



Implementation of the Kane County 2040 Long Range Transit Plan

Transit-Supportive Corridors: Existing Conditions and Implementation Tools

APPENDIX

February 17, 2015



Photo Credit Pace

Funding Acknowledgement

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The Chicago Metropolitan Agency for Planning (CMAP) is the region's official comprehensive planning organization. Its GO TO 2040 planning campaign is helping the region's seven counties and 284 communities to implement strategies that address transportation, housing, economic development, open space, the environment, and other quality of life issues. See www.cmap.illinois.gov for more information.

Appendix A

Data and Methodology

The following is a detailed summary of the data and methodology used by the project team to evaluate the preliminary list of possible transit-supportive corridors.

High Priority Measures

Population Density

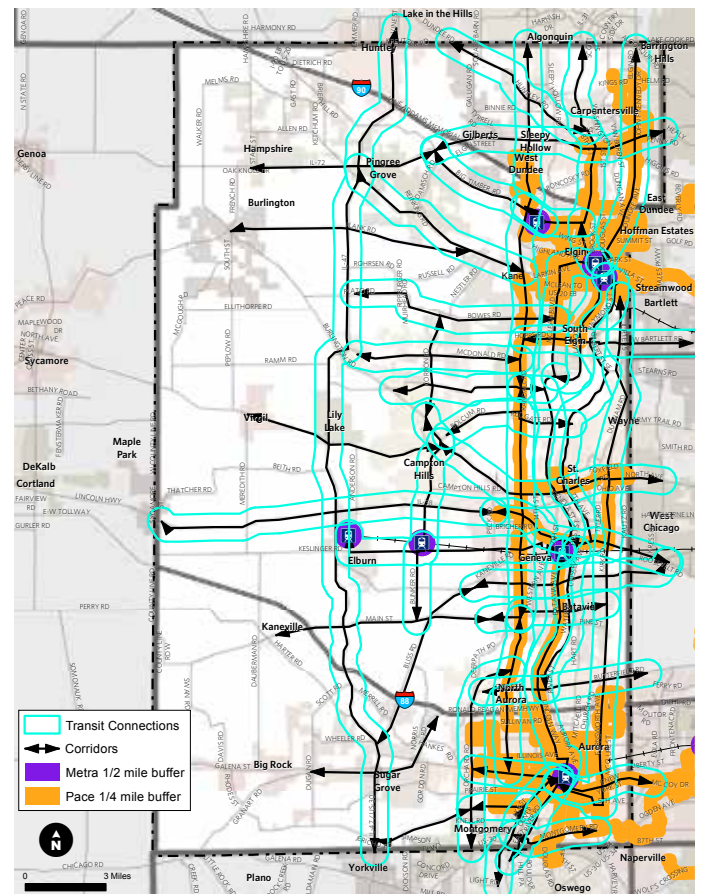
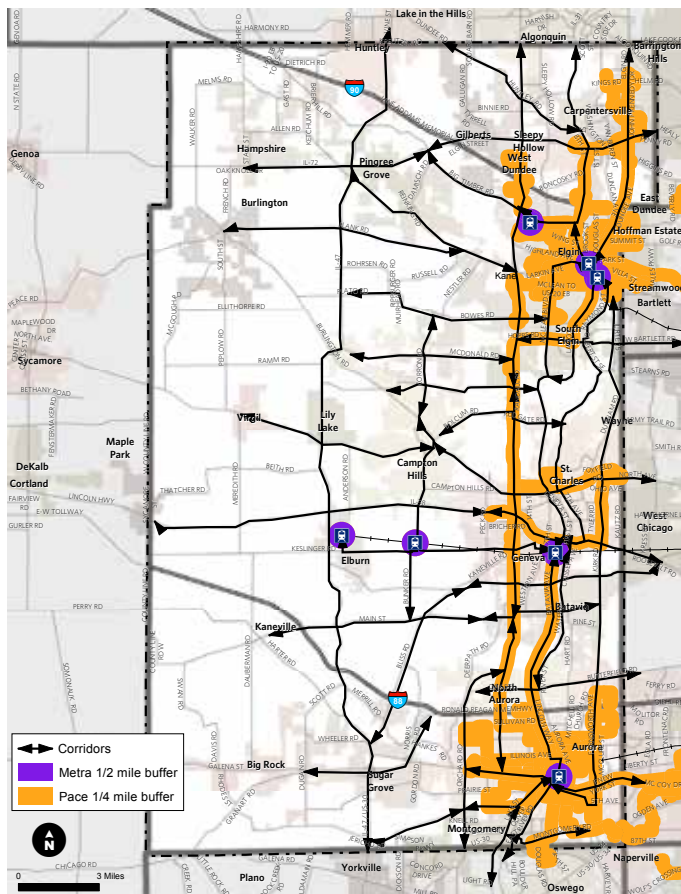
Using U.S. Census 2010 blocks, the project team selected the blocks whose centroid fell within the corridor layer. This was done to cut down on the huge blocks that are in the more rural part of the County. The team then did a spatial join, assigning the sum of all intersected blocks as a value to each corridor.

However, because population density (not just total population along the route), was desired, the population sum was divided by the length of the Corridor.

Transit Connections

The team created a 0.5-mile buffer around Metra stations (blue dots), and 0.25-mile buffer around Pace routes (orange shapes). Then CMAP selected corridors that intersect with the Metra buffer, assigned a value of 1 to a new column “MetraStations,” 0 to those

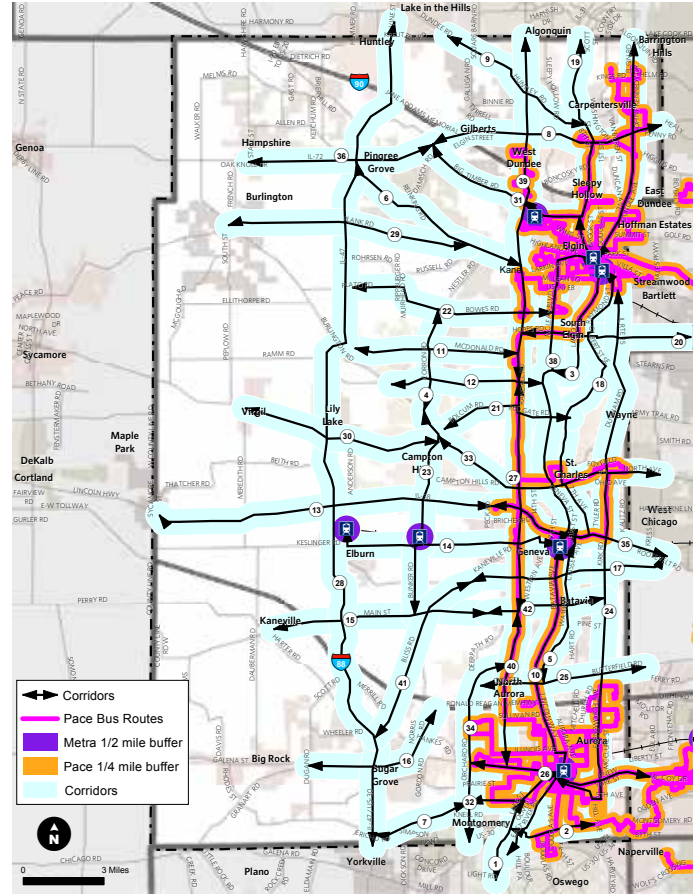
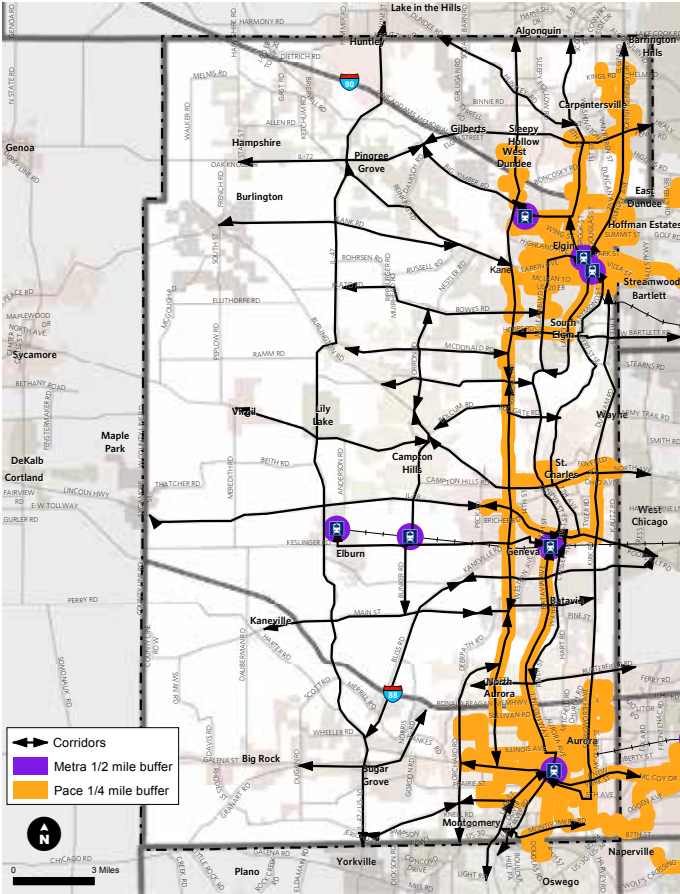
that did not, and did the same for Pace. Then CMAP exported the table, created a TransitConnection column that was a sum of the Pace and Metra columns, for a total possible value of 2, and ranked the corridors (1, 26, or 66).



Transit Connections

CMAP created a 0.5-mile buffer around Metra stations (blue dots), and 0.25-mile buffer around Pace routes (orange shapes).

CMAP ran an “intersect” GIS analysis, and calculated the area served by transit divided by the area of the corridor. This was more appealing because it gives a higher score to corridors with multiple bus routes and multiple Metra stations.

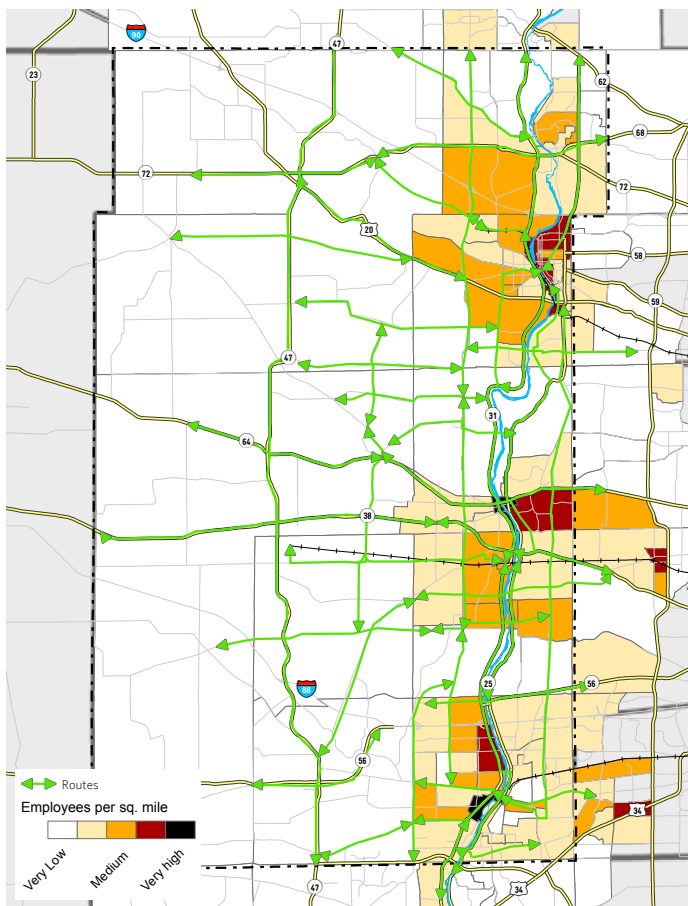


Job Density

Using CMAP’s employment data file, the project team was able to calculate the job density in the County. The primary source of the data (based on place of employment) is the ES-202 Unemployment Insurance file provided by the Illinois Department of Employment Security (IDES). Other reference data includes County Business Patterns and the Census of Governments published by the US Census Bureau, Dunn and Bradstreet data files, the Illinois Manufacturers Directory and Illinois Services Directory published by Manufacturers News, Inc. and data from associations such as the American Hospital Association and the Illinois State Board of Education. In addition, some establishment data comes from direct contact with individual employers.

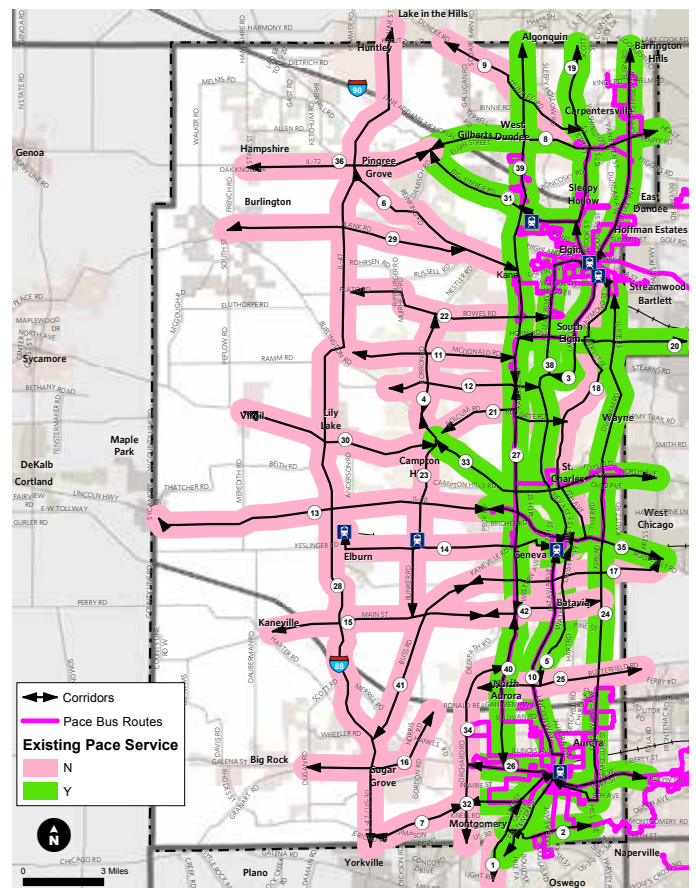
CMAP classified the census tracts by number of employees per square mile:

Using only the census tracts with employment density of over 500 employees per sq. mile or higher (anything in green or blue above) (“KaneTractsEmploy500”), the project team did the spatial join and classified by total employment numbers, assigning each corridor the value.



Presence of existing Pace transit service

CMAP selected the corridors that overlapped with existing Pace service (not intersecting, but had at least a segment of the corridor shared with an existing Pace bus route), and assigned each selected corridor a value showing that there is existing Pace service (green) or not (pink).



Walkability

Due to lack of more descriptive data on the quality of the walking environment, CMAP used intersection density, which has been recognized as a very important aspect of the built environment, as a proxy for walkability. **Figure 1.6** below on the left shows the

intersection density for Kane County, with blue showing areas with the highest intersection density. The map on the right shows the classified values for the corridors.

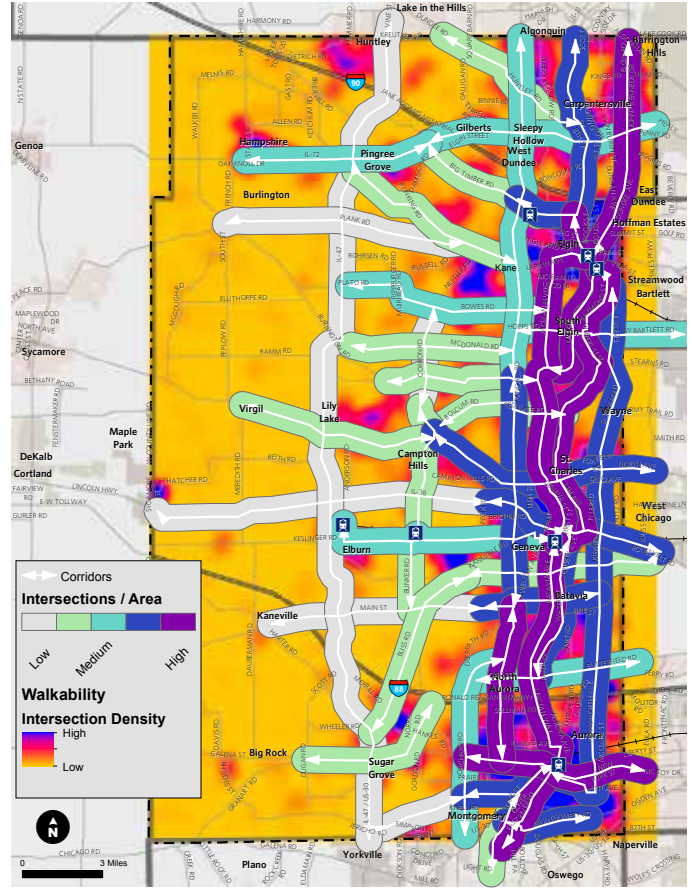
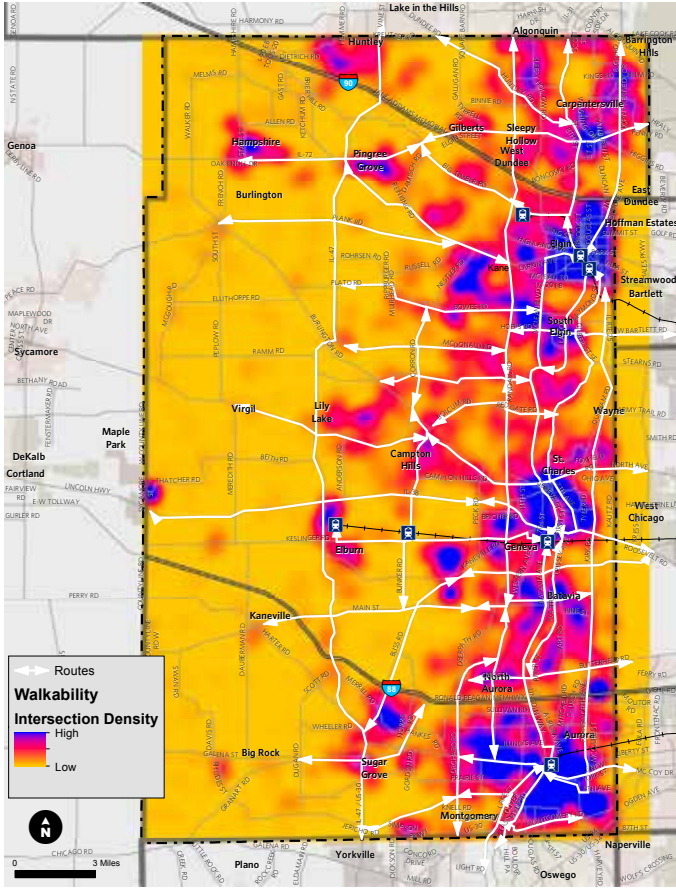


Photo by Michael Kappel, Flickr User

Transit-dependent community

For the transit-dependent community, CMAP used the census data for number of vehicles per household, and focused on those households that have one or no cars available.

Using the Census 2011 ASC 5-yr estimates of “Vehicles available” the project team calculated the percentage of households that have one car or no cars available. Then the project team did an Intersect with the corridors:

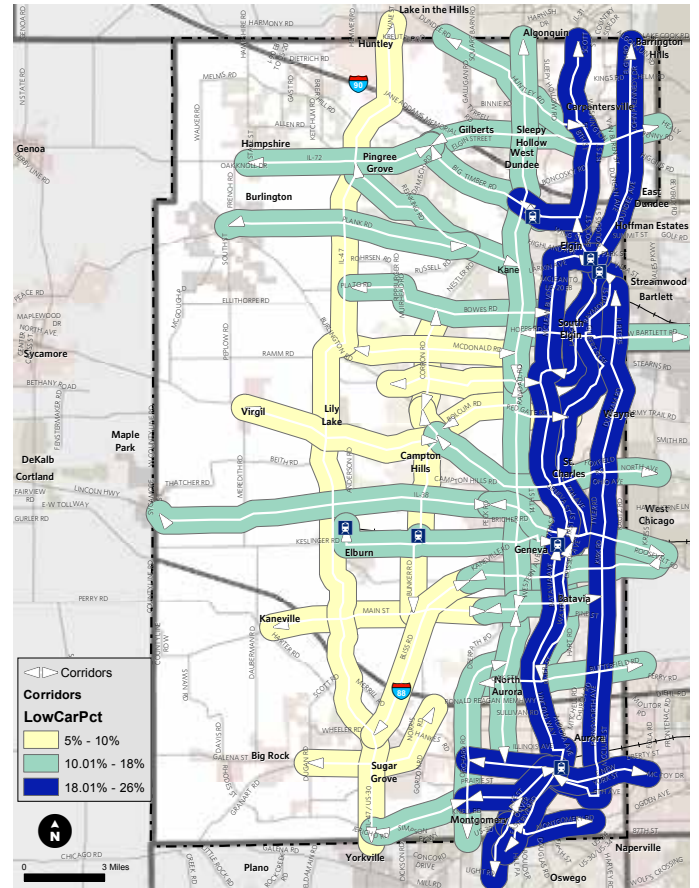
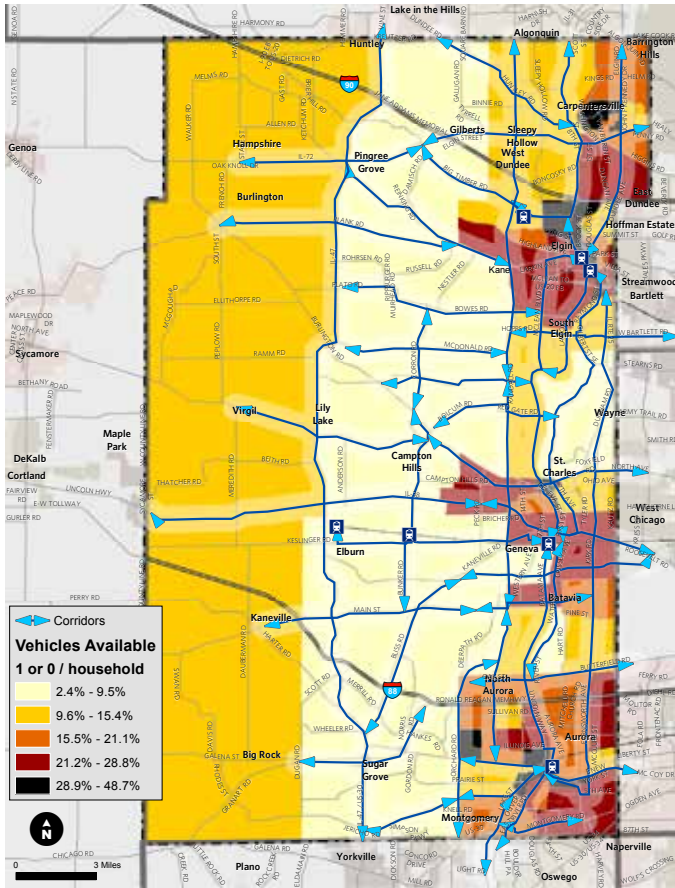


Photo by John Trautschold, Flickr User

Medium priority measures

Access to community services

Using 2007 Business Info points, the project team calculated access to many amenities. This data set contains information on over 380,000 private and public US companies for 21 counties of Illinois, Wisconsin and Indiana. Businesses can be retrieved by their Standard Industrial Classification Code (SIC) as well as by North American Industry Classification System (NAICS) code and location. The data was obtained from InfoUSA.

For determining which points could be considered “community services,” CMAP used the following classifications:

NAICS₃ = 624 and 813, plus park district points (as recommended by Steering Committee)

The detailed description of what each NAICS category represents includes the following:

624 Social Assistance

6241 Individual and Family Services

6242 Community Food and Housing, and Emergency and Other Relief Services

6243 Vocational Rehabilitation Services

6244 Child Day Care Services

8131 Religious Organizations

8132 Grantmaking and Giving Services 8133 Social Advocacy Organizations 8134 Civic and Social Organizations 8139 Business, Professional, Labor, Political, and Similar Organizations (and Park District locations)

Access to medical facilities

Using 2006 Illinois Department of Health data, the project team counted the number of facilities within the half-mile buffer of corridors. The IDPH data includes: Ambulatory Surgical Treatment Centers, End Stage Renal Disease Centers, Home Health Agencies, Hospices, Hospitals, and Nursing Homes.

Access to grocery stores

Using 2012 Dunn & Bradstreet data, the project team counted of the number of facilities within the half-mile buffer of corridors. The detailed classification information is listed below.

Dunn & Bradstreet- July 2012 (Grocery stores (4451))

“NAICS₄” = 4451 - Grocery Stores

445 Food and Beverage Stores

4451 Grocery Stores

44511 Supermarkets and Other Grocery (except Convenience) Stores

445110 Supermarkets and Other Grocery (except Convenience) Stores

44512 Convenience Stores

445120 Convenience Stores

4452 Specialty Food Stores

44521 Meat Markets

445210 Meat Markets

44522 Fish and Seafood Markets

445220 Fish and Seafood Markets

44523 Fruit and Vegetable Markets

445230 Fruit and Vegetable Markets

44529 Other Specialty Food Stores

445291 Baked Goods Stores

445292 Confectionery and Nut Stores

445299 All Other Specialty Food Stores

Access to retail

Using 2012 Dunn & Bradstreet data, CMAP counted the number of retail facilities within the half-mile buffer of corridors.

Dunn & Bradstreet - July 2012

“NAICS₂” = 44 OR “NAICS₂” = 45 AND “NAICS₄” <> 4451 AND “NAICS₄” <> 4452

To avoid double-counting grocery stores and specialty food stores, the team did not include NAICS₄ = 4451 or NAICS = 4452.

Access to higher education

Count of the number of facilities that fall within the half-mile buffer of corridors.

HigherEducation_IBHE_2009.shp

Low priority measures

Access to entertainment

Count of the number of facilities that fall within the half-mile buffer of corridors.

Dunn & Bradstreet – July 2012

D&B NAICS2=71

Access to libraries

Count of the number of facilities that fall within the half-mile buffer of corridors.

Libraries_ILStLib_201004.shp

Vehicle Miles Traveled (VMT) per household

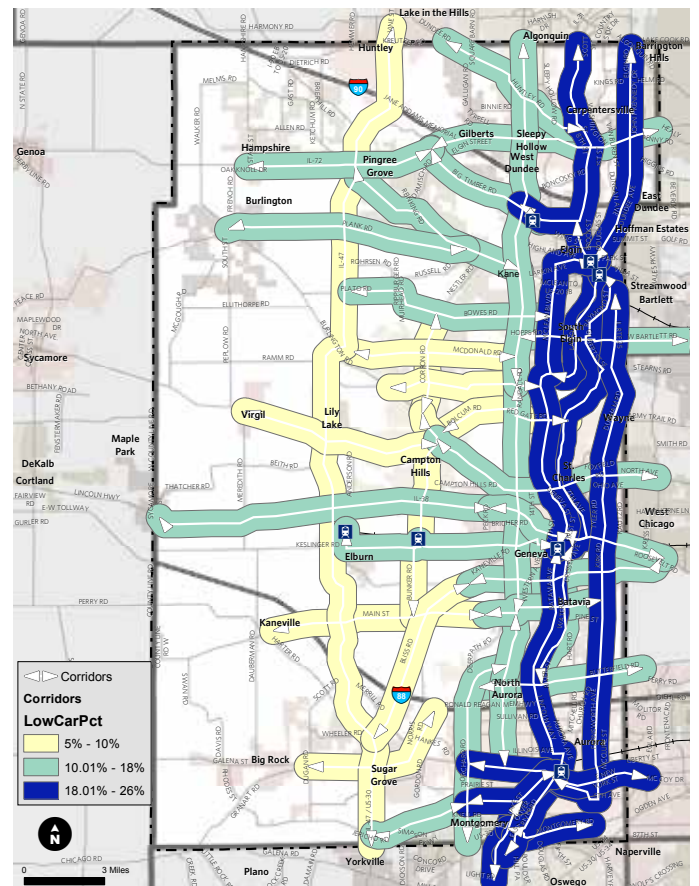
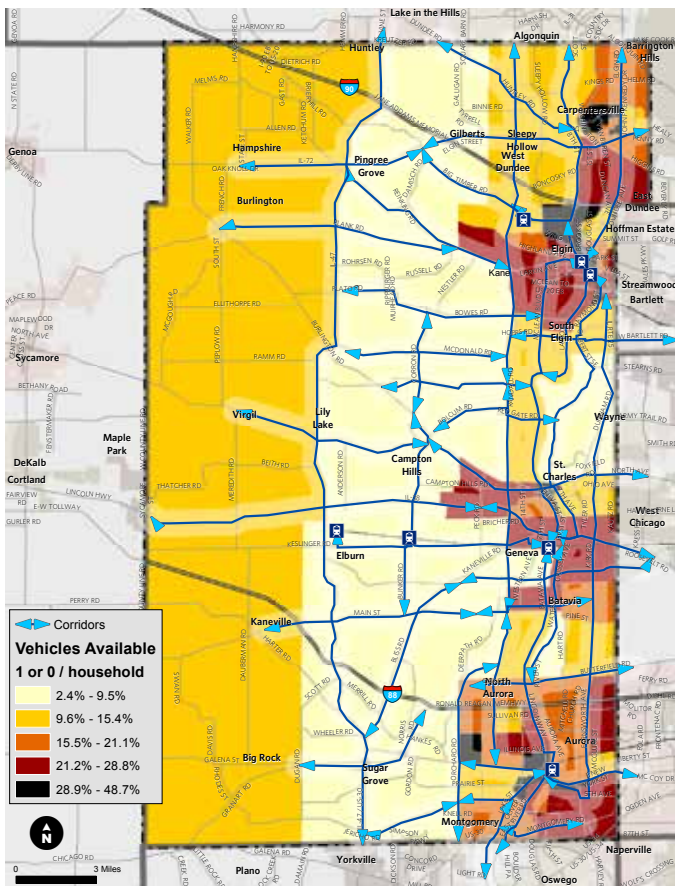
Using CNT's H+T data, the project team classified blocks by "Sum_ami_vmt_pe" which is average VMT per household per year. There are 2 blocks that don't have data: \cmap.local\DataDepot\Secure\H_and_T

H+T Guidance memo describes how to use the data, and the project team chose to use the "ami_pct_tr," "ami_vmt_pe," and "ht_ami" for analysis purposes.

CMAP did a spatial join with the block points and kept the fields that the team wanted to analyze, and joined their average to the corridors as a value. CMAP also joined the POP2010 and added the value as a total.

Using CNT's H+T data, CMAP classified block groups by "Sum_ami_vmt_pe" which is average VMT per household per year (2000). There are 2 block groups that don't have data:

Then the project team did an Intersect with the corridors (BlkGrps2000H_T_Intersect):



And then CMAP summarized the corridor column with the average annual VMT and H+T, and Transit Ridership

Ranking Criteria that were eliminated

Based upon the input received by members of the OSC, Pace representatives, and project team research, the following preliminary ranking criteria was not used in the analysis. Reasons for not using the following criteria included a lack of accurate data available, the recommendation to use the criteria on a case-by-case review, and/or the OSC recommended felt that it was not necessary.

No Data Available

- Transit service operability: Pace can weigh in on the operability at a later stage
- Support within current plans and / or ordinances: Qualitative analysis
- Presence of current or future signalized intersections: No data available
- Transit Signal prioritization systems: No data available

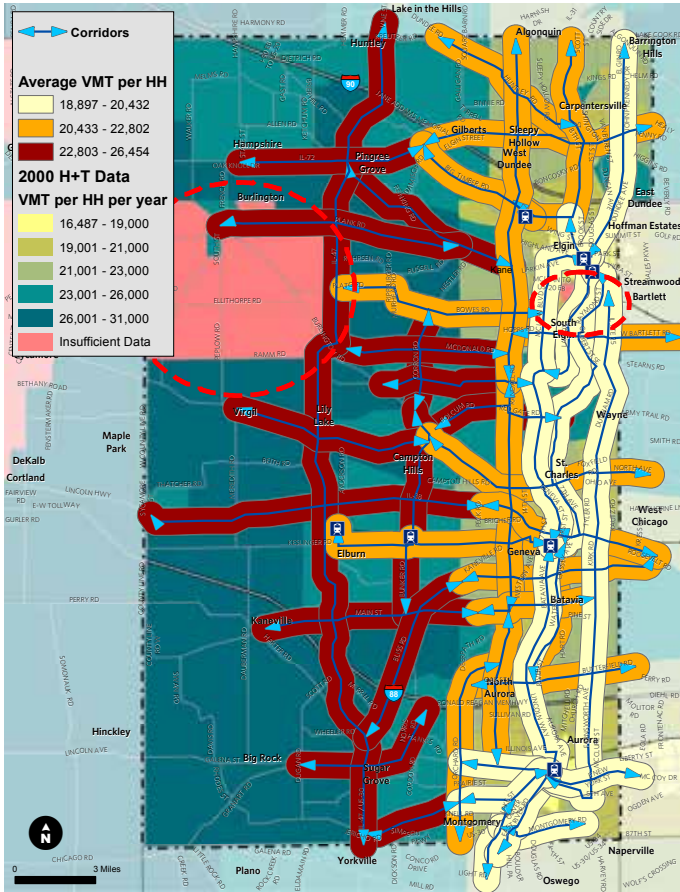
Criteria Removed Based Further Analysis

The following criteria were removed based upon input received from members of the OSC, and analysis undertaken by the project team. Preliminary analysis of the following criteria were shown to have minimal impact of the recommendations at the County-level.

- Corridor Route length – Long
- Corridor Route length – Short
- Infill parcels
- Access to open space

OSC member suggestions that were not used

- Industries most likely to have employees that use transit: In places with high quality transit, ridership is not highly segmented by industry.
- Funding for improvements (3 members suggested): No data available.
- Minority population per acre: In places with high quality transit, ridership is not highly segmented by race.
- Routes that provide connectivity to multiple routes and trails: The project team measured connectivity to existing transit.



Access to K-12 schools

Count of the number of facilities that fall within the half-mile buffer of corridors.

SchoolsK12_ISBE_200903.shp

Local Housing + Transportation costs

See VMT.

Appendix B

Oversight Steering Committee Meeting Summaries

The Oversight Steering Committee (OSC) was created to assist in guiding the development of the Implementation Strategy. Each municipality and public transit agency was invited to send a representative to participate on the OSC.

OSC Engagement

The community engagement process will primarily occur after the completion of this initial report, in order to allow for feedback and comment regarding the Corridors Analysis and Development recommendations prior to moving forward with an ultimate strategy.

Oversight Steering Committee Members

The Oversight Steering Committee consists of members that represent numerous municipalities, County departments, CMAP, and transportation agencies located within, and/or serving Kane County. **Table 2.1** lists the municipalities that were invited to the first steering committee meeting. The committee may add members based upon participation at future meetings.

Table 2.1. Oversight Steering Committee

Municipality/Agency/Organization Invited to Send Representation	Attendance at First Steering Committee Meeting
KANE COUNTY DIVISION OF TRANSPORTATION	ATTENDED
KANE/KENDALL COUNCIL OF MAYORS	ATTENDED
KANE COUNTY DEVELOPMENT AND COMMUNITY SERVICES DEPARTMENT	ATTENDED
KANE COUNTY HEALTH DEPARTMENT	ATTENDED
REGIONAL TRANSPORTATION AUTHORITY (RTA)	ATTENDED
PACE	ATTENDED
METRA	ATTENDED
VILLAGE OF ALGONQUIN	ATTENDED
CITY OF AURORA	ATTENDED
VILLAGE OF BARRINGTON HILLS	ATTENDED
CITY OF BATAVIA	ATTENDED
VILLAGE OF BIG ROCK	ATTENDED
VILLAGE OF BURLINGTON	ATTENDED
VILLAGE OF CAMPTON HILLS	ATTENDED
VILLAGE OF CARPENTERSVILLE	ATTENDED
VILLAGE OF EAST DUNDEE	ATTENDED
VILLAGE OF ELBURN	ATTENDED
CITY OF ELGIN	ATTENDED
CITY OF GENEVA	ATTENDED
VILLAGE OF GILBERTS	ATTENDED
VILLAGE OF HAMPSHIRE	ATTENDED
VILLAGE OF HUNTLEY	ATTENDED
VILLAGE OF KANEVILLE	ATTENDED
VILLAGE OF MAPLE PARK	ATTENDED
VILLAGE OF MONTGOMERY	ATTENDED
VILLAGE OF NORTH AURORA	ATTENDED
VILLAGE OF PINGREE GROVE	ATTENDED
VILLAGE OF SOUTH ELGIN	ATTENDED
CITY OF ST. CHARLES	ATTENDED
VILLAGE OF SUGAR GROVE	ATTENDED
VILLAGE OF WAYNE	ATTENDED
VILLAGE OF WEST DUNDEE	ATTENDED
VILLAGE OF LILY LAKE	DID NOT ATTEND
VILLAGE OF SLEEPY HOLLOW	DID NOT ATTEND
VILLAGE OF BARTLETT	ATTENDED
VILLAGE OF VIRGIL	ATTENDED

Summary of First Oversight Steering Committee (OSC) Meeting

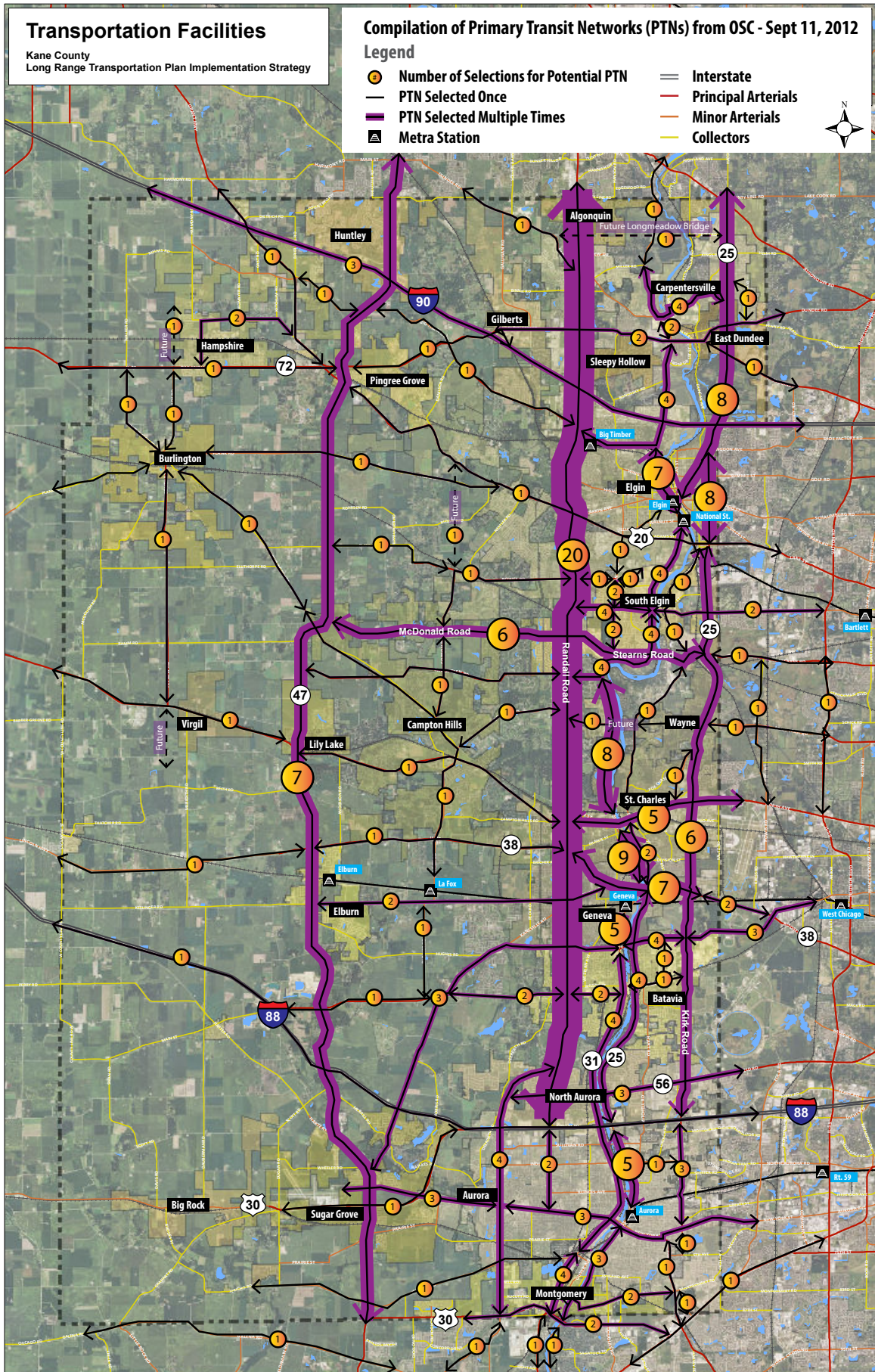
The first OSC meeting was held on September 11th, 2012 at 1:30pm at the Kane County Government Center located at 719 S Batavia Avenue in Geneva, Illinois. The following topics were covered at the meeting:

- a. Introductions
- b. Purpose of the Study
- c. Planning Process/Scope of Work
- d. Expectations/Role of the OSC
- e. Background of Primary Transit Networks (Corridor)

The meeting concluded with an exercise to help identify preliminary transit-supportive corridors in the County. Each member was asked to identify on their own map, their desired corridor in their municipalities and in other areas of the County. After completing their own maps, each member was asked to add their corridors to a larger map of the County. The results of this compiled map are illustrated on **Figure 2.1**, which displays the key corridors identified by members of the OSC. The majority of the corridors follow arterial routes through the County which generally link downtowns, Metra stations, community facilities, employment areas and shopping centers.



Figure 2.1 Compilation of Existing Transit-Supportive Corridors from OSC



Source: Chicago Metropolitan Agency for Planning, 2012

Second Oversight Steering Committee (OSC) Meeting

The second OSC meeting was held on July 23, 2013 at the Kane County Government Center located at 719 S Batavia Avenue in Geneva, Illinois. The following topics were covered at the meeting:

- a. Introductions
- b. Review of the Corridor Analysis and Development Report
- c. Review and Discussion of the Preliminary Corridor Measures
- d. OSC Members provided copies of Transit Supportive plans from their communities.

Members were asked to prioritize preliminary corridor measures. They were also asked to provide any new measures that were not included in the presentation and to recommend the removal of any measures that they thought were not important.

Figure 2.2 summarizes the results of the group discussion. The prioritized list of measures by preference is included in the far right column. The top five corridor measures identified by OSC measures are: 1) Population density, 2) Transit connections, 3) Job density, 4) presence of existing transit service, (tied for 4) Walkability, and 5) Senior populations.

Figure 2.2 Preliminary Corridor Measures Prioritized

Primary Transit Network Corridor Analysis and Development
 Draft Report
 Second Steering Committee Meeting July 23, 2013
 Preliminary PTN Measures - Group Discussion Summary of Results

Measures	Priority			Total Priority Score	Ranking										Number of Times Selected in Top 10 Ranking	Suggested to Be Removed	Overall Score	Overall Ranking	
	High	Med.	Low		1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th					
Demographic Measures																			
Population density	17	1		18	10	3	1		1						2	17		35	1
Low-income, disabled, and senior populations	12	4		16	1	2	2	4	2							13		29	5
Vehicle miles traveled (VMT) per household	2	9	6	5				1	1	1						3	1	7	13
Housing and transportation costs	4	5	8	1	1		2		1						1	5	1	5	15
Livability Measures																			
Job density	17	1		18	1	7	1	2	2	2						15		33	3
Higher education	6	7	5	8									1	3	1	5		13	10
K-12 schools	3	7	7	3			1						1	1		3		6	14
Medical facilities	8	4		12		1	2	1	1	2	2	1			1	11		23	7
Grocery stores	7	10	1	16		1	1	1	2	1	1	1			1	7		23	7
Retail	9	8	1	16		1			1	2	1			1	1	7		23	7
Community services	11	7		18			1	1	2	1					1	6		24	6
Entertainment	1	12	5	8						1						1		9	11
Libraries	5	8	5	8										2		2	1	9	11
Open space	6	11		-5										2	2	2	4	-7	19
Infill parcels	3	7	8	2										1	1	2	3	1	18
Transportation Measures																			
Transit connections	16	2		18	2	1	2	1	6	2			1		1	16		34	2
Presence of existing transit service	12	6		18	1	1	3		1		1	3	2	1	13		31	4	
Walkability	12	6		18		2	1	3	2	1		2	1	1	13		31	4	
Transit service operability	12	3	1	14					5		2	1	1		9		23	7	
Presence of current or future Signalized intersections	5	10	3	12					2				1		3		15	9	
Transit signal prioritization systems	4	6	7	3									1		1		4	16	
PTN Route length for weighting - Long	3	8	2	9									1	1	2	3	8	12	
PTN Route length for weighting - Short	3	6	4	5											0	3	2	17	
<i>NEW - Support for Randall Road BRT</i>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Government Support																			
Support within current plans and or ordinances	10	7	1	16			1		1		1	1	1	1	6		22	8	

Order	Measure
1	Population Density
2	Transit connections
3	Job density
4	Presence of existing transit service
4	Walkability
5	Low-income, disabled, and senior populations
6	Community services
7	Transit service operability
7	Medical facilities
7	Grocery stores
7	Retail
8	Support within current plans and or ordinances
9	Presence of current or future Signalized intersections
10	Higher education
11	Entertainment
11	Libraries
12	PTN Route length for weighting - Long
13	Vehicle miles traveled (VMT) per household
14	K-12 schools
15	Housing and transportation costs
16	Transit signal prioritization systems
17	PTN Route length for weighting - Short
18	Infill parcels
19	Open space
NA	New - Support for Randall Road BRT

New PTN measure (s) that should be addeded

- Industries most likely to have employees that use transit
- Funding for improvements (3)
- Number of vehicles owned per household (4)
- Minority population per acre or square mile
- Routes that provide connectivity to multiple routes and trails
- Community facilities - such as park district recreation centers, churches, health clubs, etc...
- Ridership

Any other comments or suggestions

- Use of overlay districts in the planning for new developments
- Focus more on low-income/disabled
- Should say instead of "current plans" (above) it should be current or future plans
- Large stretches of open space deter transit
- Available space "right of way" to implement recommendations
- Should community services be broken down into further categories or further prioritization?
- Seniors use transit less than the average
- Amenities should be measured per mile of corridor length
- It would be helpful to break down long corridors into shorter segment



Pace bus shelter. Photo credit: Pace

Appendix C

Existing Conditions

Summary

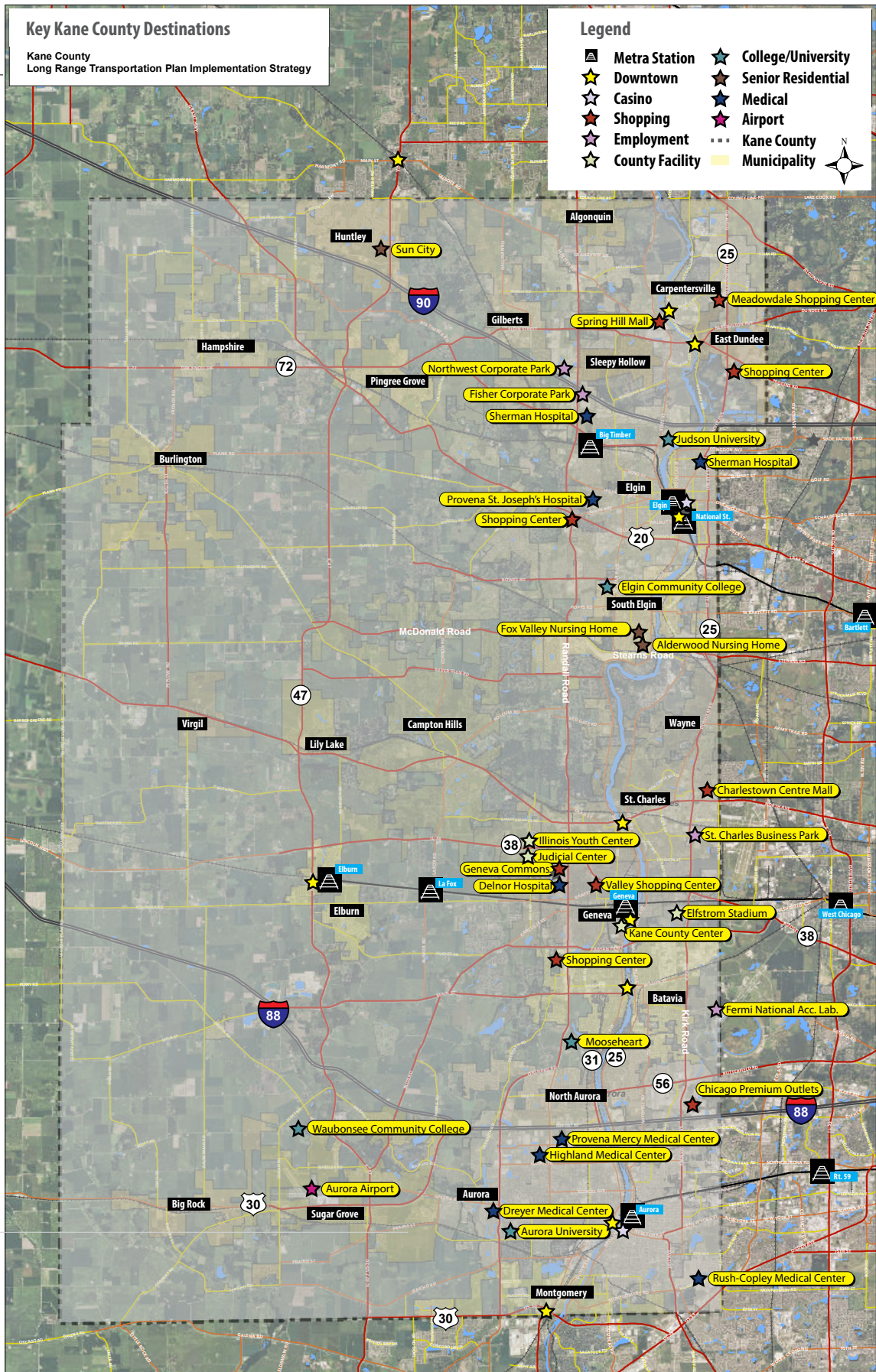
This section provides a brief overview regarding Kane County's geographic features and regional setting. A goal of the County's LRTP Implementation Strategy is to accurately reflect how Kane County fits into the larger region and to help the County and its municipalities understand and plan for the impact of regional economic and demographic changes.

Demographics

This subsection provides a brief overview of Kane County's unique demography. Demographic information, shown below, helps to describe the people of Kane County, as well as to place the area in the larger, Chicago region. Key demographic indicators such as population change also have significant impacts on the local and regional transportation network.

Currently, the County is home to over 500,000 residents, accounting for more than 170,000 households. While this figure represents a small part of the region's population, Kane County has experienced tremendous growth in recent decades. The County's population grew by more than 27% in the years 2000 to 2010, far outpacing the 3.5% growth recorded for the overall region. Continued growth is expected in years ahead. An illustration of this is included in the Kane 2040 Plan, with projections showing an additional 270,000 residents and 144,000 jobs coming to the County by 2040. **Table 1.5** shows the population change by Kane County municipalities from 2000 to 2010.

Figure 1.4. Key Kane County Destinations and Origins



Source: Chicago Metropolitan Agency for Planning, 2012

Table 1.1. Population, Households, and Household Size, 2010

	Kane County	DuPage County	Kendall County	Lake County	McHenry County	Will County	Cook County	Chicago Region
Population	515,269	916,924	114736	703462	308760	677560	5,194,675	8,431,386
Households	170,479	337,132	38022	241712	109199	225256	1,966,356	3,088,156
Average Household Size	2.98	2.68	3.01	2.82	2.81	2.97	2.60	2.73

Source: 2010 Census, U.S. Census Bureau

Table 1.2. Population Change, 2000 to 2010

	Kane County	DuPage County	Kendall County	Lake County	McHenry County	Will County	Cook County	Chicago Region
Population, 2000	404,119	904,161	54544	644356	260077	502266	5,376,741	8,146,264
Population, 2010	515,269	916,924	114736	703462	308760	677560	5,194,675	8,431,386
Change, 2000-10	111,150	12,763	60192	59106	48683	175294	-182,066	285,122
Change as %, 2000-10	27.5%	1.4%	110.4%	9.2%	18.7%	34.9%	-3.4%	3.5%

Source: 2000 and 2010 Census, U.S. Census Bureau

Kane County is also experiencing a diversifying of its population. Among racial groups, Hispanic and Asian populations have significantly increased their shares of the County's population. In absolute terms, more Hispanic residents have come to Kane County than any other group, with a 65.1% increase in population over the previous decade. (See table 1.4) In fact, the growth in Hispanic residents is larger than increases in all other groups combined.

Table 1.3. Race and Ethnicity, 2010

	Kane County		DuPage	Kendall	Lake	McHenry	Will	Cook	Region
	COUNT	%	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT	COUNT
White	304,051	59.0%	646130	85156	458701	258584	455577	2,278,358	4,486,557
Hispanic or Latino*	158,390	30.7%	121506	17898	139987	35249	105817	1,244,762	1,823,609
Black or African American	27,819	5.4%	41024	6343	46989	3045	74419	1,265,778	1,465,417
Asian	17,505	3.4%	91793	3403	43954	7712	30458	318,869	513,694
Other**	7504	1.5%	16471	1936	13831	4170	11289	86,908	142,109

Source: 2010 Census

* includes Hispanic or Latino residents of any race

** includes American Indian and Alaska Native, Native Hawaiian and Other Pacific Islander, Some Other Race, and Two or More Races

**Table 1.4. Change in Race and Ethnicity,
2000-2010**

	Kane County		DuPage		Kendall		Lake		McHenry		Will		Cook		Chicago Region	
	CHANGE IN POP.	% CHANGE	CHANGE IN POP.	% CHANGE	CHANGE IN POP.	% CHANGE	CHANGE IN POP.	% CHANGE	CHANGE IN POP.	% CHANGE	CHANGE IN POP.	% CHANGE	CHANGE IN POP.	% CHANGE	CHANGE IN POP.	% CHANGE
White	30,661	11.2%	-65,836	-9.2%	36,479	74.9%	-14,267	-3.0%	25,558	11.0%	6,7054	17.3%	-280,351	-11.0%	-200,702	-4.3%
Hispanic or Latino*	62,466	65.1%	40,140	49.3%	13,812	338.0%	47,271	51.0%	15,647	79.8%	62,049	141.8%	173,022	16.1%	414,407	29.4%
Black or African American	5,342	23.8%	1,4047	52.1%	5,650	815.3%	3,409	7.8%	1,666	120.8%	22,439	43.2%	-1,246,70	-9.0%	-72,117	-4.7%
Asian	10,363	145.1%	20,885	29.5%	2,924	610.4%	19,088	76.8%	3,978	106.5%	19,437	176.4%	61,026	23.7%	137,701	36.6%
Other**	2,318	44.7%	3,527	27.2%	1,327	217.9%	3,605	35.3%	1,834	79.5%	4,315	61.9%	-11,093	-11.3%	5,833	4.3%

Source: 2010 Census

* includes Hispanic or Latino residents of any race

** includes American Indian and Alaska Native,
Hawaiian and Other Pacific Islander, Some Other Race, and
Two or More Races

Table 1.5. Population Change by Kane County Municipality, 2000 to 2010

Geographic Area	2000 Population	2010 Population	Change 2000 to 2010	
			Number	Percent
ALGONQUIN VILLAGE	5,022	8,433	3,411	67.92%
AURORA CITY	100,290	130,976	30,686	30.60%
BARRINGTON HILLS VILLAGE	97	137	40	41.24%
BATAVIA CITY	23,866	26,045	2,179	9.13%
BIG ROCK VILLAGE	NA	1,126	N/A	NA
BURLINGTON VILLAGE	452	618	166	36.73%
CAMPTON HILLS VILLAGE	NA	11,131	N/A	NA
CARPENTERSVILLE VILLAGE	30,586	37,691	7,105	23.23%
EAST DUNDEE VILLAGE	2,948	2,860	-88	-2.99%
ELBURN VILLAGE	2,756	5,602	2,846	103.27%
ELGIN CITY	74,013	84,156	10,143	13.70%
GENEVA CITY	19,515	21,495	1,980	10.15%
GILBERTS VILLAGE	1,279	6,879	5,600	437.84%
HAMPSHIRE VILLAGE	2,900	5,563	2,663	91.83%
HUNTLEY VILLAGE	1,107	5,795	4,688	423.49%
KANEVILLE VILLAGE	NA	484	N/A	NA
LILY LAKE VILLAGE	825	993	168	20.36%
MAPLE PARK VILLAGE	652	672	20	3.07%
MONTGOMERY VILLAGE	3,855	7,871	4,016	104.18%
NORTH AURORA VILLAGE	10,585	16,760	6,175	58.34%
PINGREE GROVE VILLAGE	124	4,532	4,408	3554.84%
PRESTBURY CDP	NA	1,722	N/A	NA
SLEEPY HOLLOW VILLAGE	3,553	3,304	-249	-7.01%
SOUTH ELGIN VILLAGE	16,100	21,985	5,885	36.55%
ST. CHARLES CITY	27,727	32,431	4,704	16.97%
SUGAR GROVE VILLAGE	3,909	8,997	5,088	130.16%
VIRGIL VILLAGE	266	329	63	23.68%
WAYNE VILLAGE	834	861	27	3.24%
WEST DUNDEE VILLAGE	5,428	7,331	1,903	35.06%
TOTAL INCORPORATED	338,691	456,779	118,088	34.87%
TOTAL UNINCORPORATED	65,428	58,490	-6,938	-10.60%
TOTAL	404,119	515,269	111,150	27.50%

Source: Kane County 2040 Plan, Adopted by the County Board (May 8, 2012), Page 25

Transportation Indicators

Transportation indicators provide a glimpse into transportation usage and infrastructure as they currently exist in the County. In the next step of the process the project team will compare the following indicators:

- Total annual vehicle miles traveled per household
- Mode share as a percentage of work type
- Housing and Transportation Costs as percent of income per household
- Access to jobs in the region by travel mode
- Transit service
- Transit dependency

Since Kane County has experienced significant population growth, and expects this growth to continue, the demands on local and regional transportation systems are increasing. Land use changes associated with growth have also had impacts on local mobility. This in turn influences the selection of routes for public transportation. Specifically, the measures below may indicate unmet transportation needs, or areas where continued growth is likely to exacerbate current issues.

Like most residents of the region's collar counties, Kane County residents drive to common destinations more frequently than the regional average, with the total annual household vehicle miles traveled that are nearly 16% higher (see **Table 1.6**). Work trips, generally, make up a large part of household VMT, as shown in **Table 1.7** and a higher percentage of Kane County residents drive alone to work, versus a smaller share of residents who commute using transit or walking, when compared with overall regional averages. Carpooling use in Kane County, as a mode share, is nearly identical to the regional figure.

Housing and transportation costs have similar implications for quality of life. As shown in **Table 1.8**, in Kane County, average costs incurred by households for both housing and transportation are higher than the regional averages. Taken together, these costs amount to 56.3% of household income in Kane, significantly higher than the regional average (49.97%) and well above CNT's affordability threshold of 45%. It is important to note that compared to other collar counties (excluding Cook County) Kane County has the lowest housing costs as percent of income and the second to lowest transportation costs as percent of income, and the second to lowest H + T Costs (DuPage County is slightly lower)

As shown in **Table 1.9**, the numbers of regional jobs accessible by car and transit, within 45 and 75 minute travel times, respectively. Predictably, Kane County's accessibility scores are low in

comparison to the regional averages, with only about half as many jobs accessible by car or transit as the regional averages.

Table 1.9 shows that the typical Kane County resident has 364,277 jobs accessible by automobile within a 45 minute drive. In comparison, the typical regional resident has almost twice as many jobs (779,335 jobs) within the same drive time. The table also shows that the County has 518,431 regional jobs accessible by transit within a 75 minute commute. This number is also approximately half of the jobs as those within a 75 minute commute using transit within the region as a whole (1,024,108 jobs).

Table 1.6. Total Annual VMT per Household (2011)

DuPage	Kane	Kendall	Lake	McHenry	Will	Cook	Chicago Region
19,544.63 Annual Miles	21,225.72 Annual Miles	23,889.69 Annual Miles	21,392.85 Annual Miles	23,473.65 Annual Miles	22,279.71 Annual Miles	Annual Miles	18,272.4 Annual Miles

Source: Center for Neighborhood Technology, calculated for Municipal Energy Profiles, available at "H+T Affordability Index" website: http://htaindex.cnt.org/mapping_tool.php#region=Chicago,IL

Table 1.7: Mode Share, as a Percentage of Work Trips (2011)

	Cook	DuPage	Kane	Kendall	Lake	McHenry	Will	Chicago Region
TOTAL WORKERS	2,322,252	458,954	242,268	54,065	335,134	147,104	313,178	3,872,955
WORKED AT HOME	93,295	21,317	12,721	1,713	22,040	5,471	10,038	166,595
TOTAL COMMUTING POPULATION	2,228,957	437,637	229,547	52,352	313,094	141,633	303,140	3,706,360
DRIVE ALONE	64.8%	82.1%	82.9%	86.4%	81.6%	87.4%	85.7%	72.3%
CARPOOL	9.4%	7.8%	11.4%	9.4%	9.5%	7.6%	7.5%	9.1%
TRANSIT	19.2%	6.9%	2.8%	2.1%	4.0%	3.3%	4.1%	13.4%
WALK	4.5%	2.0%	1.2%	0.3%	3.0%	1.1%	0.9%	3.4%
OTHER	2.1%	1.2%	1.8%	1.8%	1.8%	0.6%	1.9%	1.9%

Source: 2011 American Community Survey 1-Year Estimates. U.S. Census Bureau.

Note: Mode shares are expressed as percentages of the working population excluding those who work from home.

Table 1.8. Housing and Transportation Costs as Percent of Income per Household (2011)

	Kane	Will	Lake	McHenry	Cook	DuPage	Kendall	Chicago Region
Housing Costs as percent of income	31.78%	31.98%	36.43%	32.84%	26.75%	32.49%	35.53%	28.15%
Transportation Costs as percent of income	24.51%	25.13%	24.61%	25.98%	19.57%	23.68%	26.36%	21.82%
H + T Costs as percent of income	56.29%	57.11%	61.05%	58.81%	46.32%	56.17%	61.89%	49.97%

Source: CNT, "H+T Affordability Index": http://htaindex.cnt.org/mapping_tool.php#region=Chicago,IL

Note: Red text if the percentage exceeds the standard threshold of affordability: 30% for housing costs and 45% for housing and transportation costs combined.

Table 1.9. Access to Jobs in the Region, by Travel Mode (2009)

	Kane County	Will	Lake	McHenry	DuPage	Kendall	Cook	Chicago Region
Regional Jobs Accessible by Automobile¹ (in absolute number of jobs and %age of the region's total jobs)	364,277 jobs (7.4 %)	387,032 jobs (7.9 %)	352,306 jobs (7.2 %)	181,253 jobs (3.4 %)	1,200,340 jobs (24.4 %)	192,893 jobs (3.9 %)	1,347,947 jobs (27.4 %)	779,935 jobs (15.9 %)
Regional Jobs Accessible by Transit² (in absolute number of jobs and %age of the region's total jobs)	518,431 jobs (10.6 %)	377,123 jobs (7.7 %)	468,072 jobs (9.5 %)	283,882 jobs (5.8 %)	1,108,839 jobs (22.6 %)	330,556 jobs (6.7 %)	1,530,158 jobs (31.2 %)	1,024,108 jobs (20.9 %)

1 Accessible by Automobile = commute time of 45 minutes or less by car

2 Accessible by Transit = commute time of 75 minutes or less by bus or train

Source: Chicago Metropolitan Agency for Planning, 2009. Weighted travel model for roadway and public transportation, with the base number of Total Jobs in the region estimated to be 4,911,389.

Transit Service

Metra and Pace are the two key transit providers in the county. As shown on **Figures 1.5-1.10**, Metra and Pace provides more accessible and frequent transit to the central and eastern portions of the county which is not surprising since those are the most built-up and dense areas.

Pace Service

Table 1.10 describes Pace's bus ridership by route in Kane County. The quality and efficiency of transit service can be measured in many ways, as shown by this table. In terms of ridership, Route 530, which connects Aurora and Naperville, is the County's best-used Pace route. Other indicators, such as farebox recovery ratio, are useful measures of the efficiency of transit service. Using farebox recovery ratio, Routes 542, 543, and 549 stand out as efficient Pace routes.

- **Pace Bus Route 542:** Circulates in Downtown Elgin with connections to the Elgin Transportation Center, Casion, and Elgin High School, among others.
- **Pace Bus Route 543:** Serves commercial and residential areas along Dundee Avenue/IL25 connecting with Route 803 -Carpentersville local in East Dundee. Also serves the Elgin Terminal, Meadowdale Shopping Center, Wal-Mart, Larsen Middle School and the Elgin Metra Station.
- **Pace Bus Route 549:** Serves Elgin Community College, Larkin High School, Easter Seals Jayne Shover Center, Elgin Rehabilitation Center, Elgin Township, Aldi Foods Otter Creek Shopping Center, Meijer, Walmart, Fox Bluff Corporate Park and other destinations along South McLean Blvd. and South Randall Road. Residential areas served by this route include Buena Vista Apts (formerly The Mill). Connects with other Elgin service at the Elgin Terminal and Metra Station.

In addition, routes that experienced a 10% or greater increase in ridership from 2011 to 2012 are highlighted in **Table 1.10**. Three of the five routes that experienced 10% or greater growth operate along portions of Randall Road. The most significant increase in ridership, however, is Route 554 that operates between Elgin and Woodfield. That route saw an increase of nearly 300%, from 145 riders in 2011 to 433 riders in 2012.

Other Pace Services

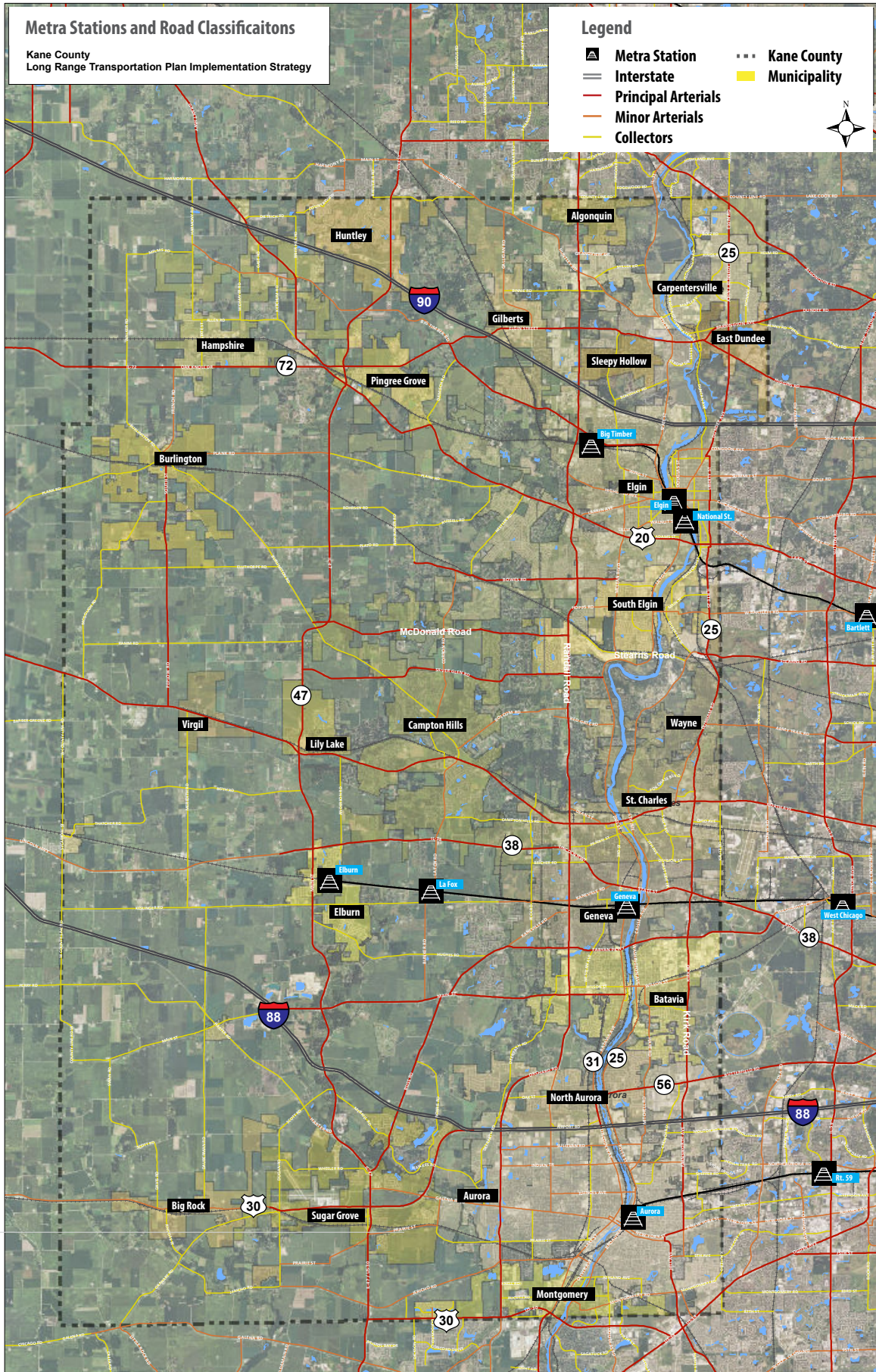
In addition to bus routes discussed above, Pace offers additional transti services, such as vanpool, RideShare, and Dial-a-Ride/Call-n-Ride. These are important community services in providing last mile coverage access to corridors.

- **Vanpool:** The Traditional Vanpool is designed to transport a group of 5-13 people to work in a Pace Van. Employees that live and work near one another and share similar schedules can form a group that conveniently gets them between home and work. (for more information http://www.pacebus.com/sub/vanpool/traditional_vanpool.asp)
- **Pace RideShare:** Pace RideShare is a free carpool and vanpool matching service for the greater Chicago area. Pace RideShare helps commuters get around and offers travel information, solutions and resources for carpooling, vanpooling, bus, train and biking/walking to work, school and more. (<https://www.pacerideshare.com/>)
- **Dial-a-Ride and Call-n-Ride:** In most cases, Pace has a financial partnership with a city or township to pay for and operate the service. Dial-a-Ride programs have different rules on fares, geographic boundaries and passenger eligibility. The Call-n-Ride service is similar to Dial-a-Ride, except that everyone is eligible to ride and passengers need to call to reserve a trip only one hour in advance. (<http://www.pacebus.com/sub/paratransit/default.asp>)

Table 1.10 Pace Ridership in Kane County

#	Route Name	Service Day	2011	2012	Percent Change	Farebox Recovery Ratio
521	EAST CIRCULATOR	WK	288	274	-4.7%	16%
521	EAST CIRCULATOR	SA	124	134	8.1%	14%
524	WEST CIRCULATOR	WK	164	147	-10.6%	13%
524	WEST CIRCULATOR	SA	60	49	-18.3%	11%
528	AURORA TRAN. CTR. - RUSH-COPLEY MEDICAL	WK	156	158	1.5%	13%
529	RANDALL ROAD - 5TH STREET	WK	376	406	7.9%	11%
529	RANDALL ROAD - 5TH STREET	SA	203	230	13.3%	8%
530	WESTFIELD SHOPPINGTOWN FOX VALLEY - NAPERVILLE	WK	843	836	-0.8%	13%
530	WESTFIELD SHOPPINGTOWN FOX VALLEY - NAPERVILLE	SA	712	720	1.1%	13%
532	ILLINOIS AVENUE	WK	153	139	-9.3%	13%
532	ILLINOIS AVENUE	SA	53	55	3.8%	21%
533	MOLITOR	WK	221	247	11.6%	20%
533	MOLITOR	SA	170	183	7.6%	20%
541	NORTHEAST ELGIN	WK	345	330	-4.2%	26%
541	NORTHEAST ELGIN	SA	225	226	0.4%	25%
542	BLUFF CITY	WK	337	364	8.0%	29%
542	BLUFF CITY	SA	267	258	-3.4%	28%
543	DUNDEE-CARPENTERSVILLE	WK	329	349	6.1%	27%
543	DUNDEE-CARPENTERSVILLE	SA	266	264	-0.8%	31%
546	ORANGE-WALNUT	WK	303	253	-16.6%	22%
546	ORANGE-WALNUT	SA	230	199	-13.5%	22%
547	WING PARK	WK	301	242	-19.5%	23%
547	WING PARK	SA	218	153	-29.8%	19%
548	HIGHLAND	WK	271	274	1.0%	24%
548	HIGHLAND	SA	158	161	1.9%	18%
549	SOUTH RANDALL	WK	427	472	10.5%	28%
549	SOUTH RANDALL	SA	242	298	23.1%	33%
550	BIG TIMBER-NORTH RANDALL	WK	182	127	-30.2%	15%
552	NORTH STATE - SPRING HILL MALL	WK	358	382	6.7%	18%
552	NORTH STATE - SPRING HILL MALL	SA	386	314	-18.7%	18%
554	ELGIN - WOODFIELD	WK	145	433	298.7%	30%
554	ELGIN - WOODFIELD	SA	N/A	249	-----	17%
801	ELGIN-GENEVA	WK	224	175	-21.7%	14%
801	ELGIN-GENEVA	SA	74	58	-21.6%	10%
802	AURORA-ST. CHARLES	WK	368	283	-23.1%	24%
802	AURORA-ST. CHARLES	SA	221	153	-30.8%	17%
803	CARPENTERSVILLE LOCAL	WK	327	329	0.7%	20%
803	CARPENTERSVILLE LOCAL	SA	307	286	-6.8%	19%

Figure 1.5. Metra Station and Road Classifications



Source: Chicago Metropolitan Agency for Planning, 2012

Figure 1.6. Pace Bus Routes in Kane County



SOURCE: RTA, 2012

Note: Pace bus routes have changed since the time of this figure (2012). For example, some key routes that have changed include:

- Route 801 was restructured in 2011 to serve Randall Road.
- Route 907 was discontinued on January 1, 2013, and service between Kendall County and Aurora is now provided by KAT.

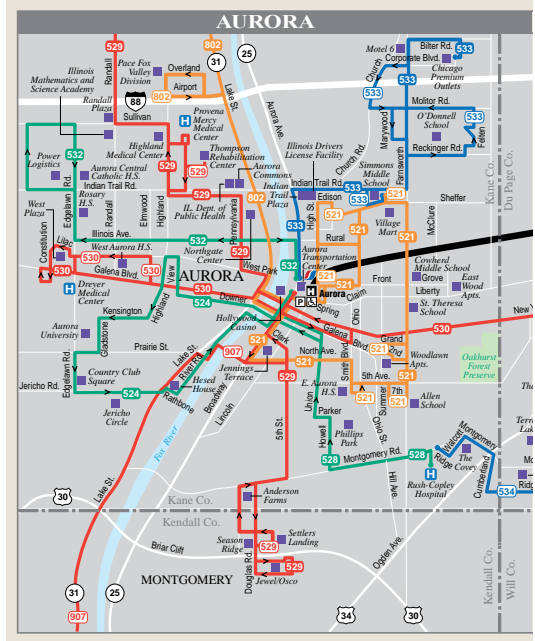
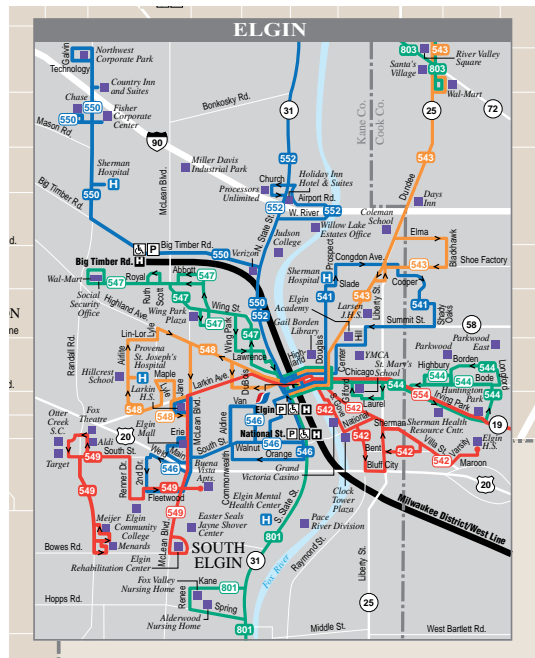
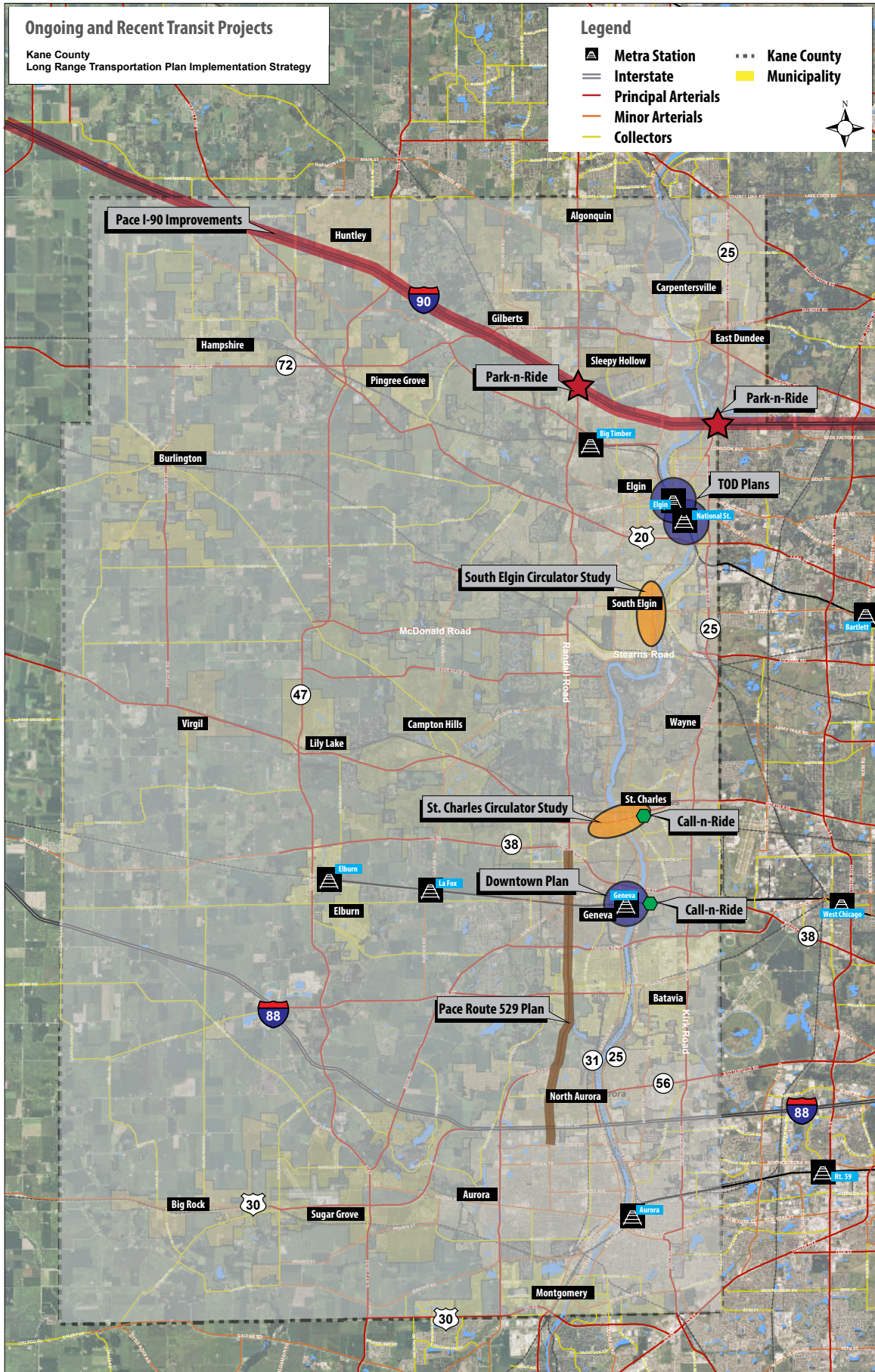
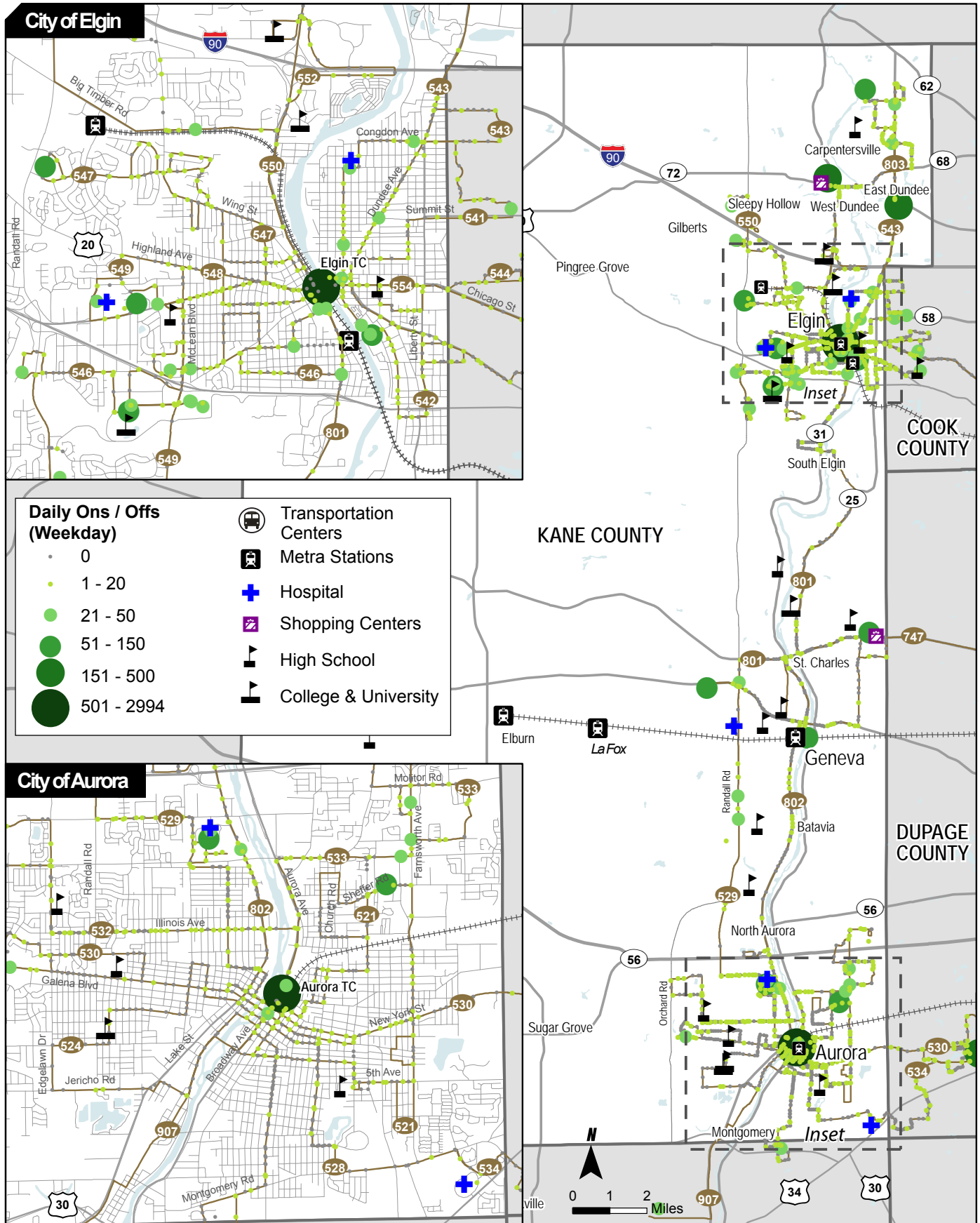


Figure 1.7. Ongoing and Recently completed Transit TOD Plans and Projects in Kane County



Source: Chicago Metropolitan Agency for Planning, 2012

Figure 1.8. Pace Route Network and Weekday Daily Boardings/Alightings, October 2009



Source: Pace, Kane County, Illinois DOT

Metra Service

Three Metra commuter rail lines serve Kane County. According to Metra, Kane County stations account for over 6,000 weekday boardings. As shown in **Figure 1.9**, shows Metra lines and stations along with daily ridership.

Transit Dependency

Figure 1.10 shows the geographic distribution of transit-dependent populations in Kane County, based on an index of transit-dependency that was conducted for the Long Range Transit Plan. The figure illustrates that the greatest concentrations of transit dependent populations are in the built-up cities of Aurora and Elgin as well as moderate-to-high levels of transit dependency in the Upper Fox Valley, South Elgin, St.Charles, Geneva, Batavia, and North Aurora communities.



Figure 1.9. Metra Weekday Daily Boardings/Alightings, Fall 2006

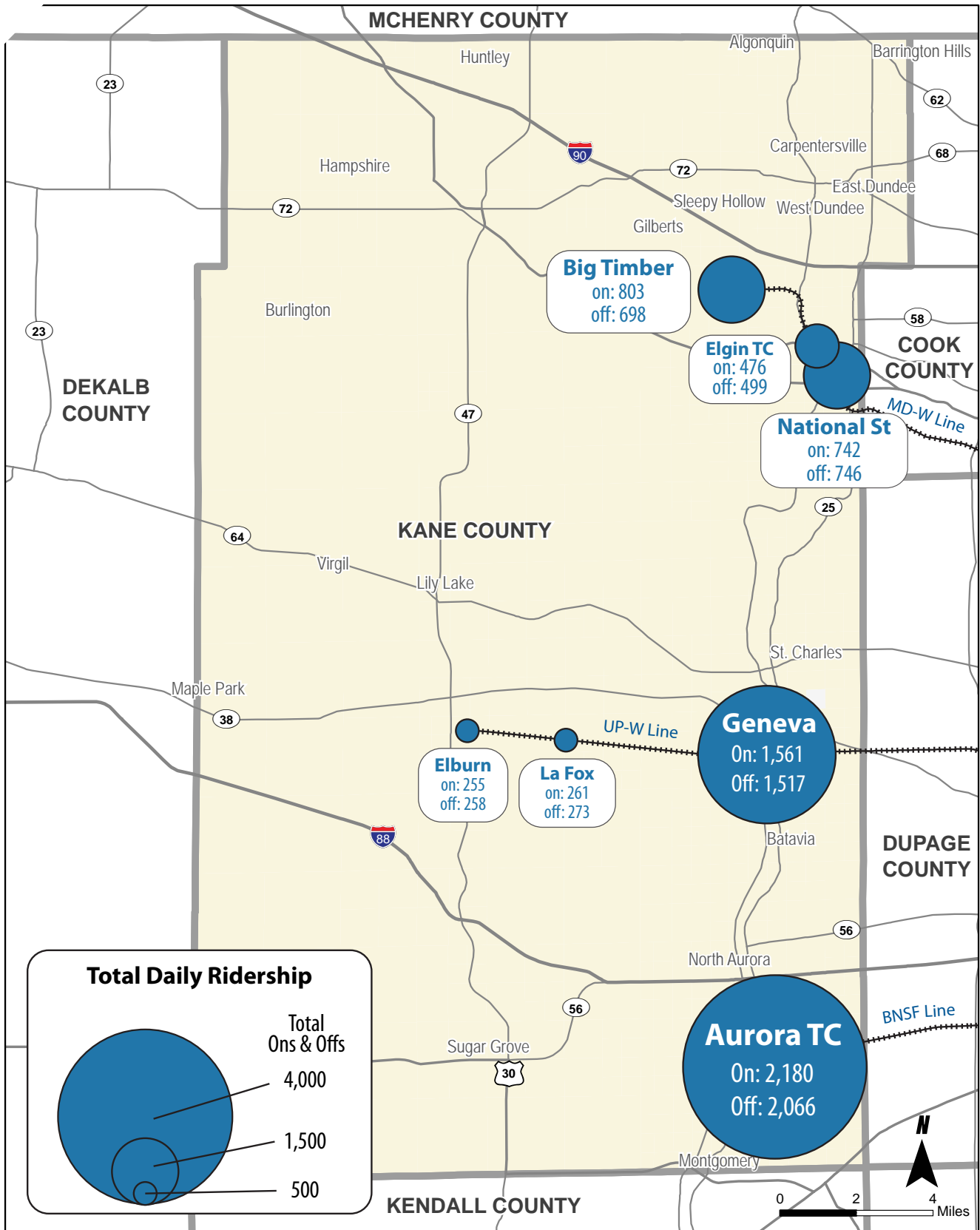
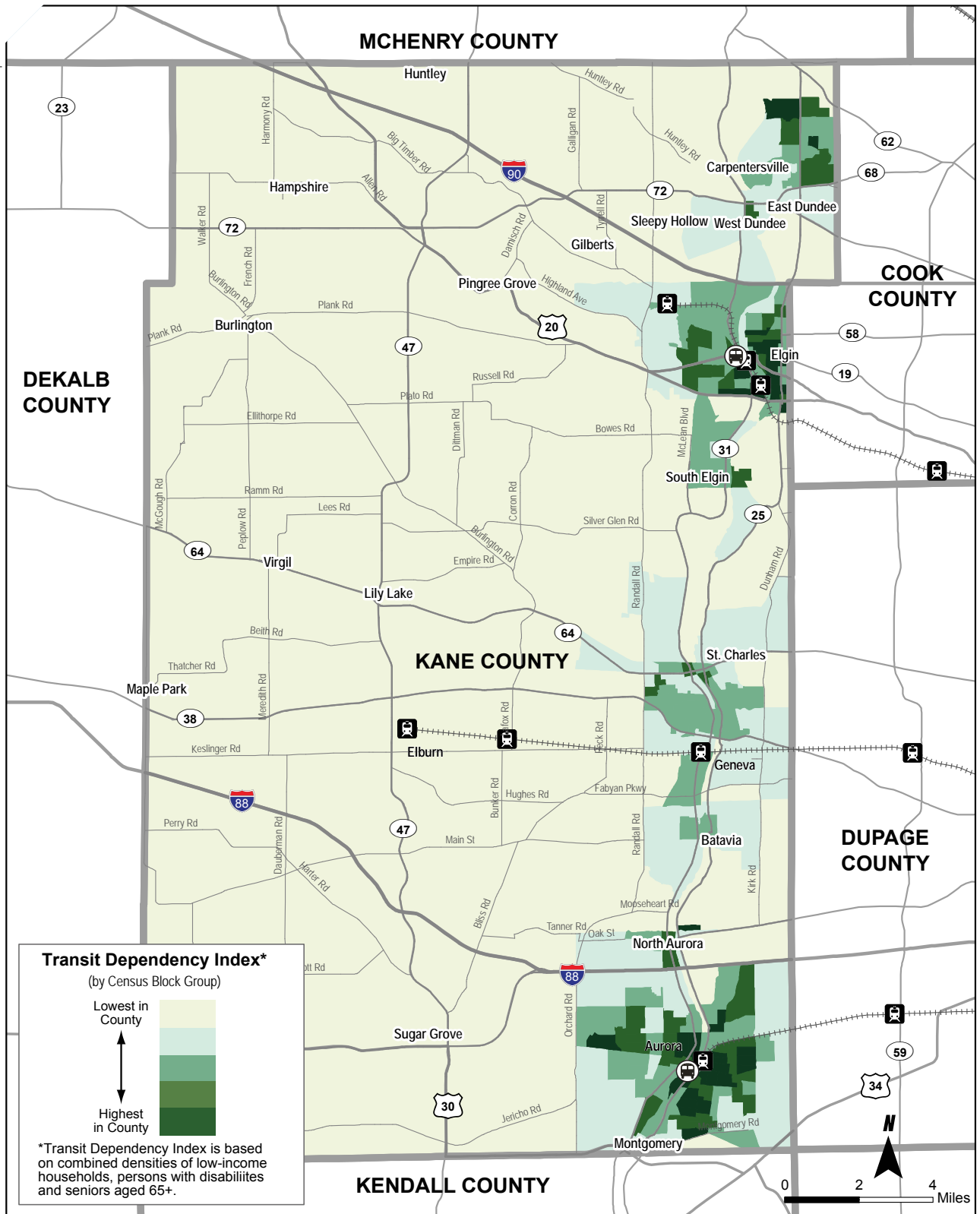


Figure 1.10. Transit Dependency



Source: Kane County, ESRI, Census 2000

Appendix D

Planning and Zoning Resources

The following resources are provided to assist communities interested in updating their comprehensive plans (and/or similar long-range plans including corridor plans, downtown plans, TOD plans, etc.) to support the type of development necessary to support successful Transit-Supportive Corridor's.

Institute for Transportation and Development Policy (ITDP): More Development For Your Transit Dollar: An Analysis of 21 North American Transit Corridors

<http://www.itdp.org/library/publications/more-development-for-your-transit-dollar-an-analysis-of-21-north-american-t/?moredevelopment#sthash.itIVTa3.dpuf>

This analysis, prepared by the ITDP in the wake of the 2008 economic downturn, points out that cities in the U.S. still have a long way to go in transforming existing auto-oriented suburbs or blighted inner urban areas into vibrant, high quality transit-oriented communities. In response, the analysis attempts to provide communities guidance on what it takes to make TOD happen.

The analysis notes that a growing number of cities are promoting transit-oriented development (TOD). Many cities are planning rail-based mass transit investments like light rail transit (LRT) and streetcars, hoping they will stimulate transit-oriented development, but cities are finding the costs to be crippling. Increasingly, cities in the U.S., finding themselves short of funds, are wondering whether BRT, a lower cost mass transit solution, could be used to better leverage transit-oriented development investments.

The report found the following:

- Per dollar of transit investment, and under similar conditions, Bus Rapid Transit leverages more transit-oriented development investment than Light Rail Transit or streetcars.
- Both BRT and LRT can leverage many times more TOD investment than they cost.
- Government support for TOD is the strongest predictor of success.
- The strength of the land market around the transit corridor is the secondary indicator of success.
- The quality of the transit investment - how well it meets the best-practices detailed in the BRT Standard — is the tertiary indicator of success.

Northwest Transit Corridor TOD Implementation Guidebook (2003)

<http://www.rtams.org/reportLibrary/127.pdf>

In 2003 Parsons Brinckerhoff created a guidebook for the Northwest Municipal Conference. The purpose of the Guidebook was to provide a synthesis of “best practices” to help policymakers, planners and developers throughout the Northwest Transit Corridor facilitate the broader implementation of TOD. The

compendium of best practices was based on a review of over 30 North American TOD guidebooks and publications on urban design and placemaking. The main sections of the Guidebook are listed and briefly described below.

- **Introduction:** The introduction outlines the purpose of the guidebook, orients the reader to the Northwest Transit Corridor, and introduces Transit-Oriented Development (TOD).
- **Benefits of TOD:** This section explains why TOD is important for communities in the Northwest Transit Corridor.
- **Elements of TOD:** Land Use; Site and Building Design; Street Patterns and Circulation; Parking; and Development-Oriented Transit.
- **Implementing TOD:** Implementing TOD is more than incorporating good urban design and designing transit facilities. It requires a vision, an understanding of the market, a project champion, and using the right implementation tools.

Massachusetts Smart Growth Toolkit - Model TOD Bylaw

http://www.mass.gov/envir/smart_growth_toolkit/bylaws/TOD-Bylaw.pdf

The first example in the County's 2040 Plan is the State of Massachusetts Smart Growth Toolkit. ***It includes a very detailed model zoning overlay district ordinance that should be used by municipalities interested in supporting Corridors and TODs in their zoning code.***

The State of Massachusetts encourages local governments to zone for TOD by providing technical assistance and a model bylaw and other information through a Smart Growth/Smart Energy Toolkit. Mixed-use and high-density development designed to take advantage of transit can reduce energy consumption and provide needed housing and economic development in a smart growth consistent way.

A model Transit-Oriented Development bylaw was created by the State of Massachusetts to provide a foundation for developing a municipal TOD bylaw. The document notes, that no single "model" bylaw or ordinance can be adopted by a municipality without some tailoring to the unique characteristics and needs of that individual municipality. Therefore, municipalities are encouraged to revise and adapt the text to reflect their community's character, and to be compatible with their existing zoning bylaws/ordinances.

Municipal Research and Services Center of Washington (MRSC)

<http://www.mrsc.org/subjects/Transpo/transitdev.aspx#example>

The second example in the County's 2040 Plans is from the MRSC. The MRSC is a private, non-profit organization based in Seattle, Washington. According to their website, their mission is to support effective local government in Washington through trusted consultation, research, training, and collaboration. MRSC provides several links to examples of TOD ordinances that can be used by as templates.

TOD Template Zoning Code Standards - City of Philadelphia, PA (2009)

http://planphilly.com/sites/planphilly.com/files/Farr_report.pdf

In 2009, the City of Philadelphia and Farr Associates created TOD template zoning code standards. The report states that it was created with the realization that not all transit stations are the same and that a one-size-fits-all approach to zoning and development is not sufficient. Therefore, the standards differ based upon the intensity of the station, which are defined as different TOD Place Types. Templates have been created for the following seven different TOD Place Types:

1. Regional Center
2. Urban Center
3. Urban Neighborhood
4. Transit Neighborhood
5. Commuter Neighborhood
6. Campus/Employment Center

7. Mixed Use Corridor

The Mixed-Use Corridor template is the most appropriate one for review by Kane County municipalities interested in zoning for Corridor corridors. Unlike the other Place Types, this is a linear corridor with a mix of medium density residential and commercial uses along the corridor and low to medium density residential development moving away from the corridor. It is important to note, that the densities recommended for this Place Type in the City of Philadelphia are higher than what is suited for the majority of Corridor corridors in Kane County. However, with some modifications the template is still relevant for Kane County communities to consider. As defined within the City of Philadelphia's report:

The Mixed Use Corridor differs from the other Place Types in that the intensity of development has a linear pattern. This street has a mix of medium density commercial and residential uses and low to medium density residential development moving away from the corridor. The Mixed Use, Corridor, Apartment, Flat, and Rowhouse building standards will be the most commonly applied with limited use of the Corner Store, Iconic, and Detached Residence. (Source TOD Template Zoning Code Standards – City of Philadelphia, PA (2009) page 82.)

Regional Transportation Authority’s (RTA) Zoning and Transit-Oriented Development: A Best Practices Report (2011)

http://rtachicago.com/images/stories/Initiatives/landuse_tod/Copy%20of%20Zoning%20Best%20Practices%20Report.pdf

The RTA created a document that outlines the most common types of zoning ordinances and the best practices of each as related to TOD. The intent is that the document can be used as a guide for municipalities to help further implement TOD by incorporating transit-supportive zoning regulations and standards in their transit area.

The report discusses the variety of tools a municipality can use to allow for TOD. For instance a municipality can create a special TOD zoning designation, change existing zoning classifications, require review through the planned unit development process, or create special design standards to be applied to TOD areas. The creation of an overlay zone is a common example of the application of design standards to existing zoned areas. As its name implies, an overlay zone is placed on the zoning map over an existing zoning district(s). The overlay zone modifies, eliminates, or adds regulations to the base zoning designation.

City of Aurora Zoning Ordinance: Section 10.8 Overlay Districts

http://www.aurora-il.org/documents/planning/ordinance/appendix_a_zoning.pdf

The City of Aurora’s zoning ordinance provides for the creation of overlay districts and one such example is the Foxwalk Overlay District. An overlay district is one of the zoning approaches available for communities interested in supporting Corridor corridors. According to the City’s current ordinance, *“The purpose of an overlay districts is to promote the City of Aurora’s stated goals and objectives for certain definable areas within its jurisdiction by imposing special regulations over, and providing flexibility within, existing zoning classifications for those areas of the city with unique land use and*

environmental characteristics that may not be adequately addressed under any of the zoning district classifications having theretofore been adopted by the city.” (City of Aurora Zoning Ordinance Section 10.8-1)

City of Blue Island TOD Zoning Ordinance (2012)

<http://www.blueisland.org/zoning/>

The City of Blue Island adopted an Uptown-Transit Oriented Development (U-TOD) district in 2012. The U-TOD Zoning District is intended to provide for transit-supportive land use that promotes commercial, cultural, institutional, governmental, and residential uses in a compact pedestrian oriented design. The creation of the ordinance was supported by a grant from the Regional Transportation Agency (RTA) and by working with Teska Associates and Ginkgo Planning.

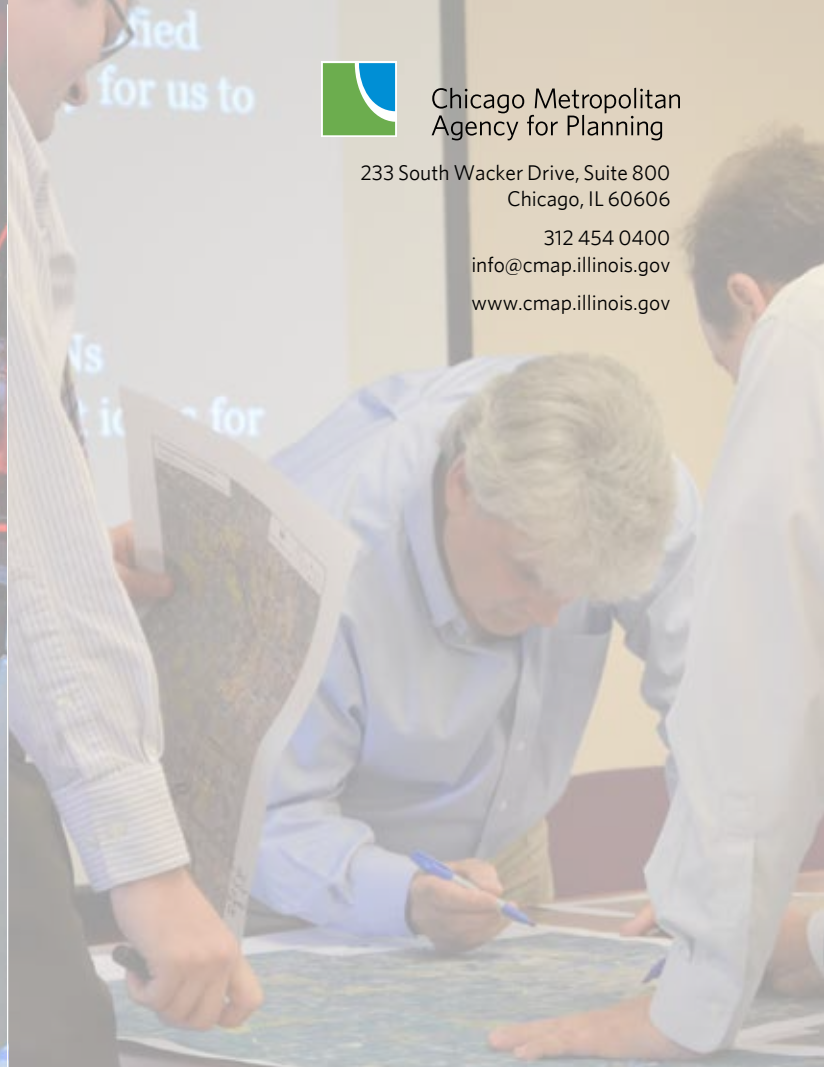
U.S. Environmental Protection Agency (EPA) Smart Growth Development

<http://www.epa.gov/dced/codeexamples.htm>

The EPA compiled a set of best-practice examples of adopted codes and guidelines from around the U.S. that support smart growth. As they state, their list is not exhaustive, but rather is a sampling of worthy, smart growth-supportive codes that could be used as models for communities trying to make similar updates to their zoning. The examples are grouped into six categories:

- 1 Unified Development Code** — a single document that includes all development-related regulations, including zoning and subdivision regulation.
- 2 Form-Based Code/SmartCode** — a code that outlines a specific urban form rather than zoning by use.
- 3 Transit-Oriented Development** — moderate- to high-density, mixed-use neighborhoods concentrated at transit stops and designed to maximize access to and use of public transportation.
- 4 Design Guidelines** — a set of standards that aims to maintain a certain level of quality and architectural or historic character.
- 5 Street Design Standards** — guidelines and standards related to travel-lane width, bicycle lanes, on-street parking, medians, sidewalks, landscaping, lighting, crosswalks, etc.
- 6 Zoning Overlay** — a set of zoning ordinances, optional or required, specifying land use and/or design standards for a designated portion of the underlying zoning within a defined district.¹

¹<http://www.epa.gov/dced/codeexamples.htm>. The U.S. Environmental Protection Agency Smart Growth Development code examples.



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