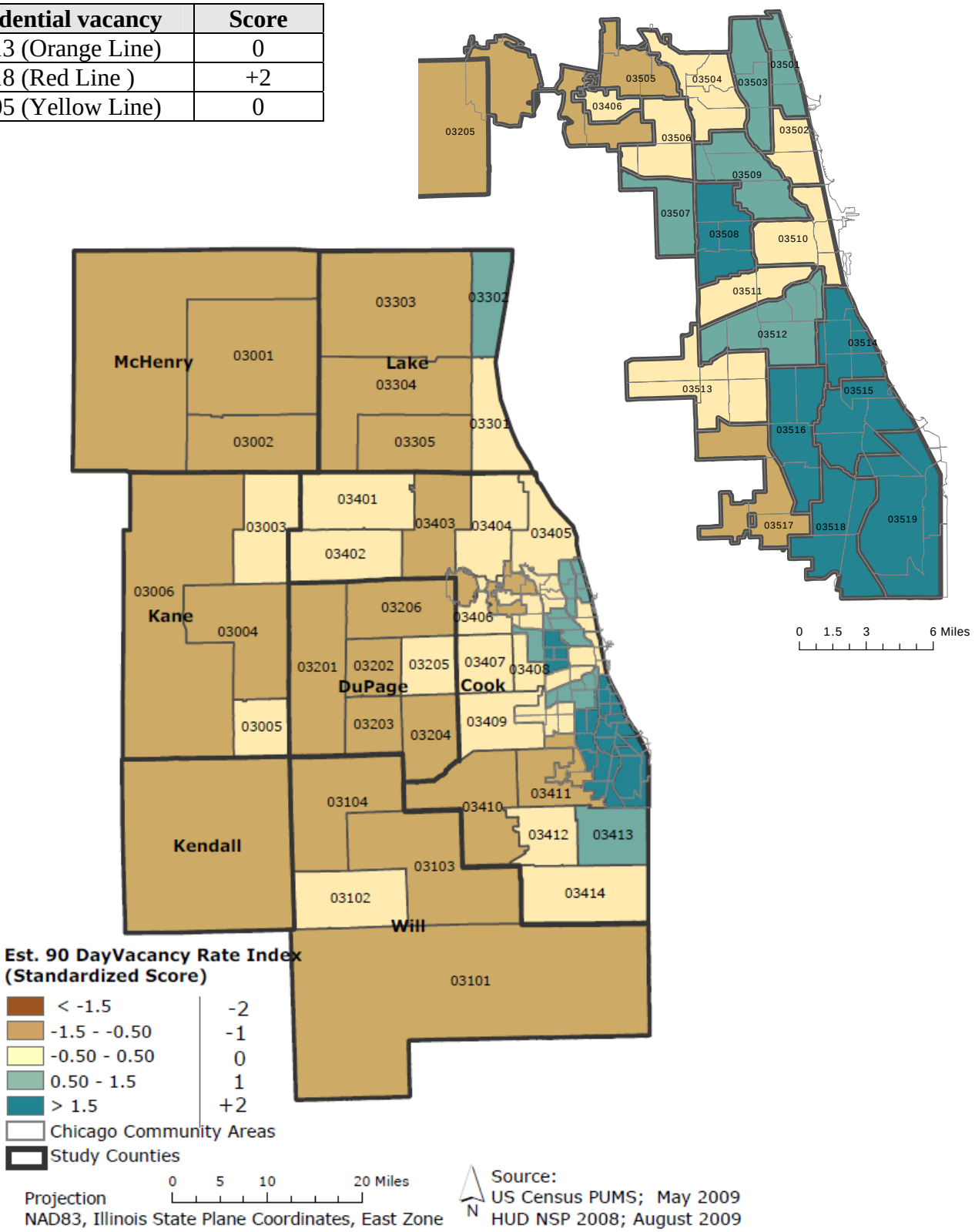
Foreclosure risk	Score
03513 (Orange Line)	+1
03518 (Red Line)	+2
03405 (Yellow Line)	-1



[21] Foreclose risks is estimated by HUD in the Neighborhood Stabilization Program Data. Estimates of risk are based on data from the Mortgage Bankers Association National Delinquency Survey and from USPS residential vacancy data.

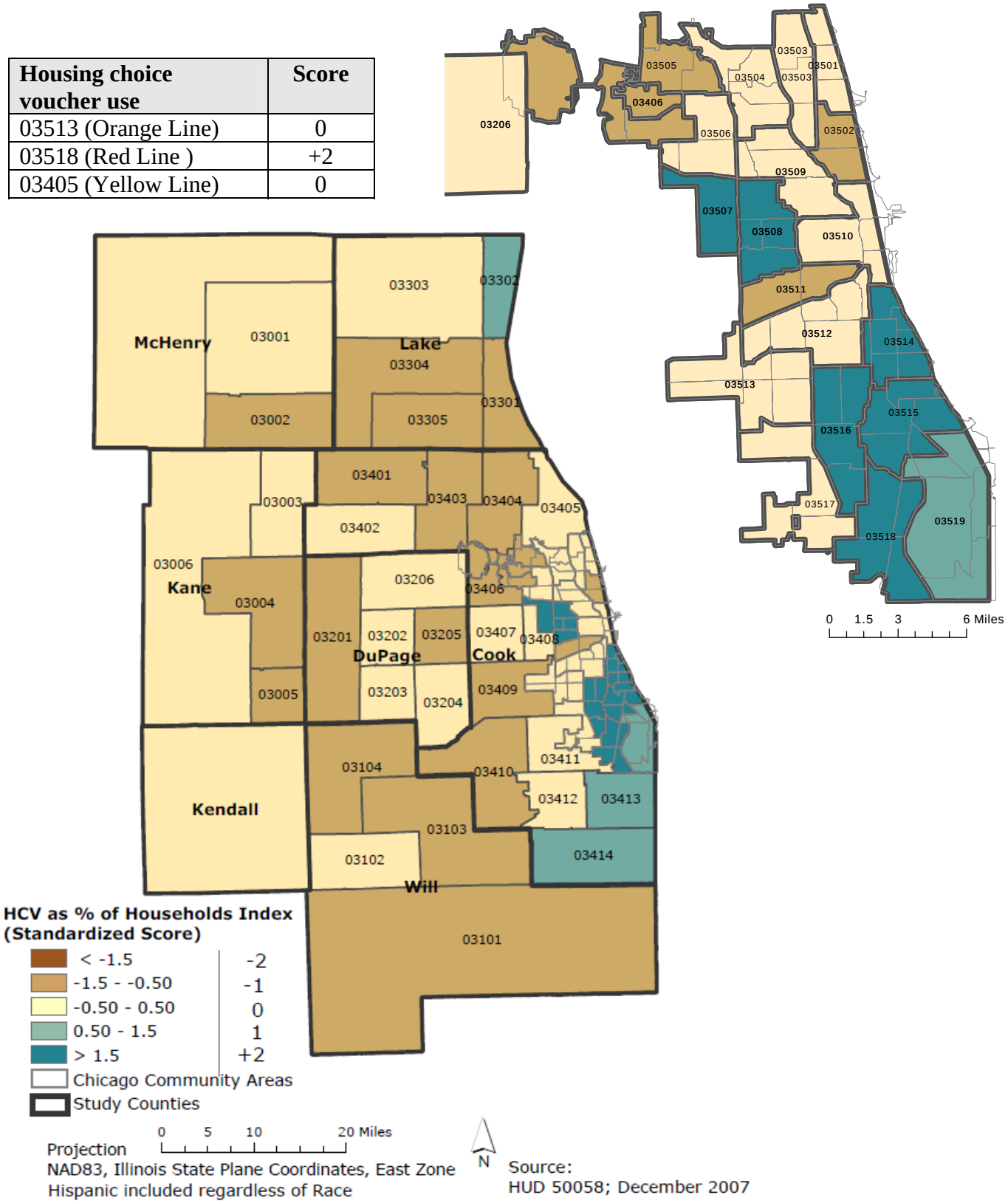
4.5 Housing Market Condition is measured by residential vacancy. Areas with higher residential vacancy than the region are scored on the positive scale.

Residential vacancy	Score
03513 (Orange Line)	0
03518 (Red Line)	+2
03405 (Yellow Line)	0



4.6 Availability of affordable low-income housing as measured by Housing Choice Voucher usage. Areas with higher percentage of housing choice voucher holders than the region are scored on the positive scale.

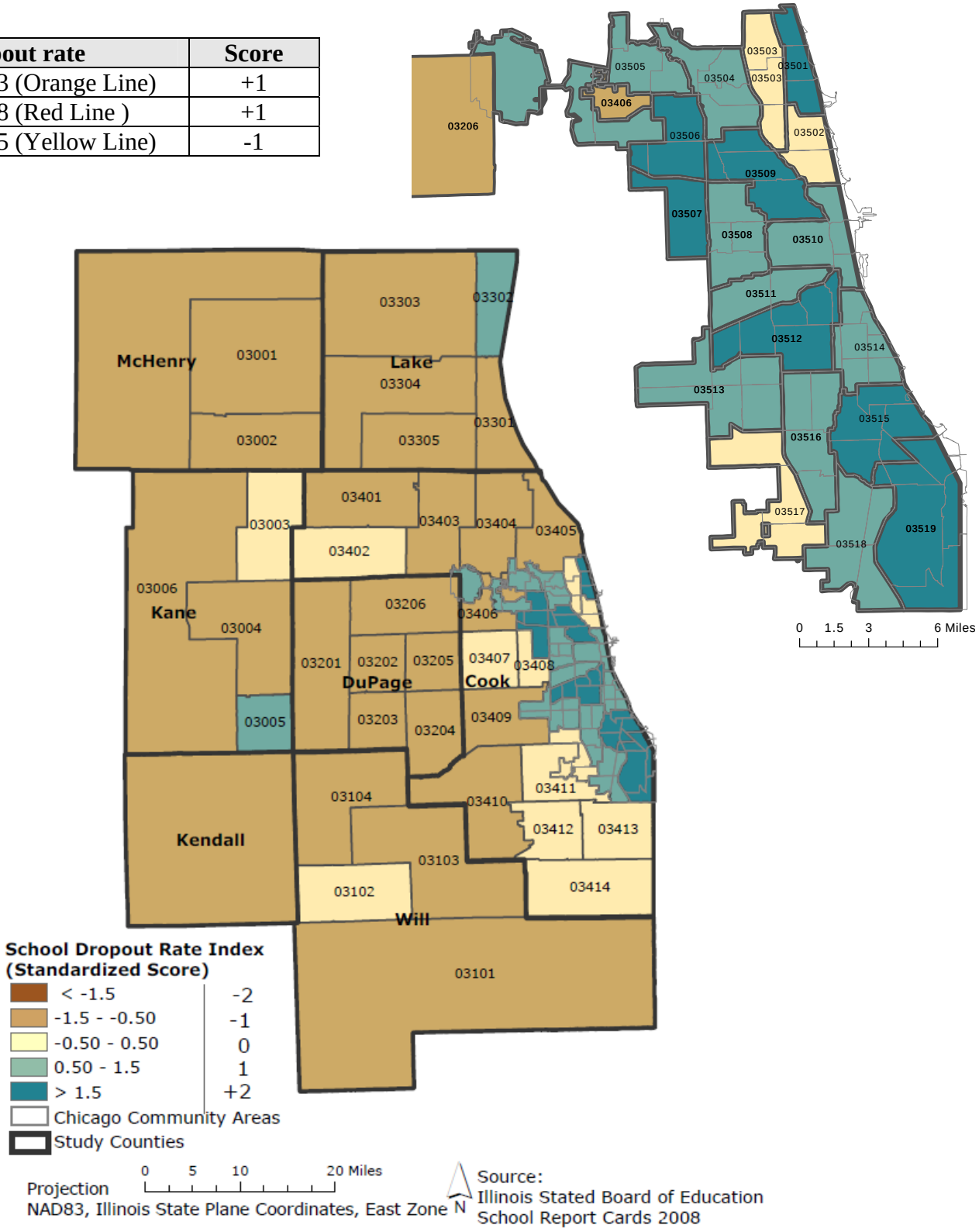
Housing choice voucher use	Score
03513 (Orange Line)	0
03518 (Red Line)	+2
03405 (Yellow Line)	0



Education Equity Potential

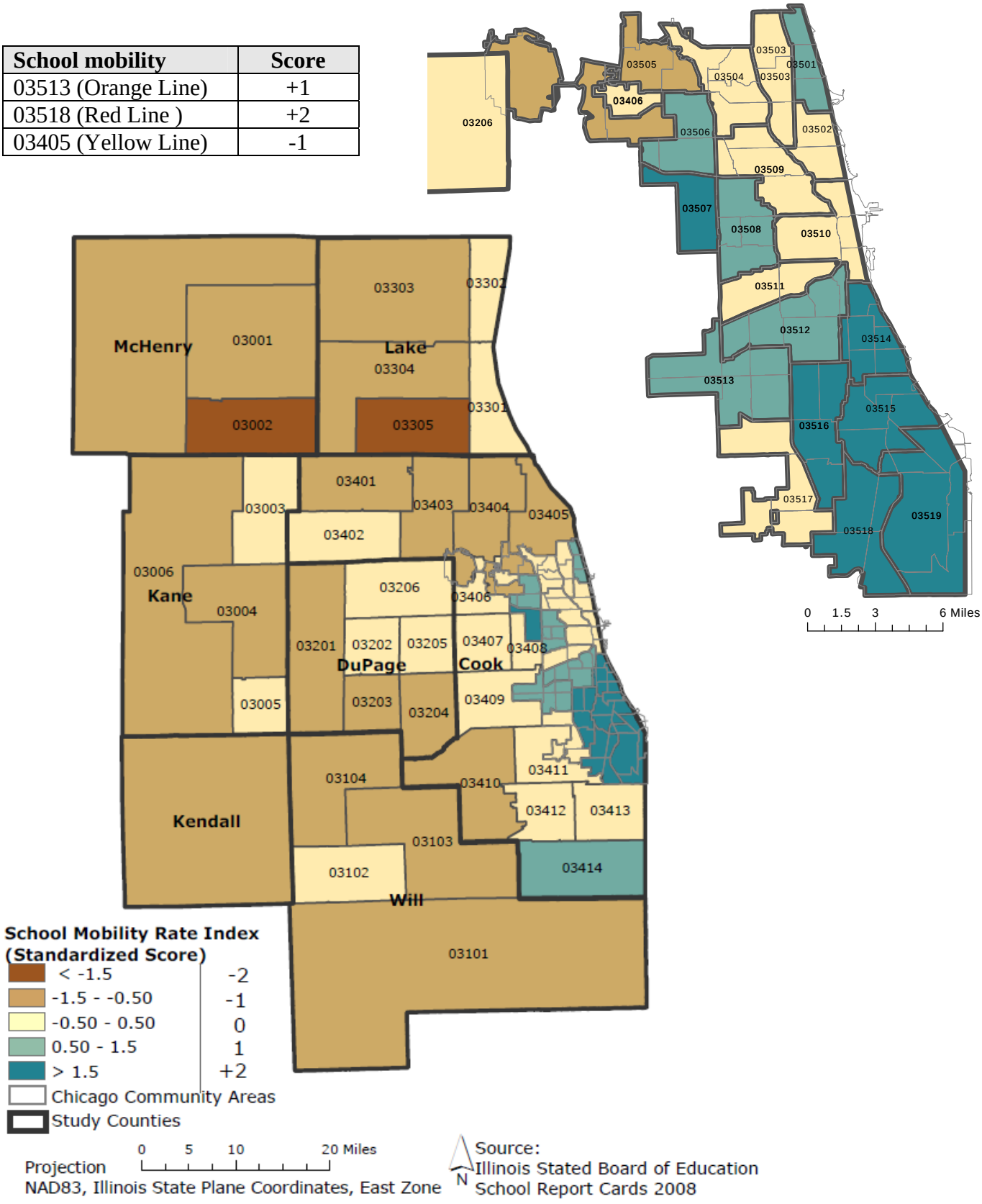
5.1 Education Support is measured by high school dropout rates. Areas with high drop out rates are an indicator of inadequate education support and access to opportunity and scored on the positive scale.

Dropout rate	Score
03513 (Orange Line)	+1
03518 (Red Line)	+1
03405 (Yellow Line)	-1



5.2 Education Stability is measured by school mobility rate. School mobility is students transitioning from one school to another within a given school year. Areas with high school mobility rates indicate education instability which can result in decreased opportunities.

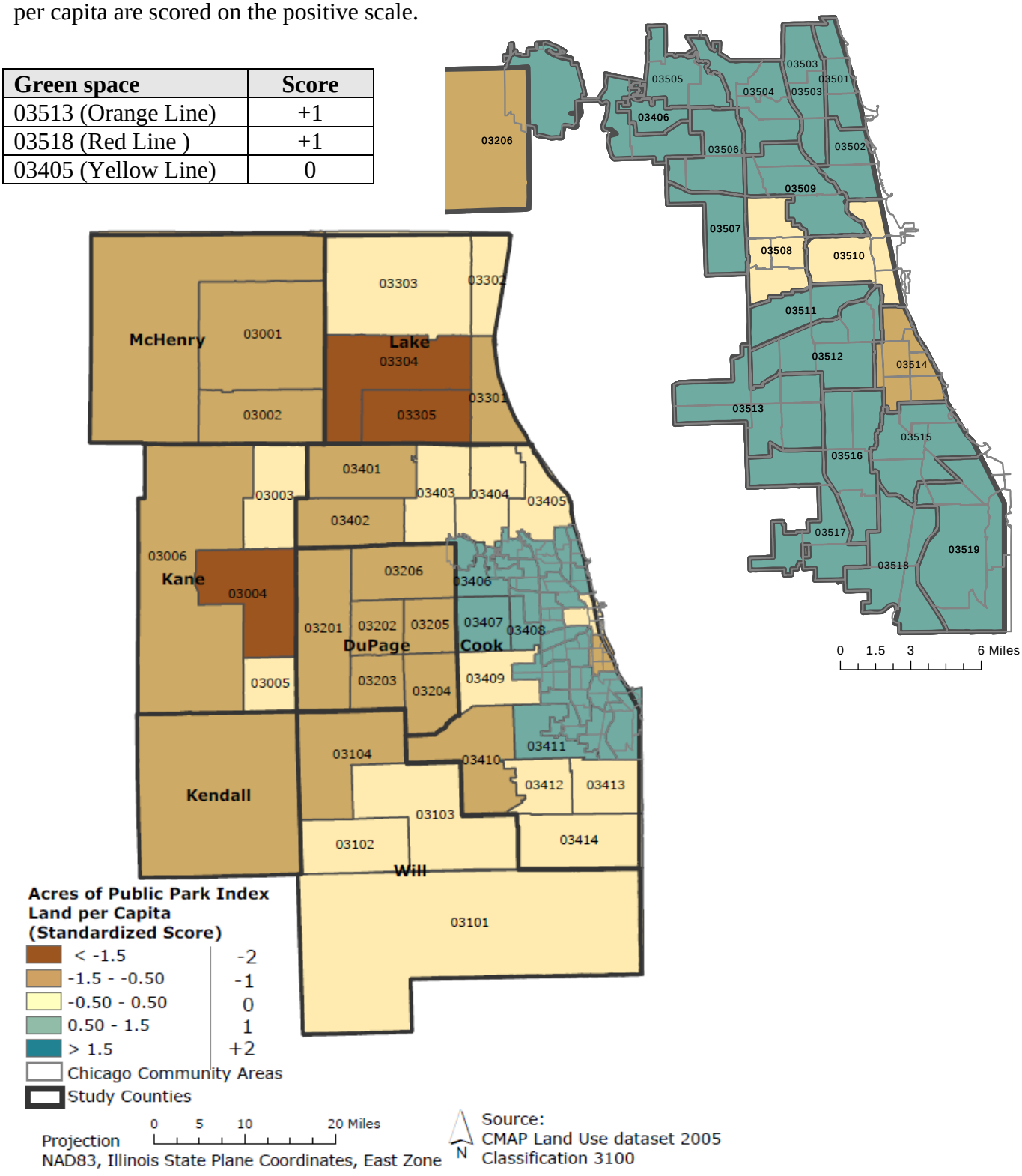
School mobility	Score
03513 (Orange Line)	+1
03518 (Red Line)	+2
03405 (Yellow Line)	-1



Health and Environmental Potential

6.1 Green Space is measured by parks and public open space per capita.[22] Areas with low green space per capita are scored on the positive scale.

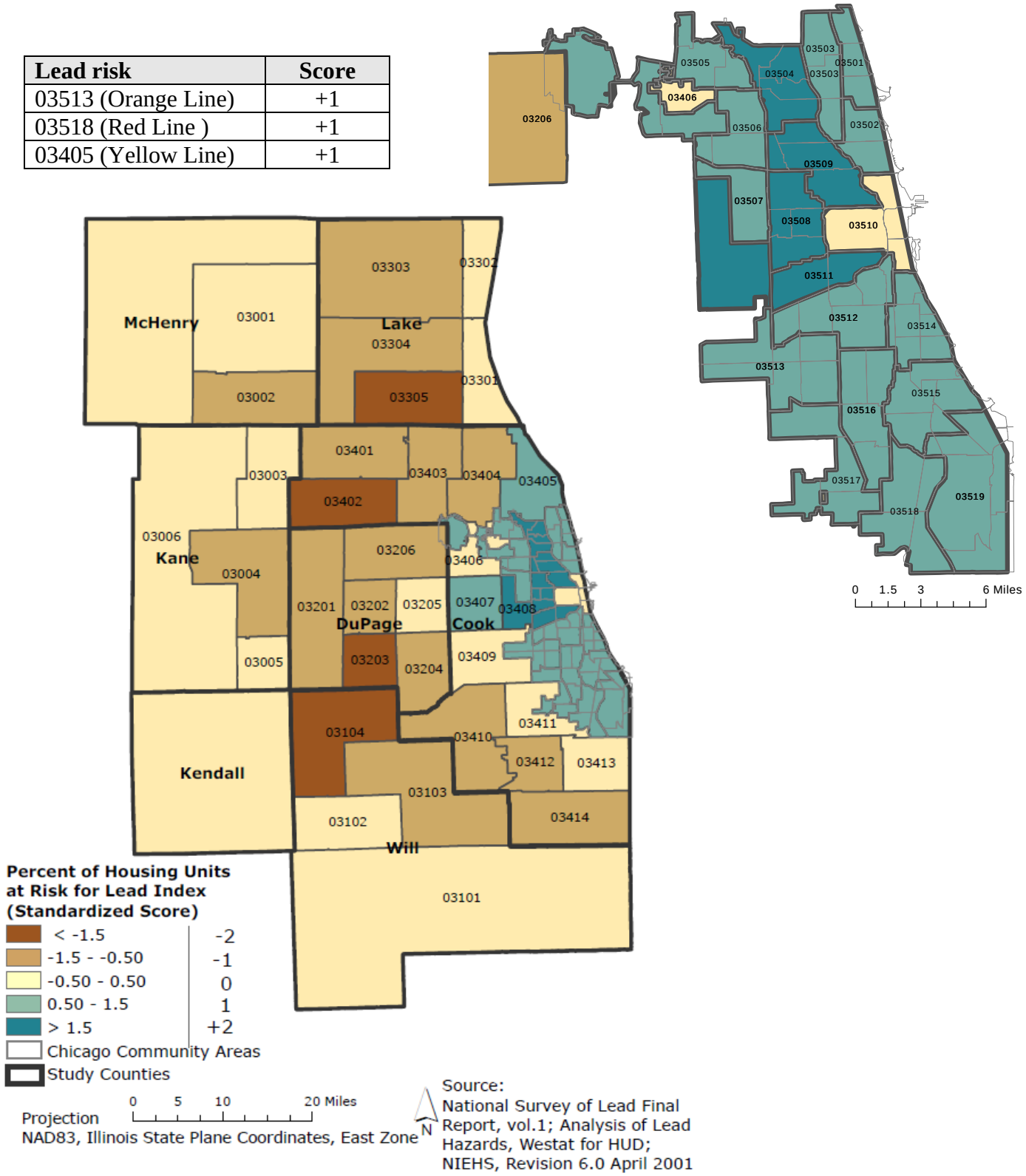
Green space	Score
03513 (Orange Line)	+1
03518 (Red Line)	+1
03405 (Yellow Line)	0



[22] Park areas were derived from land use classification 3100 (Open Space: Primarily Recreation) in the 2005 CMAP Land Use dataset.

6.2 Healthy Housing is measured by the number of housing units estimated to have lead exposure risks.[23] Areas with higher lead hazard risks than the region are scored on the positive scale.

Lead risk	Score
03513 (Orange Line)	+1
03518 (Red Line)	+1
03405 (Yellow Line)	+1



[23]Estimate based on national survey of Lead, Final Report, Volume I of the National Survey, Analysis of Lead Hazards, Westat for HUD and NIEHS, Revision 6.0, April 2001.

Equity Index Findings

As discussed, the regional Equity Index is based on environmental justice principles and livable community principles as defined by the recent Interagency Partnership for Sustainable Communities. Indicators that give a general snapshot of conditions in the region surrounding transportation, economic, social and environmental health were used to help gauge regional equity needs.

When all indicators are considered and scored equally, the Red Line Extension would impact an area considered a high priority area as it scored 32 out of 38 possible points from the indicators in the Index. Looking at only the transit equity indicators, the Red Line Extension area scored 8/10 total points demonstrating a transit dependent population.

The Red Line Extension area of impact (PUMA 03518) had high transit dependency in 2005-07.

- Twenty-four percent (24%) of households were without cars, compared to a 12% regional mean.
- Seventeen percent (17%) of the working population traveled in excess of 60 minutes to work, compared to a regional mean of 6%.
- Fourteen percent (14%) of the population was elderly (65+), compared to 11% regional mean.
- Nineteen percent (19%) of the population had disabilities, compared to a 12% regional mean.
- Seventy-three (73%) percent of households were low-income, compared to a 49% regional mean.

The area also scored high on environmental justice (4/4) and livability indicators (20/24) indicating a need for comprehensive investment strategies.

The Orange Line Extension area scored fewer points (11 out of 38) on the priority scale and 0/10 points for the transit equity indicators. A score of 0 on the transit equity indicators implies that the transit needs of the community are in line with the region and transit needs are being met.

The area where the Yellow Line Extension is proposed scored -5 on the priority scale and 1/10 for the transit equity indicators. The area scored a 1 on transit equity indicators because the area had a slightly higher proportion of elderly than the region and the elderly population is viewed as a transit dependent population.

Data on all indicators is presented below for further comparison and data tables can be found in Appendix C.

Table 1 Equity Index Scorecard

	PUMA 3513	PUMA 3518	PUMA 3405
	ORANGE LINE	RED LINE	YELLOW LINE
1.1 Transit dependent measured by population that is disabled	0	2	0
1.2 Transit dependent measured by households with 0 cars	0	1	0
1.3 Transit dependent measured by population that is elderly	0	1	2
1.4 Transit dependent measured by population that is high school student	0	2	0
1.5 Inadequate access measured by excessive travel time to work	0	2	-1
Transit Equity Indicators	**0**	**8**	**1**
2.1 Low-income measured by population earning under 80% Area Median Income	1	2	-1
2.2 Minority measured by population “non white” and/or Hispanic	1	2	0
Environmental Justice Indicators	**2**	**4**	**-1**
3.1 Economic health measured by population unemployed	0	2	-1
3.2 Business health measured by extensive business vacancy	0	2	-1
3.3 Economic stability measured by estimated high cost loans	1	2	-1
4.1 Affordability measured by cost burdened households	1	1	0
4.2 Affordability measured by rent burdened households	2	2	0
4.3 Housing instability measured by foreclosure risk	1	2	-1
4.4 Housing market measured by vacancy	0	2	0
4.5 Affordable housing demand measured by housing choice vouchers use	0	2	0
5.1 Education support measured by high school drop out rate	1	1	-1
5.2 Education stability measure by school mobility	1	2	-1
6.1 Environmental space measured by park space per capita	1	1	0
6.2 Healthy housing measured by estimated lead risk	1	1	1
Livable Community Indicators	**9**	**20**	**-5**
TOTAL SCORECARD	**11**	**32**	**-5**

Public investments, including transportation, housing, economic, and environmental in areas with the greatest need, could help balance regional equity issues and help advance regional sustainability. For example:

- An area that has a high transit dependent population (higher than the regional mean) should be a location choice for transportation investments.
- An area that has a high estimated foreclosure risk (higher than the regional mean) should be a location choice for housing investments (neighborhood stabilization dollars, housing programs).
- An area that has high lead hazard risks (higher than the regional mean) should be a location choice for environmental investments (lead abatement, education).

A location that has high concentrations for multiple social, economic and environmental concerns is an opportunity for coordinated efforts to enable more efficient use of resources and to advance equity and sustainability.

Based on the Equity Index, the Red Line Extension would benefit the region far more from a regional transit equity perspective because the transit dependency in the area is high, as is inadequate transportation access measured by extensive travel times of residents.

Table 2 Summary of Equity Index

Priority	Score range	Red Line Extension	Orange Line Extension	Yellow Line Extension
High	20-38	**X**		
Med high	1-19		**X**	
Neutral	0			
Med low	-(1-19)			**X**
Low	-(20-38)			

.

3. Regional Impact Assessment

Section 3 of the report assesses the potential regional impact of the Red Line Extension compared to other proposed extensions in the region. This part describes existing conditions around the Red, Orange and Yellow Lines and assesses the potential for economic benefits. Sections are as follows:

3.1) Existing Conditions.
3.2) Extension Conditions.
3.3) Transit-Oriented Development Potential.

3.1 Existing Transit Conditions

Ridership

Ridership on the Red Line accounts for 30% of ridership system-wide. Ridership in 2008 along the Dan Ryan Branch (Cermak-Chinatown to 95th Street – 9 stations) averaged 117,000 daily riders or roughly 13,000 riders per station. This is second in magnitude only to ridership experienced in the Loop.[24]

The Midway Branch of the Orange Line begins at Roosevelt/Wabash station and ends at Midway station with a total of 8 stations. Average daily ridership in 2008 along this Branch was 67,700 or 8,400 riders per station. The Yellow Branch from Howard Street to the Dempster/Skokie station averaged 3,700 riders per station in 2008.

Transportation Performance

Traffic
The average daily traffic in the south Chicago region is high with 300,000 drivers on the I-94 Dan Ryan leading to downtown Chicago and 26,000 drivers along arterial streets like Halsted. Traffic increases for far south Chicago are projected to be 10% for expressways and between 20-30% for local arterials by 2030.[25]

Average daily traffic along I-55, the expressway closest to the Orange Line, is 180,000 vehicles. Severe congestion is experienced during peak periods. Cicero Avenue and Pulaski Avenue which are two major north-south arterials in the area, average 52,700 vehicles. Traffic along the I-94 Eden's expressway at the Yellow Line Dempster street area is roughly 165,700 vehicles daily and according to the CMAP regional travel demand model traffic is expected to only increase slightly by 2030.[26]

Bus Connections
Nineteen buses from both CTA and Pace currently serve the 95th Street station and bus routes average 12.4 miles in length and 46 minutes in travel time. Ridership averages nearly 3,600 passengers a day.

[24] Regional Transportation Asset Management System (RTAMS) 2008 ridership data.
[25] CTA Red Line Extension Alternatives Analysis Locally Preferred Alternative Report, August 2009.
[26] CTA Yellow Line Extension Alternatives Analysis Locally Preferred Alternative Report, August 2009.

Route length and speed translates the average bus speed in the area to be 9.5 miles an hour and by 2030 bus travels times are projected to increase 20 percent.[27]

Twenty buses serve the Midway station and they average 11 miles in length and 44 minutes in travel time. Average ridership is 4,318 daily. Four buses from CTA and Pace currently serve the Dempster station and bus routes average 14 miles in length and 55 minutes in travel time. Ridership averages at 2,000 passengers a day.

Travel Time

Residents living in the vicinity of the proposed terminal station at 130th and Stony Island currently travel 28 minutes to get to the 95th Street station. Travel into downtown (Jackson Street station) from 95th Street is an additional 25 minutes which results in an overall travel time of 62 minutes.[28]

Residents living near the proposed Ford City station at 75th and Cicero currently travel nearly 50 minutes to the Library station in the Loop.[29] Residents living in the vicinity of the proposed terminal station at Old Orchard Mall currently travel 34.5 minutes to get to the Howard Street station.[30]

Accessibility

Currently no parking spaces are available along the Dan Ryan Branch. System-wide there are 6,713 parking spaces available. Nine percent (592) of those spaces are located at the Howard station on the north half of the Red Line. Both the Skokie Branch and Midway Branch have parking spaces available at nearly all stations. Utilization rates from year 2000 for parking at the Midway Branch stations ranged from 79% to 123%. Parking at the Skokie station was 73% utilized. According to the Regional Transportation Asset Management System (RTAMS) database, 60% of stations system-wide are accessible to persons with disabilities. Along the Red Line 40% (12 stations) are ADA accessible to disabled individuals while both the Orange and Yellow Line are 100% accessible.

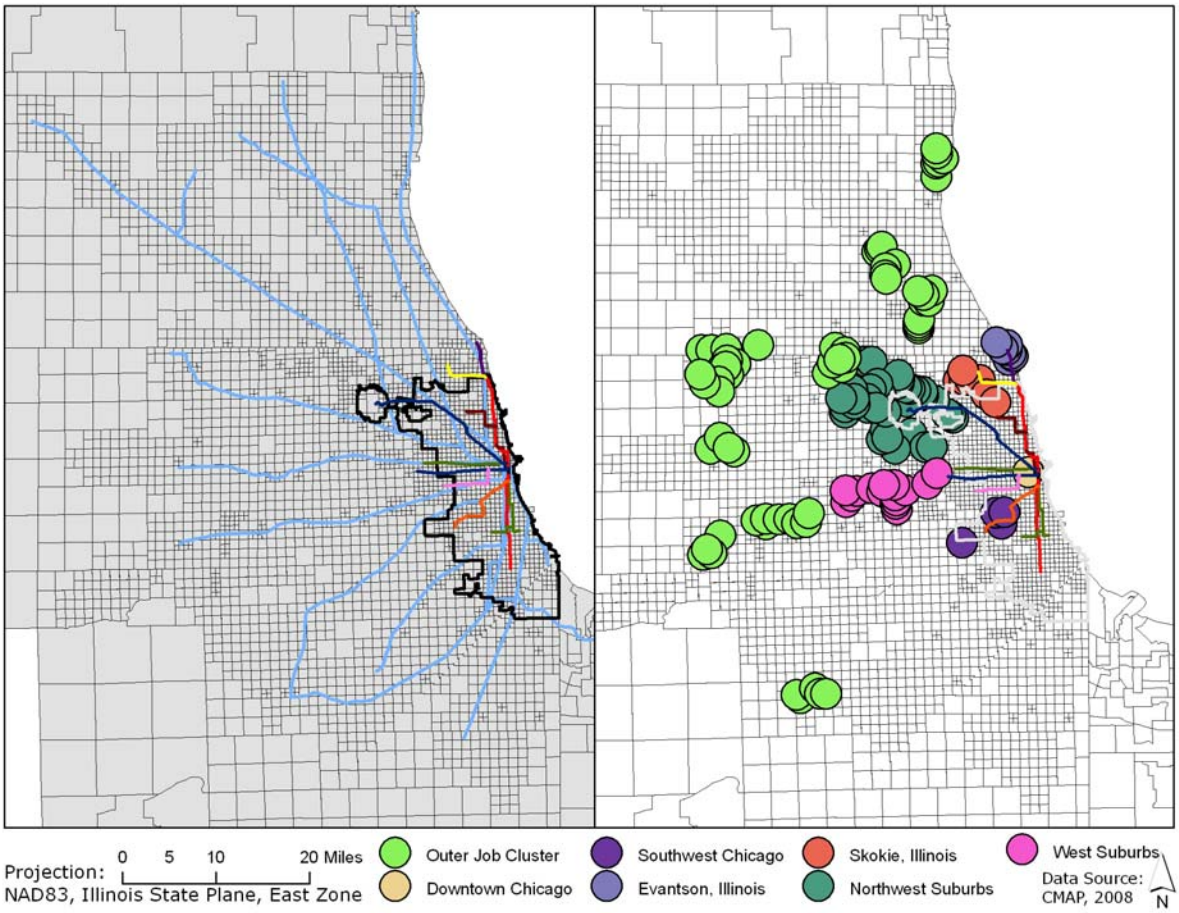
Employment access

Chicago Metropolitan Agency for Planning (CMAP) has identified regional employment sub-centers. Employment sub-centers reflect concentrations of firms with sufficient size to have significant effects on the spatial distribution of housing and employment. CMAP identified employment sub-centers by examining Northeastern Illinois Planning Commission (NIPC)[31] employment, population, and land use data to identify regional quarter sections that have at least 10,000 jobs and 20 jobs per acre. According to CMAP, these employment sub-centers make up 21% of the region's total employment.[32] Based on criteria, no job centers exist in the south side of Chicago and south suburbs.

[27] CTA Red Line Extension Alternatives Analysis Locally Preferred Alternative Report, August 2009
[28] CTA Red Line Extension Alternatives Analysis Locally Preferred Alternative Report, August 2009
[29] CTA Orange Line Extension Alternatives Analysis Locally Preferred Alternative Report, August 2009
[30] CTA Yellow Line Extension Alternatives Analysis Locally Preferred Alternative Report, August 2009
[31] Northeastern Illinois Planning Commission and Chicago Area Transportation Study merged in 2005 to form Chicago Metropolitan Agency for Planning.
[32]Chicago Metropolitan Agency for Planning, Jobs & Housing Balance, Go To 2040.

Employment sub-centers were organized into clusters as illustrated in Figure 6. Employment access is measured by average travel time to job clusters for each existing terminal station, Midway, 95th Street and Dempster.

Figure 6 Employment Sub-centers by Cluster Area



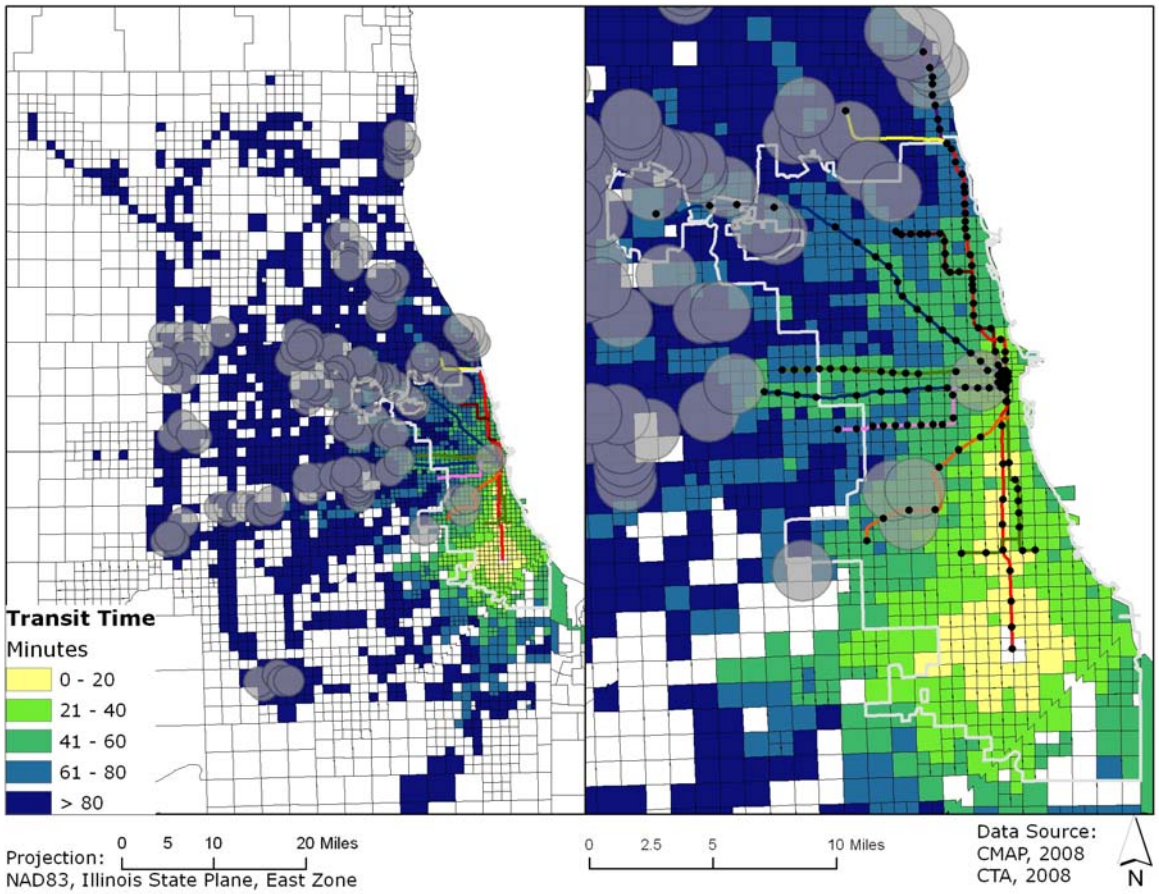
Job access to employment centers from the Red Line 95th Street station

Out of the seven regional employment sub-center clusters, average travel time from the 95th Street station is longest to three out of the seven cluster areas compared to access from Midway and from Dempster. Job centers with the longest average travel time from 95th Street include travel to jobs in the northwest cluster, Skokie, and Evanston area.

Table 3 Travel Time to Employment Center Clusters from 95th Street Red Line Station

Line	All job sub centers	CBD (downtown)	West cluster	Northwest cluster	Skokie	Evanston	Southwest	Outer suburbs
Red Line	92.29	32.64	86.35	94.87	92.04	80.61	47.75	107.85

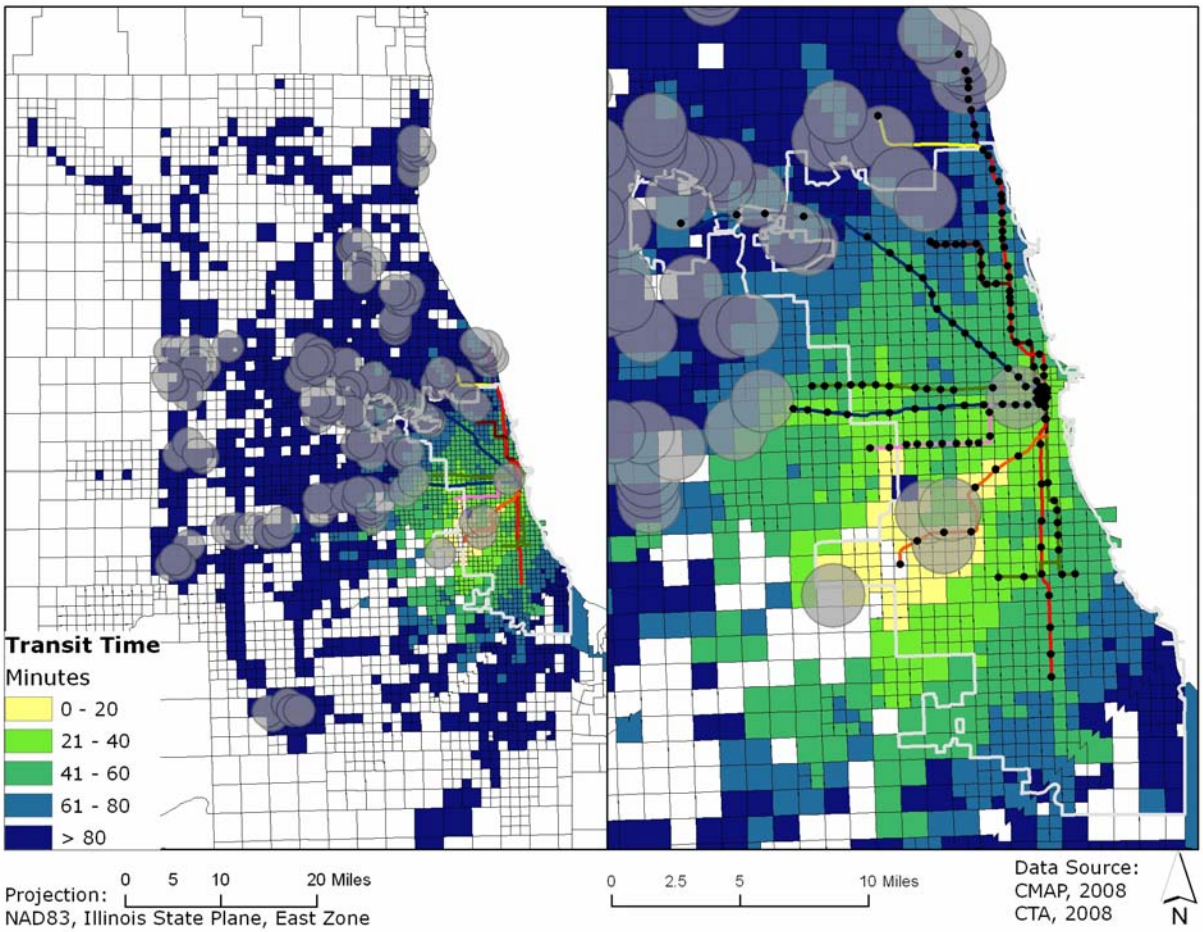
Figure 7 Travel Time to Employment Sub-centers from 95th Street Station



Job access to employment centers from the Orange Line Midway station

Average travel time to any job center cluster from the Orange Line Midway station is comparatively shorter for all but the outer suburbs cluster where travel time is averaged at 109 minutes (compared to 108 minutes from 95th Street and 107 minutes from the Dempster station).

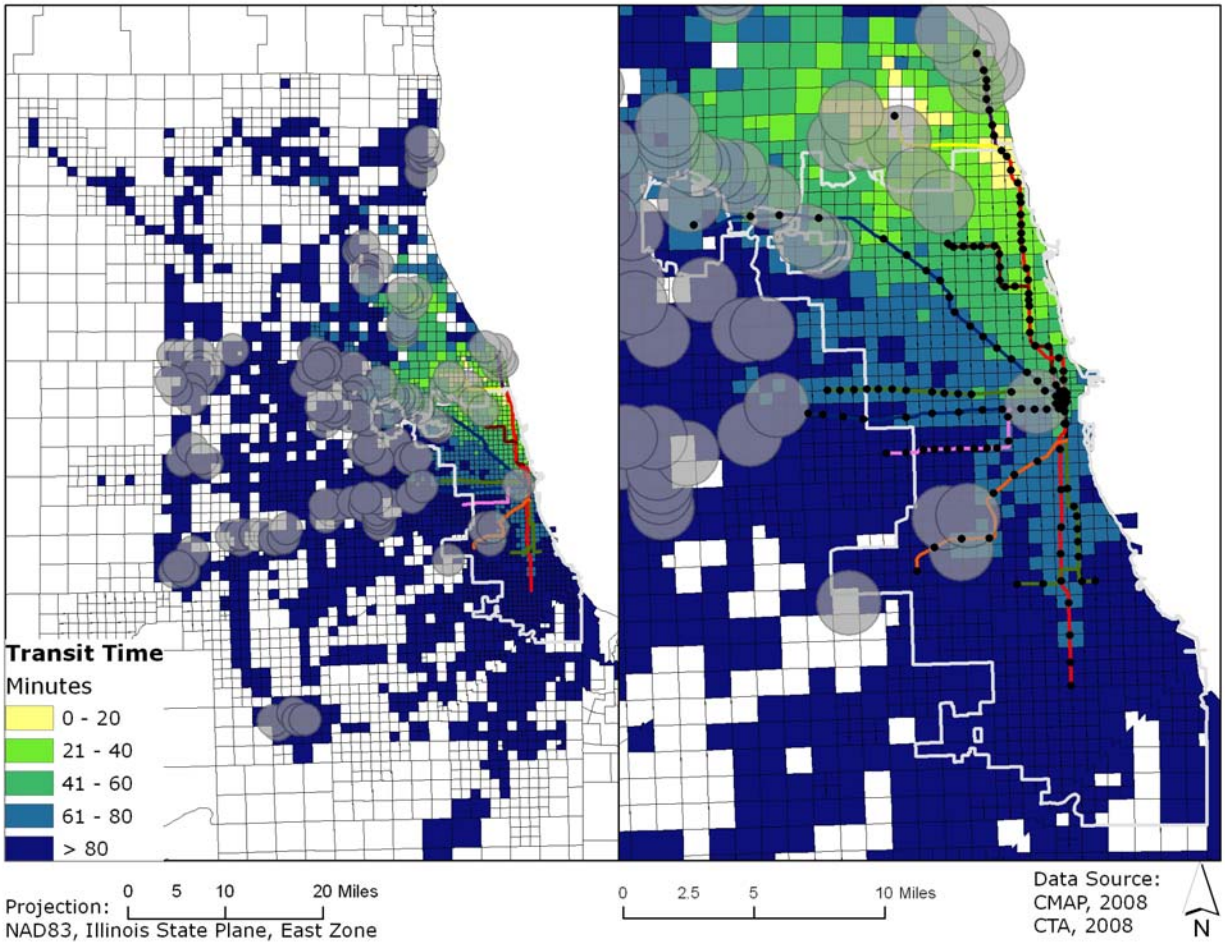
Figure 8 Travel Time to Employment Sub-centers from Midway Station



Job access to employment centers from the Yellow Line Dempster station

Out of the seven regional employment sub-center clusters, average travel time to employment clusters from the Dempster station is longest to three out of the seven employment clusters. Job centers with the longest average travel time from Dempster include travel to the CBD, west cluster and southwest cluster.

Figure 9 Travel Time to Employment Sub-centers from Dempster Skokie Station



Job access measured by average travel time to job center clusters indicates that the access from the 95th Street station to all job sub-centers is higher (92.3 minutes) compared to the Orange (88.9 minutes) and Yellow Line (84.56 minutes) terminal stations. In addition to inadequate access to jobs, the lack of nearby jobs in south Chicago and south suburbs also contribute to the high travel times.

Table 4 Summary Travel Times to Regional Job Clusters

Line	All job sub centers	CBD (downtown)	West cluster	Northwest cluster	Skokie	Evanston	Southwest	Outer suburbs
Red Line	92.29	32.64	86.35	94.87	92.04	80.61	47.75	107.85
Orange Line	88.86	31.61	70.70	92.86	88.99	79.87	15.68	109.26
Yellow Line	84.56	53.46	106.65	80.23	30.79	38.59	81.50	106.91

3.2 Extension Conditions

Estimated Ridership

The Alternatives Analysis process generated figures for three key factors used to advance projects in the New Starts process. Factors include estimated ridership, capital costs and operating and maintenance costs. Figures for all three Locally Preferred Alternatives are presented below.

Table 5 Alternative Analysis Estimates for Locally Preferred Alternatives[33]

	Red Line	Orange Line	Yellow Line
Proposed New Station	4	1	1
Miles of Track	5.3	2.3	1.6
Estimated New Riders	12.7M	3M	2M
Capital Costs	$1100M	$400M	$270M
Capital Cost per Estimated New Rider	$87	$133	$135
Operating and Maintenance Costs	$24.1M	$4.3M	$1.9M

Estimated new ridership for the Red Line Extension is 12.7 million riders, compared to 3 million new riders for the Orange Line Extension and 2 million for the Yellow Line Extension. Capital costs per estimated new rider for the Red Line are less than what is estimated for the other two extension proposals. For the Red Line, capital costs per person are $87 per person compared to $133 per person for the Orange Line and $135 per person for the Yellow Line.

Estimated Transportation Performance

Travel time
The construction of the Red Line Extension to the 130th Street station location is estimated to generate a 33% increase in time savings or a 20.5 minute savings for residents in the area traveling to the downtown Jackson station. This compares to 16.5 minute time savings for Orange Line Extension riders traveling from Ford City to the Library and 11 minute savings for Yellow Line Extension riders travelling to Howard Street Station.

Accessibility
The construction of the Red Line Extension includes the creation of 1,500 parking spaces at intermediate and terminal stations. Currently there are 592 parking spaces available along the Red Line and all are located at the Howard station, which is the north terminal of the Line. The addition of parking spaces will increase accessibility along the south side route and enhance access to Chicago for south suburban residents, which will likely also ease congestion on the Bishop Ford Expressway.

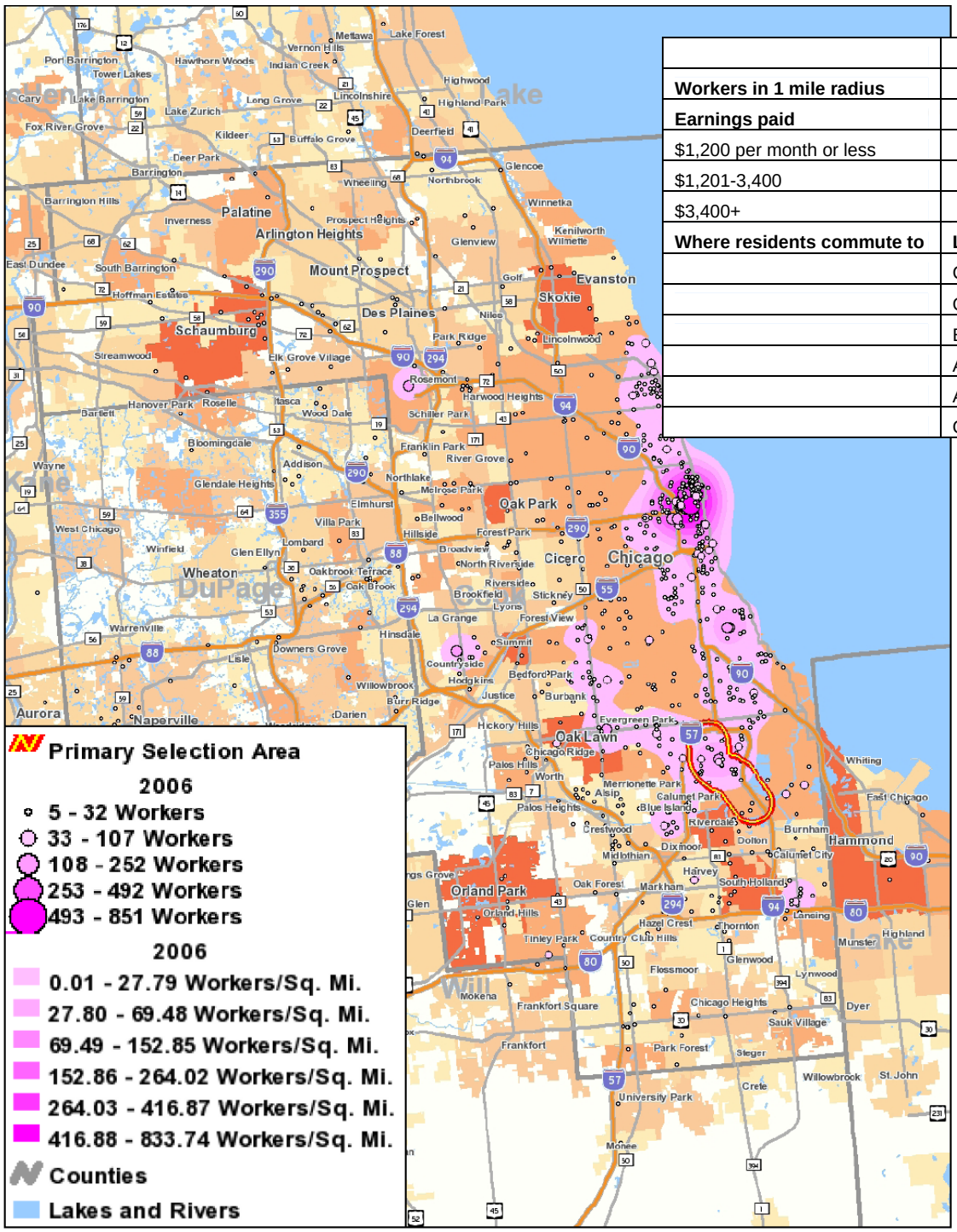
Employment access
Commute patterns of employees living within a 1-mile radius of the proposed stations are presented below. Commute patterns of people going to work at jobs located within a 1-mile radius of proposed stations is also presented. Data and maps were derived from U.S. Census Local Employment Dynamics website. Employee and employment data are from 2006 and includes all workers and all job types.

[33] Alternatives Analysis Public Screenings: Orange Line Extension, Red Line Extension, Yellow Line Extension, Chicago Transit Authority, 2009.

Employment around the proposed Red Line stations

In 2006, there were 25,408 working people living within a 1 mile radius of the 4 proposed new stations at 103rd, 111th, 116th, and 130th Street. Twenty-five percent of the working population (6,368) earned $1,200 per month or less and majority (60%) travel within Chicago for employment. Other top employer locations included Oak Lawn, Blue Island and Aurora. As can be seen in the illustration below, the commute pattern for residents surrounding the proposed Red Line Extension is linear and directed toward the Chicago Loop.

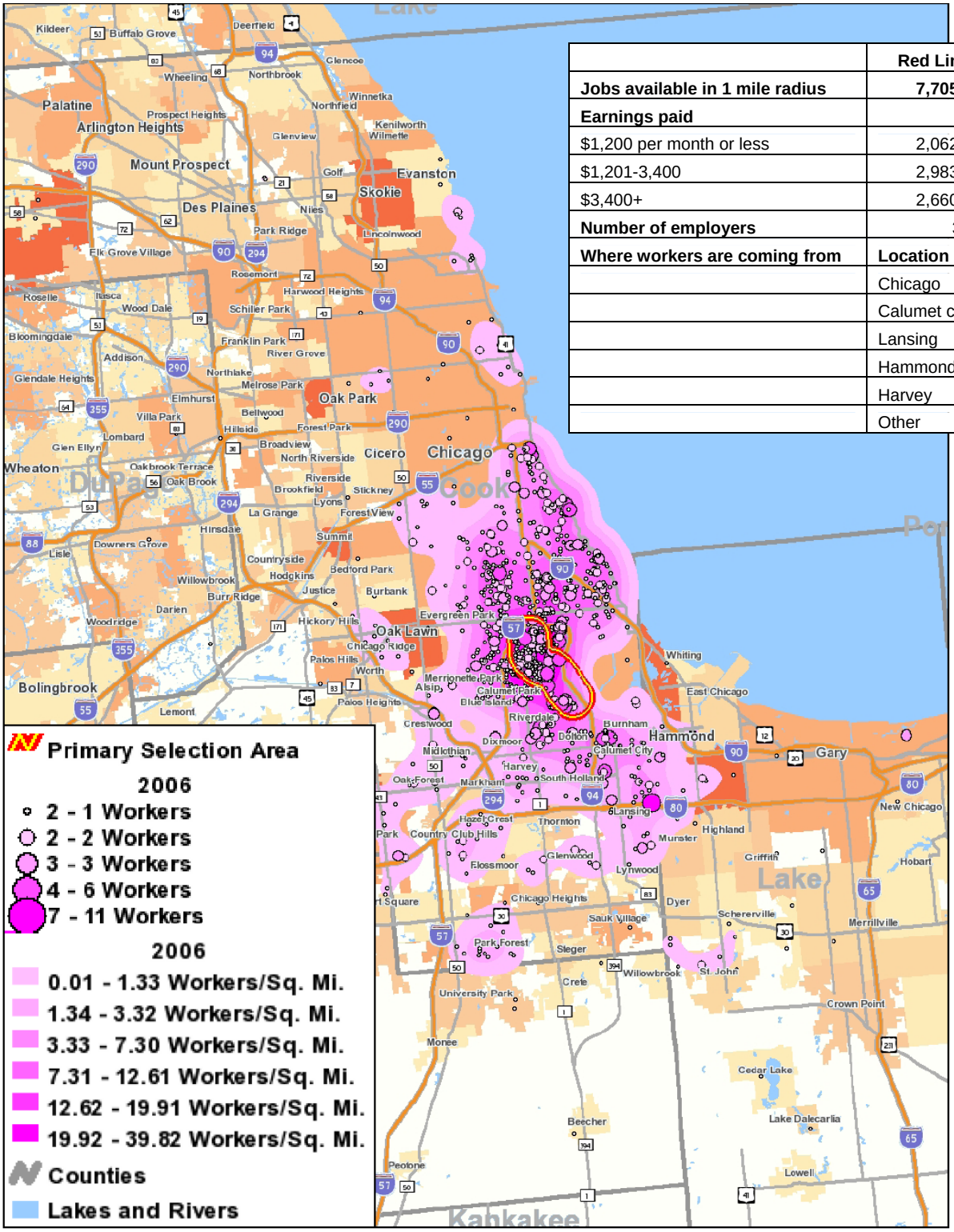
Figure 10 Commute Pattern of Workers Living Within a 1 Mile Radius of Proposed Red Line Stations



	Red Line stations	
Workers in 1 mile radius	**25,408**	
Earnings paid		
$1,200 per month or less	6,368	25.1%
$1,201-3,400	14,380	56.6%
$3,400+	4,660	18.3%
Where residents commute to	**Location**	**%**
	Chicago	60.2
	Oak lawn	1.4
	Blue island	0.9
	Aurora	0.9
	Alsip	0.8
	Other	35.7

The number of jobs available within a 1 mile buffer of all four stations is minimal (7,705) compared to the jobs available at the Orange Line Ford City station (11,223) and Yellow Line Orchard Mall station (10,166). There were 385 employers located in the 1 mile buffer area, compared to 308 around the proposed Orange Line station and 543 around the proposed Yellow Line station. This suggests that areas around the proposed Red Line stations also lack the larger, more stable employers.

Figure 11 Commute Pattern of Employees Traveling to Work within a 1 Mile Radius of Proposed Red Line Stations

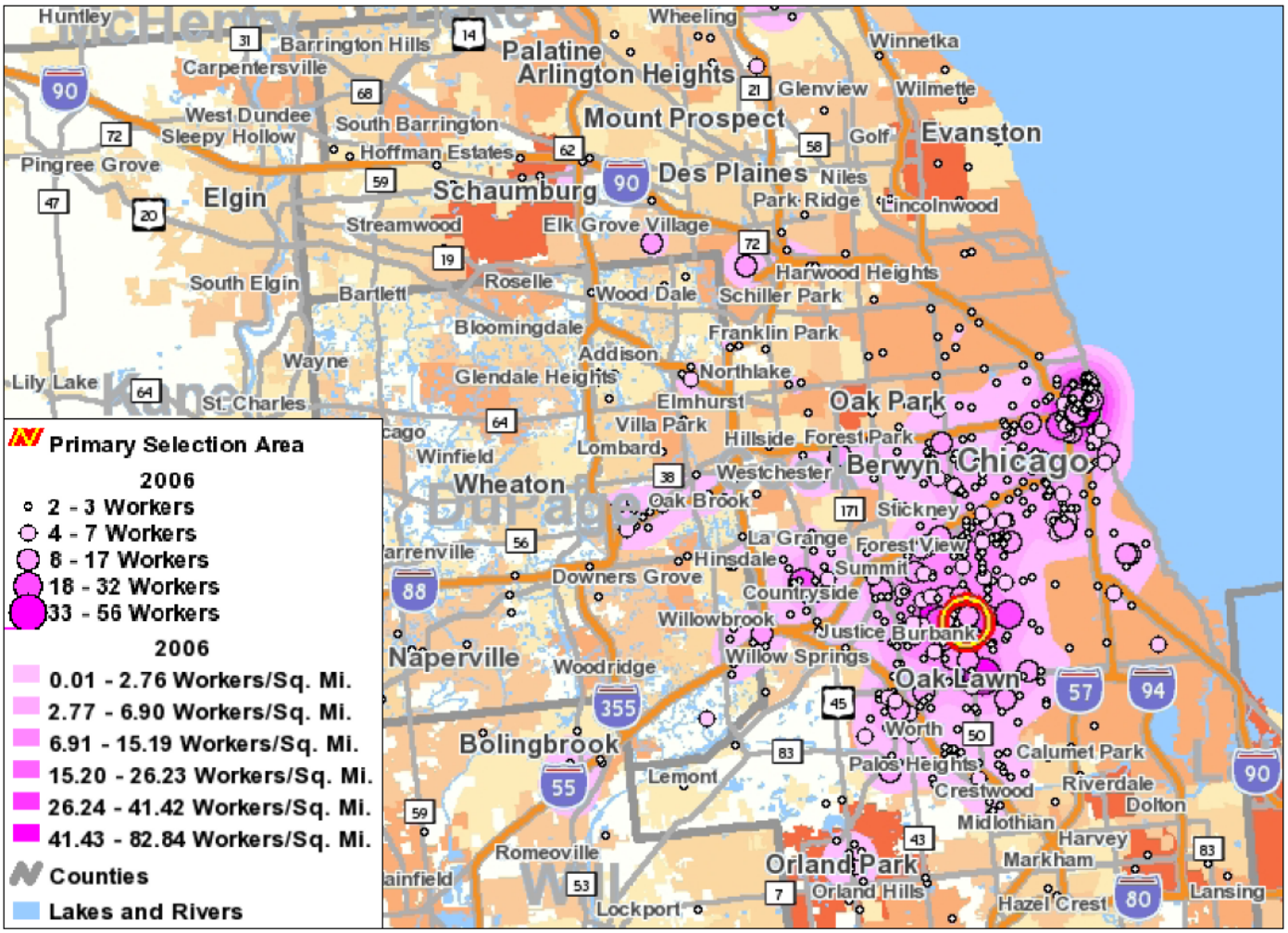


	Red Line stations	
Jobs available in 1 mile radius	**7,705**	
Earnings paid		
$1,200 per month or less	2,062	26.8%
$1,201-3,400	2,983	38.7%
$3,400+	2,660	34.5%
Number of employers	**385**	
Where workers are coming from	**Location**	**%**
	Chicago	47.5
	Calumet city	2.4
	Lansing	1.7
	Hammond	1.7
	Harvey	1.4
	Other	45.4

Employment around the proposed Orange Line station

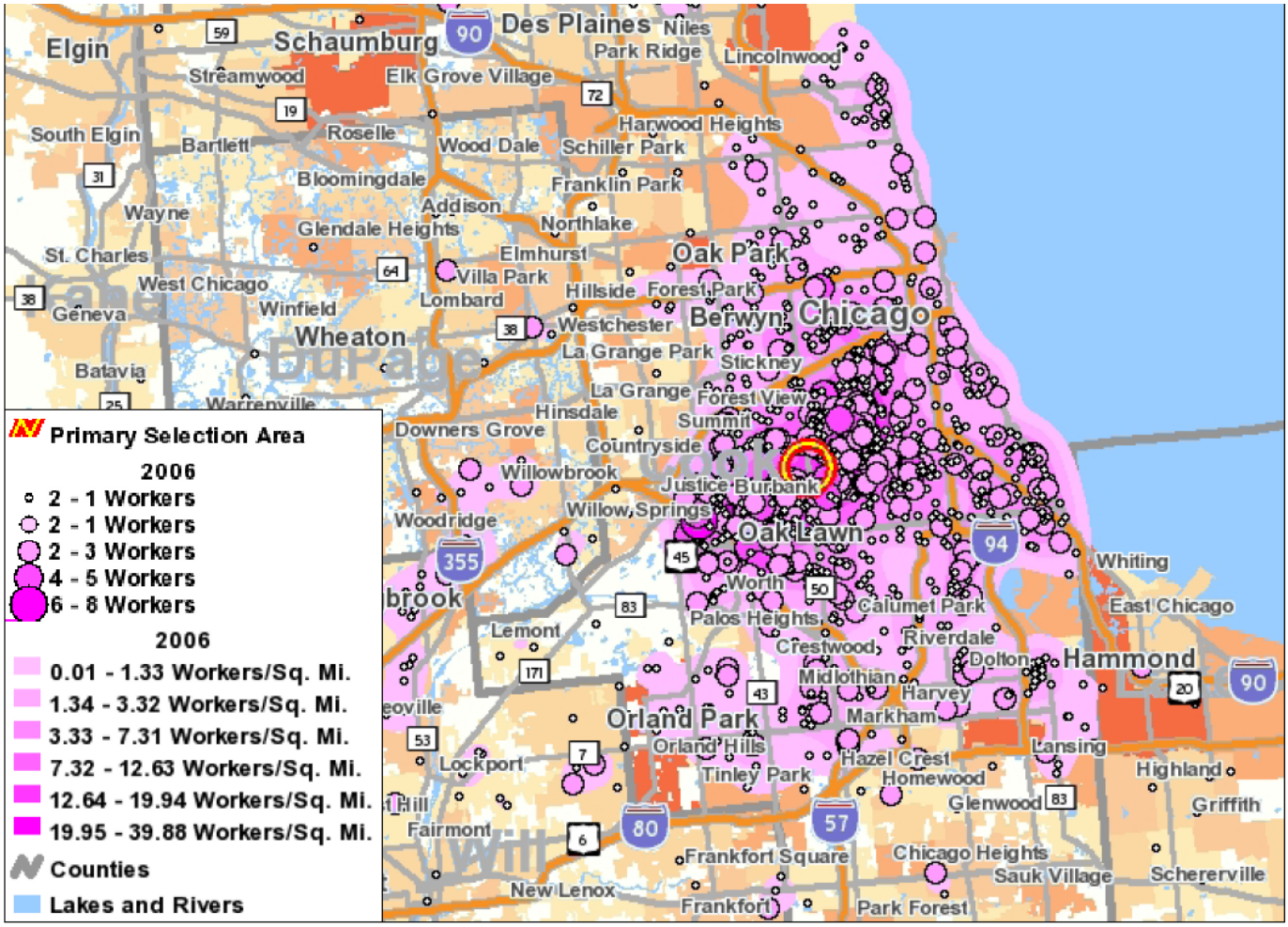
In 2006, there were 4,487 working people living within a 1 mile radius of the proposed new station at 76th & Cicero. Twenty-seven percent (27%) of the working population (1,214) earned $1,200 per month or less and 44% traveled within Chicago for employment. Other top employer locations include neighboring Bedford Park, Oak Lawn and Burbank.

Figure 12 Commute Pattern of Workers Living Within a 1 Mile Radius of Proposed Orange Line Station



In 2006, 11,223 employees worked for 308 employers within a 1 mile radius of the proposed station Ford City staion. Thirty-nine percent (39%) were coming to the 76th Street & Cicero area from Chicago, while an additional 5% came from neighboring Oak Lawn and Burbank.

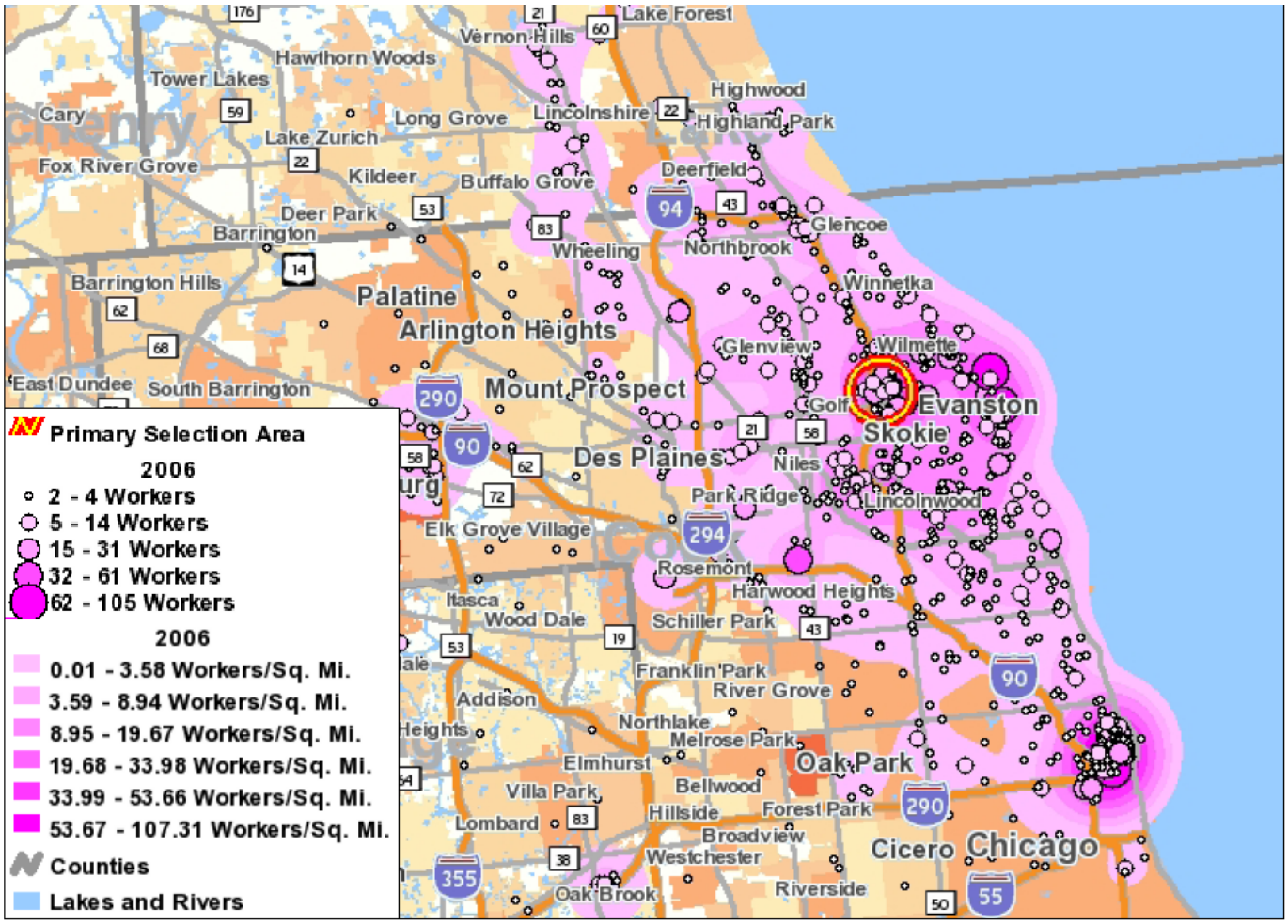
Figure 13 Commute Pattern of Employees Traveling to Work within a 1 Mile Radius of Proposed Orange Line Station



Employment around the proposed Yellow Line station

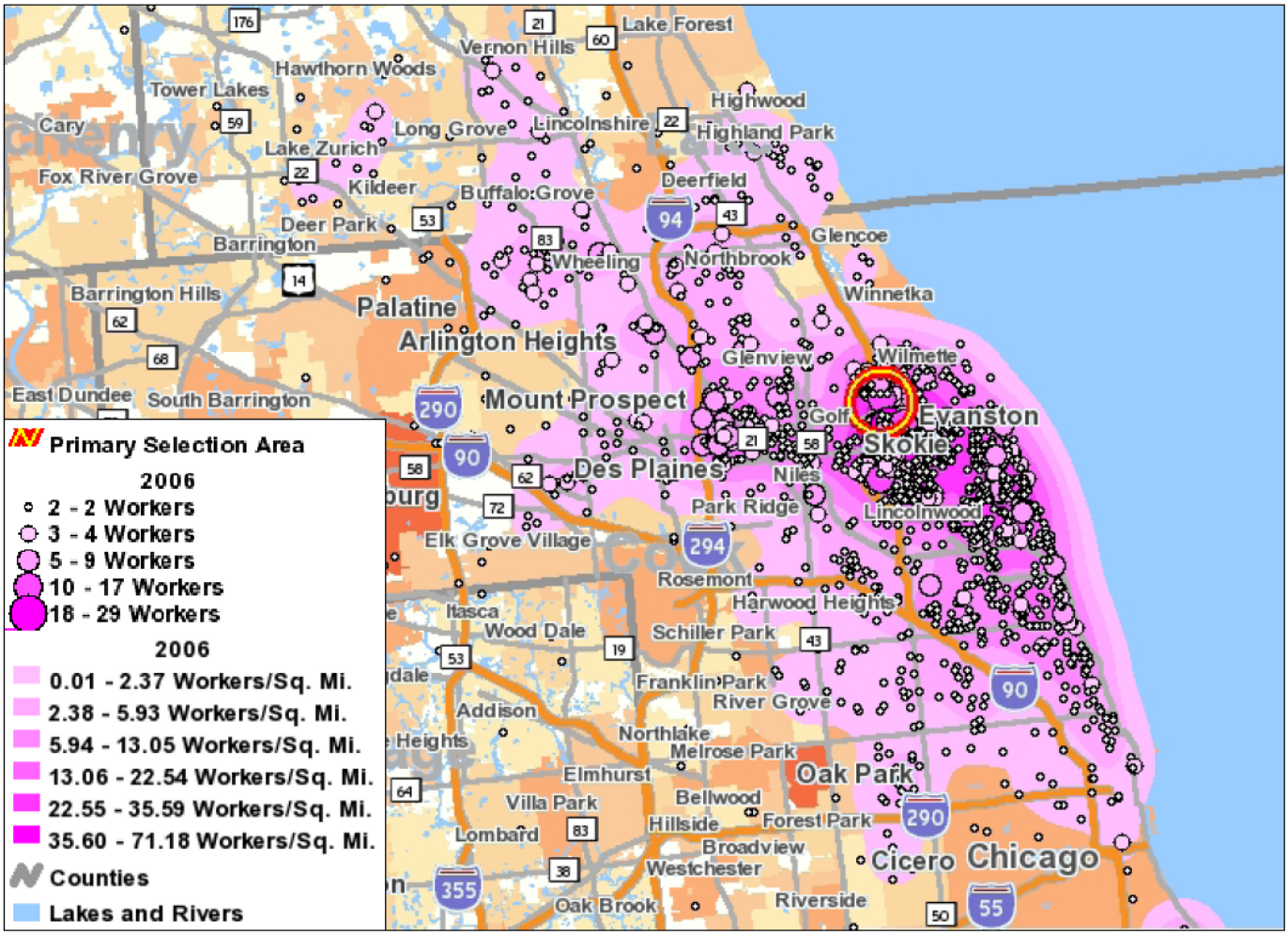
In 2006, there were 5,794 working people living within a 1 mile radius of the proposed station at Old Orchard. Twenty-eight percent (28%) of the working population (1,609) earned $1,200 per month or less and 34% traveled to Chicago for employment. Other top employer locations included Skokie (9%), Evanston (8%) and Wilmette (4%).

Figure 14 Commute Pattern of Workers Living Within a 1 Mile Radius of Proposed Yellow Line Station.



In 2006, 543 business entities located within a 1-mile buffer employed 10,166 workers. While the number of jobs available in the Old Orchard area is high, 25% of the workers in these jobs earned $1,200 or less per month. Thirty-one percent (31%) come from Chicago while 11% come from surrounding Skokie.

Figure 15 Commute Pattern of Employees Traveling to Work within a 1 Mile Radius of Proposed Yellow Line Station



In comparison to employment levels near the other two rail extensions, job availability along the Red Line Extension is low. That area had 7,705 jobs within four 1-mile buffer areas or roughly 1,900 jobs per station area. This compares to 11,223 at the Ford City location and 10,166 at the Old Orchard location. The Extension with the most workers coming from and to Chicago for employment was also the Red Line Extension area. Of the 25,408 working residents living within a 1-mile buffer of the proposed stations, 60% commute within the Chicago limits, the majority traveling to the Loop. This compares to 44% traveling from the Ford City area to Chicago jobs and 34% traveling from the Old Orchard area to Chicago jobs.

Persons earning $1,200 a month are roughly working full time at minimum wage ($8.50/hour) and earning $17,000 annually just below the 2008 Federal Poverty level for a family of three.[34] In 2006,

[34] Poverty, Income and Health Insurance in Chicago, Illinois. Social Impact Research Center, September 2009

33% (8,486) of workers living near the Red Line Extension were earning this amount and 60% were jobs in the City. The Orange Line impact area in comparison had 27% of workers earning this amount and the Old Orchard area had 28%.

Detailed data from U.S. Census Local Employment Dynamics can be found in Appendix E.

One positive attribute in the Red Line Extension impact area is affordable housing. The estimated median home value in 2009 ranged from $82,000-$136,000. These are homes that households earning $35,000+ a year could afford. Though jobs are plentiful around the Ford City station and the Old Orchard station, affordable housing is not. The estimated median home value in the Ford City station area is nearly $200,000. The estimated median home value in the Old Orchard area is even higher, at $370,000.[35]

Table 6 Summary Table of Jobs and Working Residents around the Proposed Extension Stations and Housing Values in the Area

	1 mile radius around each proposed station							
Station Location	Number of Jobs	Number of Employers	% Coming from Chicago Area	% Getting Paid $1,200 and Below	Number of Workers	% Commuting to Jobs in Chicago Area	% Earning $1,200 and Below	Median Home Value (estimated 09)
103rd Street								$ 136,679
111th Street								$ 130,939
116th Street								$ 126,067
130th Street	7,705	395	47.5%	26.8%	25,408	60.2%	33.4%	$ 82,727
Ford City	11,223	308	39.1%	35.2%	4,487	43.9%	27.1%	$ 196,648
Old Orchard	10,166	543	31.3%	25.4%	5,794	34.4%	27.8%	$ 370,448

The regional jobs and housing mismatch could be best addressed with the construction of the Red Line Extension. The Extension would allow low-income residents access to employment opportunities which might include higher wages. A study of transportation expenditures found that a greater investment in mobility leads to destination benefits which result in earnings improvements.[36] The Extension would decrease travel times for residents by 20 minutes, which results in household cost savings. The Extension would serve a greater transit dependent population than other proposed extensions. Enhanced access to the Greater Roseland area could also result in job creation providing employment opportunities closer to home.

3.3 Transit-Oriented Development Potential

Local development impacts of new transit stations

There are many different variables within a community that influence the development impact of a new transit rail line and its stations. The community's location in relation to the central business district and other employment centers, the income level and social status of its residents, population density, the types of land uses in the area, and even the condition of the regional economy are all examples of the set of characteristics that can indicate what kind of impacts a new transit line and/or stations will have on housing and retail markets of a particular community. The following section

[35] Estimated Housing Values are from Claritas Site Reports, 2009.

[36] Thakuriah, Piyushimita and Yihua Liao. Transportation Expenditures and Ability to Pay, Evidence from Consumer Expenditure Survey.

reviews what previous studies have revealed about the relationship between community-level development and new transit lines or extensions.

Housing prices and residential real estate activity

Most studies reveal a positive relationship between new rail stations and the price of single-family homes located nearby. However the strength of this relationship depends on some geographical considerations. First, people in different cities and regions of the U.S. value close proximity to transit in different ways. Average housing premiums associated with living within ¼ to ½ mile of a station vary from city to city and are measured generally by how much a home sells for in a TOD area compared to areas with no transit in close proximity. In Chicago, the premium for transit accessible housing is 20%, but in other areas of the country, it can be much lower (Philadelphia 6.4%) or much higher (Santa Clara County, CA, 45%).[37] The variability depends on different factors like traffic congestion, the quality and frequency of transit services, and so on. Since these factors can also vary within metropolitan areas, we can assume that housing premiums vary between neighborhoods and cities in the same region.

The location of the affected community in relation to the larger metropolitan area also matters in regards to residential real estate impacts. In one study of new rail stations in Atlanta, the interactions between station proximity and the property's distance to the central business district reveal that homeowners are willing to pay more for housing within a mile of a rail station farther from the center in comparison to stations closer in to the city center.[38]

More generally, housing sale prices around a new rail station location tend to increase, but not dramatically. A study of housing sales within 1.5 miles of the CTA Orange Line found an average increase in value of $6,000 between 1983 and 1999. Also of note was the moment when sales prices began to increase: 6 years prior to the completion of the line.[39] This suggests that the market anticipates (or speculates) that housing prices will rise as a result of the infrastructure improvement. The only exception to the rule of rising housing values near new rail stations was found in a study of Atlanta's Marta system. Researcher's found that externalities like noise and other nuisances that stations bring to a community had a negative impact on housing values in higher-income areas. However, the same study found these externality affects were irrelevant in low-income areas.[40]

Commercial activity and economic development

Studies generally find that commercial property prices also increase closer to rail stations.[41] In addition, one study conducted in the Washington D.C. and Atlanta metropolitan areas found that system-wide ridership trends had a positive impact on commercial rents of offices near stations. Rents of office space located within close proximity to stations increased nearly four dollars per square foot for every 100,000 additional daily riders.[42]

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[37] Transit-Oriented Development in the United States: Experiences, Challenges, and Prospects. (2004). *Transit Research Board* 102. Washington D.C., p. 162.

[38] Bowes, D.R. & Ihlandfelt, K.R. (2001). Identifying the Impacts of Rail Transit on Residential Property Values. *Journal of Urban Economics*, 50, pp. 1-25.

[39] McMillen, D.P. & McDonald, J. (2004). Reaction of Housing Prices to a New Rapid Transit Line: Chicago's Midway Line, 1983-1999. *Real Estate Economics*, 32 (3) pp. 463-486.

[40] Nelson, A.C. (1992). Effects of Elevated Heavy-Rail Transit Stations on Housing Prices with Respect to Neighborhood Income. *Transit Research Board* 1359. Washington D.C.

[41] The Effect of Rail Transit on Property Values: A Summary of Studies. (2001). *Parsons Brinkerhoff* 21439S.

[42] Cervero, R. (1994). Rail Transit and Joint Development: Land Market Impacts in Washington D.C. and Atlanta. *Journal of the American Planning Association*, 60 (1), pp. 83-94.

In contrast to commercial rents, there is little evidence that demonstrates the significance of rail stations on area employment. An Atlanta study found that under relatively free market conditions, new Marta rail stations had little impact on employment.[43] However, Cervero points out that urban rail transit will significantly benefit land use and site rents only if a region's economy is growing and a number of supportive programs are in place. For example, permissive zoning to allow higher densities and infrastructure improvements such as pedestrian plazas and street improvements can help increase economic development benefits.[44]

Accessibility is the underlying relationship between economic development and transportation. When transit improves accessibility to a parcel of land it can be expected that the value of the land will rise. Several studies do show however that accessibility is not the only factor for additional development. Other conditions such as availability of land, local policies and economic conditions all factors in making development successful.[45]

Currently the New Starts process does not have a formal measure for economic development potential of transit improvements. Studies have been done and because so many variables are in play, no formal criteria have been adopted.

For the purposes of this study, we used economic development factors cited in "*Discussion Paper on the Evaluation of Economic Development*" produced by the Federal Transit Administration Office of Planning and Environment. The factors are consistent with what Cervero provides as an explanation for minimal development impacts by writing, "transit guides rather than creates growth, and by itself rarely effects significant land use changes."[46] Thus, the potential development benefits do not necessarily lie in the construction of a rail extension by itself. Rather, the development benefits to a community arise when system ridership is high and policies are implemented to facilitate and target development near rail stations.

Based on the above, the factors used to evaluate the potential for economic development are:

1) **Development potential of land.** Assesses the % of vacant land available and any financial incentives available for transit-oriented development
2) **Transit supportive plans and policies**. Assesses the zoning, development plans and pedestrian friendliness near the stations.
3) **Economic climate**. Assesses the current consumer spending leakages and the transit dependent population around the each station.

Development Potential of Land

Development potential of land refers to actual land availability. Vacant land availability was assessed ¼ mile from proposed stations using data from the Cook County Tax Assessor. Data used in the maps in addition to zoning definitions can be found in Appendix D. Parcels identified as vacant include

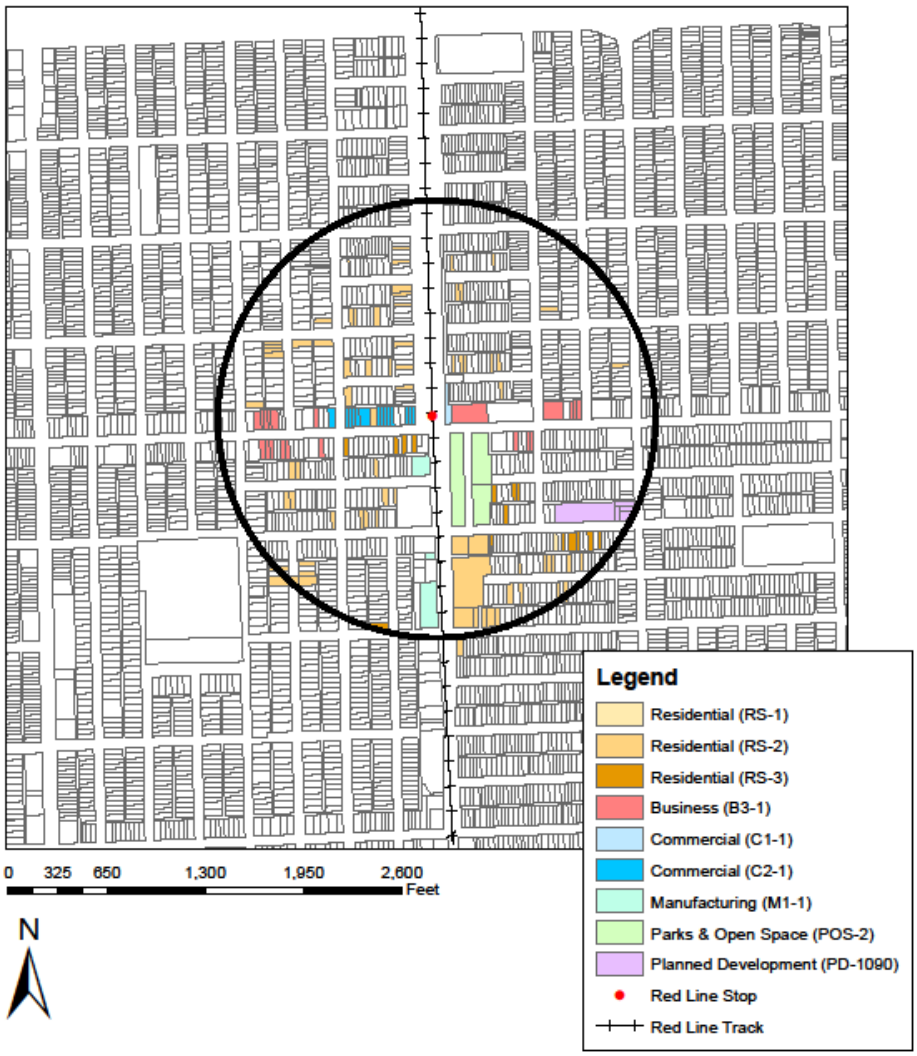
[43] Bollinger, C.R. & Ihlandfelt K.R. (1997). The Impact of Rapid Rail Transit on Economic Development: The Case of Atlanta's MARTA. *Journal of Urban Economics*, 42, pp. 179-204.
[44] Cervero, R. (1994). Rail Transit and Joint Development: Land Market Impacts in Washington D.C. and Atlanta. *Journal of the American Planning Association*, 60 (1), pp. 83-94
[45] Discussion paper on the evaluation of economic development, US Department of Transportation Federal Transit Administration, October 2008
[46] Cervero, R. (1994). Rail Transit and Joint Development: Land Market Impacts in Washington D.C. and Atlanta. *Journal of the American Planning Association*, 60 (1), pp. 83-94

vacant land and/or vacant buildings. Exempt parcels include city owned property and tax exempt entities such as churches. These parcels are included because TOD often requires public and private partnerships to be formed. For example, church parking lots can be utilized for park-n-ride facilities during the weekdays when services are not being held and city owned parcels could be donated or discounted to help spur development.

Red Line Extension – 103rd Street station

The development potential of land around the proposed 103rd Street station is high, based on the percentage of vacant land available. As can be seen in Figure 16, many of the vacant parcels within ¼ mile of the station are already zoned for residential (R3-1), business (B3-1) and commercial use (C3-1) and can easily be adapted for transit-oriented development. The green space (POS-2) in the vicinity of the station can incur negative environmental impacts as a result of the extension construction, but with careful planning it can also be an amenity in TOD and can be incorporated into development plans in ways that minimize the environmental impact.

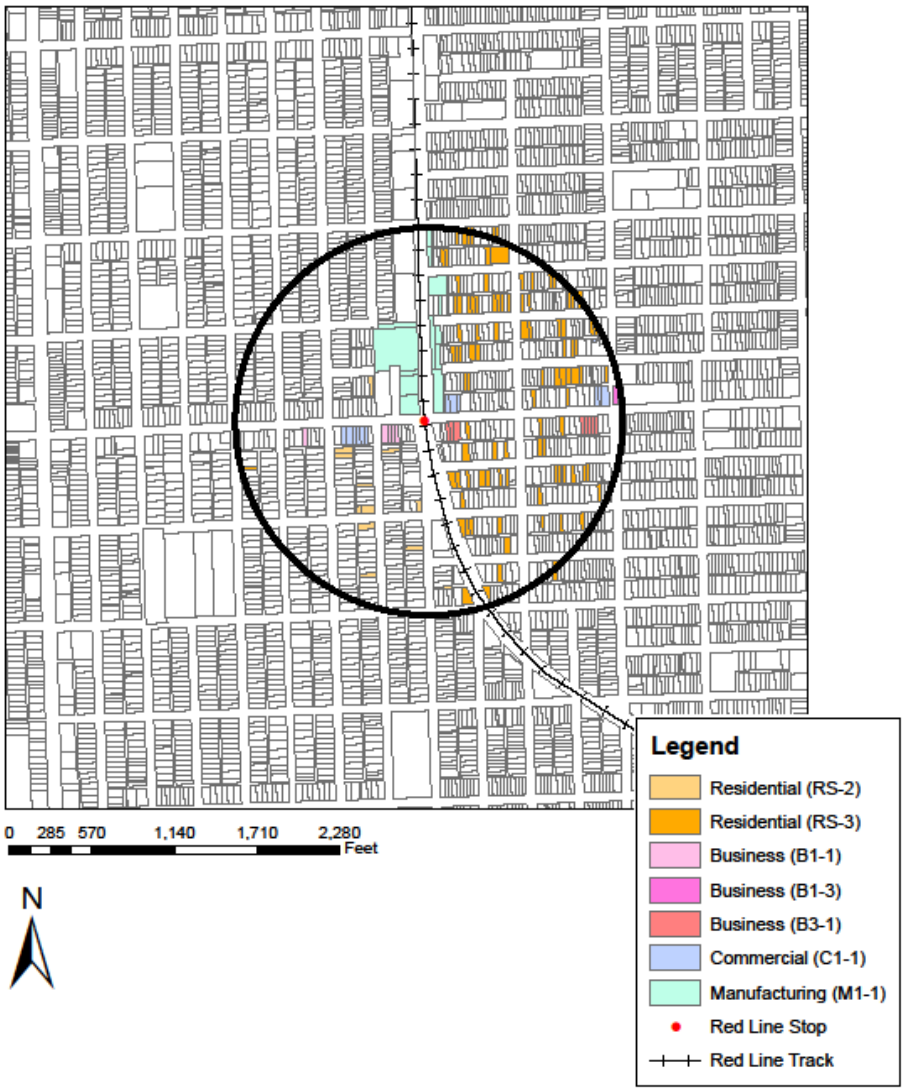
Figure 16 Zoning of Vacant and Exempt Parcels, ¼ Mile around the Proposed 103rd Street Station



Red Line Extension – 111th Street station

Based on the percentage of vacant land available within a ¼ mile of the station the development potential of land around the proposed 111th Street station is high. As can be seen in Figure 17, many of the vacant parcels are already zoned for business (B1-1, B1-3, B3-1) and commercial use (C1-1) and can easily be adapted for transit-oriented development. The large vacant parcels north of the 111th Street station, which are zoned for manufacturing, create a unique opportunity to explore major redevelopment including attracting large employers to the area for transit linked employment.

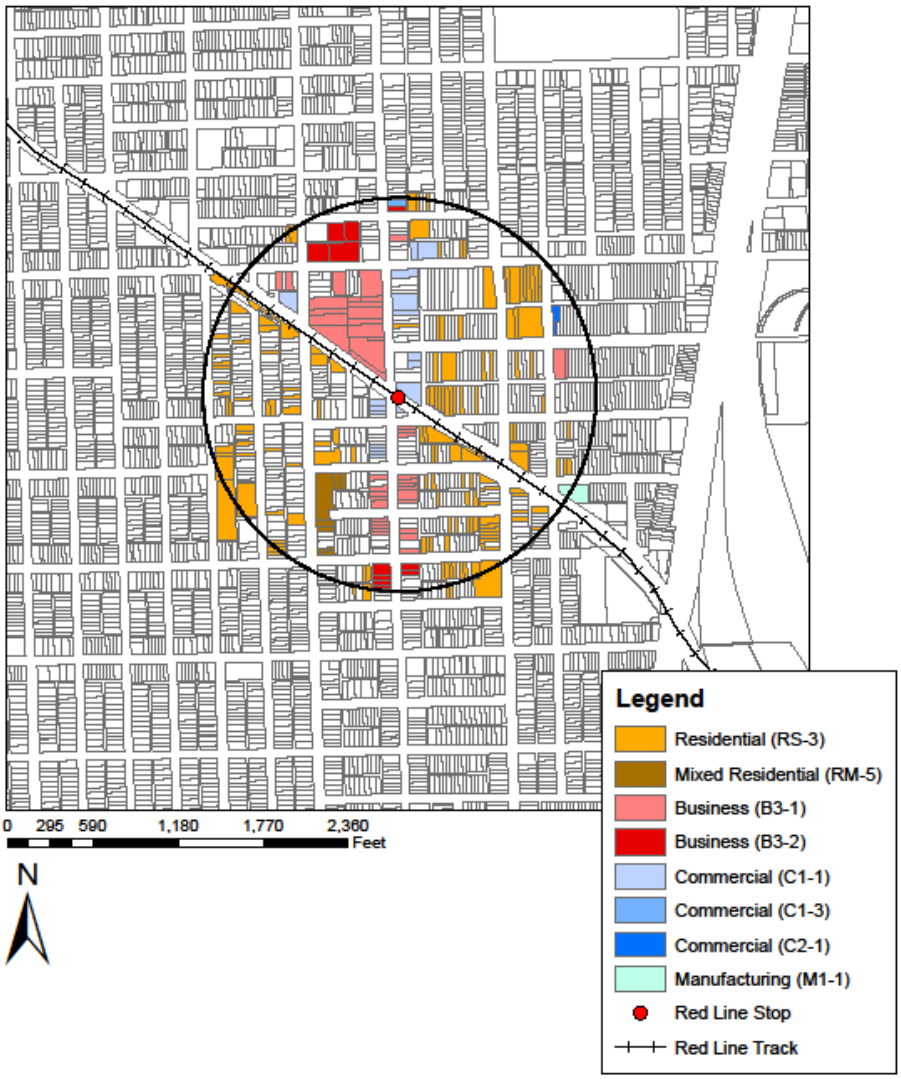
Figure 17 Zoning of Vacant and Exempt Parcels, ¼ Mile around the Proposed 111th Street Station



Red Line Extension – 116th Street station

Based on the percentage of vacant land within ¼ mile of the station, the development potential of land surrounding the proposed 116th Street station is high. As seen in the Figure 18, many of the vacant parcels are already zoned for business (B3-1, B3-2) and commercial use (C1-1) and can easily be adapted for transit-oriented development. Development plans (Roseland Retail Center) are underway for the large vacant parcels northwest of the proposed 116th street station which will allow for other development opportunities of smaller vacant parcels in the vicinity. The center is slated to include an Aldi grocery store, CVS/pharmacy, bank, family restaurant, general merchandise store, and 41,000 square feet of additional retail space. It also plans to attain LEED certification.[47] The project is projected to create 250 permanent full- and part-time jobs in the retail component and 200 jobs in the construction of the retail center. [48]

Figure 18 Zoning of Vacant and Exempt Parcels, ¼ Mile around the Proposed 116th Street Station



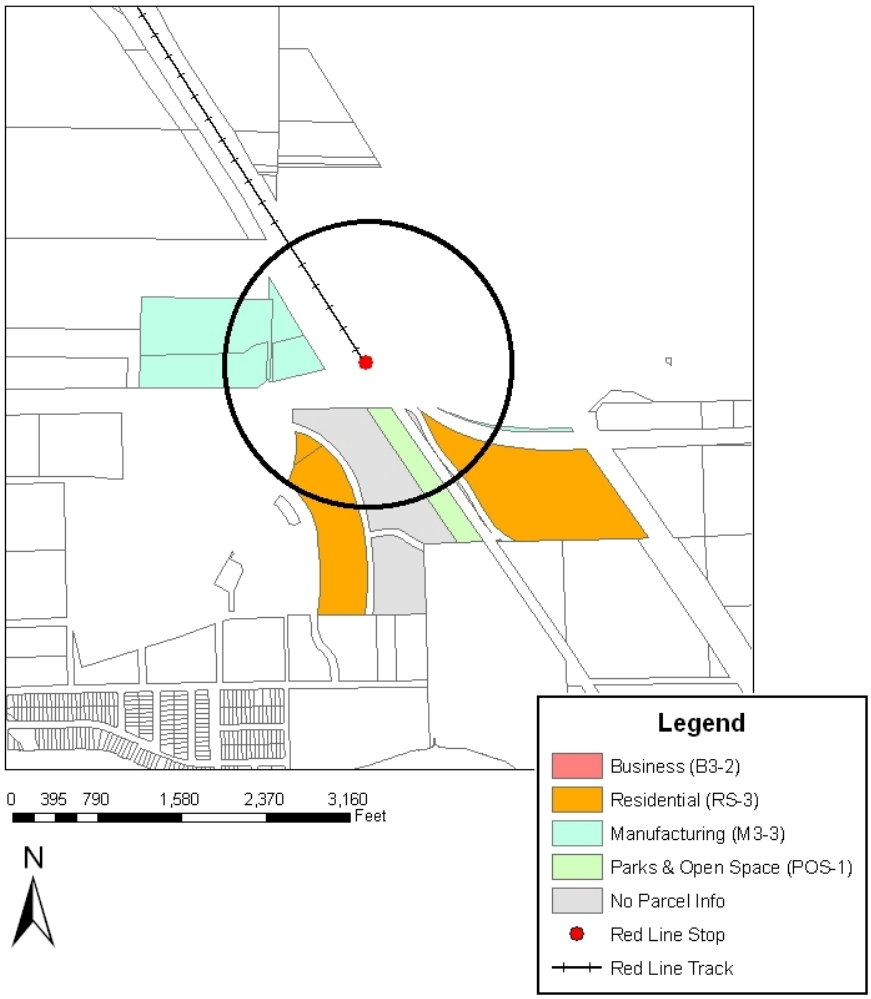
[47] The Leadership in Energy and Environmental Design (LEED) Green Building Rating System™ encourages and accelerates global adoption of sustainable green building and development practices through the creation and implementation of universally understood and accepted tools and performance criteria.

[48] Chicago Department of Community Development. (12 May 2009). 'Roseland Retail Proposal Moves Forward.' Press Release. Retrieved on August 5, 2009, from http://www.cityofchicago.org/city/webportal

Red Line Extension – 130th Street station

According to data from the tax assessor, there are 9 parcels within 1/4 mile radius of the proposed 130th Street station. All nine parcels have exempt status. Development potential maybe limited to creation of public and private partnerships.

Figure 19 Zoning of Vacant and Exempt Parcels, ¼ Mile around the Proposed 130th Street Station



Overall, 11% of parcels within a ¼ mile of all stations are vacant and have development potential. An additional 11% of parcels are also exempt, which includes city owned and institutional land that have partnership potential for development. The creation of a transit station at 116th and Michigan could bolster current development plans for the area and stimulate development interest. The station at 130th, with the proposed park-n-ride facility, could open up access to the southern suburbs and stimulate employment opportunities and access.

Table 7 Vacant Parcel Inventory, 2009[49]

	103rd St	111th St	116th St	130th St
Number of parcels	**824**	**858**	**754**	**9**
Vacant land	88	95	95	0
Exempt	47	56	148	9
Vacant	*25*	41	*83*	6
Occupied	*22*	15	*65*	3

The Orange Line Extension station at 76th and Cicero is predominately large scale commercial including big box retail within and surrounding Ford City Mall. Some multifamily residential areas exist south of the proposed station. According to the Chicago Metropolitan Agency for Planning (CMAP) 2005 land use map, 5.1% of the area within a ¼ mile of the proposed station is vacant and developable. Any new development will likely be large scale and similar to existing land uses.

The Yellow Line Extension station at Old Orchard Road is predominately commercial (Old Orchard Mall) and institutional (Niles North High School) and large scale office developments. Some single family residential is located north of the proposed station location. According to the CMAP 2005 land use map 0% of the area within a ¼ mile of the proposed station is vacant and developable. Niles North High School, where the proposed station is to terminate, is land-locked and limited in space. Although the area is built out, Old Orchard Mall and the Westfield Group are currently undertaking a major $60 million dollar expansion through replacing surface parking with new parking structures that will include new retail and office space.

[49] Cook County Assessor data, 2009

Transit Supportive Conditions

Areas surrounding the proposed stations were examined for transit supportive conditions, zoning and plans. Transit supportive zoning is defined as zoning that allows residential density, commercial use and mixed-use. Any station that had 3+ transit supportive elements received a positive mark while those with less than three received a negative mark. Those areas with positive marks already support transit initiatives and should require less zoning changes and fewer barriers to developing the area with transit development principles. Zoning definitions can be found in the Appendix D.

Pedestrian friendliness was determined by visually assessing the area surrounding the proposed stations for pedestrian scale. Areas that currently support a walkable scale including the presence of sidewalks and low level neighborhood vehicle traffic were marked positive. Areas that had expansive parking space and high volume roads were marked negative indicating limited opportunity for transit-oriented development based on existing conditions.

Pedestrian friendliness was also assessed using the "walk score" for the area surrounding the stations. The walk score calculates the walkable nature of an address by locating nearby stores, restaurants, schools, and parks. The score assesses car dependency in the area. If an area has a high walk score it has enough available in goods and services to meet daily needs in close proximity to the address. It does not take into consideration scale. The following describes walk score ranges:[50]

- **90–100 = walkers' paradise:** most errands can be accomplished on foot and many people get by without owning a car.
- **70–89 = very walkable:** it's possible to get by without owning a car.
- **50–69 = somewhat walkable:** some stores and amenities are within walking distance, but many everyday trips still require a bike, public transportation, or car.
- **25–49 = car-dependent:** only a few destinations are within easy walking range. For most errands, driving or public transportation is a must.
- **0–24 = car-dependent (driving only):** virtually no neighborhood destinations within walking range. You can walk from your house to your car

Red Line Extension

The proposed Red Line Extension consists of 4 stations, all of which are surrounded by residential neighborhoods. Most zoning (except at 130th Street) already includes residential, commercial and mixed use areas. The terminal station at 130th and Stony Island has low density residential, including the Altgeld Gardens community, but little in terms of commercial or mixed use. The area is however, underdeveloped and could be viewed as a clean slate for development. Walk score's are mid-range in the 50's and described as "somewhat walkable" indicating a reasonable amount of goods and services but with room for improvement. Vacant lots and buildings are plentiful around the stations, which presents opportunity for raising the walk score of the station areas in the future. The terminal station at 130th received an 18 walk score, which is described as "car dependent"- indicating minimal services available within walking distance to the residents living in the area. All station locations have tax increment financing districts within close proximity and special service area designations are present for all but the 130th street location.

[50] www.walkscore.com

Table 8 Transit Supportiveness Surrounding Proposed Red Line Extensions Stations (4)

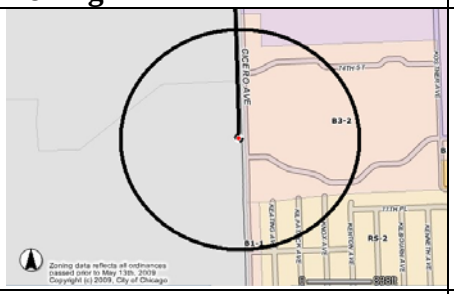
Station	Zoning	Scale of site location	Walk score	Score
103rd			51 – "somewhat walkable"	
	POS-1, B3-1, C2-1**, C1-1, PD 1090**, RS-3, M1-1 (+)	Pedestrian scale (+)	(+)	+
111th			58 – "somewhat walkable"	
	B3-1, B1-1, **C1-1**, **RS-3**, M1-1, RS-2 (+)	Pedestrian scale (+)	(+)	+
116th			55 – "somewhat walkable"	
	C1-1, B3-1, B1-1, **RS-3, B3-2**, **RM-5**, **Roseland Retail Plan** (+)	Pedestrian scale (+)	(+)	+
130th			18- "car-dependent"	
	M3-3, B1-1, **POS-1 (-)**	Pedestrian scale (-)	(-)	(-)

All Red Line stations were given positive marks except 130th because existing conditions including zoning is not supportive of transit-oriented development. Because the area is largely underdeveloped, there is potential for other development of larger scale including possibly large scale office space or large scale retail space.

Orange Line Extension

The proposed Orange Line Extension terminates in the median at 76th and Cicero. The area currently consists of big box retailers such as Best Buy, large chain restaurants like Olive Garden and Ford City Mall just east of Cicero. Area goods and services are plenty; however the scale of the area would inhibit traditional transit-oriented development.

Table 9 Transit Supportiveness Surrounding Proposed Orange Line Extension Station

Station	Zoning	Scale of site location	Walk score	Score
76th & Cicero			72- Very walkable	
	B3-2,**B-1**, RS-2 (-)	Pedestrian scale (-)	(+)	(-)

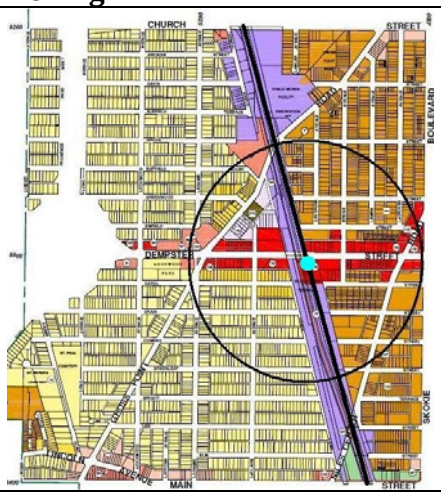
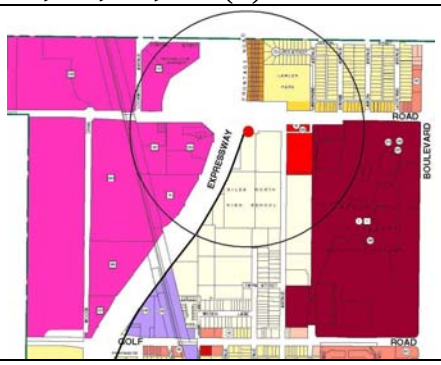
Based on the three factors, the Orange Line Extension scores low for having existing supportive transit-oriented development features or zoning to allow for such development without significant change to the surrounding land uses in the area.

Proposed Yellow Line Extension and station rehabilitation

The extension is proposed to terminate at Niles North High School near Old Orchard Mall in Skokie. The walk score for the area is high (75) as there are many goods and services available in the near vicinity of the proposed station. The zoning is mainly for large scale retail and office development and has little transit friendly features. The current terminus at Dempster, which is slated for redevelopment, also has a high walk score (72). It has pedestrian friendly features including small scale, sidewalks, density and zoning that is supportive of traditional transit-oriented development.

.

Table 10 Yellow Line Proposed Extension Stations

Station	Zoning	Scale of site location	Walk score	Score
Dempster			75- "very walkable"	
	B3, R3, R4, M1 (+)	Pedestrian scale (+)	(+)	(+)
Old Orchard			75- "very walkable"	
	OR, B4, B3 (-)	Pedestrian scale (-)	(+)	(-)

Based on the above measures, three out of four Red Line Extension stations currently have the support necessary for transit-oriented development. This includes pedestrian scale, supportive land use mix and transit supportive zoning. Out of the other three extension stations proposed along the Orange and Yellow Lines, only the Yellow Line Dempster station has transit supportive zoning and features.

Additionally areas surrounding all the Red Line stations currently have some tax subsidies in place which could be used to leverage development. Tax Increment Financing (TIF) districts and Special Service Area (SSA) names can be found in Appendix F.

Table 11 Tax Subsidies in Place, 2009

	103rd St	111th St	116th St	130th St	75th Cicero	Dempster	Old Orchard
Tax subsidies (TIF, SSA)	T-113, SSA 41	T-113, SSA 40	T-103, T-113, T-114, SSA-40	T-103	T-6, T-92, T-140	None	None
Population (2009)	8,506	9,169	8,979	2,320	2,114	18,737	2,761

Economic Climate

Consumer spending leakage

Consumer spending leakage within a ½ mile radius was examined. All Red Line Extension station locations have significant consumer spending gaps. These gaps represent development opportunities in the area. Both the Orange Line terminal and the Yellow Line terminal have surpluses, indicating areas where development is saturated.

Proposed Red Line station areas would benefit from grocery stores, pharmacies, building material stores and general merchandise stores. See Appendix G for more detailed information.

Table 12 Consumer Spending Gaps and Surpluses within a ½ Mile from Proposed Stations[51]

Consumer Spending	Red Line				Orange Line	Yellow Line	
	103rd St	111th St	116th St	130th St	Ford City	Dempster	Old Orchard
TOTAL Opportunity gap/surplus	68M gap	60M gap	41M gap	8M gap	22M surplus	77M gap	397M surplus

Need

In the region, 35% of households earn under $50,000 per year and households earning this income are twice as likely to use transit as higher incomes.[52] In 2009, an estimated 70% (5,694) of households within a ½ mile radius of the proposed Red Line stations earned less than $50,000/yr. Transit dependency is much less at the Ford City Orange Line station 55% (381) and similarly at the Old Orchard Yellow Line station which had 32% (326) households earning this amount

Households owning zero cars, also an indicator of transit dependency, were considerably higher at the Red Line proposed stations. The highest dependency is at the 130th and Stony Island station where an estimated 69% of households own 0 cars. Excessive travel time to work for residents within ½ mile is also considerably higher, ranging from 28% to 36%, compared to 18% for the Orange Line and 14% for the Yellow Line proposed station areas. In addition to transit dependency, residents living within ½ mile radius of the proposed Red Line stations also experience higher unemployment rates. Unemployment in these impact areas are estimated to range from 9-24%, with the greatest unemployment at the 130th station stop. This compares to considerably lower unemployment levels at the Ford City Orange Line stop (3%) and the Old Orchard Mall Yellow Line stop (2%).

Table 13 Demographic Characteristics of Population and Households Living within ½ Mile of Proposed Stations [53]

	Red Line				Orange Line	Yellow Line
	103rd St	111th St	116th St	130th St	75th Cicero	Old Orchard
Population (2009)	8,506	9,169	8,979	2,320	2,114	2,761
Households (2009)	2,454	2,530	2,498	629	691	1,020
Households earning <$50,000	64.4%	65.1%	73.7%	96.9%	55.2%	32%
% 0 vehicle	16.0%	22.8%	31.7%	68.8%	7.4%	5.9%
Time travel to work (60+)	28.0%	33.1%	35.3%	36%	18.4%	13.6%
Unemployed estimate	11.2%	10.1%	9.6%	24.4%	2.9%	2.2%

[51] Claritas, RMP Opportunity Gap –Retail Stores. Consumer Expenditures and Retails Sales, 2009.
[52] American Public Transportation Association, May 2007.
[53] Claritas Site Reports, Estimated Population Demographics.

Regional Impact Assessment Summary

Section 3 examined existing conditions along the Red, Orange and Yellow Lines as well as conditions if the extensions were to be built. The Red Line Extension demonstrated the greatest priority in terms of balancing existing inequities found in the current transit lines and the most cost effectiveness in terms of providing transit to a highly transit dependent population.

Transit-oriented development (TOD) is not a cure to economic and social problems in a community and cannot guarantee development and development benefits. However TOD can and should be used to guide development around proposed stations. Transit makes land accessible and that is what makes land valuable. But as discussed in the report, other factors such as transit supportive zoning, pedestrian scale, land availability, tax subsidies, and economic climate all play an important role. Case studies of successful TOD sites can be found in Appendix H.

Transit-oriented development potential is greatest at the proposed Red Line stations in that there is:

- Ample land available for development.
- Zoning, density and scale that is favorable to TOD.
- Tax subsidies in place including TIF and SSA's.
- Consumer spending leakages indicating demand for goods in the area and development potential.
- Highly transit dependent population.
- Affordable housing.

Findings and Conclusions

The findings of this study highlight areas in the region that are viewed as priority areas for investment. Areas identified as being in greatest need or having greatest disadvantage based on the regional mean are considered priority areas.

Priority areas are identified for the purposes of balancing regional inequities and inequities can be addressed in a number of ways. Encouraging job creation in areas that have affordable housing and encouraging affordable housing in areas near job centers is an example of balancing regional development equitably. Improving transportation between job centers and housing is another opportunity to close regional gaps.[54]

Equity Index and Regional Impact Assessment Findings

- The *Equity Index* revealed that the Red Line Extension is a high priority as it received 32 out of 38 points in the overall Index. (See Table 14) Transit dependent population was comparatively higher for the Red Line which scored 8 out of 10 points for having a highly transit dependent population. This includes high concentrations of residents that are elderly, disabled, high school aged, households with zero cars and workers with excessive travel time to work. This compares to a score of 0 out of 10 for the Orange Line Extension and 1 out of 10 for the Yellow Line Extension. In addition to having high transit dependency, the Red Line Extension area also has comparatively higher proportions of low income and minority populations. Livable community indicators for healthy housing, education, economy and environment also revealed worse conditions comparatively for the Red Line area. Out of 24 points, the Red Line area scored 20 on the priority scale and merits investment in these areas in addition to transportation.

Table 14 Equity Index Composite Score

	Red Line Extension	Orange Line Extension	Yellow Line Extension
Equity Index Composite Scores for Priority Area			
High (20-38)	X		
Med High (1-19)		X	
Neutral (0)			
Med Low -(1-19)			X
Low -(20-38)			

- The *Regional Impact Assessment* examined conditions along the existing Red, Orange and Yellow transit lines. Findings revealed that the existing Red Line is in comparatively worse condition. Currently the Red Line has the least number of ADA compliant stations (40%) and has 594 parking spaces all of which are located at the north end of the Line at the Howard station. Average ridership (13,027) for the Dan Ryan Branch rivals ridership in the busy Chicago Loop. Travel time to employment centers in the region overall was longest for commuters traveling from the 95th Street station.

[54].Jobs and Housing Balance, CMAP Regional Snapshot, Go To 2040, 2009.

In terms of access to employment the Red Line Extension area had the least amount of jobs (7,705) in the buffer area comparatively and the greatest number of working residents (25,408). See Table 15. Of these working residents, 25% or 6,368 residents earned $1,200 or less compared to 1,214 in the Orange Line Extension area and 2,581 in the Yellow Line Extension area. Of the workers commuting from the Red Line Extension area, 60% travel within Chicago for employment compared to 44% in the Orange Line Extension area and 34% in the Yellow Line Extension area. The Red Line Extension impact area is viewed as a priority area because of the minimal employers located in the area and the need for more job creation and because comparatively, the majority of the workers commute to employment within Chicago.

Table 15 Summary of Travel Patterns of Workers and Residents in the Impact Area

	Red Line Extension	Orange Line Extension	Yellow Line Extension
Impact Assessment			
Residents from the impact area traveling to jobs in Chicago	15,250 (60%)	1,975 (44%)	1,970 (34%)
Workers residing in Chicago traveling to employment in the impact area	3,660 (47.5%)	4,377 (39%)	3,151 (31%)

Estimated new ridership is considerably greater for the Red Line (12.7 million) compared to the Orange Line (3 Million) and Yellow Line (2 million). Although capital costs are greater for the Red Line, the capital cost per rider is lower comparatively. See Table 16. Estimated time savings are also greater for the Red Line Extension

Table 16 Summary of Estimated Benefits of Constructing the Extensions

	Red Line Extension	Orange Line Extension	Yellow Line Extension
Impact Assessment			
Estimated New Riders	12.7 Million	3 Million	2 Million
Capital Cost per rider	$87 per estimated new rider	$133 per estimated new rider	$135 per estimated new rider
Estimated Time Savings	20.5 minutes	16.5 minutes	11 minutes

- The transit-oriented development (TOD) potential assessed the development potential of land within a ¼ mile of the proposed stations, transit supportive plans and zoning within a ½ mile of the proposed stations, and economic climate. The stations proposed along the Red Line Extension and the Yellow Line Dempster station all scored high for TOD potential because they have land for development, transit supportive zoning, and consumer spending leakages indicating development potential. Orange Line to Ford City and Yellow Line to Old Orchard stations have limited TOD potential because of limited land, unsupportive TOD zoning and consumer spending surpluses. See Table 17.

Table 17 Transit-oriented Development Potential Summary

	Red Line Extension	Orange Line Extension	Yellow Line Extension
Transit-oriented development potential			
Consumer spending	$177 Million Gap	$22 Million Surplus	$397 Million Surplus
Developable land	11%	5%	0%
TOD supportive zoning & pedestrian friendly scale	Yes	No	No

Based on the Equity Index and the assessments in this comparative analysis, the impact area of the proposed Red Line Extension is identified as a priority area for investment. The area is most in line with current FTA principles and guidelines as it is a heavily transit dependent population with a high proportion of minority residents and a high proportion of low income residents.

In addition to being comparatively an area with the greatest transit dependent population, it is also identified as an area with ample affordable housing and limited employment opportunities. This area would be well suited for closing the regional jobs and housing mismatch.

1) The Red Line Extension would increase access to job opportunities and create new transit linkages to existing employment in the area.
2) The Red Line Extension would increase overall transit options making the area more attractive to employers looking to locate in the Chicago area.
3) The Red Line Extension would make the affordable housing in the area more accessible to Chicago residents.

Appendix

Appendix A: CMAP Capital Improvement Recommendations and Transit Line History for the Red, Orange and Yellow Lines

Appendix B: Chicago PUMA's and their Corresponding Chicago Community Areas

Appendix C: Data Tables for Indicators

Appendix D: Zoning Definitions

Appendix E: U.S. Census and Local Employment Dynamics, *OnTheMap Version 3*

Appendix F: Tax Increment Financing (TIF) and Special Service Area (SSA)

Appendix G: Consumer Spending Gaps and Surpluses

Appendix H: Case Studies of Successful TOD Sites