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Agency for Planning

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Jobs & Housing Balance

CMAP Regional Snapshot



About this Snapshot...

Among the significant challenges that northeastern Illinois will face in the decades to come is the mismatch of jobs to housing. Recognizing the likelihood that energy and housing prices will remain volatile in the future, the region needs to plan to give our residents the option to live close to where they work. As new, primarily residential development continues to grow at a rapid pace further from the core, the proximity of jobs to housing is increasingly imbalanced. This diminishes quality of life by burdening the region's infrastructure and natural environment, creating economic stress for employers and residents, exacerbating social inequities across the region, and creating longer commute times and distances. By 2040, the region is expected to add 2.8 million people and 1.8 million jobs. This growth provides both an opportunity to plan for a future where jobs and housing are balanced within communities, and a challenge to change current trends in which such a balance is rare within the region's communities.

This Regional Snapshot examines the mismatch between jobs and housing in the region. It outlines why a regional balance of the supply of jobs and housing — particularly affordable housing — is an important part of achieving our region's vision. See <http://www.cmap.illinois.gov/snapshot.aspx#jobs> for a more-detailed technical report on this topic.

This Regional Snapshot is not designed to make specific, implementable recommendations, but to highlight the importance of the issue and demonstrate that it should be addressed in the *GO TO 2040* plan. This report also establishes a method to measure jobs-housing balance over time, while exploring other analytical means to define and address the implications of the regional jobs-housing imbalance. As with all Regional Snapshots, it is also meant to inspire discussion between CMAP, its partners, and other stakeholders concerning the most effective approaches to addressing the region's jobs-housing balance.



Why Address Jobs-Housing Balance?

The region has expanded tremendously in the past few decades. During this time, traffic congestion and commute times have been on the rise. Currently, residents in the region spend 203 million hours a year in traffic delays, burning an extra 142 million gallons of fuel. Residents are also experiencing 5.5 times more travel delay than they did 20 years ago. For years prior to the recent economic downturn, the rates at which gas and housing prices increased have far outpaced wage increases. Between 1999 and 2007, median incomes actually declined while housing values skyrocketed in every county across the region (see figure below). In 2007, forty percent of the region's households were housing-cost burdened (paying in excess of 30 percent of income on housing), a staggering increase from 29 percent of households in 1990. Even with the dramatic decline of the housing market that began in 2006, housing affordability remains an issue. Increasing joblessness, declining salaries, and tighter credit markets continue to restrict access to affordable housing. Families are finding their finances and their quality of life increasingly stressed as they have to move farther from where they work in search of housing that is more affordable. Often, however, the increased commute cost offsets the cheaper housing prices.

Changes in Median Value of Owner-Occupied Units vs. Median Household Income (Adjusted for Inflation) 2000-2007

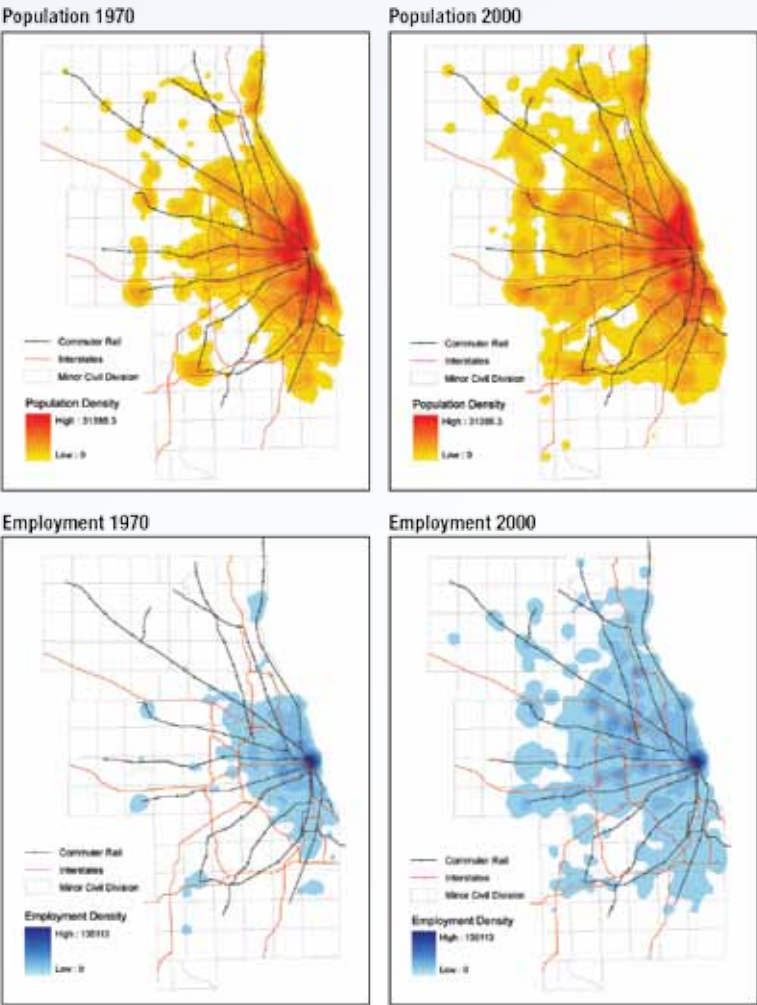
County	Percent Change in Housing Value	Percent Change in Income
Cook	48.4%	-8.0%
DuPage	38.6%	-12.7%
Kane	29.8%	-7.3%
Kendall	33.7%	-5.5%
Lake	30.2%	-3.2%
McHenry	29.5%	-9.2%
Will	31.3%	-7.9%
Northeastern Illinois	30.5%	-8.8%

Source: U.S. Census 2000, American Community Survey

The current condition of the housing market and the effects of the foreclosure crisis are not entirely reflected in the data within this study. At the same time, the report does illustrate the necessity to plan for a more diverse housing stock that is better distributed throughout the region. This Regional Snapshot demonstrates that the distribution of housing in the region is not aligned with the distribution of jobs — especially lower-wage jobs. Given declining real estate values and escalating energy costs, there has never been a clearer case to plan for a future where people can live in places that are affordable, close to where they work, with access to reliable public transit.

The mismatch of jobs and housing is the result of several interrelated changes in land development over the course of many decades. Shifts in economic production, expanded transportation networks, and changes in consumer preferences are among the factors that have led to current development patterns. In general, people today live on much larger lots and in much larger homes. Jobs rely on different transportation networks than was true 50 years ago. These shifts have resulted in land use patterns that are significantly different from those several decades ago. As the maps below show, in the past 30 years the region has consumed massive amounts of land at much lower development densities. These patterns have resulted in congested roads, longer commute times, and limited options for people to live near work.

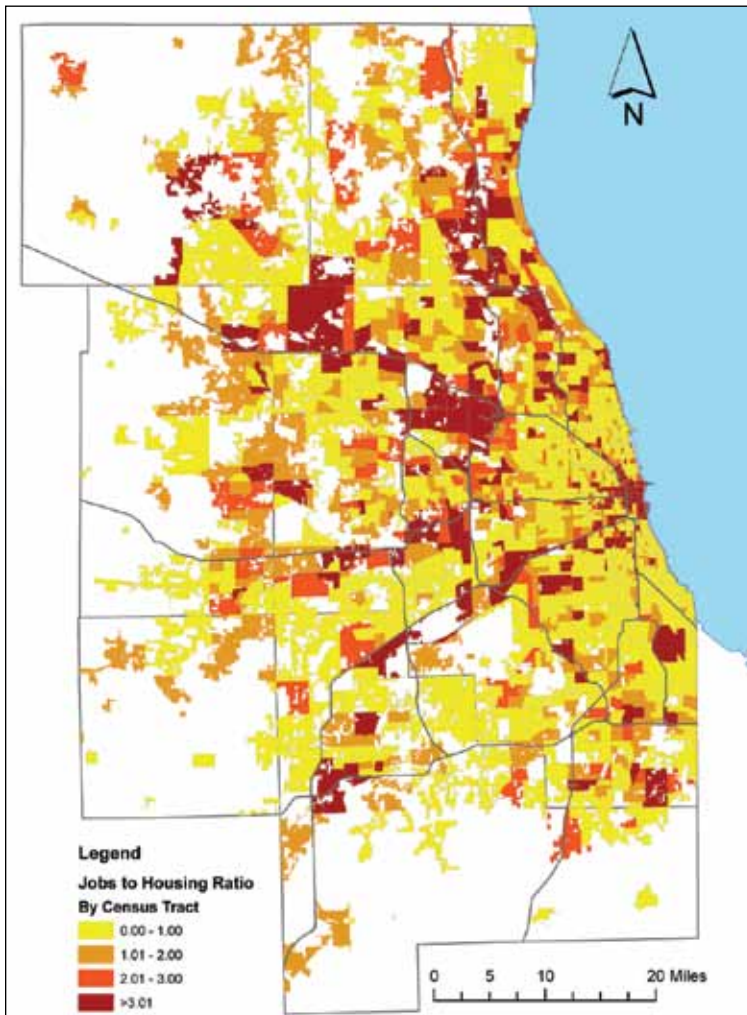
Change in Population and Employment Density, 1970-2000



Source: Northeastern Illinois Planning Commission, 2006

The map below shows the ratio of jobs to housing across the region. CMAP recognizes that proximity to employment is just one factor contributing to where residents decide to live, and many people choose for a variety of reasons to live far from their jobs. There is a need for deliberate planning, however, that attempts to bring economic development opportunities to areas in the region that currently have an abundance of affordable housing but few job prospects, and to bring a diversity of housing options to high-employment areas where entry-level jobs exist but affordable housing opportunities do not. In general, it is in our region's interest to plan for balanced communities, where there is a mixture of jobs and diverse housing options.

Ratio of Jobs to Households by Census Tract, 2000

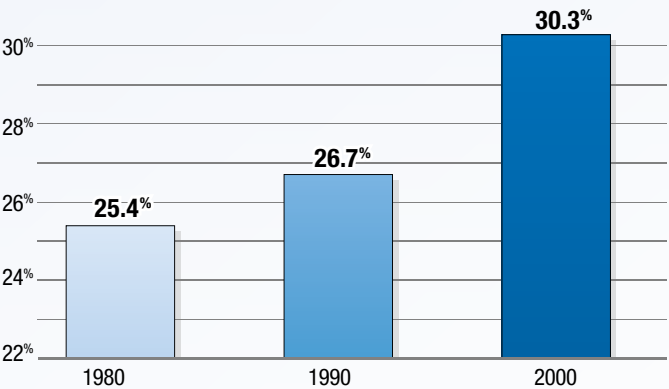


Source: Census Transportation Planning Package 2000, U.S. Census 2000

Regional Jobs-Housing Balance Calculations

The region as a whole has a jobs-housing balance ratio of 1.3, meaning that there are approximately 1.3 jobs for every household across the region. However, as the map on the previous page shows, jobs and housing are not distributed evenly. To determine whether the jobs-housing balance in the region is decreasing or increasing over time, CMAP calculated a “dissimilarity index” for jobs and housing. Often used to measure spatial distributions, the dissimilarity index indicates the proportion of a specified variable that would need to change locations to achieve a completely even regional distribution. The dissimilarity index scores from 0-1 the proportion of jobs that would need to move to have a perfectly even distribution of jobs and housing across the region. A score of zero indicates an even distribution whereas a higher score indicates a less even distribution.

Jobs and Households Dissimilarity Index



Source: Northeastern Illinois Planning Commission Quarter Section data, 1980, 1990, 2000

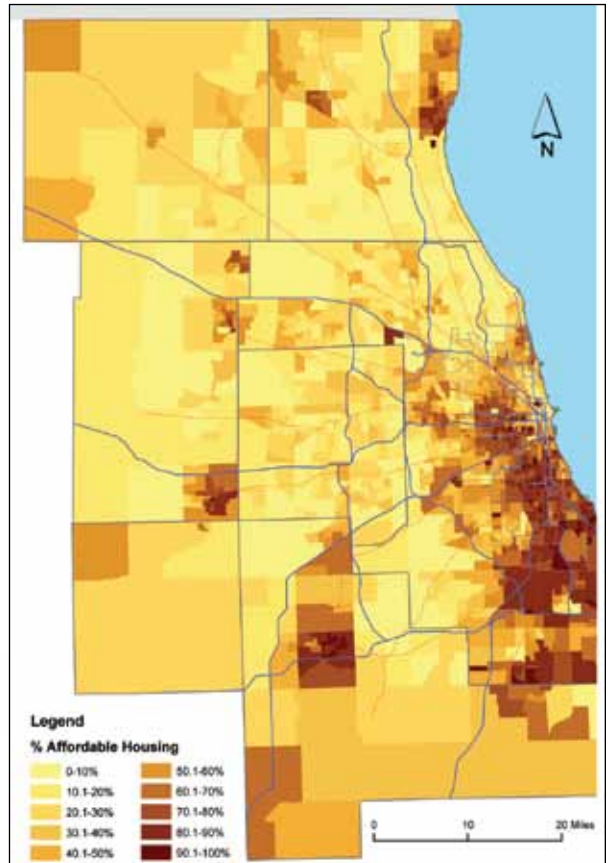
The region’s dissimilarity index for jobs and housing was calculated at the township level, because of the uniformity of this geography and the availability of data over time. In 2000, the dissimilarity index was 0.30, meaning that to achieve a perfectly even distribution of jobs and housing across all of the region’s townships, 30 percent of the region’s jobs would have to move from one township to another. This figure has grown over time; in 1980, as shown in the chart below, only 25 percent of the region’s jobs would have had to move to achieve an even distribution across townships. The goal is not to have a perfectly even distribution, since areas such as the Loop serve as important economic epicenters that are accessible from many parts of the region by public transit. But the dissimilarity index does indicate that jobs and housing are becoming less evenly distributed over time. To better distribute jobs and housing in the future, the region will need to explore housing infill and preservation opportunities near employers as well as economic development opportunities near existing housing. The dissimilarity index can be calculated in future years, giving CMAP the ability to track whether the region’s jobs and housing are becoming more or less balanced.

Locations of Affordable Housing

The jobs and housing imbalance affects all residents of the region, but hardest hit are those in the low- and moderate-income ranges. This Regional Snapshot focuses on the location of affordable housing, defined as housing that is affordable to households with incomes less than the area median income (AMI) for the region. According to this definition, based on standards used by the Illinois Housing Development Authority, housing that can be *purchased* by households who make \$41,000 or below (80 percent of AMI) and housing that can be *rented* by households who make \$31,000 or below (60 percent of AMI) is “affordable.” (These figures are based on the U.S. Census 2000).

The map to the right displays where affordable housing exists throughout the region. High concentrations of affordable housing are located in the city of Chicago, south and west Cook County, and portions of the region’s older satellite cities such as Aurora, Joliet, and Waukegan. These areas are typically older industrial communities where jobs have declined in recent decades due to losses in manufacturing jobs and an aging infrastructure. Elsewhere in the region, particularly in portions of Lake, McHenry, Kane, and DuPage counties, very few affordable housing opportunities exist.

Percentage Affordable Housing by Tract, 2000



Source: U.S. Census 2000

Locations of Jobs

Jobs exist in every community throughout the region, but this report is primarily concerned with locations that have high concentrations of jobs, or “employment subcenters.” An employment subcenter is defined as a concentration of employers large enough to have significant effects on the overall spatial distribution of population, employment, and land prices. This report identifies 32 employment subcenters, which together make up 21 percent of the region’s total employment (an additional 13 percent of the region’s jobs are in Chicago’s Loop and medical district). These are shown in the map below. Employment subcenters are heavily concentrated along the region’s interstates and near O’Hare airport which permits an efficient movement of goods. Housing is distributed throughout the region, however, and price is a major determinant of where people live.

Employment Subcenters, 2000



Source: Regional Framework Plan, 2005

What Workers Get Paid

Further analysis of job centers helps to identify the balance between low-wage jobs and affordable housing within the region. An examination of the U.S. Census Bureau's Longitudinal Employer-Household Dynamics (LEHD) data for 2004 identifies pay scales within municipalities that contain the region's largest employment subcenters. The table below shows that all of the highest-employment communities in the region contain a significant portion of jobs that pay low wages.

Jobs that pay less than \$1,200 per month, which is slightly lower than minimum wage, pay an annual wage of \$14,400 or less. This pay scale represents 23 percent of all jobs in the region and at least 15 percent of workers in every high employment municipality, including over 35 percent in Aurora and 28 percent in Joliet. There is also a large share of workers earning between \$1,201 and \$3,400 per month, or what would amount to between \$14,400 and \$40,800 annually. At least 30 percent and as much as 55 percent of all workers in these municipalities are in this pay range. High-paying jobs, at which workers earn over \$3,400 per month, range from 27 percent of the jobs in Aurora to nearly 50 percent in Arlington Heights.

The LEHD data shows that high-employment communities with high concentrations of jobs have a broad array of job types, from low paying service sector jobs to upper-income jobs. However, as the previous maps have shown, affordable housing options in many of these areas are limited.

Municipality	Percent paying \$1,200 per month or less	Percent paying \$1,201 to \$3,400 per month	Percent paying > \$3,400 per month	Total Primary Jobs
Chicago	20.2%	38.6%	41.2%	1,128,915
Schaumburg	23.2%	29.9%	46.9%	76,349
Naperville	26.4%	35.3%	38.2%	60,148
Aurora	35.9%	36.9%	27.1%	55,648
Elk Grove Village	15.3%	42.8%	41.9%	53,720
Elgin	26.9%	38.5%	34.6%	46,602
Des Plaines	17.4%	40.0%	42.6%	36,942
Joliet	28.0%	38.9%	33.1%	43,106
Arlington Heights	20.8%	29.6%	49.6%	43,072
Oak Brook	20.1%	54.9%	45.1%	38,902
Evanston	22.9%	36.5%	40.6%	37,879
Skokie	22.5%	40.2%	37.3%	32,647
Downers Grove	21.3%	38.9%	39.9%	37,742
Northbrook	20.0%	34.3%	45.7%	30,702

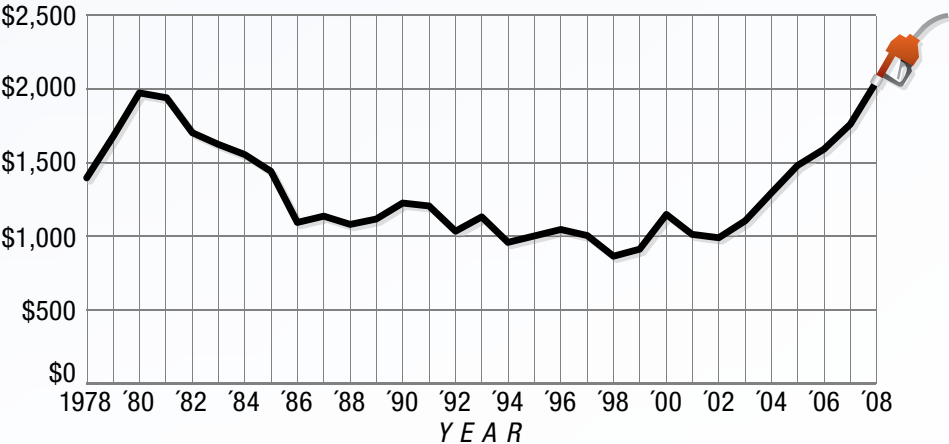
Sources: U.S. Census Bureau, Longitudinal Employer-Household Dynamics, 2004

Commuting

The mismatch of jobs and housing creates economic and quality-of-life burdens for the region’s residents. According to the study “Heavy Load” conducted by the Center for Housing Policy in 2006, families that move farther away from employment centers in search of more affordable housing often find that the additional transportation costs negate the savings in housing costs. According to this report, low-and moderate-income households in our region spend on average 55 percent of income on housing and transportation costs.

This figure has increased since 2006 due to significantly higher fuel prices. In particular, households that live in areas of the region that lack good transit service have been especially burdened by fuel price increases. According to data from the recent CMAP household travel survey, an average household travels approximately 47 miles per day by automobile. Assuming an average vehicle efficiency of approximately 20 miles per gallon and gas prices of \$3.62 per gallon (the average price for a gallon of gas through August in 2008), this household would spend over \$3,100 per year on gasoline. As shown in the chart below, this figure has increased tremendously in recent years (when holding vehicle miles traveled constant). While the price of fuel has fallen considerably over the past several months, the levels reached in summer 2008 clearly indicated the tremendous volatility in fuel prices and financial burdens that these increases place on workers.

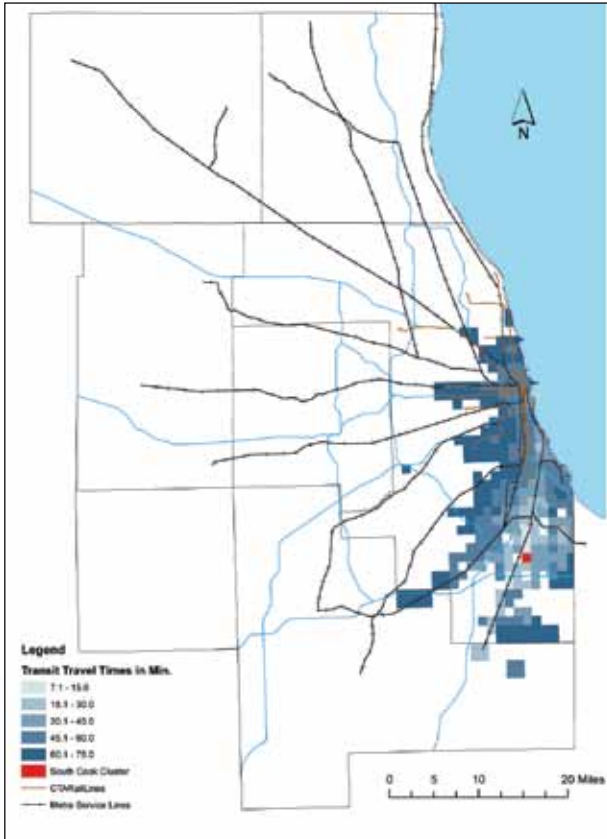
Annual Gas Costs based on Average VMT
Based on 31 miles per day, gas prices are adjusted for inflation



Source: U.S. Bureau of Labor Statistics, Consumer Price Index, 2008

An interactive map of the combined cost of housing and transportation produced by the Center for Neighborhood Technology is online at <http://htaindex.cnt.org/>, though it uses a different set of data for its calculations than the description above.

Transit Accessibility and Travel Time from South Cook Affordable Housing Cluster

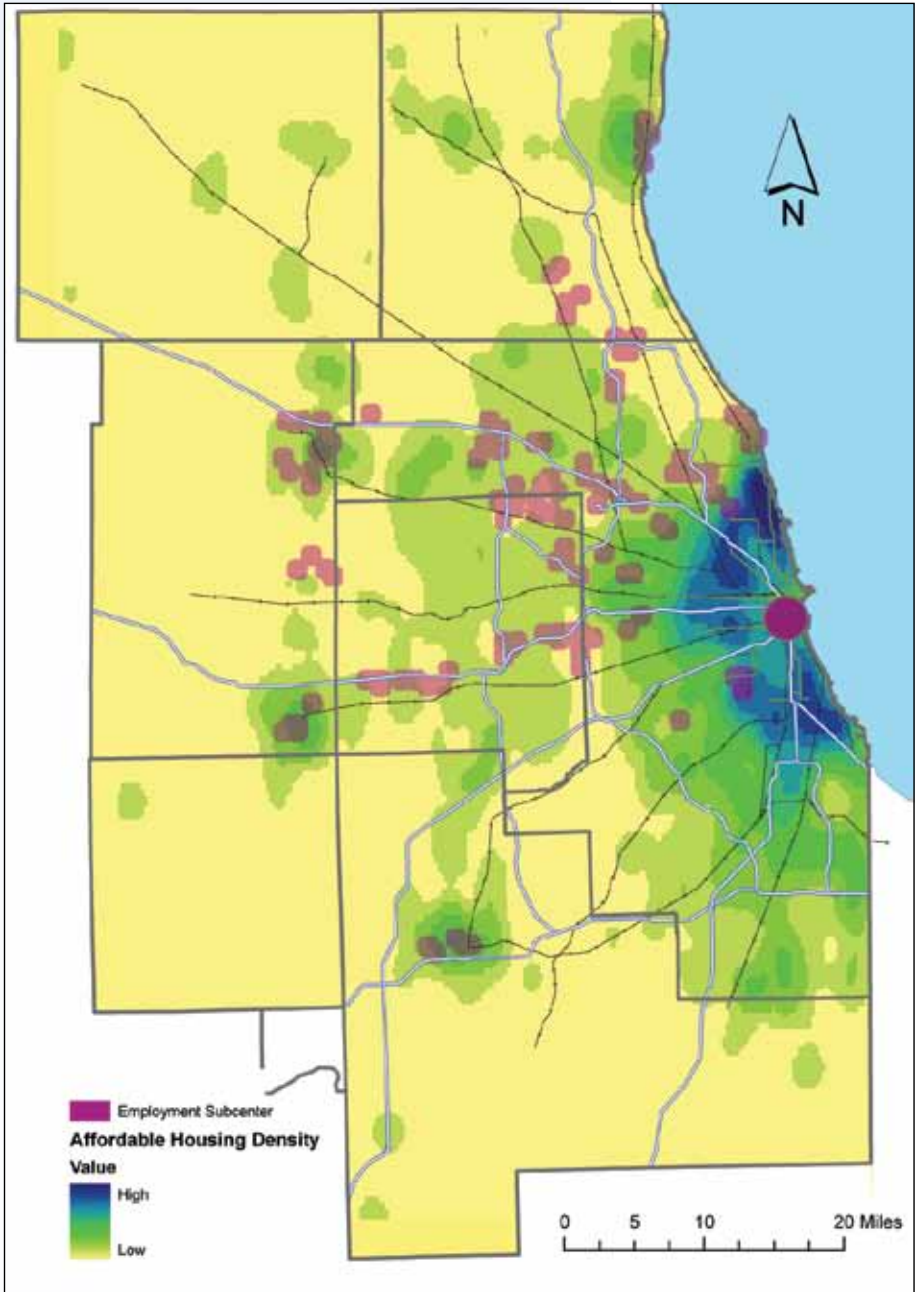


Source: Chicago Metropolitan Agency for Planning Travel Demand Model

In addition to creating financial burdens on individuals, the mismatch of jobs and housing has strained the region's transportation system. Those who drive are faced with longer commute times, while many who take public transit find a system that does not adequately meet current commuting patterns. The shift in locations of employment centers and new residential development to suburban areas has caused increases in reverse commuting and suburb-to-suburb commuting. At the same time, the growth in low-paying service sector jobs has caused increases in off-peak commuting all around the region. Reverse and off-peak commuting can present new opportunities to use existing infrastructure. However, suburb-to-suburb commuting where public transit does not currently exist represents a major challenge to the current transportation system.

The map above shows that households in the South Suburban Cook affordable housing cluster have limited options of where they can work within the region if transit is the primary mode of transportation. From this area, only job centers in the Loop and in southwest Cook County are accessible within 75 minutes on public transit.

Affordable Housing Density & Employment Subcenters, 2000



Sources: U.S. Census Bureau, 2000, Northeastern Illinois Planning Commission Regional Framework Plan

The map at left compares the locations of affordable housing concentrations and job centers. The areas with the highest concentrations of affordable housing in the region are shown in darkest blue, and job centers are represented as red dots. This indicates considerable dissimilarity between where affordable housing is located and where jobs are located. Some job centers, namely Waukegan, Elgin, Aurora, and Joliet, contain affordable housing as well as employment. However, many other job centers are not in close proximity to any substantial density of affordable housing, requiring long commutes for lower-income workers in these areas. Meanwhile, concentrations of affordable housing in Cook County are near few job centers, particularly in southern Cook County.

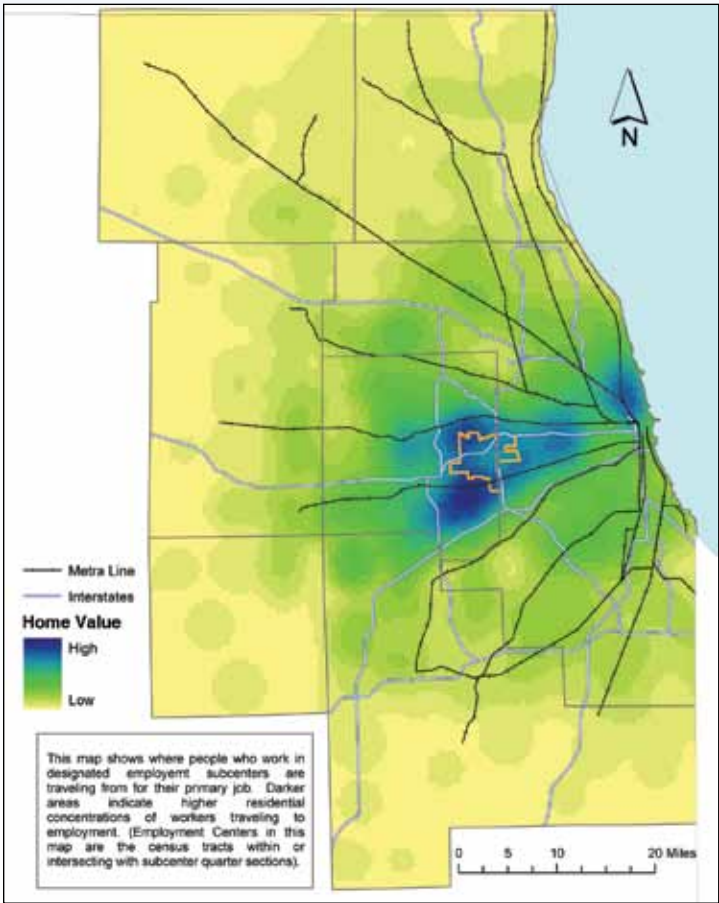


Case Study: the Oak Brook Employment Center

Data from the LEHD survey in 2004 provide a comparison of where individuals live and work. For example, the following map shows the residence locations of people who work in the Village of Oak Brook, an employment subcenter in eastern DuPage County with approximately 39,000 jobs. As it shows, Oak Brook attracts workers from across the region.

More Oak Brook workers live in Chicago than in any other municipality in the region, with nearly 7,000 people commuting from Chicago to Oak Brook. The darkest areas on the map below show where Oak Brook workers are most likely to live, including southeast and central DuPage County (particularly Westmont and northern Downers Grove), western Cook County, and the Chicago's north side. Meanwhile, of Oak Brook's nearly 3,000 employed residents, only eight percent work in Oak Brook, whereas 26 percent work in Chicago.

Where Workers Live: Oak Brook Job Center

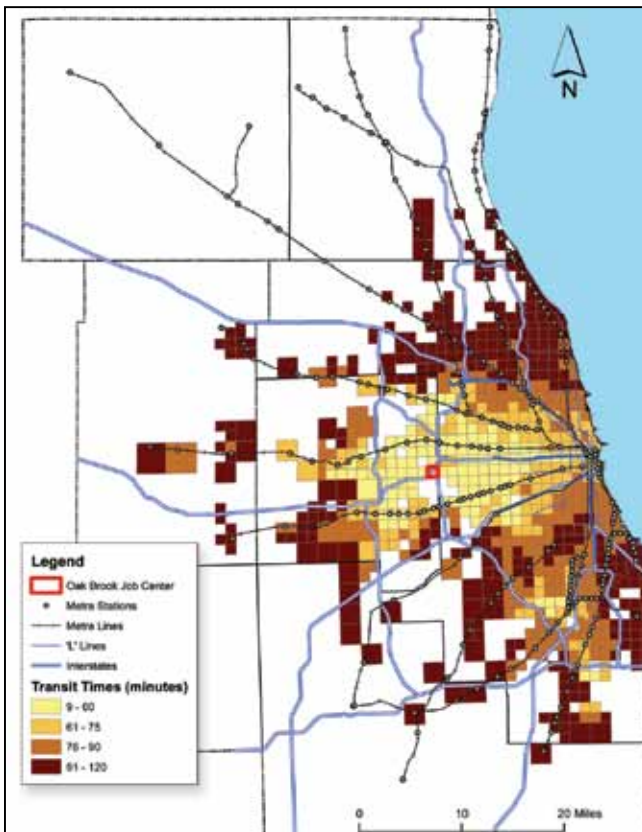


Source: Longitudinal Employer Household Dynamics, 2004

The map below shows travel times to central Oak Brook using public transit. This area has better transit access than other areas of Oak Brook, giving an optimistic portrayal of transit service to this employment center. These data are also based on transit service during the morning rush hour, but not all of the transit services are offered during off-peak hours when service workers often need to access transit. The map shows that access to Oak Brook by public transit is primarily limited to only those who reside in Cook and DuPage counties. Transit access to Oak Brook relies on several Pace routes, in particular east-west routes on Roosevelt Road and Cermak Road. In addition, access to Oak Brook from southern Cook County is made possible by express bus routes on expressways.

The Village of Oak Brook is seeking to improve its transit accessibility by studying circulator service that could meet trains on the nearby UP-W and BNSF Metra lines, which would allow for commute trips from a much broader area of Cook and DuPage by train (with a bus connection) to Oak Brook. For the jobs-housing balance to be addressed, communities that have a significant number of lower paying jobs need to be better connected with those that have high concentrations of affordable housing.

Transit Time to Oak Brook, A.M. Peak, 2007



Source: Chicago Metropolitan Agency for Planning Travel Demand Model

The jobs-housing balance can be addressed in three ways:

- **Encouraging job creation in areas with a large supply of affordable housing stock**
- **Encouraging affordable housing near job centers**
- **Improving the transportation connections between affordable housing and job centers** (thus mitigating the effect of the spread between jobs and housing)

Job Creation Near Affordable Housing

In recent years, the region has experienced a decline in manufacturing jobs and the emergence of new service and technology sector jobs. These changing dynamics have resulted in job losses in the region's older industrial areas and the development of new employment subcenters in locations that offer an updated and more compatible infrastructure. In addressing the jobs to housing imbalance, one strategy is to focus economic development resources in areas with high supplies of affordable housing. In these areas, which include but are not limited to southern and western Cook County, Aurora, Elgin, Joliet, and Waukegan, public investment should focus on business attraction and retention, human capital development, and improving the aging infrastructure.

This approach allows affordable housing residents to work within their communities by providing more nearby job opportunities and limiting the need for long commutes. In addition, this approach promotes reinvestment in the lower-income communities that typically have large concentrations of affordable housing and other infrastructure, which has benefits beyond addressing jobs-housing balance.

Given the global market, communities will need to be astute in encouraging business development and retention. Strategies should also focus on workforce development for local residents that is targeted toward local business needs. A report from the 106th American Assembly titled *"Retooling for Growth: Building A 21st Century Economy in America's Older Industrial Areas"* offers specific strategies to bring economic development into such areas. To download a copy, visit <http://www.americanassembly.org/index.php>. Beyond this focus on business development, communities will need to concentrate on improving education, public safety, and the condition of the housing stock to improve overall quality of life and to increase the attractiveness of reinvestment.

CMAP is currently researching the factors that drive business location decisions. The **GO TO 2040** plan will address these regional issues, making recommendations for the creation of jobs in areas with high concentrations of affordable housing.

Affordable Housing Opportunities near Employment Subcenters

Another way to address jobs-housing balance is to encourage the creation of affordable and more diverse housing options near job centers. This approach allows lower-income residents who are interested in living near their workplaces to have the opportunity to do so. It is still the case that households have many considerations other than proximity to work when deciding where to live, and that some people will choose to continue to live at greater distances from their workplaces than others. In addition to proximity to jobs, many other factors — such as access to transit and services — must be considered in affordable housing development strategies.

Projected growth is another important consideration. Most parts of the region have the opportunity to plan for additional affordable housing by redeveloping vacant or underutilized sites. In parts of the region that are experiencing new development, there are even more opportunities to provide affordable housing. Special consideration should be given to the provision of affordable housing in areas where both population and job growth are projected to be high.

Providing affordable housing near employment subcenters can be a significant challenge due to lack of available land, high land values, and excessive development costs. However, policies and programs such as inclusionary zoning and community land trusts can create well-designed affordable housing developments when employed in ways sensitive to local context. Timber Courts in Arlington Park (see photo below) was developed through the provision of a zoning change and density bonus in exchange for affordable units in an agreement made between the municipality and developer. The development involved little public expenditure, and 21 new units of affordable housing were produced.

In 2006, the Metropolitan Mayors Caucus, Metropolis 2020, and the Metropolitan Planning Council released a series of housing best practices titled “Home Grown.” Home Grown highlights examples of how municipalities are addressing housing issues within their communities and provides a set of ideas on how they can be replicated and improved upon in other communities with similar housing challenges. To download a copy, visit <http://www.metroplanning.org/homegrown/>.

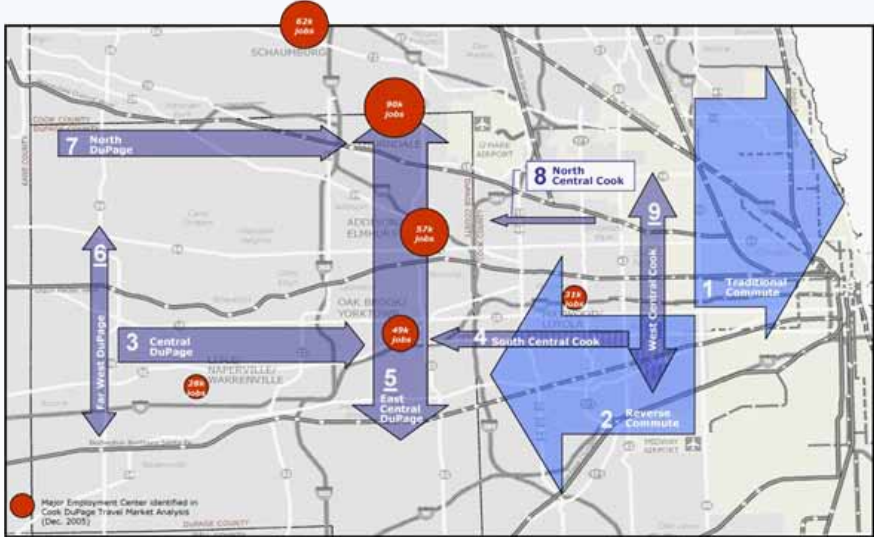


Transportation and Accessibility

The jobs-housing mismatch exacerbates problems in commuting and congestion, driving up transportation costs for all residents of the region. To mitigate these problems, transportation planning needs to consider the changing dynamics of the region’s workforce and consider investments that address the rise in reverse, off-peak, and suburb-to-suburb commuting — in particular, the needs of lower-income residents. Addressing the rise in reverse commutes and off-peak travel will require maximizing efficiencies and services on the existing system. Where public transit does not serve suburb to suburb commutes, new routes either through expanding the existing rail system or providing additional bus services will need to be explored.

The **GO TO 2040** process will use evaluation measures to weigh potential transportation investments and to develop priorities. One factor that should be considered is the degree to which an investment improves the ability of residents, particularly lower-income residents, to access jobs. The Regional Transportation Authority (RTA) has already used a similar approach to evaluate transportation options in the “Cook-DuPage Corridor Study.” To estimate how transportation investments would improve access to jobs, the RTA used measures such as the number of jobs within a short distance of transportation facilities that provided reverse-commute or inter-suburban service and the number of transfers required to reach employment subcenters from major concentrations of work trip origins. The map below, prepared by the RTA for this study, illustrates employment subcenters and major commuting flows in the Cook-DuPage corridor.

Employment Subcenters and Major Commuting Flows in the Cook-DuPage Corridor



Source: Regional Transportation Authority, Cook-DuPage Corridor Study

Next Steps and Further Discussion

While this Regional Snapshot provides an overview of the region's jobs-housing balance and describes the types of activities that would address this issue, it does not make specific recommendations for action. This report is designed to inform CMAP's approach to the *GO TO 2040* plan, which will make such recommendations.

This report has used new data sources and analytical methods to understand the jobs-housing balance and to guide CMAP's approach to this issue. CMAP will continue to expand the use of the Longitudinal Employment-Household Dynamics (LEHD) data, a relatively new data source that provides a high level of detail concerning commuting patterns.

To fully address the jobs-housing balance issue, CMAP needs a robust understanding of how businesses and households decide where to locate. Research is currently underway on this subject, and the results of this work will be released in future reports.

The *GO TO 2040* plan will require a thorough understanding of the strategies that could be used to encourage job creation in areas with high concentrations of affordable housing and affordable housing near employment sub-centers. CMAP is preparing strategy reports on affordable housing and economic development approaches that could be used for these purposes. Strategy reports issued to date are available on the *GO TO 2040* website, www.GOTO2040.org.

About CMAP

The Chicago Metropolitan Agency for Planning (CMAP) is the comprehensive regional planning organization for the seven counties of northeastern Illinois. By state and federal law, CMAP is responsible for producing the region's official, integrated plan for land use and transportation. The agency's innovative *GO TO 2040* planning campaign will develop and implement strategies to address projected population and employment growth and its serious implications for transportation, housing, economic development, open space, the environment, and other quality-of-life issues. See www.cmap.illinois.gov and www.GOTO2040.org for more information.





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