

**Section 8**  
**Improvement Strategies**

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# Improvement Strategies

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## 8.1 Streets and Highways

A list of roadway projects was identified as part of the development of the transportation plan. Many of the projects were identified through previous planning efforts and some of the projects were identified from multiple sources. The improvements selected are for roadways, limited access freeways, SRAs, expressways, and tollways with a regional significance. Local projects will be discussed in Chapter 10. The projects were evaluated to determine their effectiveness at reducing congestion. The below mentioned plans and documents are summarized in Appendix A.

The initial set of improvements is the committed projects. The Existing plus Committed (E+C) has been alluded to earlier in Chapter 7 of this report. The committed improvements include widening of Orchard Road and McLean Road. The 2030 RTP projects include widening of the freeways and tollways, the Prairie Parkway, and three proposed regional Fox River Bridge Crossings (Stearns, Long Meadow, and Oak/IL 56). These projects have regional significance and are supported by CATS. In addition, several local bridge locations have been identified.

Many of the CRIP projects from this plan were intersection type projects. Since the CRIP is a 10-year plan, these projects are considered to be near term needs. Additional projects were identified from the SRAs planning studies. These improvements are primarily on the state system or along the Randall Road/Orchard Road corridor. Additional planned projects were identified from prior studies along with arterial roadway improvements that would address future locations of congestion.

In conjunction with the major improvements, Kane County has incorporated a strategy of planning for a system of collector roads. The collector roads would serve a dual function of providing mobility and access, while the major arterial improvements would primarily enhance mobility. The benefit of providing an efficient and continuous collector road system would be to improve mobility on arterials by providing better access to abutting land uses and connectivity to the roadway network. In addition, the collector roads would afford an alternative route whenever an incident occurs or during a special event.

## 8.2 Public Transportation

Several recent studies addressing public transportation issues and programs have been completed in Kane County. Synopses of each document are presented in Appendix A. The public transportation proposals described below have been developed from the findings presented in these documents.

### 8.2.1 Commuter Rail Routes

Potential expansion of the commuter rail lines would provide service along existing Metra lines and a number of freight rail lines. The expansion of services would include the development on new stations with parking to accommodate commuters. Where the proposed route would operate along freight rail lines that are owned by a railroad, Metra would be required to establish operating agreements for commuter rail service.

### 8.2.2 Fixed Route Bus Service

Fixed route bus service in Kane County is provided by Pace. The routes are located within the county and also provide connections to neighboring collar counties and rail transit routes.

As indicated in the *Kane County Transit Opportunity Assessment Study*, the existing Pace fixed route bus service is essentially confined to areas of the county with a combined residential and employment density of 4,000 persons per square mile. The Pace criteria established to provide fixed route service also have the additional requirements of:

- Eight contiguous quarter-sections (2 square miles) having population and employment of at least 4,000 persons per square mile; and
- A 6-square-mile area with 75 percent of the quarter sections having a population and employment density of at least 4,000 persons per square mile.

Pace has also developed *Vision 2020*, which represents a blueprint for future suburban mobility. The plan recommends express routes on major roadways that will connect with smaller community-based services at regional and community transportation centers. It calls for a network of new services, infrastructure improvements, and a decrease in travel times.

By providing fast and convenient transit services throughout Pace's suburban service area, *Vision 2020* is expected to substantially improve mobility for all segments of the suburban population, assist communities in their pursuit of improved quality of life, and promote regional smart growth goals.

### 8.2.3 Paratransit

Paratransit provides transportation alternatives to the elderly and people with disabilities enhancing mobility for populations with special needs. Services can include Dial-A-Ride and Taxi subsidy programs and should be promoted through a joint effort among the County, municipalities, and transit agencies.

### 8.2.4 Supporting Transit Options

The Kane County Transit Opportunity Assessment Study also describes a wide range of options to support a comprehensive system of transit opportunities. Some of the recommendations are described below.

**Transportation Hubs.** Transportation Hubs would be an extension of the existing transportation facilities in downtown Elgin and Aurora. They would be comprehensive and full service centers that provide a full range of transportation opportunities. The Elgin and Aurora hubs require enhancement to include a system to support all forms of transit. It was

recommended that a plan be created to use the Geneva Metra Station as a Transportation Hub. There was also potential for a Transportation Hub in Huntley given its location on the Milwaukee West Line, its proximity to I-90, and that it is currently experiencing high population and employment growth.

**Transportation Centers.** Transportation centers would be smaller facilities with more limited transportation service. They would be used as connections between park'n'ride lots in smaller outlying local communities and Transportation Hubs. Transportation Centers were recommended at the existing Metra rail stations at Big Timber and National Street and the proposed Metra rail stations in Elburn, LaFox, Sugar Grove, Montgomery, Hampshire, South Elgin, St. Charles and one or two strategic locations in the Upper Fox Transit Area.

**Park'n'Ride Lots.** The Transit Opportunity Assessment Study recommended planning and development of a ubiquitous system of park'n'ride lots throughout Kane County. The RTP also recommended additional park'n'ride facilities to encourage increased transit use. The County was advised to work directly with CATS, Pace and the local communities to establish a system of potential park'n'ride users and locations.

**HOV Lanes and Bus Rapid Transit.** The Transit Opportunity Assessment and the Pace Vision 2020 both recommended the planning and development of HOV lanes and Bus Rapid Transit (BRT) within Kane County. BRT are buses that travel on an exclusive guide way and also can travel on roadways, similar to a typical bus. In some cases, right-of-way along existing or abandoned rail lines could be used for the BRT service.

### 8.2.5 Transit Supportive Land Planning

The RTP recommended that special emphasis be placed on the land-use principles of TOD. TOD is the design and development of land around transit stations and bus stops that encourage people to use public transportation. Its purpose is to build active and convenient communities that link people to their jobs as well as to commercial, retail and entertainment centers, in addition to reducing the need for multiple, longer-distance trips. The RTP recommended that TOD be pursued in all major capital projects and new transit service.

## 8.3 Transportation Demand Management

The process of transportation management follows a similar course as the laws of supply and demand, which are applied in business management. TSM relates to improving the supply side of transportation through strategies such as building and widening roads or improving signal timing. TDM is directed at increasing the passenger capacity of the transportation system by reducing the number of vehicles on the roads, particularly during peak travel periods. This is accomplished through a variety of strategies aimed at influencing mode choice, frequency of trips, trip length, and route traveled.

The CATS 2030 RTP supports the ongoing development and implementation of the region's congestion management plan, including TDM. Examples of TDM strategies that would reduce the demand for peak-period single-occupant vehicle travel are:

- Parking Management
- HOV Parking

- Rideshare Programs
- Employer Tax Incentives
- Flextime
- Telecommute

The plan states:

*“These strategies are intended to better manage the demand placed on a fixed transportation supply. The strategies are aimed primarily at encouraging alternatives to traveling alone by auto with emphasis on more efficient travel planning with private vehicle use. The intended benefit is to contribute to reduced congestion and auto emissions. These strategies are typically voluntary in nature, and often rely on market-based or employer incentives to increase participation.”*

As indicated above, the success of any of these TDM strategies in reducing peak period traffic congestion will depend to a great extent on the level of employer participation or encouragement. Experience elsewhere has indicated that rideshare programs, for example, may reasonably be expected to reduce vehicle trips by from approximately 2 percent to 5 percent for a particular traffic generator, and given a moderate degree of outside support.

One form of TDM, which has been considered in the past in Kane County, is the TMA. This is an organization that provides a structure for developers, employers and public officials to cooperate in promoting alternatives to the single occupant vehicle.

The TMA of Lake County has successfully accommodated travelers along the busy, industrialized corridor at the border of Lake and Cook Counties. Along with fixed route bus service, the TMA operates 15 “shuttle bug” routes using smaller buses. The shuttle bugs provide service from selected Metra stations to and from approximately 33 companies located in the service corridor.

## 8.4 Transportation System Management

TSM is the concept of more efficiently using existing transportation systems by means other than large-scale construction. Just as TDM strategies are aimed at managing transportation *demand*, TSM strategies are directed at managing the transportation *system*. Some categories of actions that comprise TSM are:

- Physical improvements to roadways, intersections and interchanges such as lane or shoulder widening, channelization, grade separations, removal of restrictive segments that prevent full utilization of capacity
- Traffic control and surveillance systems (i.e. signal interconnects)
- Preferential or exclusive lanes for transit and/or HOVs
- Provisions for parking and loading

Existing TSM programs within Kane County include traffic signal interconnection, and the Tollway’s I-Pass electronic toll system.

## 8.5 Non-Motorized Transportation

Some communities and park districts within Kane County have developed bicycle and pedestrian plans. The broad objectives of the *Kane County Bicycle and Pedestrian Plan* are to collect all previous bicycle and pedestrian planning studies, comprehensively identify all existing, proposed, and conceptual bikeways, and strategically plan for bikeway projects to create a countywide network. This network will improve public safety, encourage alternative modes of transportation, and increase recreational opportunities in the county.

The recommended plan recognizes that no single type of bicycle facility accommodates all types of bicyclists and therefore recommends design standards for various types of facilities. The plan also contains design recommendations for pedestrian facilities. It also investigates various design options to reduce conflict and improve safety both at intersections and mid-block crossing locations.

The plan proposes two strategies. The first strategy is the construction of physical improvements to the bikeway and sidewalk network to connect people with popular destinations and origins. The second strategy is to have municipalities adopt policies and programs to encourage the development of bicycle and pedestrian facilities during roadway design and construction and to encourage bikeway connectivity to the existing trail system. The objectives of physical improvements are to link bicycle and pedestrian destinations, increase pedestrian and bicyclist safety, improve trail network connectivity, support multimodal transportation, eliminate barriers that prevent bicycle trips, and develop future bikeway corridors.

Proposals for new or improved bicycle facilities in Kane County encompass regional trails, local trails, conceptual trails and transit links. The plan proposes expansion of regional trails or creation of new regional trails.

There are approximately 111 miles of planned bikeway facilities in Kane County. Most of the local trails are within parks or link major pedestrian destinations, such as schools, parks, Metra commuter rail stations, or recreation facilities. Another major function of local trails is to link neighborhoods to regional paths.

Conceptual paths are trails that, presently, local governments have insufficient funds to construct. Kane County park district and municipal officials have drawn approximately 301 miles of conceptual trails, or over three times the existing local trails or planned trails.

The expanding bikeway network allows the use of bicycles as a safe transportation option. Also, a safer environment with connections between origins and destinations encourages walking for short errands and improves access to transit. Bicycles and walking are considered integral parts of the transportation system and can be used in place of automobiles to meet air quality improvement goals. Bicycle and pedestrian facilities have many positive effects on the community; they are environmentally sound, reduce congestion and associated air pollution, and provide health benefits.

## 8.6 Summary

Overall the proposed transportation enhancements for Kane County include a comprehensive suite of improvements including roads, transit, non-motorized travel, and alternative strategies including TDM and TSM. The majority of travel, in particular commuter travel, is on the roadway system. The proposed improvements included widening of arterials and the tollways, creation of new corridors, realignments, and the promoting of a local collector road system. Transit improvements are also planned for Kane County to expand and improve the services provided by Metra and Pace. Non-motorized travel is planned to be expanded by connecting existing trails, improve the bicycle level of service (BLOS) for on-street trails, and develop conceptual trails. To support the transportation system alternative strategies are also explored to include the development and promotion of TDM and TSM practices.