

# TRANSPORTATION FACTS

About the northeastern Illinois region from the  
Chicago Area Transportation Study

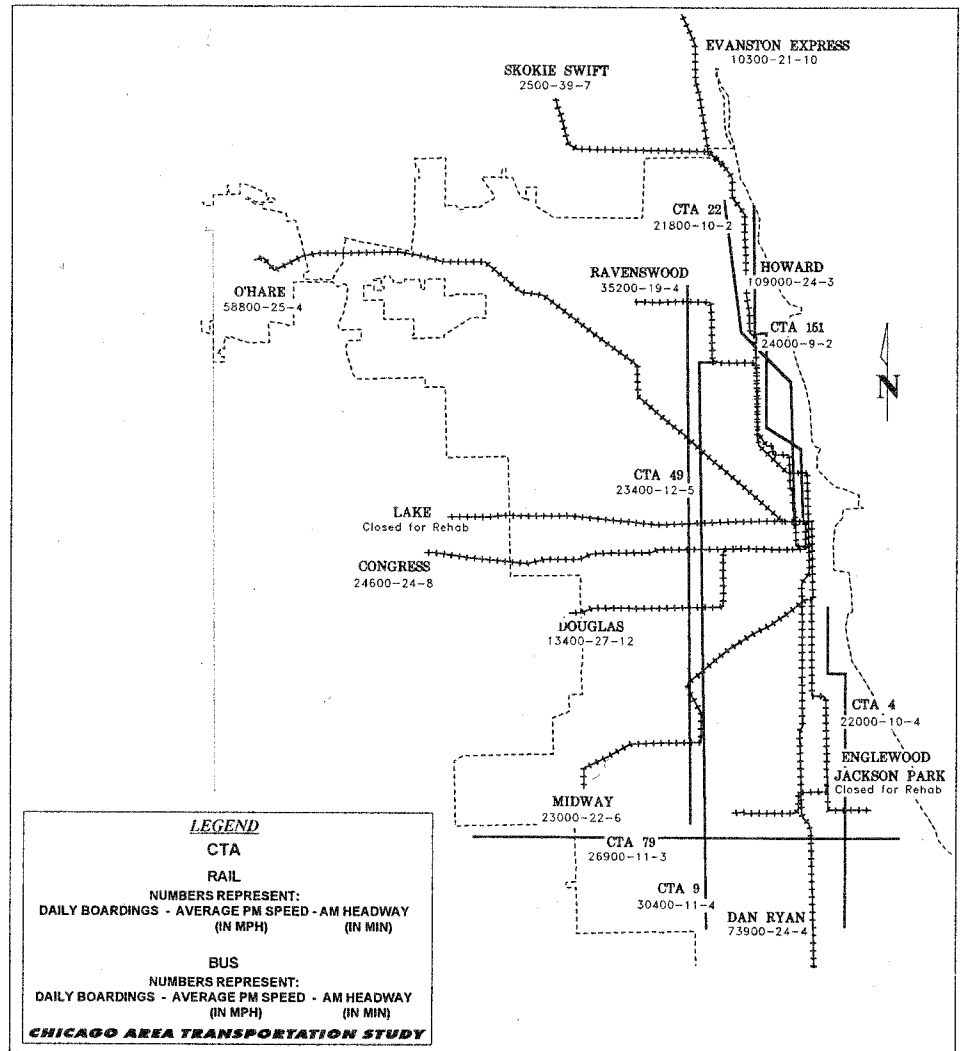
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## CURRENT STATE OF THE CHICAGO AREA TRANSPORTATION SYSTEM

The transportation system in north-eastern Illinois is a complex network of various modes of travel. Three of its main components are highways, rail and bus transit over which goods and people continually move throughout the region and across its borders. In this issue of Transportation Facts, the current operating state of the regional bus/rail transit and expressway/tollway systems is described.

Recently, operational and volume data for bus/rail passenger routes and expressways and tollways were obtained and analyzed by the Chicago Area Transportation Study (CATS) staff and presented to the highway and transit working group of the Regional Transportation Plan Committee. The Chicago Transit Authority (CTA) bus/rail data consist of daily boardings, speeds and headways. For the Metra routes, daily boardings, express train speeds and arrival/departure intervals are presented. PACE suburban bus data contain daily boardings, speeds and headways. Finally, the highway information consists of Average Daily Traffic (ADT) and speeds.

### EXHIBIT 1 CTA RAPID TRANSIT AND BUS ROUTES



Finally, the highway information consists of Average Daily Traffic

Data for this report came from many sources and were not the results of any particular study. There may be a year or two variation in the dates in which certain information was collected or minor differences in methodology where data from two or more sources were combined.

## CTA Rapid Transit and Bus

CTA ridership and operational information for all currently operating CTA rapid transit lines and the six highest ridership bus routes is shown on the map in Exhibit 1 and in the tables in Exhibits 2 and 3. Note that the Green Line rapid transit service (Lake Street, Englewood and Jackson Park routes) was closed for rehabilitation when this information was collected. All ridership and operational data were taken from "CTA Bus and Rail Systems Operating Facts, Fall/Winter 1994-95", published in March, 1995.

### EXHIBIT 2

#### CTA RAPID TRANSIT RIDERSHIP AND SERVICE DATA

Route	Purple	Yellow	Red		Brown
Route Name	Evanston Express*	Skokie Swift	Howard	Dan Ryan	Ravenswood*
Average Weekday Ridership	10,300	2,500	109,000	73,900	35,200
Average p.m. Peak Speed (MPH)	21	39	24	24	19
AM Peak Headway (Min)	10	7	3	4	4

Route	Blue			Orange	Misc.
Route Name	O'Hare	Congress	Douglas	Midway*	Loop
Average Weekday Ridership	58,800	24,600	13,400	23,000	37,500
Average p.m. Peak Speed (MPH)	25	24	27	22	----
AM Peak Headway (Min)	4	8	12	6	----

\* These lines all have Loop stations which are listed separately under Misc.

### EXHIBIT 3

#### CTA BUS RIDERSHIP AND SERVICE DATA

Route Name	Cottage Grove	Ashland Ave.	Clark St.	Western Ave.	79th St.	Sheridan Rd.
Route Number	4	9	22	49	79	151
Average Weekday Ridership	22,000	30,400	21,800	23,400	26,900	24,000
Average p.m. Peak Speed (MPH)	10	11	10	12	11	9
AM Peak Headway (Min)	4	4	2	5	3	2

Sources : Chicago Transit Authority Bus and Rail Systems Operating Facts, Fall/Winter - 1994/95 (CTA, 1995)  
CTA Bus and Rail Route Performance - Period 4 (CTA, 1994)

#### The measures appearing in Exhibits 2 and 3 are defined below:

##### Average Weekday Ridership

Total weekday boardings based on turnstile and farebox data from the fall of 1994.

##### Average p.m. Peak Speed

Calculated using the published weekday p.m. rush round trip times and route lengths from the Fall of 1994.

##### Average a.m. Peak Headway

Taken directly from the fall 1994 published data.

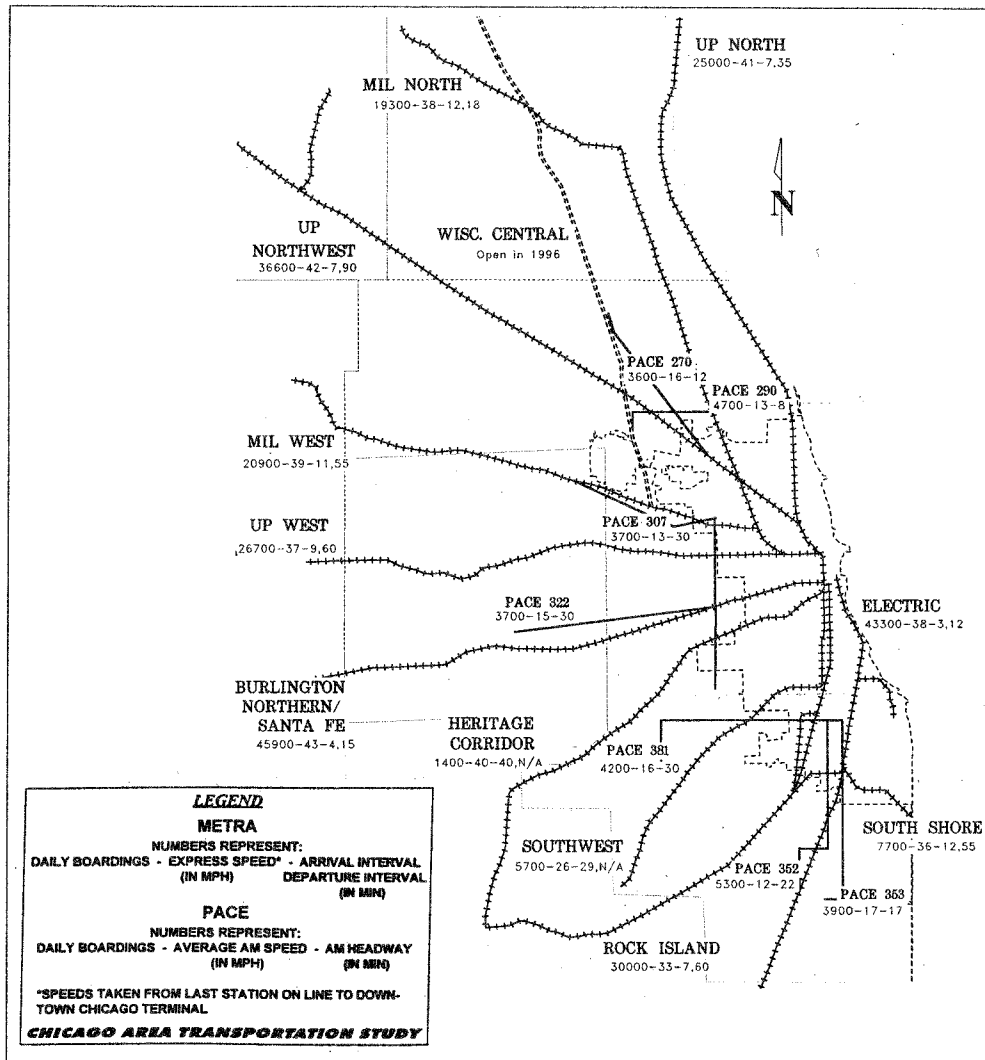
Three CTA rapid transit data items are presented: daily boardings, average p.m. speed (mph) and a.m. headways (minutes). The information is presented by line and route. Keep in mind that the Green Line routes are temporarily shut down for reconstruction.

Average p.m. peak speeds on the rapid transit routes range from 19 to 39 miles per hour. Contrast this with the six highest volume CTA bus routes profiled in this report. Average p.m. peak speeds on these bus routes range from 9 to 12 miles per hour. These bus routes carry between 22,000 and 30,400 riders per day which is more than some of the rapid transit lines. Transfers to and from rapid transit probably contribute to the popularity of these bus routes.

## Metra Commuter Rail

Metra ridership and operational information is shown on the map in Exhibit 4 and in the tables in Exhibit 5. Ridership data are derived from a Metra report, "Commuter Rail System Station Boarding/Alighting Count Summary Results", published in February 1994. Operational data were based on the most recent schedules for each Metra commuter rail line.

EXHIBIT 4  
**METRA COMMUTER RAIL AND PACE BUS ROUTES**



### The measures appearing in the Exhibit 5 are defined below:

#### Average Weekday Boardings

Total of inbound and outbound weekday boardings, based on one day counts in the fall of 1993.

#### AM Peak Speed (Local)

One local service train originating at the end of the line in the peak hour was selected and its average travel speed calculated based on its scheduled operations.

#### AM Peak Speed (Express)

The same as the local measure but for a representative express train.

#### AM Peak Downtown Arrival Interval

This is the average arrival interval during the peak a.m. hour for trains at the downtown terminal. If 15 trains arrive during that hour, the interval would be one train every four minutes.

#### AM Peak Downtown Departure Interval

This is the same as the previous measure but for a.m. outbound service.

EXHIBIT 5

**METRA RIDERSHIP AND SERVICE DATA**

Line	Burlington Northern/Santa Fe	Union Pacific			South Shore	Electric Line
		North	Northwest	West		
Average Weekday Boardings	45,900	25,000	36,600	26,700	7,700	43,300
Average a.m. Peak Speed (MPH, Local, Inbound)	29	32	36	31	32	22
Average a.m. Peak Speed (MPH, Express, Inbound)	43	41	42	37	36	27
AM Peak Downtown Arrival Interval (Min)	4	7	7	9	12	3
AM Peak Downtown Departure Interval (Min)	15	35	90	60	55	12
Times Used for a.m. Arrival/Departure Intervals	7:00-8:00	8:00-9:00	8:00-9:00	7:00-8:00	7:00-8:00	7:00-8:00
Train Numbers Used for Average a.m. Peak Speed (Local/Express)	1200/1210	330/322	636/630	10/32	10/108	100/700

Line	Heritage Corridor	Milwaukee District		South West	Rock Island
		North	West		
Average Weekday Boardings	1,400	19,300	20,900	5,700	30,000
Average a.m. Peak Speed (MPH, Local, Inbound)	40	35	32	26	28
Average a.m. Peak Speed (MPH, Express, Inbound)	N/A	38	39	N/A	33
AM Peak Downtown Arrival Interval (Min)	40	12	11	29	7
AM Peak Downtown Departure Interval (Min)	N/A	18	55	N/A	60
Times Used for a.m. Arrival/Departure Intervals	7:30-8:30	8:00-9:00	7:00-8:00	7:00-8:00	8:00-9:00
Train Numbers Used for Average a.m. Peak Speed (Local/Express)	16	2102/2116	2202/2116	2	506/414

*Sources:* Commuter Rail System Station Boarding/Alighting Count Summary Results - Fall, 1993 (February 1994, Metra) Current Metra schedules

The data show that Metra is now carrying about 260,000 riders per day. Ridership has been slowly climbing over the last several years since it plummeted in 1981 after a series of fare increases.

Local and express train speeds are presented for Metra lines, where applicable. The Burlington Northern/Santa Fe Line has the greatest difference between express and local train speeds, 14 miles per hour.

For each line, the a.m. peak hour downtown arrival interval is shown and it follows that the high volume lines have the most arrivals per hour. The Electric Line and the BN/SF have trains arriving every three and four minutes respectively. Also shown are the a.m. peak hour downtown departure intervals. Outbound a.m. peak period trains serve reverse commuters and the same two lines, with the addition of the Milwaukee Road North Line, have the most frequent outbound service at this time of day.

***Pace Suburban Bus***

Pace suburban bus ridership data were published by Pace in its "Bus Route Descriptions" report in March, 1995. For presentation purposes the seven highest ridership routes were selected. The operational and service data were taken from the most recent schedules. The information is shown on the map in Exhibit 4 and in the table in Exhibit 6.

***The measures appearing in the exhibits are defined below:***

- Average Weekday Ridership* Annual average weekday ridership for 1994.
- Average a.m. Peak Speed* Estimated using the most recent published schedules.
- Average a.m. Peak Headway* Estimated using the most recent published schedules.

EXHIBIT 6

**PACE RIDERSHIP AND SERVICE DATA**

Route Name	Milwaukee Ave.	Touhy Ave.	Harlem Ave.	Cermak-22nd	Halsted St.	95th-Riverdale	95th St.
Route Number	270	290	307	322	352	353	381
Average Weekday Ridership	3,600	4,700	3,700	3,700	5,300	3,900	4,200
Average p.m. Peak Speed (MPH)	16	13	13	15	12	17	16
AM Peak Headway (Min)	12	8	30	30	22	17	30

Sources : Bus Route Descriptions (1995, Pace) and the most recent Pace bus schedules (August 1995).

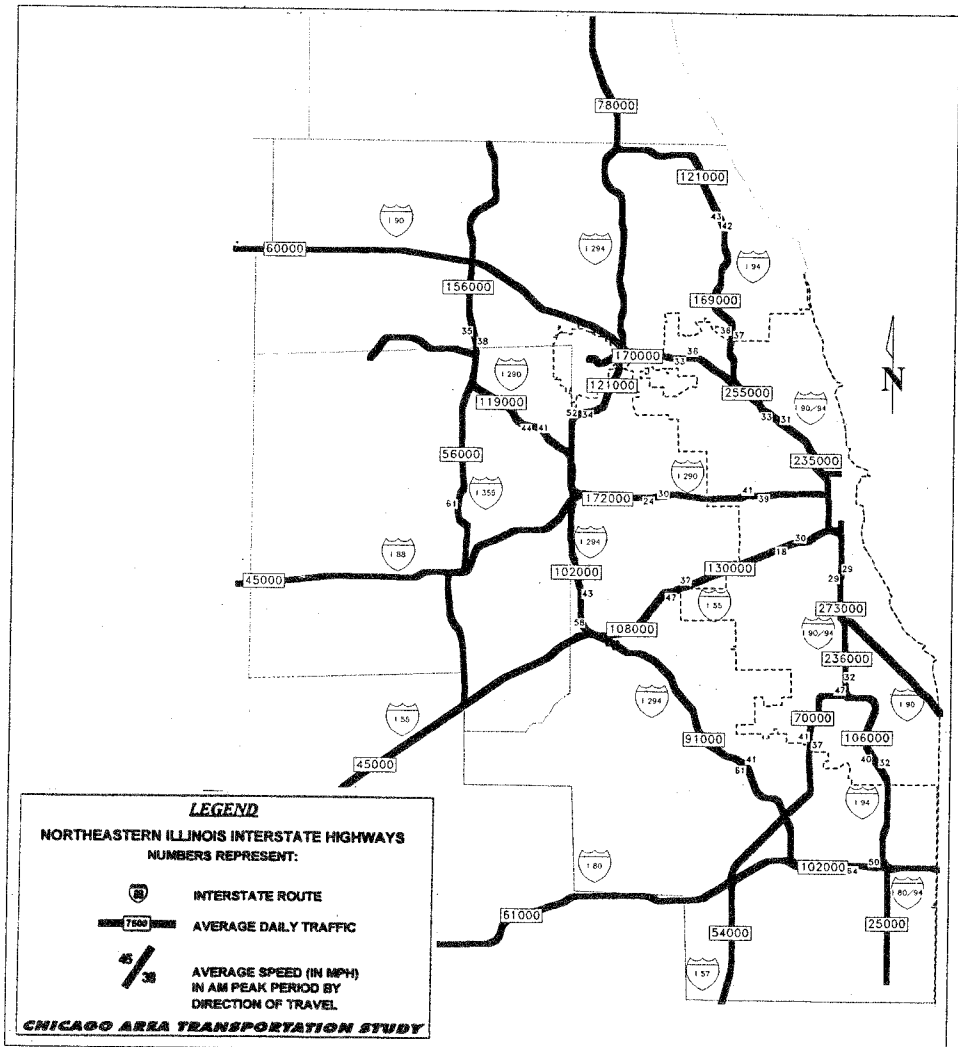
The seven Pace bus routes with the highest ridership are profiled in Exhibit 6. Reflecting the lower population densities in the suburbs and outlying areas of the city, these Pace bus routes carry an average of 4150 riders per day compared with an average of 24,750 on the six highest ridership routes on the CTA. It follows that a.m. peak hour headways on the suburban buses are greater, ranging from 8 to 30 minutes versus a range of 2 to 5 minutes for the CTA. However, the Pace routes have faster average speeds than the CTA routes. Like the CTA bus routes profiled in this report these Pace routes also intersect with rapid transit and commuter rail lines.

EXHIBIT 7

**NORTHEASTERN ILLINOIS EXPRESSWAYS AND TOLLWAYS**

**Expressway/  
Tollway System**

Northeastern Illinois expressway/tollway information is displayed on the map in Exhibit 7 and in the tables in Exhibit 8. Traffic and speed data are shown. Daily traffic data were taken from the CATS 1990 report "Average Daily Traffic on Northeastern Illinois Expressways". Speed data for non-tollway routes are averages for the period of November 1993 to November 1994 as collected by the Traffic Systems Center of the Illinois Department of Transportation (IDOT) and compiled by CATS. The Tri-State Tollway speeds were collected by CATS in the summer of 1987. (It must be noted that while the IDOT data are continuously collected 24 hours per day, the Tri-State Tollway speeds were obtained using the "floating car" method making only five passes per direction of travel in the a.m. and p.m. peak time periods). Travel times and speeds on the North-South Tollway (I-355) were collected daily during the fall of 1991.



**The measures appearing in the exhibits are defined below:**

*1990 Daily Traffic*

The volumes listed are approximate ADT averages over the length of the segments.

*Average Speeds*

These speeds, in miles per hour, are averages over the length of the segment and over the 12 month data collection period.

The traffic volume data show that the Kennedy/Dan Ryan Expressway (I-90/94) corridor, passing through the city of Chicago between Montrose Ave. and 67th St., contains the highest ADT's in the region. ADT's are consistently in excess of 200,000 vehicles per day and no other highways have such high traffic volumes. Several other expressways funnel traffic onto and off of I-90/94 which passes through the northwest side, the Central Business District and the south side of the city of Chicago.

Average speed data on the expressway/tollway system shows that the fastest a.m. and p.m. speeds are on the less heavily traveled roads, I-294 and I-355. These roads had four segments where the average a.m. peak speeds are over 55 miles per hour (mph), while in the a.m. peak, five segments of I-294 had speeds that were in excess of 55 mph. Average speeds on the highest volume stretches of I-94 are considerably slower.

EXHIBIT 8

**EXPRESSWAY/TOLLWAY VOLUME AND SPEED DATA**

Expressway/Tollway	Location of Segment	Average Speed (MPH)				1990 Daily Traffic
		AM Inbound	AM Outbound	PM Inbound	PM Outbound	
Eisenhower Expressway (I-290)	NW Toll to Thorndale	35	38	28	40	156,000
	Thorndale to Wolf	44	41	39	41	119,000
	Wolf to Harlem	24	30	25	24	172,000
	Harlem to Dan Ryan	39	41	49	22	177,000

Dan Ryan Expressway (I-90/94)	95th to 65th (Total)	SPEED DATA NOT AVAILABLE				236,000
	95th to Van Buren (Express)	32	47	40	24	N/A
	65th to 29th (Total)	SPEED DATA NOT AVAILABLE				273,000
	65th to 29th (Local)	29	29	33	14	N/A
	29th to Van Buren (Total)	SPEED DATA NOT AVAILABLE				254,000

Kennedy Expressway (I-90/94)	O'Hare to Montrose	33	36	34	35	170,000
	Montrose to Ohio (Local)	33	31	30	25	210,000
	Montrose to Ohio (Express)	34	N/A	N/A	25	45,000
	Ohio to Van Buren	SPEED DATA NOT AVAILABLE				235,000

\*The Kennedy Expressway was under construction when the data were obtained.

Continued on page 7

**EXPRESSWAY/TOLLWAY VOLUME AND SPEED DATA**

Expressway /Tollway	Location of Segment	Average Speed (MPH)				1990 Daily Traffic
		AM Inbound	AM Outbound	PM Inbound	PM Outbound	
Stevenson Expressway (I-55)	Tri-State to Harlem	47	37	55	33	108,000
	Harlem to Dan Ryan	18	30	47	24	130,000
Edens Expressway (I-94)	Lake Cook to Dempster	43	42	34	43	121,000
	Dempster to Montrose	36	37	34	41	169,000
Calumet Expressway (I-94, IL-394)	South of Kingery to 97th	32	40	40	40	106,000
Interstate 57 (I-57)	South of Kingery to 97th	37	41	44	43	70,000

Sources : IDOT/TSC data as compiled by CATS for 1994

Average Daily Traffic on Northeastern Illinois Expressways (CATS, 1990)

Expressway / Tollway	Location of Segment	Average Speed (MPH)				1990 Daily Traffic
		AM Northbound	PM Northbound	AM Southbound	PM Southbound	
Tri-State Tollway (I-80/I-94, I-294)	IL/IN State Line to 163rd	50	64	60	63	102,000
	163rd to 83rd	41	61	61	57	91,000
	83rd to Cermak	43	58	59	36	102,000
	Cermak to Touhy	34	52	50	44	121,000
North-South Tollway (I-355)		AM Southbound		PM Northbound		
	North to 75th	61		45		56,000

Sources : A Comparison of Tri-State Tollway Travel Times Before and During Dan Ryan Reconstruction (CATS, 1988)

Average Daily Traffic on Northeastern Illinois Expressways (CATS, 1990)

Unpublished I-355 weekday travel time data collected by IDOT staff (1991)

## ***Did You Know?***

I-90/94 in Chicago, with ADT's consistently over 200,000, is paralleled by two CTA rapid transit lines that carry over 110,000 riders per day and three Metra commuter rail lines that carry over 72,000 riders per day.

A total of 1,800,460 daily transit trips are made via CTA bus (966,110), CTA rapid transit (436,750), Metra commuter rail (262,500) and Pace suburban bus (135,100).

The northeastern Illinois expressway/tollway system consists of approximately 840 directional route miles.

The regional transit system provides service on 7094 directional route miles via CTA bus (2,020), CTA rapid transit (319\*), Metra (1,004) and Pace (3,751).

*\* The rapid transit mileage figure includes the three routes that comprise the temporarily out-of-service Green Line.*