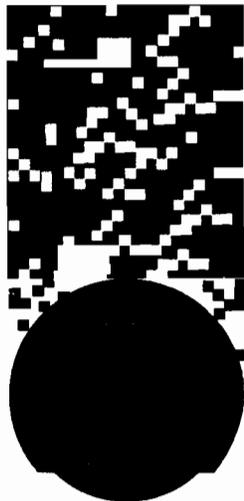


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# ***Strategic Regional Arterial U.S. 14***

***from Illinois-Wisconsin state line  
to Palatine Road***



**Operation  
GreenLight**

**Illinois Department of Transportation**

**April 1993**

## **Foreword**

U.S. Route 14 is a Strategic Regional Arterial (SRA) from Palatine Road to the Illinois-Wisconsin state line. CH2M HILL, Inc. has prepared this SRA report for U.S. Route 14 for the Illinois Department of Transportation and the Strategic Regional Arterial Subcommittee of the Work Program Committee of the Chicago Area Transportation Study.

As a SRA route, U.S. Route 14 is intended to function as part of a regional arterial system, carrying high volumes of long-distance traffic in conjunction with other SRA routes and the regional expressway and transit systems. This report is one element of a long-range plan for all routes in the SRA network. Together, the route studies constitute a comprehensive, coordinated plan for the entire SRA network.

This report includes a description of the SRA study objectives and process, a detailed exposition and analysis of the existing route conditions, recommendations for ultimate and basic improvements, and documentation of the public involvement process including citizen comments.

*U.S. 14 SRA*

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**Summary of  
Recommendations**

## **Summary of Recommendations**

The U.S. 14 Strategic Regional Arterial (SRA) route is considered in four segments (see Exhibit S-1 attached following this section). The following sections summarize recommendations for each route segment.

### **SRA Segment I: Wisconsin State Line to Bunker Hill Road—10.5 Miles**

- Wisconsin state line to Crowley Road, two through lanes in each direction separated by a 40-foot median, within 170 feet of right-of-way, requiring acquisition of 90 to 95 feet of additional right-of-way
- Crowley Road to Lindwall Road, U.S. 14 on new alignment, bypassing the town of Harvard for a distance of about 5.5 miles
- Lindwall Road to Bunker Hill Road, two through lanes in each direction separated by a 40-foot median, within 180 feet of right-of-way, requiring acquisition of 60 feet of additional right-of-way
- Geometric improvements to at-grade, stop-controlled intersections of Lindwall Road, Lembcke Road, and Bunker Hill Road

### **SRA Segment II: Bunker Hill Road to Ridgefield Road (North)— 13.5 Miles**

- South of Bunker Hill Road to Lake Shore Drive (in Woodstock), two through lanes in each direction separated by a 40-foot median, within 160 to 200 feet of right-of-way, requiring 100 feet of additional right-of-way north of Illinois 120 to Paulsen Road
- Geometric improvements and potential signalization to intersections with Illinois 120, Dean Street, and Lake Avenue

- Lake Shore Drive to Doty Road, two through lanes in each direction separated by a 40-foot median with a two-lane frontage road along the south side of U.S. 14, within 230 feet of right-of-way, requiring the acquisition of 164 feet of additional right-of-way
- Doty Road to Ridgefield Road (north), two lanes in each direction separated by a 40-foot median, within 170 feet of right-of-way, requiring the acquisition of about 100 feet of additional right-of-way
- Geometric improvements to intersections with Lake Shore Drive and Doty Road, with provision for signalization of the Lake Shore Drive and Doty Road intersections with U.S. 14

**SRA Segment III: Ridgefield Road (North) to Cuba Road—14 Miles**

- Ridgefield Road (north) to McHenry County College, two through lanes in each direction separated by a 40-foot median, within 170 feet of right-of-way, requiring acquisition of about 95 feet of additional right-of-way
- Ridgefield Road (north) to Ridgefield Road (south), two through lanes in each direction separated by an 18-foot raised median, with open drainage and right-of-way of 140 feet, requiring acquisition of 80 feet of additional right-of-way, with the provision for a new signal at Ridgefield Road (north)
- Ridgefield Road (south) to Crystal Lake Avenue, two through lanes in each direction separated by an 18-foot raised median, with closed drainage and right-of-way of 90 feet, requiring acquisition of 10 feet of additional right-of-way

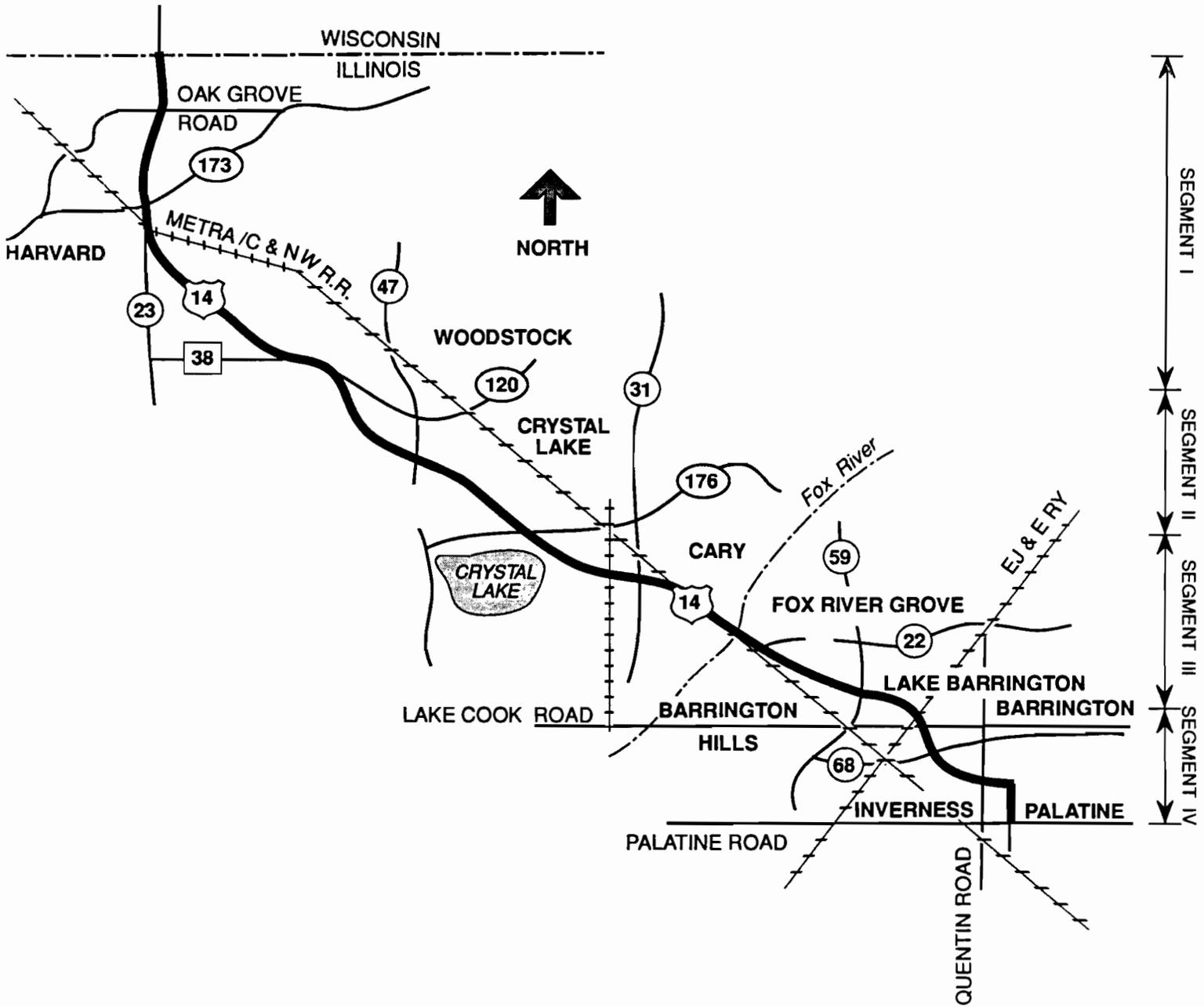
- Crystal Lake Road to Virginia Road, two through lanes in each direction separated by a 10- to 14-foot flush median, generally within existing right-of-way of 80 to 100 feet, including retention of parking along the east side of U.S. 14 between Dole Avenue and McHenry Avenue
- Virginia Road to Cog Street, two through lanes in each direction separated by a 16-foot mountable median, within 100 feet of right-of-way, requiring acquisition of 10 feet of additional right-of-way between Pingree Road and Cog Street
- Relocation and extension of the Ridgefield Road (south) intersection, channelization improvements to signalized intersections on U.S. 14 in Crystal Lake
- Development of access roads about ¼ mile north of U.S. 14 between Crystal Point Mall and Pingree Road, with provision for an additional signalized intersection 1,500 feet west of Pingree Road, and the potential for a new signal 1,550 feet east of Crystal Point Mall
- Through the interchange with Illinois 31, two through lanes in each direction with a 16-foot raised median, within existing right-of-way
- Sands Road to Silver Lakes Road, two through lanes in each direction with a 16-foot mountable median, within existing right-of-way of 90 to 120 feet
- Silver Lakes Road to Illinois 22, two 11-foot through lanes in each direction with an 11-foot flush median within existing right-of-way
- Geometric and channelization improvements to existing signalized intersections in Cary and Fox River Grove
- Signalization of U.S. 14 intersections with Doyle Road, School Drive, Sands Road, Cary-Algonquin Road, and the Jandus Road Cut-off

- Illinois 22 to Cuba Road, two through lanes in each direction separated by a 40-foot open median, with 10-foot outside shoulders and open drainage, within existing right-of-way of 200 feet
- Geometric and channelization improvements at Kelsey Road and Cuba Road intersections with U.S. 14, signalization of the U.S. 14 intersection with Cuba Road
- Closure and consolidation of median access openings between Illinois 22 and Cuba Road

#### **Segment IV: Cuba Road to Palatine Road—10 Miles**

- Cuba Road to west of Cumnor Avenue, two through lanes in each direction separated by a 40-foot open median, with 10-foot outside shoulders and open drainage, within 200 feet of existing right-of-way
- Cumnor Avenue to Hillside Road, two through lanes in each direction separated by a 12-foot flush median, with closed drainage, within 80 to 90 feet of right-of-way, requiring acquisition of 8 to 10 feet of additional right-of-way
- Hillside Road to Ela Road, two through lanes in each direction separated by an 8-foot raised median, with curb and gutter (i.e., no shoulders) and open drainage, within existing right-of-way of 80 feet
- Ela Road to east of Countryside Drive, two through lanes in each direction separated by an 8-foot raised median, with closed drainage, within 90 feet of right-of-way, requiring acquisition of 10 feet of additional right-of-way
- Countryside Drive to Palatine Road, two through lanes in each direction separated by a 12-foot flush median, within 90 feet of right-of-way, requiring acquisition of about 10 feet of additional right-of-way

- Consolidation of median openings and access driveways between Cuba Road and Western Avenue
- Geometric and channelization improvements to intersections with Main Street and Hillside Road, relocation of the intersection of Ela Road, reconfiguration and signalization of the intersection with Countryside Drive/Baldwin Road, and channelization improvements at the intersections of Quentin Road and Palatine Road



LOCATION MAP U.S. 14 (NORTHWEST HWY)

# Strategic Regional Arterial Study U.S. 14 (Northwest Highway)

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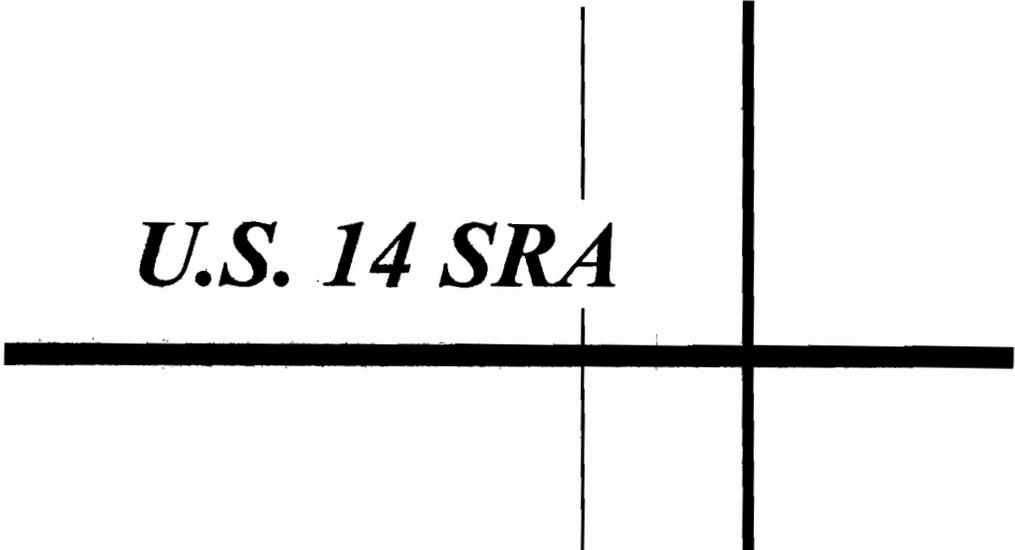
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*U.S. 14 SRA*



**Chapter I**

**Introduction**



## **Chapter I**

# **Introduction**

The 2010 Transportation System Development Plan adopted by the Chicago Area Transportation Study (CATS) and the Northeastern Illinois Planning Commission (NIPC) recognizes that not all long-distance highway travel can be handled by the expressway system. Realizing that the arterial system will have to carry some long-distance trips, the 2010 Plan designated a system of Strategic Regional Arterials (SRAs) to supplement the expressway system.

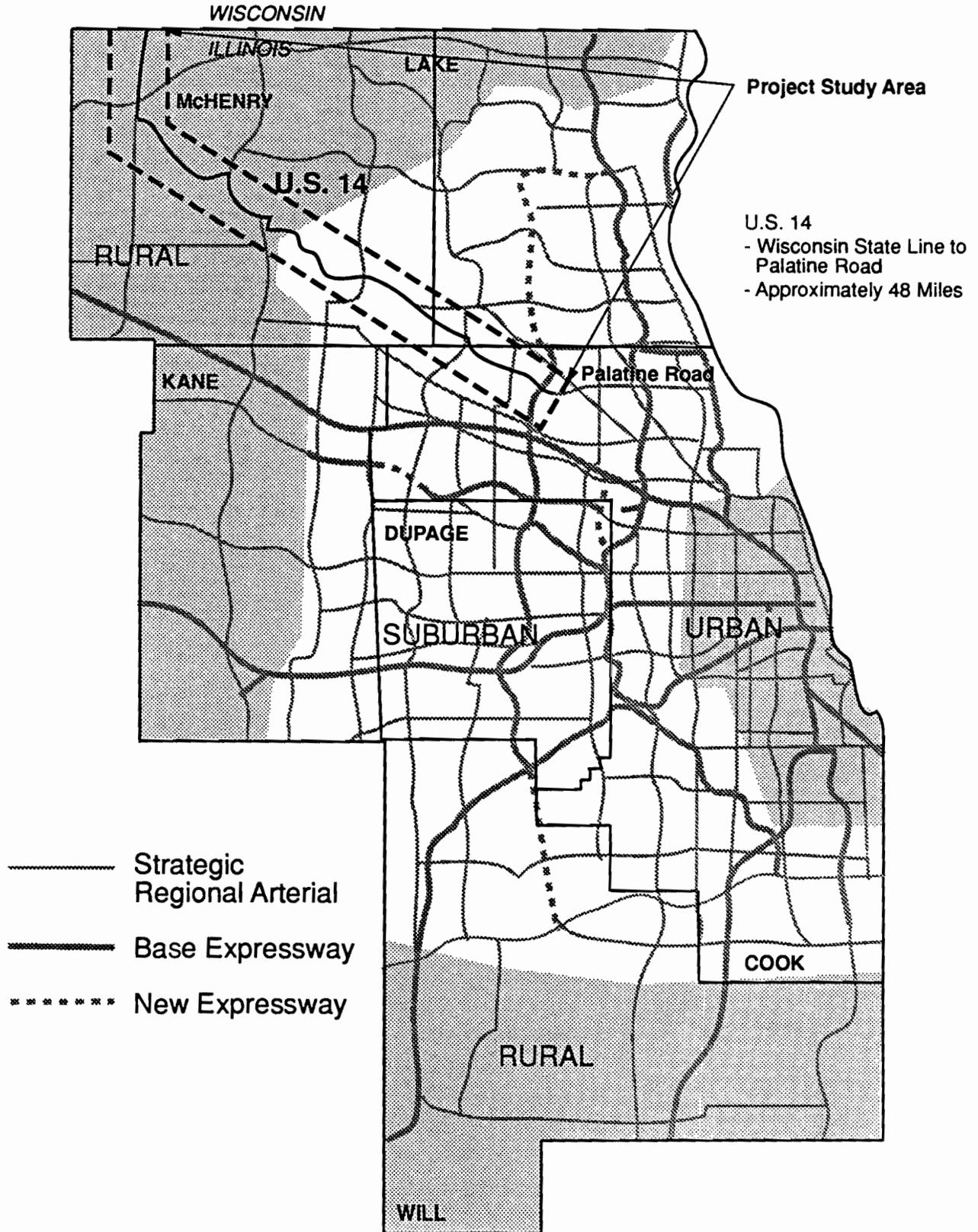
The SRA system is a 1,340-mile network of existing roads in the northeastern Illinois region. The SRAs create a network of 66 routes intended to serve as a second tier to the expressway system. The regional highway system, consisting of existing and planned expressways and SRAs, is shown on Exhibit 1.

Identification of routes that comprise the SRA system was determined based upon the projected levels of future travel demand within different parts of the region, ranging from about 3 miles apart in the more densely developed areas to about 8 miles apart in predominantly rural areas. Within this network, there are significant differences in the roadway environment that determine how various types of routes may function in the system. Three different types of SRA routes have been designated, corresponding to three differing roadway environments:

- Urban routes
- Suburban routes
- Rural routes

The designation of route types within the overall SRA system reflects the expected density of long-range development within the different portions of the region.

This report is concerned with U.S. Highway Route 14 (U.S. 14), also known as the Northwest Highway, which has been designated a SRA corridor from the Wisconsin-Illinois border southeast to Palatine Road (see Exhibit 1). The U.S. 14 SRA, which traverses McHenry, Lake, and Cook Counties, has been classified as a rural SRA



# ROUTE TYPES ON THE STRATEGIC REGIONAL ARTERIAL SYSTEM

from the Wisconsin state line to approximately Illinois 176 (Terra Cotta Road), and suburban from Terra Cotta Road to Palatine Road.

### **SRA Planning Objectives**

The SRA system is intended to accomplish certain specific objectives within the overall regional transportation system:

- Supplement an expanded expressway system by:
  - Improving access to expressways
  - Providing route alternatives to expressway travel
  - Providing a lower-cost substitute for expressways in some corridors
  
- Enhance public transportation and personal mobility by:
  - Improving access to rail transit stations
  - Improving operating conditions for buses and other transit vehicles
  - Identifying opportunities for future transit facilities
  - Maintaining pedestrian accessibility
  
- Accommodate commercial vehicle traffic by:
  - Improving structural clearances
  - Maximizing through traffic movement

## **SRA Design Concept**

A report on design concepts for the SRA system, prepared by Harland Bartholomew & Associates, Inc., was endorsed by the CATS Policy Committee. These concepts have been used as a guide, but not as a policy, in developing the improvement plan for U.S. 14 described in this report.

### **Organization of the Report**

This report presents a summary of the SRA planning study for the U.S. 14 corridor. It is organized as follows:

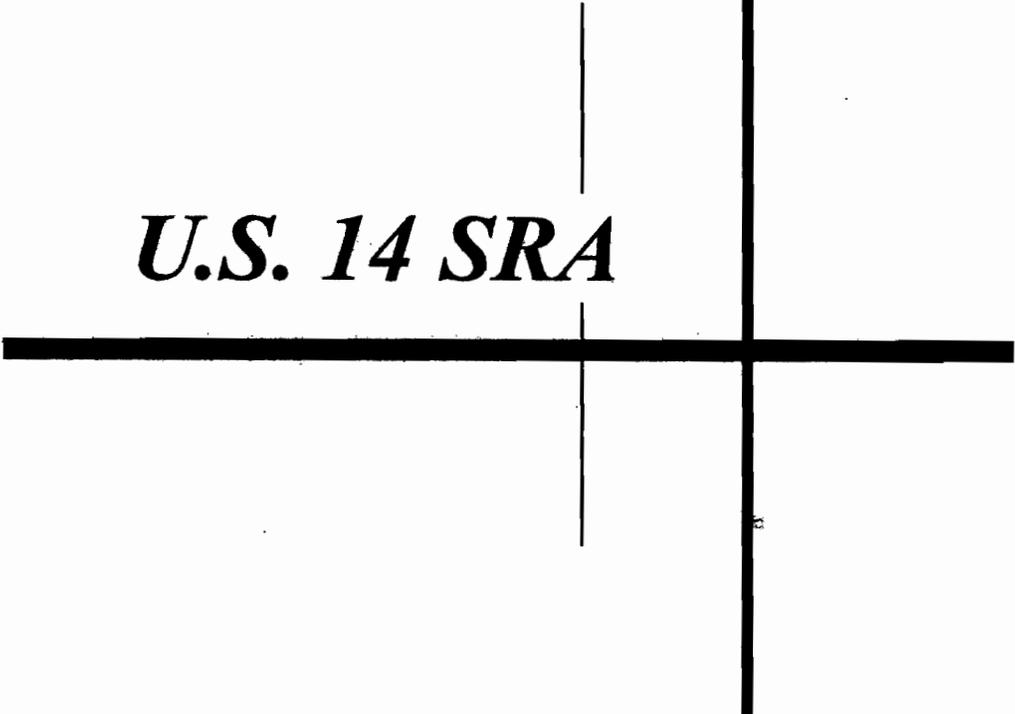
- **Existing Conditions (Chapter II)**
  - This section describes the existing physical characteristics, traffic operations, safety, transit operations, environmental concerns, and land uses in the U.S. 14 corridor.
  
- **Planning Framework (Chapter III)**
  - This section describes the framework within which the recommended SRA plan will be situated. The chapter includes a description of route design characteristics, design criteria, travel forecasts, future land use zoning and development, future roadway and transit planning, future areas of concern, and a summary of the roadway recommendations.
  
- **Recommended SRA Plan (Chapter IV)**
  - This section describes the recommended SRA corridor plan, including lane arrangements, right-of-way, an arterial operations and level of service summary, intersection capacity planning analysis, construction and right-of-way costs, and a prioritization of recommendations.

- **Public Involvement (Chapter V)**
  - This section documents the public involvement process undertaken for the SRA study of U.S. 14. It is divided into three major sections: Panel Advisory Meetings, Newsletters, and the Public Hearings. These three opportunities for participation allowed the general public or their elected officials to voice opinions concerning U.S. 14.

### **Timeframe**

The SRA study of the U.S. 14 corridor began in May 1991 and continued through April 1993. Conclusions and recommendations are based on conditions existing during the study period as well as known developments and plans by others that were current within this timeframe.

SRA planning for U.S. 14 involved the Illinois Department of Transportation (IDOT), CATS, and the various communities served and/or affected by the route. Input was received through a series of three meetings with two SRA Advisory Panels. Also, two Public Hearings were held, one each on October 7 and 14, 1992, to present the draft recommendations.



*U.S. 14 SRA*

**Chapter II**

**Existing Conditions**



## **Chapter II**

### **Existing Conditions**

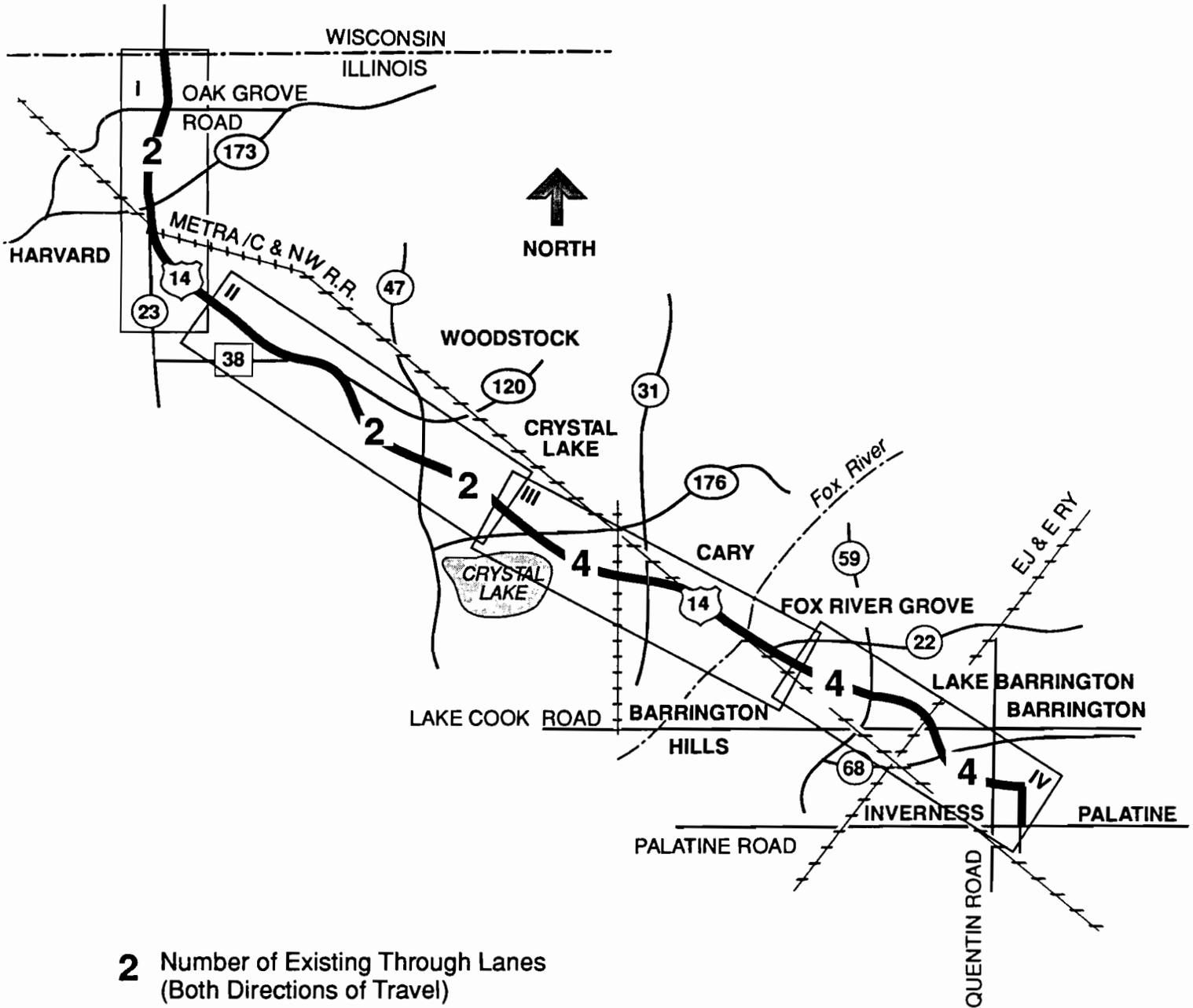
The U.S. 14 SRA corridor study area extends from the Wisconsin state line southeast to Palatine Road. The study corridor, approximately 48 miles long, passes through portions of McHenry, Lake, and Cook Counties. As shown in Exhibit 2, the corridor has been divided into four segments for a more detailed discussion:

- Segment I—Harvard (Wisconsin-Illinois border to south of Lembcke Road)
- Segment II—Woodstock (south of Lembcke Road to north of Ridgefield Road [north])
- Segment III—Crystal Lake (north of Ridgefield Road [north] to east of Cuba Road)
- Segment IV—Palatine (east of Cuba Road to Palatine Road)

U.S. 14 (commonly known as the Northwest Highway) serves as a principal north-south regional arterial between the northwest suburbs of Chicago and southeastern Wisconsin. The regional importance of U.S. 14 is emphasized by its classification as a U.S. Highway and because it intersects with eight other SRA-designated arterials: Illinois 173, Illinois 23, Illinois 47, Illinois 31, Illinois 22, Illinois 59 (Hough Street), Quentin Road, and the east leg of Palatine Road. In general, the corridor serves both long-distance, through trips as well as local, short trips within the cities and villages through which it travels.

Existing physical characteristics, and safety/accident, traffic, transit, and land use data for each of the segments defined above were collected from a number of sources (see Table 1). Additional information and data were gathered through field reconnaissance and investigations, and discussions with state, county, and village officials at the corridor Advisory Panel Meetings. The existing conditions as they relate to traffic operations and safety, transit, environmental concerns, and land use are discussed later in this chapter for each of the four U.S. 14 segments.

**U.S. 14  
WISCONSIN STATE LINE TO PALATINE ROAD  
(Approx. 48 Miles)**



**2** Number of Existing Through Lanes  
(Both Directions of Travel)

**IV** Segment Identification Number

**Table 1**  
**Sources of Data Describing Traffic and Transportation Characteristics of**  
**U.S. 14 in 1991/1992**

Item	Data Source
<b>Traffic Volumes</b> <ul style="list-style-type: none"> <li>• Average Daily Traffic</li> <li>• Intersection Turning</li> <li>• Movement Counts</li> <li>• Truck Classification</li> </ul>	<ul style="list-style-type: none"> <li>- 1988 Lake County Traffic Map, 1989 McHenry County Traffic Map, and 1986 Cook County Traffic Map</li> <li>- 1989 Traffic Map, McHenry County</li> <li>- Illinois Department of Transportation, Office of Planning &amp; Programming</li> </ul>
<b>Accidents</b>	<ul style="list-style-type: none"> <li>- Illinois Department of Transportation, Division of Traffic Safety, Collision Diagram Information (1987, 1988, January to October, 1989)</li> </ul>
<b>Transit</b> <ul style="list-style-type: none"> <li>• Routes</li> <li>• Ridership</li> </ul>	<ul style="list-style-type: none"> <li>- Regional Transportation Authority</li> <li>- Chicago Transit Authority</li> <li>- Metra</li> <li>- Pace</li> </ul>
<b>Traffic Control</b> <ul style="list-style-type: none"> <li>• Signalized Intersection Locations</li> <li>• Other Traffic Control</li> </ul>	<ul style="list-style-type: none"> <li>- Field Reconnaissance</li> </ul>
<b>Cross Section</b> <ul style="list-style-type: none"> <li>• Lane Widths and Arrangements</li> <li>• Shoulder Widths</li> <li>• Type of Selection</li> </ul>	<ul style="list-style-type: none"> <li>- As-Built Plans</li> <li>- Illinois Department of Transportation, Scope Report OPP-Planning Services Section</li> <li>- Reconnaissance</li> </ul>
<b>Right-of-Way</b>	<ul style="list-style-type: none"> <li>- Illinois Department of Transportation, Scope Report OPP-Planning Services Section</li> <li>- As-Built Plans, Sidwell Maps</li> </ul>
<b>Curb/Roadside Use</b> <ul style="list-style-type: none"> <li>• Parking</li> <li>• Bus and Loading Zones</li> </ul>	<ul style="list-style-type: none"> <li>- Field Reconnaissance</li> </ul>
<b>Structures</b>	<ul style="list-style-type: none"> <li>- Illinois Department of Transportation, Scope Report OPP-Planning Services Section</li> </ul>
<b>Other Features</b>	<ul style="list-style-type: none"> <li>- Illinois Department of Transportation, Scope Report OPP-Planning Services Section</li> </ul>

## Corridor Overview

In general, the U.S. 14 corridor is a combination of two- and four-lane roadway. The northern segments of U.S. 14 consist of a two-lane rural roadway with aggregate or paved shoulders, no median, and open-ditch drainage on the outside. A few exceptions do exist where four-lane sections are provided, such as in downtown Harvard and a small segment in the vicinity of Illinois 120. As U.S. 14 proceeds to the south, the cross section expands to include four lanes (two in each direction of travel) in more suburban areas. The cross section design becomes urban in nature with a variable flush median through most of the remaining segments of U.S. 14. A short segment does exist between Pingree Road and Illinois 22 where a four-lane rural cross section with a 40-foot open median is present. South of this rural section, the cross section once again becomes urban in design with a variable flush median. Although right-of-way varies along the corridor from 60 to 200 feet wide, right-of-way generally is between 80 and 100 feet.

North of Crystal Lake, U.S. 14 is free flow with no signalization, except in the town of Harvard. Through portions of the southern segments south of Crystal Lake, U.S. 14 has a number of signalized intersections, and grade-separated interchanges exist at Illinois 31 and Dundee Road (Illinois 68). On a regional basis, U.S. 14 is the major arterial serving this portion of Illinois. Because U.S. 14 is a diagonal arterial running from southeast to northwest, there are no comparable parallel facilities. I-90 and U.S. 12 (also a SRA), travel roughly parallel to U.S. 14, however, they are about 10 miles to the east and 10 miles to the west, respectively. A number of lower-class roads parallel U.S. 14 at a close distance, but none has the necessary continuity or functional classification to serve as an alternate route for the regional trips that U.S. 14 is intended to serve.

Table 2 summarizes existing traffic demand in terms of average daily traffic (ADT) counts from 1986 to 1989. For the section of U.S. 14 under study, ADT ranges from 4,200 to 30,300 vehicles per day (vpd). The lowest ADT, on the order of 4,000 vpd, is north of the town of Harvard. Through Harvard, ADT ranges between 7,500 and 13,000 vpd. South of Harvard to Crystal Lake, where U.S. 14 is rural in nature, ADT is between 7,000 to 13,000 vpd. The highest traffic volumes occur through major communities through which U.S. 14 passes—through Crystal Lake, a highly-developed

**Table 2**  
**Average Daily Traffic Volumes Along U.S. 14 in 1986/1988/1989**

Location	ADT (vpd)
State Line Road to Crowley Road	4,100 - 4,200
Crowley Road to Illinois 173	7,800
Illinois 173 to Illinois 23	9,400 - 11,000
Illinois 23 to Illinois 120	6,200 - 7,500
Illinois 120 to Illinois 47	6,400 - 7,600
Illinois 47 to Lake Street	5,400
Lake Street to Illinois 176	12,300 - 17,000
Illinois 176 to McHenry Avenue	18,100
McHenry Avenue to Main Street (Crystal Lake)	23,100
Main Street (Crystal Lake) to Illinois 31	19,300 - 21,000
Illinois 31 to Three Oaks Road	15,100 - 18,800
Three Oaks Road to Cary Road	17,000
Cary Road to Main Street (Cary)	19,000
Main Street (Cary) to Lincoln Avenue	25,500
Lincoln Avenue to Illinois 22	24,100
Illinois 22 to Kelsey Road	15,900 - 16,400
Kelsey Road to Cuba Road	19,700
Cuba Road to Hough Street	20,300 - 20,900
Hough Street to Main Street (Barrington)	25,200
Main Street (Barrington) to Hillside Court	12,800 - 20,900
Hillside Court to Ela Road	16,900
Ela Road to Dundee Road	25,500
Dundee Road to Baldwin Road	15,800 - 18,500
Baldwin Road to Quentin Road	16,000
Quentin Road to Hicks Road	18,500 - 29,990
Hicks Road to Palatine Road	30,300

area, ADT ranges from 17,000 to 23,000 vpd. South of Crystal Lake to Cary, there is relatively little development adjacent to the corridor, and ADT decreases to between 15,000 and 19,000 vpd. Conversely, in the more developed areas through Cary and Fox River Grove, the ADT increases from 24,000 to 25,000 vpd. Again, ADT increases in more developed areas through Barrington, Barrington Hills, and at the southern end of the corridor in Palatine, where the highest ADT occurs (approximately 30,000 vpd).

Table 3 lists other transportation facilities that cross or are adjacent to U.S. 14. The principal transit line that serves regional trips in the U.S. 14 corridor is the Metra Chicago and North Western (C&NW) Northwest rail line. This facility operates parallel to U.S. 14, from Harvard southeast into downtown Chicago, and serves both commuters and freight. A spur of the Metra rail line runs north from Crystal Lake to Illinois 120. Several freight lines also intersect U.S. 14. West of Harvard is an extension of the C&NW Railroad. Bisecting Crystal Lake, in the vicinity of Main Street, traveling north and south, is another segment of the C&NW Northwest rail line serving commercial traffic. The Elgin, Joliet, & Eastern (EJ&E) Railway freight line bisects Barrington and crosses U.S. 14 south of Illinois 59. In addition, rail lines are supplemented with a number of Pace bus routes that serve portions of the corridor. Many of these Pace routes tie existing communities to Metra train stations along the corridor. Bus routes that serve the U.S. 14 corridor include Pace Routes 699, 725, 726, 803, 805, 807, and 808.

The U.S. 14 corridor exhibits several operational, geometric, physical, and environmental concerns. Limited right-of-way is a concern in a number of locations along the corridor, especially in areas where development is in close proximity to the corridor. Right-of-way is constrained severely in portions of downtown Harvard, in Crystal Lake, and at spot locations from Cary to Palatine. In less developed areas, limited right-of-way may only be a concern on one side of the roadway as a result of a specific land use or environmental constraint. Furthermore, the Metra rail line limits the availability of right-of-way for most of the west side of U.S. 14 from south of Illinois 31 to Palatine Road. Environmental concerns along U.S. 14 include stream crossings; parks; forest preserves; wetlands; floodplains; historic sites; cemeteries; leaking underground storage tank (LUST) sites; and Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) sites. Sources for these data are listed in Table 4.

**Table 3**  
**Existing Transit Facilities and Rail Operation Along U.S. 14**

Facility	Frequency	Location of Facility	Number of Weekday Boardings
<b>Metra Lines and Nearest Station</b>			
Metra/C&NW Northwest	—	Blaine Street/Admiral Street (east of U.S. 14)	1,000
Metra/C&NW Northwest	—	Sands Road to Lake Zurich Road (west of U.S. 14)	1,000
Metra/C&NW Northwest	—	Lake Zurich Road to Palatine Road (west of U.S. 14)	1,500 to 2,800
<b>Pace Bus Routes</b>			
Route 808	1/peak hour	McKinley to Illinois 120	—
Route 808	1/peak hour	Edgewood Drive to Terra Cotta Road	—
Route 805	1/peak hour	Crystal Lake to Crystal Point Mall	—
Route 725	3/peak hour	Lake Zurich to Station Street	—
Route 726	3/peak hour	Lake Zurich to Station Street	—
Route 728	3/peak hour	Lake Zurich to Station Street	—
<b>Other Rail Lines</b>			
Elgin, Joliet & Eastern Railway	1 train/day	East of Lake Zurich commercial business district	Not Applicable

Sources: Metra and Pace, "Future Agenda for Suburban Transportation" (April 1992) and Pace, "Comprehensive Operating Plan" (1992)

**Table 4**  
**Sources of Environmental and Land Use Data Along U.S. 14**

Item	Data Source
Parkland and Other Open Space	<p>Listing of Land and Water Conservation Fund (LAWCON) Projects; U.S. Department of the Interior, National Park Service</p> <p>1985 Bikeways Plan; Northeastern Illinois Planning Commission</p> <p>Illinois Natural Areas Inventory; Illinois Department of Transportation, Bureau of Location and Design</p> <p>Illinois Nature Preserves System 1987-1988 Report and 1990 Update; Illinois Nature Preserves Commission</p> <p>Lake County Forest Preserve Maps</p> <p>McHenry County Conservation District Maps</p> <p>Visual Survey 7/91</p>
Wetlands	<p>National Wetlands Inventory Map; United States Department of the Interior, U.S. Fish and Wildlife Service</p>
Floodplains	<p>FIRM, Flood Insurance Rate Map; Federal Emergency Management Agency</p> <p>FLOODWAY, Flood Boundary and Floodway Map; U.S. Department of Housing and Urban Development</p>
Hazardous Materials	<p>Comprehensive Environmental Response, Compensation, and Liability Act Information System (CERCLIS) Listing, 5/91; U.S. EPA Superfund Program</p> <p>Leaking Underground Storage Tank (LUST) Listing, 12/88; Illinois Environmental Protection Agency files</p>
Historic Sites	<p>The National Register of Historic Places, 1990; U.S. Department of the Interior</p> <p>Illinois State Historical Markers Text Book, 1973; Illinois Historic Structures Survey</p> <p>Inventory of Historic Structures and Historic Landmarks, 1973; Illinois Historic Structures Survey</p>

## **Current Planning, Design, and Construction Activity**

There are several current planning, design, and construction activities that have a direct bearing on U.S. 14: the IDOT Phase I study (which recommends expansion of U.S. 14, from Illinois 31 to Illinois 22, from a two-lane, undivided cross section to a four-lane cross section with a mountable 16-foot median), and an ongoing study investigating improvements to and reconstruction of the existing Illinois 31 interchange. Other plans call for signaling the intersection of U.S. 14 and Kishwaukee Valley Road, U.S. 14 and McGuire Road, and U.S. 14 and the Jandus Road Cut-off.

## **Detailed Summary of U.S. 14 by Segment Definitions**

The existing physical characteristics, traffic operations, safety, public transportation, environmental concerns, and land use for the four segments defined along U.S. 14 are discussed below.

### **Segment I—“Harvard” (State Line Road to South of Lembcke Road)**

Segment I, the northern segment of U.S. 14, is approximately 10½ miles long. It extends southeasterly from the Wisconsin state line to just south of Lembcke Road. This segment is generally rural in nature and encompasses the communities of Big Foot and Harvard.

#### ***Physical Characteristics***

North and south of the town of Harvard, the U.S. 14 cross section is characterized as rural, consisting of two lanes (one lane in each direction of travel) with no median and, consequently, no left-turn protection. Aggregate shoulders are provided on the outside of the roadway, and the drainage is open with ditches. A few exceptions to the typical section exist in downtown Harvard. A four-lane section exists between Illinois 173, and left-turn lanes are provided at the U.S. 14 intersection with Illinois 173. In general, the cross section maintains the same rural characteristics described to the north. With respect to alignment, the horizontal alignment is relatively tangent with high-speed, flat horizontal curves. With the exception of the

crest vertical curve over the C&NW Railroad in Harvard, the vertical alignment is relatively level.

The right-of-way within Segment I varies from 60 to 100 feet. Right-of-way is especially narrow in the town of Big Foot near the Wisconsin border. At this site, the land use is directly adjacent to the west side of U.S. 14 and a cemetery abuts the east side. Similarly, in downtown Harvard, adjacent land use (including schools, churches, and historic structures) and mature oak trees lining both sides of U.S. 14 limit available right-of-way within Harvard.

There are a number of structures (see Table 5) that carry U.S. 14 within this segment, including four structures that carry U.S. 14 over minor waterways. In addition, a major four-lane structure carries U.S. 14 over the C&NW Railroad.

<b>Table 5</b>			
<b>Existing Structures Along Segment I</b>			
<b>(State Line Road to South of Lembcke Road) of U.S. 14</b>			
<b>Structure</b>	<b>IDOT Structure Reference</b>	<b>Feature</b>	
		<b>Over</b>	<b>Under</b>
Bridge	056-2000	Lawrence Creek	—
Bridge	056-2001	Lawrence Creek	—
Bridge	056-0007	C&NW Railroad	—
Bridge	056-0048	McComb Street	—
Bridge	056-0052	Mokeler Creek	—
		Rush Creek	

## ***Traffic Control, Operations, and Safety***

Major intersections within Segment I include Illinois 173 and Illinois 23, both of which are designated SRAs. Illinois 173 overlaps U.S. 14 in downtown Harvard and is signal-controlled at two locations. Illinois 23, a continuous north-south arterial, terminates to the north at a U.S. 14 intersection that is stop-controlled on Illinois 23. Left-turn protection is provided at both intersections. A new signal is currently being installed at U.S. 14 and McGuire/Airport Road.

North and south of Harvard, traffic operates at a high level of service with little congestion and high speeds. In Harvard, however, as a result of the overlapping route of Illinois 173 and U.S. 14, and the relatively constrained cross section, there are times when peak period congestion occurs. The five-leg intersection at U.S. 14 with Ayer Street (Illinois 173) operates inefficiently. In addition, there are a number of access points through the downtown that affect traffic operation. On-street parking is prohibited throughout this segment with one exception: along U.S. 14 between Illinois 173 and University Street, half-hour parking is permitted. The posted speed limit to the north and south of Harvard is 55 miles per hour (mph). Entering Harvard, the speed limits decrease from 45 mph to 30 mph in the downtown (see Exhibits A-1 through A-7).

Existing traffic demand within this segment, based on a 1989 McHenry ADT Map (see Exhibits A-1 through A-7), ranges from 4,100 to 13,100 vpd. Not surprisingly, the highest traffic volumes occur in the commercial district of Harvard. These high volumes result from local land use and addition of Illinois 173 traffic using this segment of U.S. 14. North of town, ADT decreases to roughly 4,100 vpd. South of Illinois 23, ADT along U.S. 14 is approximately 6,000 vpd (the result of north-south traffic shifting to Illinois 23 as part of a north-south trip).

Accident data were obtained from IDOT accident summaries for the years of 1987 through 1989. Segment accident rates were calculated along U.S. 14 in accidents per million vehicle miles (MVM). Intersection accident rates in accidents per million entering vehicles (MEV) also were calculated at selected intersections for which data were available. North of Harvard, calculated intersection accident rates of 0.40, 0.64, and 0.59 accidents per MEV at State Line Road, Hebron Road, and Oak Grove

Road, respectively, are not considered high. Similarly, segment accident rates north of town, ranging from 2.06 to 2.53 accidents per MVM, were not considered significantly high. Through Harvard, calculated intersection rates ranged from 0.40 to 0.79 accidents per MEV, and no rates were found to be significantly high. Through Harvard, the segment rates ranged from 3.63 to 9.44 accidents per MVM. The only portion of U.S. 14 with a calculated accident rate reported higher than statewide averages for comparable roadways was between Illinois 173 and Illinois 23 (a rate of 9.44 accidents per MVM). South of Harvard, calculated segment rates were between 2.87 and 3.07 accidents per MVM.

### ***Public Transportation***

One other transportation facility (see Table 3 and Exhibit A-4) that operates in a portion of this segment is the Metra C&NW Northwest commuter rail line. This railroad runs approximately parallel to U.S. 14, south of Harvard. A train station serves Harvard and the surrounding areas. Pace Route 808 provides bus service to portions of Harvard along U.S. 14.

### ***Environmental Constraints and Land Use***

There are a variety of environmental constraints along this segment of U.S. 14 (see Exhibits B-1 through B-7). North of Harvard, U.S. 14 crosses a number of streams and passes by wetlands adjacent to both sides of the corridor. In addition, the Big Foot Cemetery is located near the state line. In Harvard, there are schools and churches abutting the U.S. 14 corridor, two of which are registered historic properties (the Central School and Saint Joseph's Church). One additional historic site is located along Segment I (see Table 6).

South of Harvard, several wetland locations and sensitive land uses exist: Burrow's Woods, south of Illinois 23 on the east side of the corridor; a parcel of land south of Streit Road that has been dedicated as wildlife preserve by the Illinois Department of Conservation; and the Plum Tree Golf Course, south of Lembcke Road.

Land use north of Harvard is generally open, agricultural land. In the town of Big Foot, existing land use is zoned commercial, industrial, and residential. North of Illinois 173, existing land use is generally residential. Land use adjacent to the corridor in the town of Harvard, which is between Illinois 173 and McGuire Road, is a combination of industrial and commercial development, and some sections of residential. To the south of Harvard, the land use along U.S. 14 transitions to open space and agricultural use.

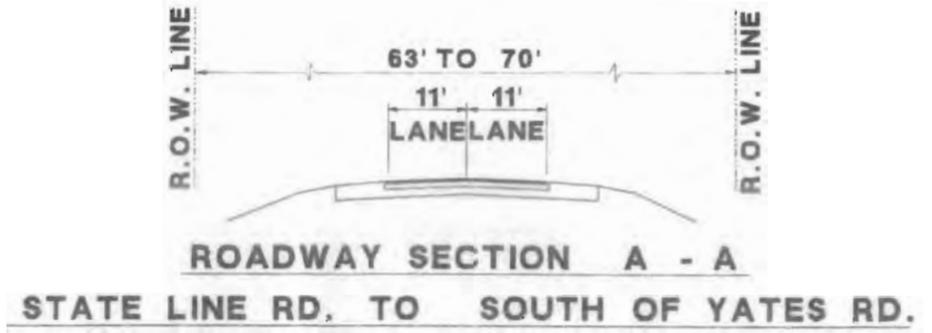
<p align="center"><b>Table 6</b>  <b>Summary of Environmentally Sensitive Land Uses</b>  <b>and Sites Along Segment I of U.S. 14</b></p>			
<b>Item</b>	<b>Exhibit No.</b>	<b>Reference</b>	<b>Description</b>
Historic Sites	B-4	H-1	Residence, 800 Division, Harvard
	B-4	H-2	School, Center Block, Division & Diggins, Harvard
	B-4	H-4	St. Joseph's Church, 204 Front Street, Harvard
CERCLIS Sites <sup>a</sup>	—	—	None Noted
LUST Sites <sup>b</sup>	B-5	L-1	Northern Federal Savings Bank, 343 Division Street, Harvard

<sup>a</sup>CERCLIS = Comprehensive Environmental Response, Compensation, and Liability Information System; sites that reportedly have accepted hazardous substances or possess a record of accidental or illegal dumping.

<sup>b</sup>LUST = Leaking Underground Storage Tank.

**LEGEND**

- △ SIGNALIZED INTERSECTION
- ↔ LANE ARRANGEMENTS AT KEY INTERSECTIONS
- (P) PARKING ALLOWED
- (P) PARKING PROHIBITED
- (NR) NO POSTED RESTRICTIONS
- DESIGNATED BUS STOP
- CTA RAPID TRANSIT STATION
- METRA METRA STATION



1988 - 1990  
AVERAGE  
DAILY  
TRAFFIC

ACCIDENT  
RATE

TRANSIT  
ROUTES

EDGE OF  
ROAD USE

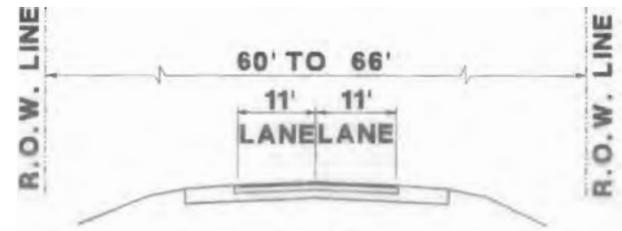
	3,900	4,150	4,200
	0.40/MEV	2.06 / MVM	0.64/MEV
		METRA RAIL NONE	
		PACE BUS NONE	
EAST		(P)	(P)
WEST		(P)	(P)

**U.S. 14 - EXISTING CONDITIONS**

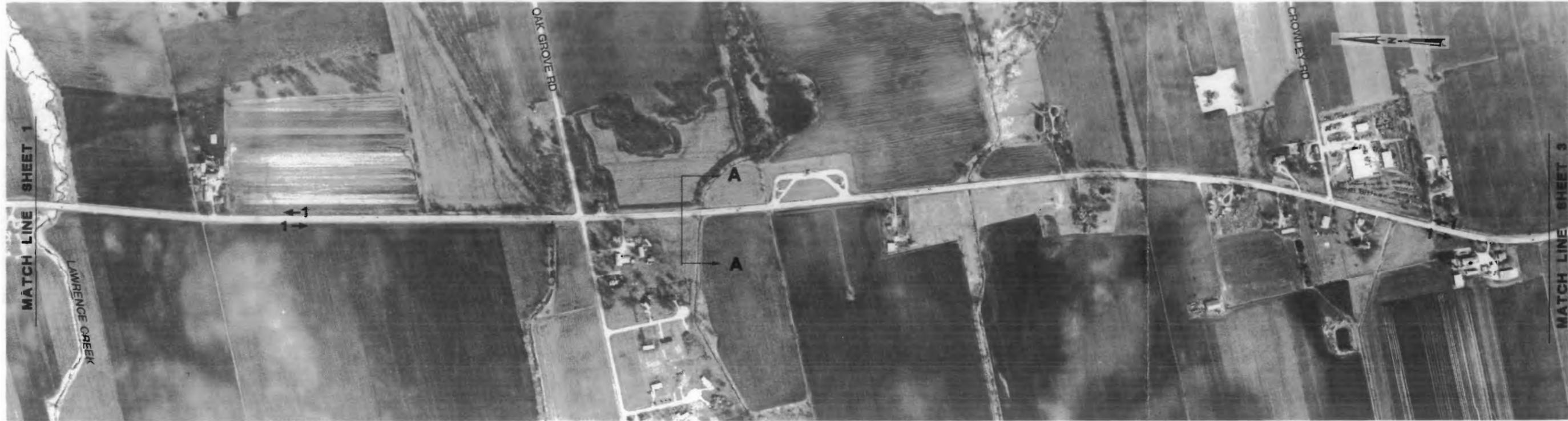
Prepared by CH2M HILL in association with  
METRO Transportation Group and EJM Engineering  
ILLINOIS DEPARTMENT OF TRANSPORTATION



LEGEND	
△	SIGNALIZED INTERSECTION
↔	LANE ARRANGEMENTS AT KEY INTERSECTIONS
P	PARKING ALLOWED
⊘	PARKING PROHIBITED
NR	NO POSTED RESTRICTIONS
B	DESIGNATED BUS STOP
CTA	RAPID TRANSIT STATION
METRA	METRA STATION



**ROADWAY SECTION A - A**  
**NORTH OF OAK GROVE RD. TO SOUTH OF CROWLEY RD.**



1988 - 1990  
 AVERAGE  
 DAILY  
 TRAFFIC

ACCIDENT  
 RATE

TRANSIT  
 ROUTES

EDGE OF  
 ROAD USE

	4,200	7,800
		2.53 / MVM
	0.59/MEV	
	METRA RAIL NONE	
	PACE BUS NONE	
EAST	⊘	⊘
WEST	⊘	⊘

**U.S. 14 - EXISTING CONDITIONS**

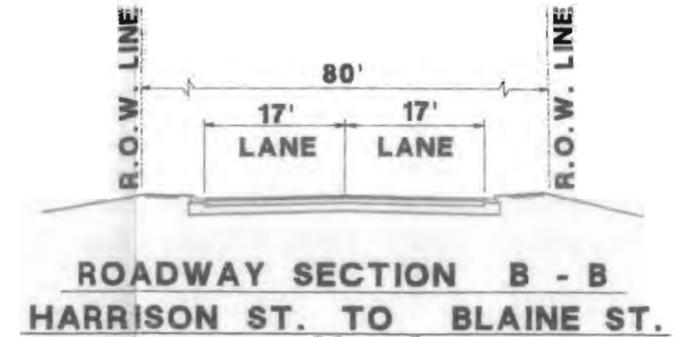
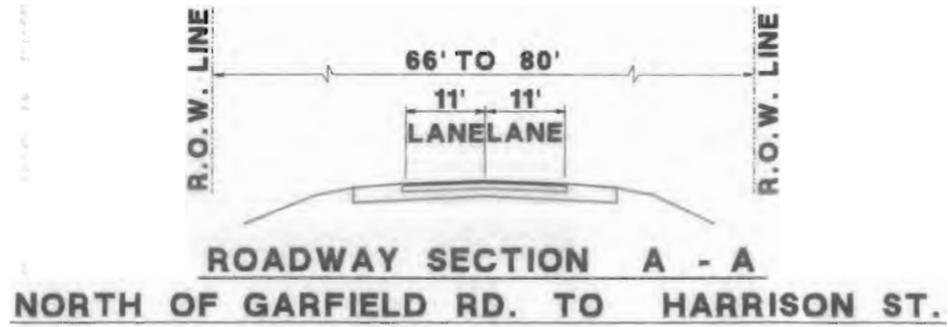
Prepared by CH2M HILL in association with  
 METRO Transportation Group and EJM Engineering

ILLINOIS DEPARTMENT OF TRANSPORTATION

**SRA** Strategic  
 Regional  
 Arterial Planning Study  
 EXHIBIT A-2

Scale 0 200 400 feet

LEGEND	
△	SIGNALIZED INTERSECTION
↔	LANE ARRANGEMENTS AT KEY INTERSECTIONS
(P)	PARKING ALLOWED
(P)	PARKING PROHIBITED
(NR)	NO POSTED RESTRICTIONS
B	DESIGNATED BUS STOP
CTA	RAPID TRANSIT STATION
METRA	METRA STATION



1988 - 1990  
AVERAGE  
DAILY  
TRAFFIC

7,800

ACCIDENT  
RATE

3.63 / MVM

TRANSIT  
ROUTES

METRA RAIL NONE

PACE BUS NONE

EDGE OF  
ROAD USE

(P)

**U.S. 14 - EXISTING CONDITIONS**

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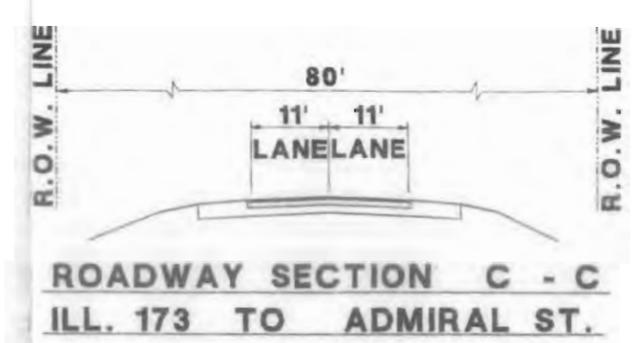
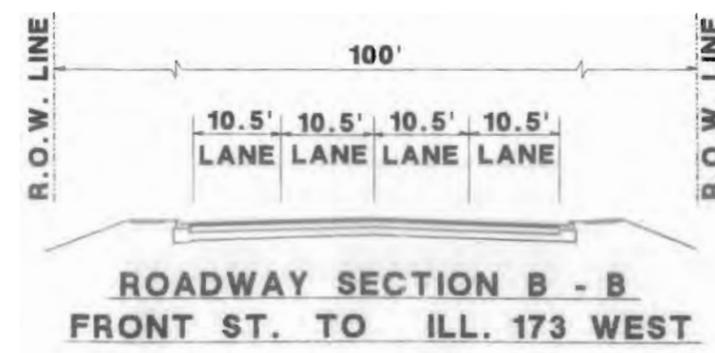
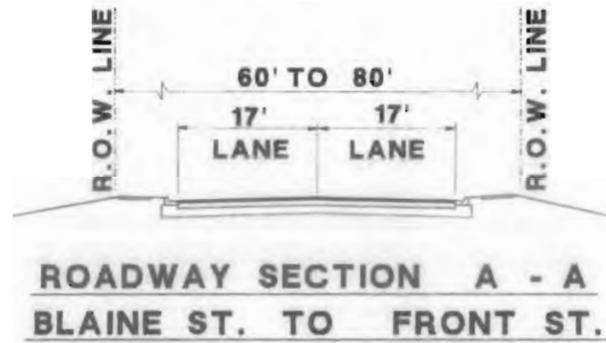
ILLINOIS DEPARTMENT OF TRANSPORTATION

**SRA** Strategic  
Regional  
Arterial Planning Study  
EXHIBIT A-3

Scale: 0 100 200 feet

**LEGEND**

- SIGNALIZED INTERSECTION
- LANE ARRANGEMENTS AT KEY INTERSECTIONS
- PARKING ALLOWED
- PARKING PROHIBITED
- NO POSTED RESTRICTIONS
- DESIGNATED BUS STOP
- RAPID TRANSIT STATION
- METRA STATION



**1988 - 1990  
AVERAGE  
DAILY  
TRAFFIC**

**ACCIDENT  
RATE**

**TRANSIT  
ROUTES**

**EDGE OF  
ROAD USE**

	7,800										11,000										13,100																			
	3.63 / MVM										1.84/MEV										7.13 / MVM										1.29/MEV									
	PACE BUS ROUTE 808 (1 PEAK BUS/HR)										METRA RAIL RIDERSHIP 1,000										PACE BUS ROUTE 808 (1 PEAK BUS/HR)																			
EAST	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)										
WEST	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)	(P)										

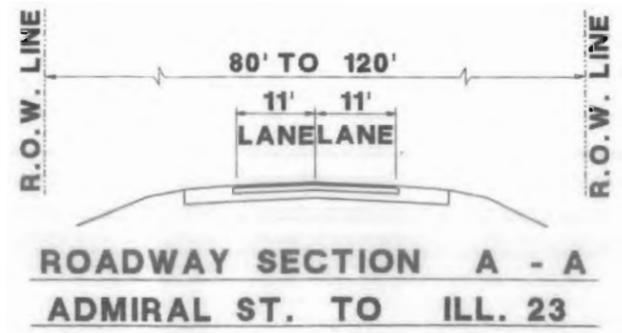
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**LEGEND**

	SIGNALIZED INTERSECTION
	LANE ARRANGEMENTS AT KEY INTERSECTIONS
	PARKING ALLOWED
	PARKING PROHIBITED
	NO POSTED RESTRICTIONS
	DESIGNATED BUS STOP
	RAPID TRANSIT STATION
	METRA STATION



1988 - 1990  
AVERAGE  
DAILY  
TRAFFIC

ACCIDENT  
RATE

TRANSIT  
ROUTES

EDGE OF  
ROAD USE

	13,100	13,000	9,400
	9.44 / MVM	1.20/MEV	3.83 / MVM
	METRA RAIL NONE		
	PACE BUS ROUTE 808 (1 PEAK BUS/HR)		
EAST			
WEST			

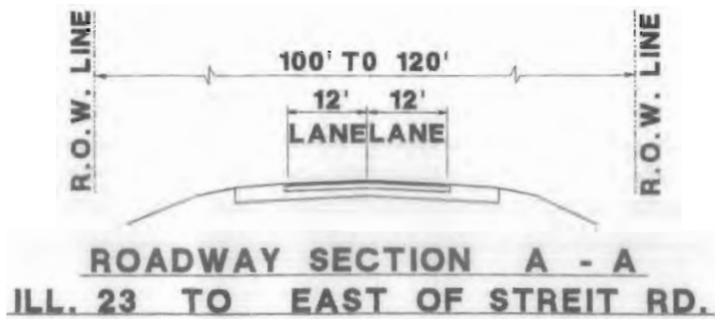
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**LEGEND**

△	SIGNALIZED INTERSECTION
↔	LANE ARRANGEMENTS AT KEY INTERSECTIONS
(P)	PARKING ALLOWED
(P)	PARKING PROHIBITED
(NR)	NO POSTED RESTRICTIONS
B	DESIGNATED BUS STOP
CTA	RAPID TRANSIT STATION
METRA	METRA STATION



1988 - 1990  
AVERAGE  
DAILY  
TRAFFIC

ACCIDENT  
RATE

TRANSIT  
ROUTES

EDGE OF  
ROAD USE

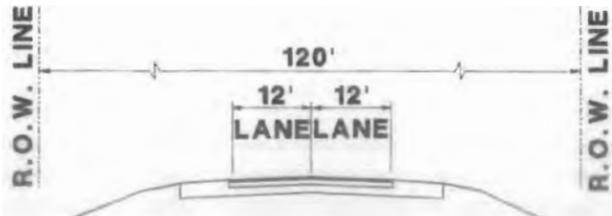
	9,400	6,200	6,500
		3.07 / MVM	3.02 / MVM
	0.79/MEV		
	METRA RAIL NONE		
	PACE BUS ROUTE 808 (1 PEAK BUS/HR)		
EAST	(P)		(P)
WEST	(P)		(P)

**U.S. 14 - EXISTING CONDITIONS**

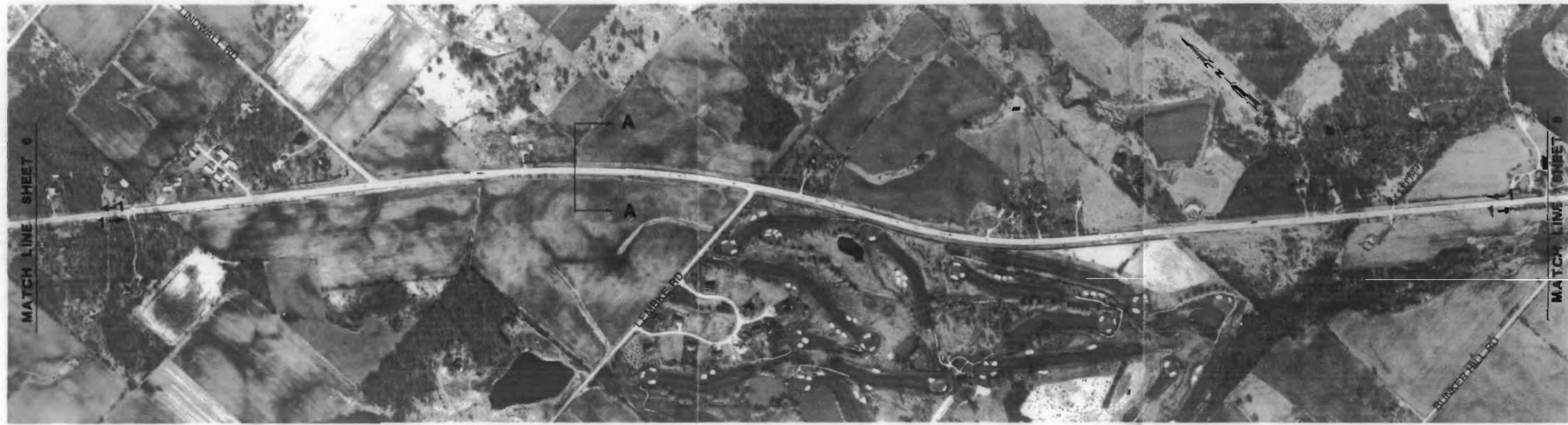
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LEGEND	
	SIGNALIZED INTERSECTION
	LANE ARRANGEMENTS AT KEY INTERSECTIONS
	PARKING ALLOWED
	PARKING PROHIBITED
	NO POSTED RESTRICTIONS
	DESIGNATED BUS STOP
	RAPID TRANSIT STATION
	METRA STATION



**ROADWAY SECTION A - A**  
**WEST OF LINDWALL RD. TO EAST OF BUNKER HILL RD.**



1988 - 1990  
 AVERAGE  
 DAILY  
 TRAFFIC

ACCIDENT  
 RATE

TRANSIT  
 ROUTES

EDGE OF  
 ROAD USE

	6,500	6,800
	3.02 / MVM	2.87 / MVM
	METRA RAIL NONE	
	PACE BUS ROUTE 808 (1 PEAK BUS/HR)	
EAST		
WEST		

**U.S. 14 - EXISTING CONDITIONS**

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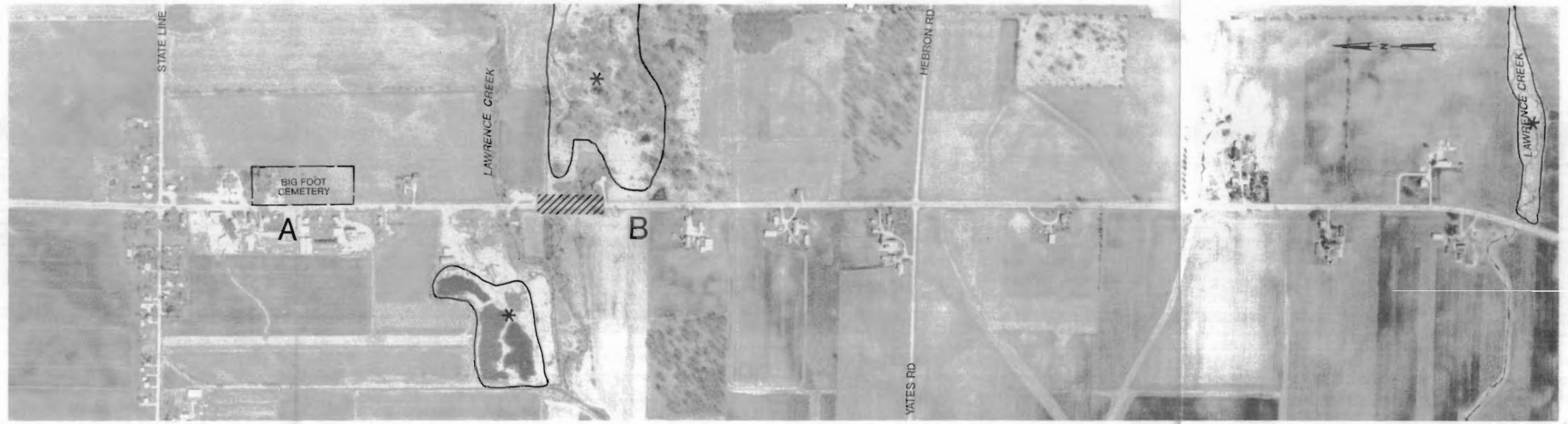
# PLANNING FOCUS AREAS

## A) SOUTH OF STATE LINE ROAD (TOWN OF BIG FOOT)

- Limited available right-of-way through Big Foot

## B) SOUTH OF LAWRENCE CREEK

- Proximity of adjacent wetlands may limit capacity improvements



RURAL SRA -- 168' TO 210' RIGHT OF WAY  
(Desirable)

### LEGEND

- A Planning Focus Area I.D.
- Hazardous Waste Site
- Leaking Underground Storage Tank
- Historic Building/District
- \* Wetland
- Church/Synagogue/Religious Institution
- Agricultural Land
- Special Use Areas
- Major Utility Lines
- Floodplain/Floodway

U.S. 14

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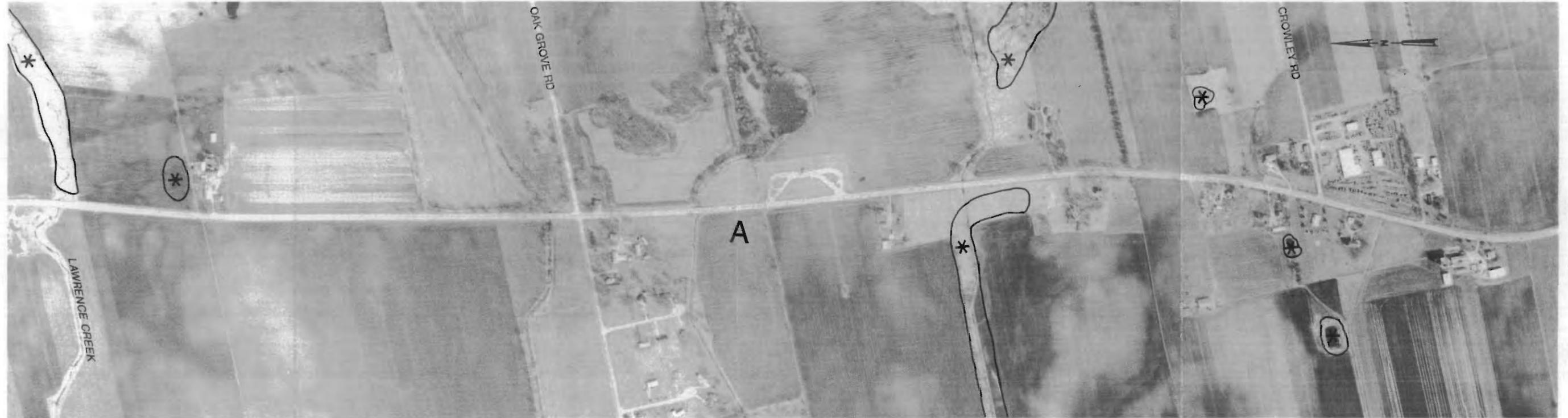


**SRA** Strategic Regional Arterial Planning Study  
EXHIBIT B-1

# PLANNING FOCUS AREAS

## A) NORTH OF OAK GROVE TO SOUTH OF CROWLEY ROAD

- Proximity of adjacent wetlands may limit capacity improvements



RURAL SRA -- 168' TO 210' RIGHT OF WAY  
(Desirable)

### LEGEND

- A Planning Focus Area I.D.
- (G1) Hazardous Waste Site
- (L1) Leaking Underground Storage Tank
- (H1) Historic Building/District
- \* Wetland
- † ☆ Church/Synagogue/Religious Institution
- - - Agricultural Land
- Special Use Areas
- Major Utility Lines

U.S. 14

**SRA** Strategic Regional Arterial Planning Study **EXHIBIT B-2**

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Scale:  
0 200 400 600 800 feet

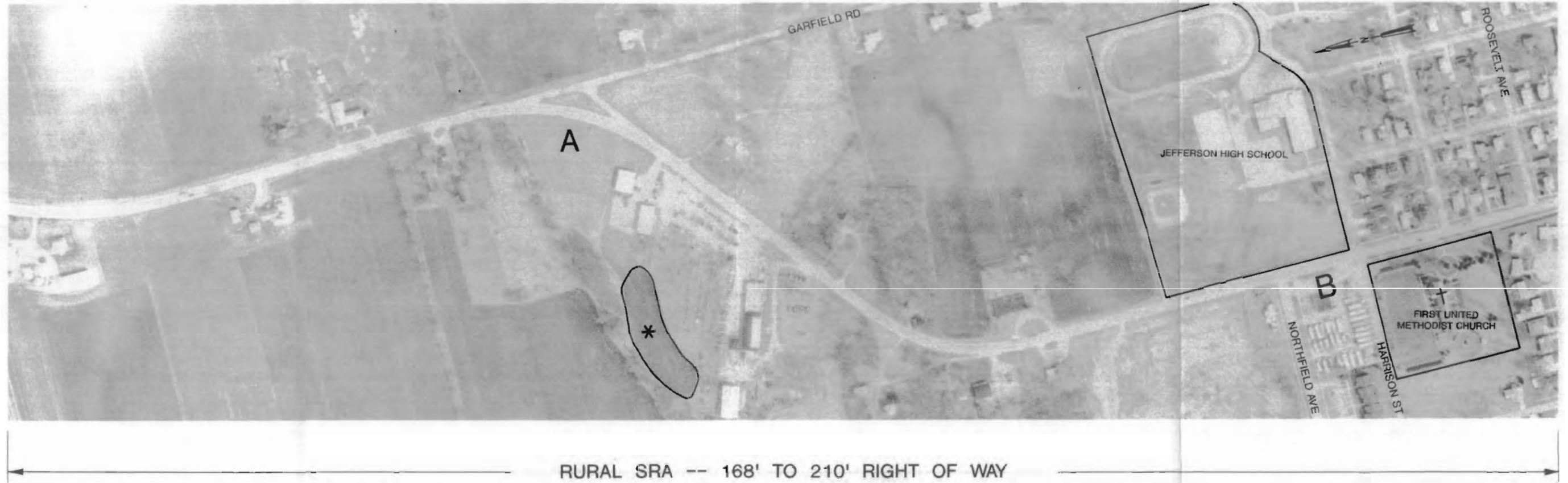
# PLANNING FOCUS AREAS

## A) GARFIELD ROAD AND U.S. 14 INTERSECTION

- Address intersection geometry

## B) NORTHFIELD AVENUE TO ROOSEVELT AVENUE

- Limited available right-of-way
- Multiple driveway/cross street access points may affect SRA operation
- Residential land use adjacent to SRA



**LEGEND**

- A Planning Focus Area (B)
- Hazardous Waste Site
- Leaking Underground Storage Tank
- Historic Building/District
- \* Wetland
- Church/Synagogue/Religious Institution
- Agricultural Land
- Special Use Areas
- Major Utility Lines

**SRA** Strategic Regional Arterial Planning Study **EXHIBIT B-3**

U.S. 14

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# PLANNING FOCUS AREAS

## A) ROOSEVELT AVENUE TO ADMIRAL DRIVE

- Limited available right-of-way
- Multiple driveway/cross street access points may affect SRA operation
- Residential land use adjacent to SRA
- Historic resources could affect improvements or alternatives

## B) ILL 173 EAST AND U.S. 14 INTERSECTION

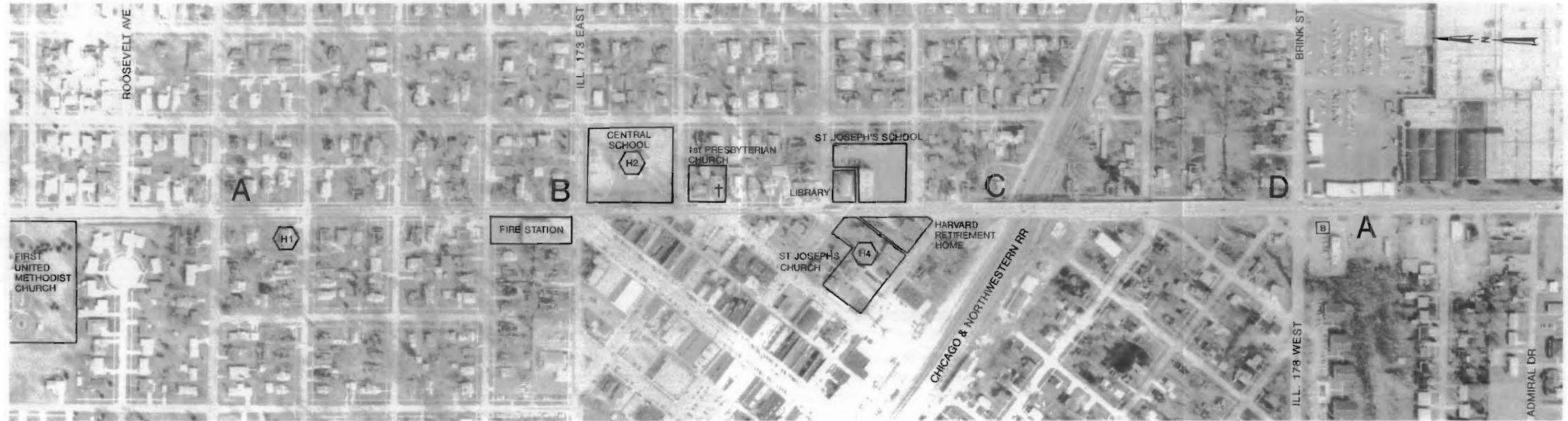
- Intersection of two SRA routes (route overlap)
- Capacity improvements for high-volume intersection are constrained by adjacent land use
- Multi-leg intersection limits through capacity of U.S. 14

## C) CHICAGO & NORTHWESTERN RAILROAD OVERPASS

- Existing structure may require widening / replacement

## D) ILL 173 WEST AND U.S. 14 INTERSECTION

- Intersection of two SRA routes (route overlap)
- Capacity improvements for high-volume intersection are constrained by adjacent land use



RURAL SRA -- 168' TO 210' RIGHT OF WAY  
(Desirable)

### LEGEND

- A Planning Focus Area I.D.
- Hazardous Waste Site
- Leaking Underground Storage Tank
- Historic Building/District
- Wetland
- Church/Synagogue/Religious Institution
- Agricultural Land
- Special Use Areas
- Major Utility Lines

U.S. 14

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Scale:  
0 100 200 300 400 feet

**SRA** Strategic  
Regional Arterial  
Planning Study EXHIBIT B-4

# PLANNING FOCUS AREAS

## A) ADMIRAL DRIVE TO NORTH OF ILL 23

- Limited available right-of-way
- Multiple driveway/cross street access points may affect SRA operation

## B) ILL 23 AND U.S. 14 INTERSECTION

- Intersection of two SRA routes
- Capacity improvements for intersection are constrained by adjacent land use



RURAL SRA -- 168' TO 210' RIGHT OF WAY  
(Desirable)

### LEGEND

- A Planning Focus Area I.D.
- (G1) Hazardous Waste Site
- ▽ Leaking Underground Storage Tank
- (H) Historic Building/District
- \* Wetland
- † Church/Synagogue/Religious Institution
- /// Floodplain/Floodway
- Agricultural Land
- Special Use Areas
- Major Utility Lines

U.S. 14

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Scale:  
0 100 200 300 400 feet

**SRA** Strategic Regional Arterial Planning Study  
EXHIBIT B-5

# PLANNING FOCUS AREAS

## A) EAST OF ILL 23 TO EAST OF STREIT ROAD

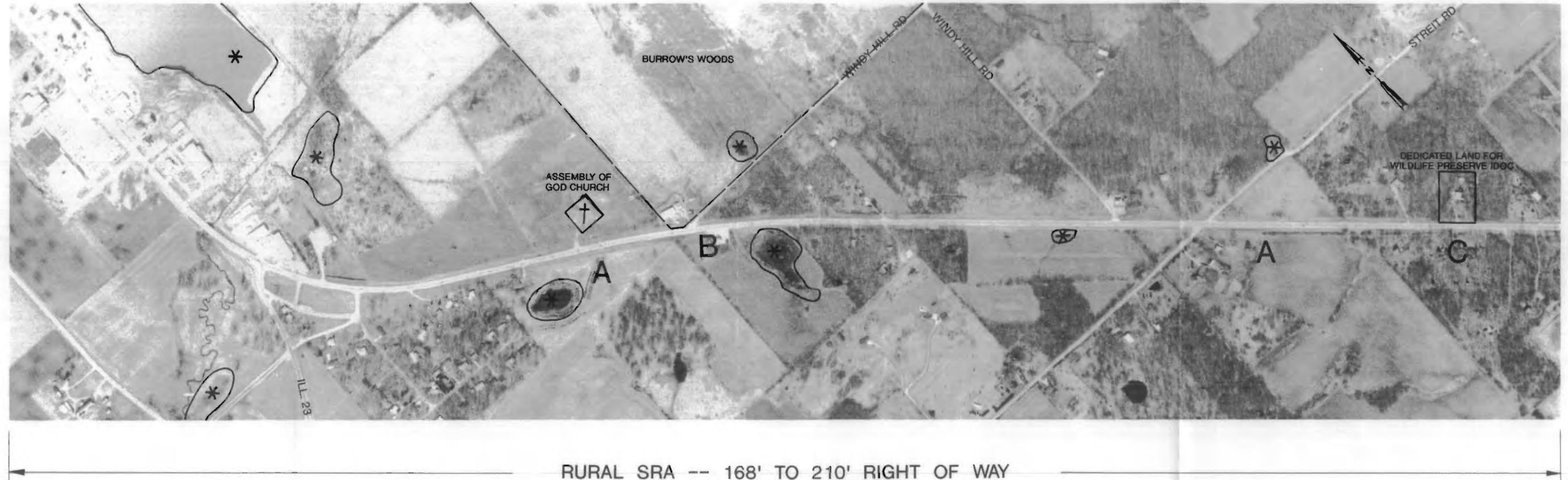
- Proximity of adjacent wetlands may limit capacity improvements

## B) BURROW'S WOODS CONSERVATION DISTRICT

- Limited available right-of-way

## C) IDOC WILDLIFE PRESERVE

- Limited available right-of-way

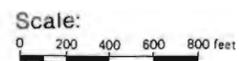


**LEGEND**

- A Planning Focus Area I.D.
- (C1) Hazardous Waste Site
- (L1) Leaking Underground Storage Tank
- (H1) Historic Building/District
- \* Wetland
- † ☆ Church/Synagogue/Religious Institution
- - - Agricultural Land
- Special Use Areas
- Major Utility Lines

**SRA** Strategic Regional Arterial Planning Study **EXHIBIT B-6**

U.S. 14



# PLANNING FOCUS AREAS

## A) LINDWALL ROAD AND U.S. 14 INTERSECTION

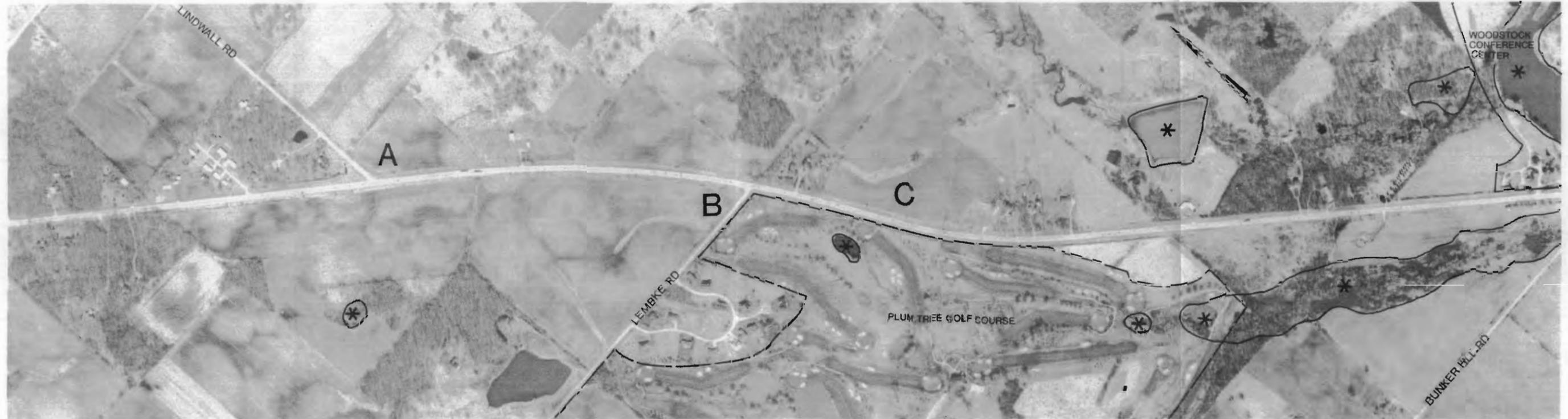
- Address intersection geometry

## B) LEMBKE ROAD AND U.S. 14 INTERSECTION

- Address intersection geometry

## C) EAST OF LEMBKE ROAD

- Limited available right-of-way



RURAL SRA -- 168' TO 210' RIGHT OF WAY  
(Desirable)

### LEGEND

- A Planning Focus Area I.D.
- Hazardous Waste Site
- Leaking Underground Storage Tank
- Historic Building/District
- Wetland
- Church/Synagogue/Religious Institution
- Agricultural Land
- Special Use Areas
- Major Utility Lines

U.S. 14

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Scale:  
0 200 400 600 800 feet

**SRA** Strategic Regional Arterial Planning Study  
EXHIBIT B-7

## **Segment II—“Woodstock” (South of Lembcke Road to North of Ridgefield Road)**

Segment II is approximately 13 ½ miles long, extending southeast from south of Lembcke Road to north of Ridgefield Road. This segment travels through Woodstock and includes the northern portion of Crystal Lake.

### ***Physical Characteristics***

The cross section along this segment is a two-lane (one lane in each direction of travel), undivided rural section. Aggregate shoulders are provided on the outside of the roadway. The design of the drainage is open with ditches. Two short segments exist where a four-lane, divided (40-foot open median) section is provided: west of Rose Farm Road to east of Illinois 120, and west of Illinois 47 to east of Lake Street. Open drainage also is provided along these segments. Note that the existing cross section southeast from Illinois 120 to Illinois 47 has been designed to accommodate the addition of two through lanes on the east side of existing U.S. 14. The horizontal alignment is comprised of tangents and mild curves well within the SRA design criteria for rural-designated SRAs, and vertical alignment is level to rolling with no upgrades of any magnitude or length.

The right-of-way within the segment varies from 60 to 200 feet. North of Paulsen Road to north of Illinois 120 the right-of-way is 60 feet. From north of Illinois 120 to south of Lake Street, the right-of-way is 200 feet. South of Lake Street, right-of-way ranges between 60 and 100 feet. The relatively open/rural nature of the land use in these areas would facilitate acquisition of additional right-of-way.

There are several other physical characteristics worth noting in this segment. U.S. 14 crosses over the North Branch of the Kishwaukee River at Bunker Hill Road. In addition, a grade separation is provided at South Street and U.S. 14. The pier locations of this structure have been designed to accommodate an additional two lanes plus a 40-foot median, possibly precluding the need for structure modification or replacement (see Table 7).

<b>Table 7</b> <b>Existing Structures Along Segment II</b> <b>(South of Lembcke Road to Ridgefield Road) of U.S. 14</b>		
<b>IDOT Structure Reference</b>	<b>Feature</b>	
	<b>Over</b>	<b>Under</b>
056-0051	Kishwaukee River	—
056-3015	—	South Street Road

***Traffic Control, Operations, and Safety***

Major intersections within Segment II include Illinois 120 and Illinois 47. Illinois 120 is a principal east-west arterial from U.S. 14 to east of U.S. 41, and is designated as a SRA east of Illinois 47. U.S. 14 widens on the approaches to Illinois 120 (which terminates from the east at U.S. 14) to provide an additional through lane and left-turn protection southbound. This intersection is stop-controlled on Illinois 120. Similarly, U.S. 14 widens on the approaches to Illinois 47 (a continuous, north-south SRA) to provide an additional through lane in each direction as well as left-turn lanes. This intersection is signal-controlled. All other intersections along this route are stop-controlled on the cross street only.

Traffic operations through this area operate at a relatively high level of service. Although some queuing was evident on the intersection approaches at U.S. 14 and Illinois 47 during the peak hour, this intersection, as well as others along this segment of U.S. 14, operate well within their existing capacity. Because of the geometry and the open channelization of the Lake Street intersection, and the skew of the westbound intersection approach, the potential exists for wrong-way movements at this intersection.

Existing traffic demand within this segment, based on a 1989 McHenry County ADT Map (see Exhibits A-8 to A-13), ranges from 5,400 to 12,800 vpd. In general, the traffic along this segment ranges from 6,500 to 7,500 vpd. ADT to the north of Illinois 120 is between 6,300 and 7,500 vpd; south of the Illinois 120/U.S. 14

intersection, ADT decreases because traffic uses Illinois 120 to travel east-west. The highest ADT link (12,800 vpd) is southeast of Illinois 47; this high volume results from traffic diversion to/from Illinois 47 to the north to/from U.S. 14 to the southeast.

Accident data were obtained for 1987 through 1989 from IDOT accident summary logs. Intersection accident rates were calculated at eight intersections along this segment (see Exhibits A-8 to A-13). Intersection accident rates ranged from 0.07 to 2.72 accidents per MEV, with the highest accident rate reported at Kishwaukee Valley Road. No intersections were identified as high-accident locations. Segment accident rates, in terms of accidents per MVM, also were computed along this segment of U.S. 14. Segment accident rates ranged from 5.91 to 2.49 accidents per MVM, and no segments were identified as high-accident locations.

### ***Public Transportation***

The Metra C&NW Northwest commuter rail line is another major transportation facility operating in this corridor (see Table 3). This railroad runs roughly parallel to U.S. 14, approximately ½ mile to the northeast. An existing train station located in Woodstock serves Woodstock and the surrounding areas. Pace Route 808 operates from south of Lembcke Road to Illinois 120 and from Illinois 47 to Ridgefield Road, at a frequency of one bus per hour.

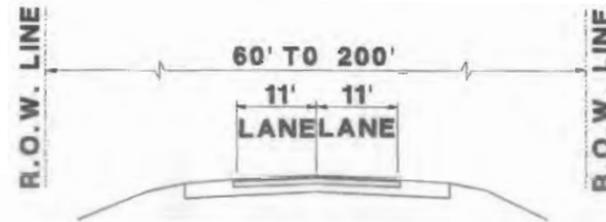
### ***Environmental Constraints and Land Use***

The environmental concerns within this segment are summarized on the Planning Focus Area Exhibits (Exhibits B-8 to B-13). At the intersection of Bunker Hill Road and U.S. 14, a section of U.S. 14 is located within an existing floodplain. There are also wetlands adjacent to the corridor at several locations, of which some are notable for their proximity to the corridor: on the east side of U.S. 14 opposite Dimmel Road, on the east side of U.S. 14 at Hartland Road, on both sides of U.S. 14 west of Illinois 47, on the west side of U.S. 14 at Lake Shore Drive, and on the east side of U.S. 14 just south of Lilly Pond Road. No historic or potentially historic sites, CERCLIS sites, or LUST sites were noted along this segment.

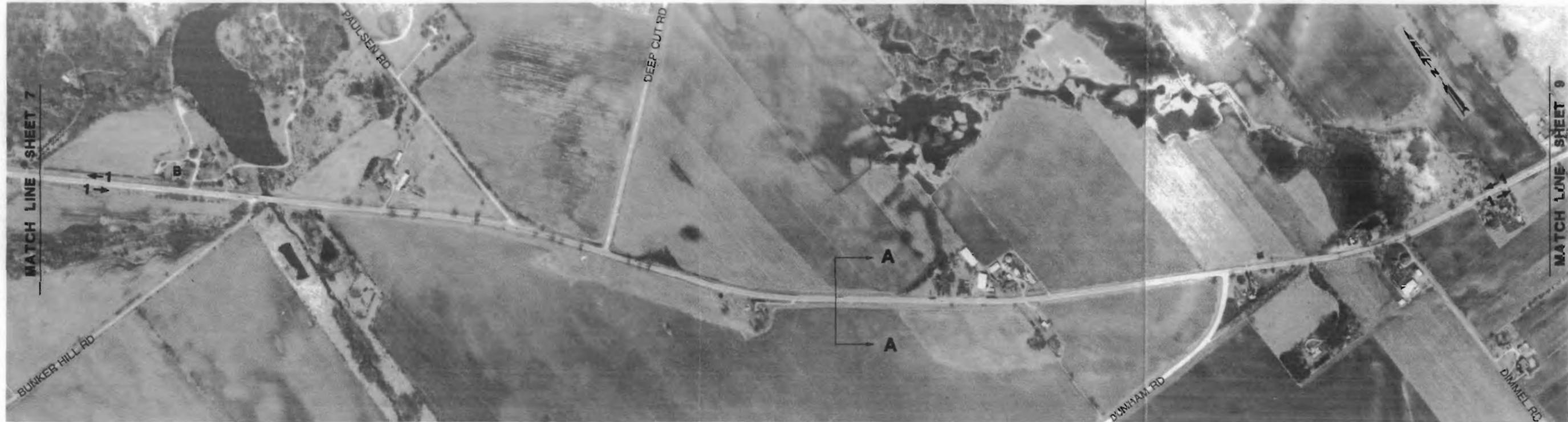
There are three parks adjacent to the corridor; they are located in the northeast quadrant of the Illinois 120 and U.S. 14 intersection, on the west side of U.S. 14 between Kishwaukee Valley Road and South Street (Emrickson Park), and on the south side of U.S. 14 just west of Illinois 47 (Kishwaukee Park).

Land use within this segment is open or agricultural in nature in the northern portion from Lembcke Road to north of Rose Farm Road. Zoned commercial areas are located around the U.S. 14 intersections with Illinois 120 and Illinois 47. From Rose Farm Road south to Ridgefield Road, the land use is zoned mostly industrial and residential. In addition, two significant developments are planned along U.S. 14: a proposed industrial development along Lake Shore Drive and a proposed hospital/medical complex at the intersection of Doty Road and U.S. 14.

LEGEND	
	SIGNALIZED INTERSECTION
	LANE ARRANGEMENTS AT KEY INTERSECTIONS
	PARKING ALLOWED
	PARKING PROHIBITED
	NO POSTED RESTRICTIONS
	DESIGNATED BUS STOP
	CTA RAPID TRANSIT STATION
	METRA STATION



**ROADWAY SECTION A - A**  
WEST OF BUNKER HILL RD. TO EAST OF DIMMEL RD.



1988 - 1990  
AVERAGE  
DAILY  
TRAFFIC

ACCIDENT  
RATE

TRANSIT  
ROUTES

EDGE OF  
ROAD USE

	6,800	6,700	6,300	7,300
Average Daily Traffic				
Accident Rate	2.87 / MVM	5.91 / MVM 0.13/MEV 0.80/MEV	4.59 / MVM	2.49 / MVM 1.17/MEV
Transit Routes	PACE BUS ROUTE 808 (1 PEAK BUS/HR)	PACE BUS ROUTE 808 (1 BUS/DAY)	METRA RAIL NONE	PACE BUS ROUTE 808 (1 PEAK BUS/HR)
Edge of Road Use (East)	(P)	(P)	(P)	(P)
Edge of Road Use (West)	(P)	(P)	(P)	(P)

**U.S. 14 - EXISTING CONDITIONS**

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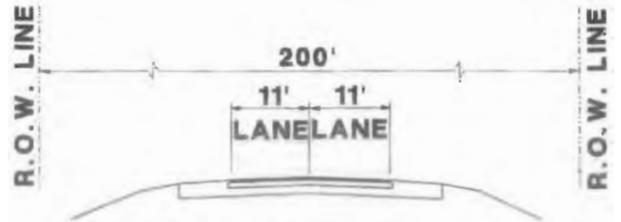
ILLINOIS DEPARTMENT OF TRANSPORTATION



Scale 1" = 200' 400' 800'

**LEGEND**

- △ SIGNALIZED INTERSECTION
- ↔ LANE ARRANGEMENTS AT KEY INTERSECTIONS
- (P) PARKING ALLOWED
- (P) PARKING PROHIBITED
- (NR) NO POSTED RESTRICTIONS
- S DESIGNATED BUS STOP
- CTA RAPID TRANSIT STATION
- METRA METRA STATION



**ROADWAY SECTION A - A**  
WEST OF PARK LN. TO WEST OF ROSE FARM RD.



1988 - 1990  
AVERAGE  
DAILY  
TRAFFIC

ACCIDENT  
RATE

TRANSIT  
ROUTES

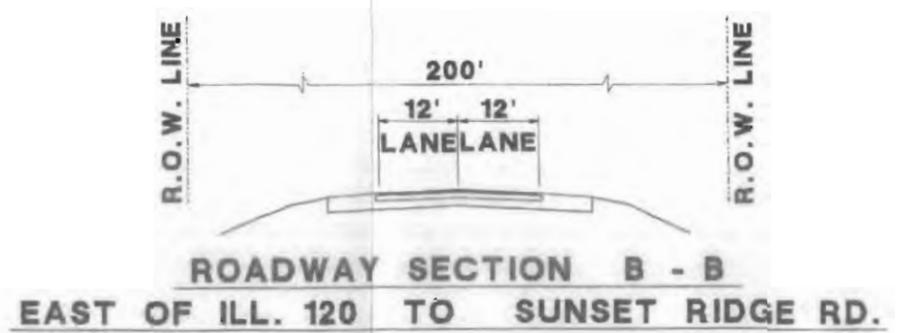
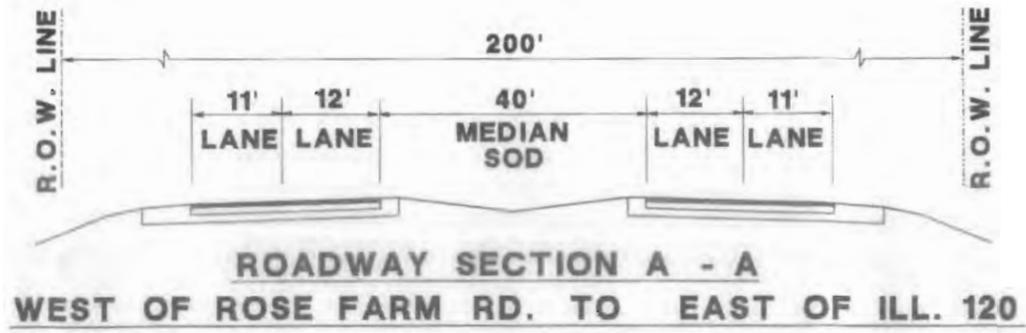
EDGE OF  
ROAD USE

	7,300		7,500	
	2.49 / MVM		4.36 / MVM	
	METRA RAIL NONE		0.76/MEV	
	PACE BUS ROUTE 808 (1 PEAK BUS/HR)		PACE BUS ROUTE 808 (1 BUS/DAY)	
	PACE BUS ROUTE 808 (1 PEAK BUS/HR)		PACE BUS ROUTE 808 (1 PEAK BUS/HR)	
EAST	(P)	(P)	(P)	(P)
WEST	(P)	(P)	(P)	(P)

**U.S. 14 - EXISTING CONDITIONS**

**LEGEND**

△	SIGNALIZED INTERSECTION
→	LANE ARRANGEMENTS AT KEY INTERSECTIONS
P	PARKING ALLOWED
P	PARKING PROHIBITED
NR	NO POSTED RESTRICTIONS
B	DESIGNATED BUS STOP
CTA	RAPID TRANSIT STATION
METRA	METRA STATION



1988 - 1990  
AVERAGE  
DAILY  
TRAFFIC

ACCIDENT  
RATE

TRANSIT  
ROUTES

EDGE OF  
ROAD USE

	7,500		6,400	
	4.36 / MVM		4.76 / MVM	
	0.11/MEV			
	PACE BUS ROUTE 808 (1 PEAK BUS/HR)		METRA RAIL NONE	
	P		P	
EAST	P	P	P	P
WEST	P	P	P	P

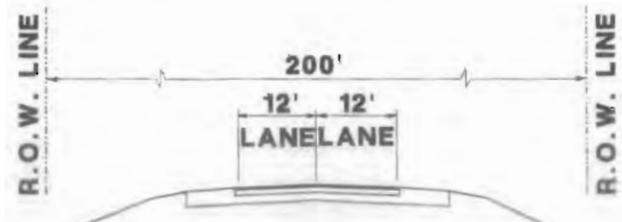
**U.S. 14 - EXISTING CONDITIONS**

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**LEGEND**

- △ SIGNALIZED INTERSECTION
- LANE ARRANGEMENTS AT KEY INTERSECTIONS
- (P) PARKING ALLOWED
- (P) PARKING PROHIBITED
- (NR) NO POSTED RESTRICTIONS
- DESIGNATED BUS STOP
- CTA RAPID TRANSIT STATION
- METRA METRA STATION



**ROADWAY SECTION A - A**  
**WEST OF KISHWAUKEE VALLEY ROAD TO EAST OF SOUTH STREET**



1988 - 1990  
 AVERAGE  
 DAILY  
 TRAFFIC

ACCIDENT  
 RATE

TRANSIT  
 ROUTES

EDGE OF EAST  
 ROAD USE WEST

6,400	7,400	8,600
4.76 / MVM	2.72 / MEV	2.64 / MVM
METRA RAIL NONE		
PACE BUS NONE		
(P)	(P)	(P)
(P)	(P)	(P)

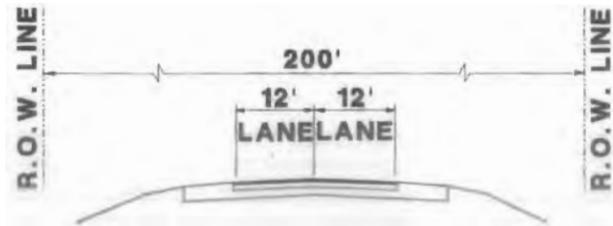
**U.S. 14 - EXISTING CONDITIONS**

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 ILLINOIS DEPARTMENT OF TRANSPORTATION

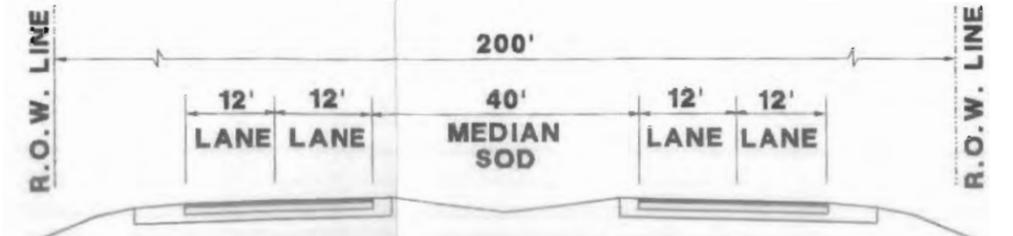


Scale: 0 200 400 feet

LEGEND	
△	SIGNALIZED INTERSECTION
↔	LANE ARRANGEMENTS AT KEY INTERSECTIONS
P	PARKING ALLOWED
⊘	PARKING PROHIBITED
NR	NO POSTED RESTRICTIONS
B	DESIGNATED BUS STOP
CTA	RAPID TRANSIT STATION
METRA	METRA STATION



**ROADWAY SECTION A - A**  
EAST OF DEAN ST. TO EAST OF EASTWOOD DR.



**ROADWAY SECTION B - B**  
EAST OF EASTWOOD DR. TO WEST OF LAKE ST.



1988 - 1990  
AVERAGE  
DAILY  
TRAFFIC

ACCIDENT  
RATE

TRANSIT  
ROUTES

EDGE OF  
ROAD USE

	6,600	7,600	5,400	12,800
		3.99 / MVM	1.58/MEV	4.55 / MVM
			METRA RAIL NONE	
		PACE BUS NONE		PACE BUS ROUTE 808 (1 PEAK BUS/HR)
		⊘		⊘
		⊘		⊘

**U.S. 14 - EXISTING CONDITIONS**

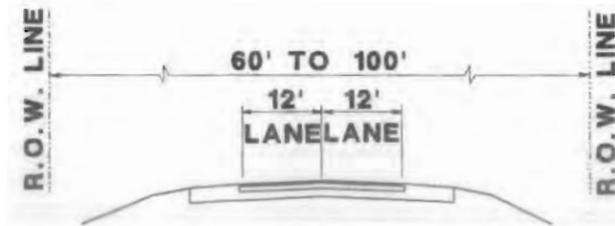
Prepared by CH2M HILL in association with  
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Scale: 0 200 400 feet

LEGEND	
△	SIGNALIZED INTERSECTION
↔	LANE ARRANGEMENTS AT KEY INTERSECTIONS
P	PARKING ALLOWED
F	PARKING PROHIBITED
NR	NO POSTED RESTRICTIONS
B	DESIGNATED BUS STOP
CTA	RAPID TRANSIT STATION
METRA	METRA STATION



**ROADWAY SECTION A - A**  
**WEST OF LAKE SHORE DR. TO EAST OF LILY POND RD.**



1988 - 1990  
 AVERAGE  
 DAILY  
 TRAFFIC

ACCIDENT  
 RATE

TRANSIT  
 ROUTES

EDGE OF EAST  
 ROAD USE WEST

	12,800			
	2.69 / MVM			
	METRA RAIL NONE			
	PACE BUS ROUTE 808 (1 PEAK BUS/HR)			
	P	P	P	P
	P	P	P	P

**U.S. 14 - EXISTING CONDITIONS**

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**SRA** Strategic  
 Regional  
 Arterial EXHIBIT A-13  
 Planning Study

Scale: 0 200 400 feet

# PLANNING FOCUS AREAS

## A) WEST OF BUNKER HILL ROAD

- Limited available right-of-way

## B) PAULSEN ROAD AND U.S. 14 INTERSECTION

- Address intersection geometry

## C) DEEP CUT ROAD AND U.S. 14 INTERSECTION

- Close proximity of cross street intersection may conflict with SRA operation

## D) WEST OF DIMMEL ROAD

- Proximity of adjacent wetlands may limit capacity improvements



RURAL SRA -- 168' TO 210' RIGHT OF WAY  
(Desirable)

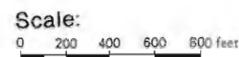
### LEGEND

- A Planning Focus Area I.D.
- Hazardous Waste Site
- Leaking Underground Storage Tank
- Historic Building/District
- Wetland
- Floodplain/Floodway
- Church/Synagogue/Religious Institution
- Agricultural Land
- Special Use Areas
- Major Utility Lines

U.S. 14

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**SRA** Strategic  
Regional  
Arterial Planning Study  
EXHIBIT B-8

# PLANNING FOCUS AREAS

## A) WEST OF HARTLAND ROAD

- Proximity of adjacent wetlands may limit capacity improvements

## B) WEST OF ILL 120

- Proximity of adjacent wetlands may limit capacity improvements



RURAL SRA -- 168' TO 210' RIGHT OF WAY  
(Desirable)

LEGEND	
A	Planning Focus Area I.D.
(C1)	Hazardous Waste Site
LI	Leaking Underground Storage Tank
(H1)	Historic Building/District
*	Wetland
† ☆	Church/Synagogue/Religious Institution
---	Agricultural Land
---	Special Use Areas
—□—	Major Utility Lines

U.S. 14



# PLANNING FOCUS AREAS

**A) EAST OF ROSE FARM ROAD**

- Proximity of adjacent park may limit improvement alternatives

**B) ILL 120 AND U.S. 14 INTERSECTION**

- Address intersection geometry



RURAL SRA -- 168' TO 210' RIGHT OF WAY  
(Desirable)

**LEGEND**

A	Planning Focus Area I.D.
(G1)	Hazardous Waste Site
(U1)	Leaking Underground Storage Tank
(H1)	Historic Building/District
*	Wetland
†	Church/Synagogue/Religious Institution
---	Agricultural Land
---	Special Use Areas
—○—	Major Utility Lines

**U.S. 14**

**SRA** Strategic Regional Arterial Planning Study **EXHIBIT B-10**



# PLANNING FOCUS AREAS



RURAL SRA -- 168' TO 210' RIGHT OF WAY (Desirable)

**LEGEND**

	Planning Focus Area I.D.
	Hazardous Waste Site
	Leaking Underground Storage Tank
	Historic Building/District
	Wetland
	Church/Synagogue/Religious Institution
	Agricultural Land
	Special Use Areas
	Major Utility Lines

U.S. 14

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**SRA** Strategic Regional Arterial Planning Study  
**EXHIBIT B-11**

# PLANNING FOCUS AREAS

## A) POWER SUBSTATION EAST OF DEAN STREET

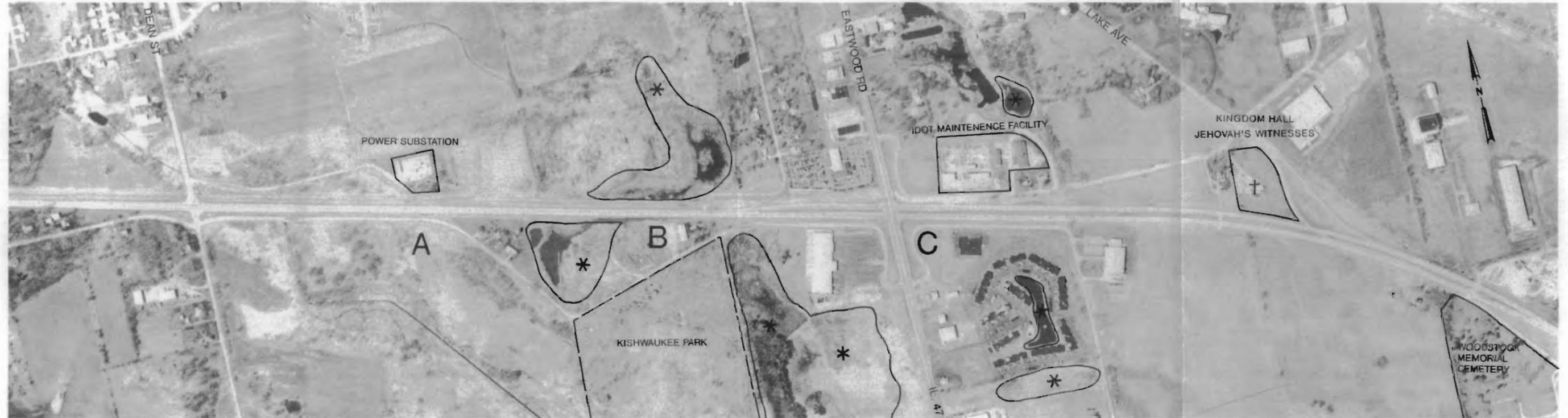
- Existing power substation may affect improvement alternatives

## B) WEST OF EASTWOOD ROAD

- Proximity of adjacent wetlands may limit capacity improvements

## C) ILL 47 AND U.S. 14 INTERSECTION

- Intersection of two SRA routes
- Capacity improvements for high-volume intersection are constrained by adjacent land use



SUBURBAN SRA -- 120' TO 150' RIGHT OF WAY  
(Desirable)

### LEGEND

- A Planning Focus Area I.D.
- (C1) Hazardous Waste Site
- LI Leaking Underground Storage Tank
- (H1) Historic Building/District
- \* Wetland
- † Church/Synagogue/Religious Institution
- - - Agricultural Land
- Special Use Areas
- Major Utility Lines

U.S. 14

**SRA** Strategic Regional Arterial Planning Study  
EXHIBIT B-12

Prepared by CH2M HILL in association with METRO Transportation Group and EJM Engineering

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Scale:  
0 200 400 600 800 feet

# PLANNING FOCUS AREAS

**A) WEST OF LAKE SHORE DRIVE TO EAST OF LILY POND ROAD**

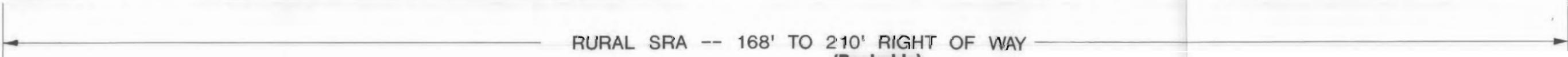
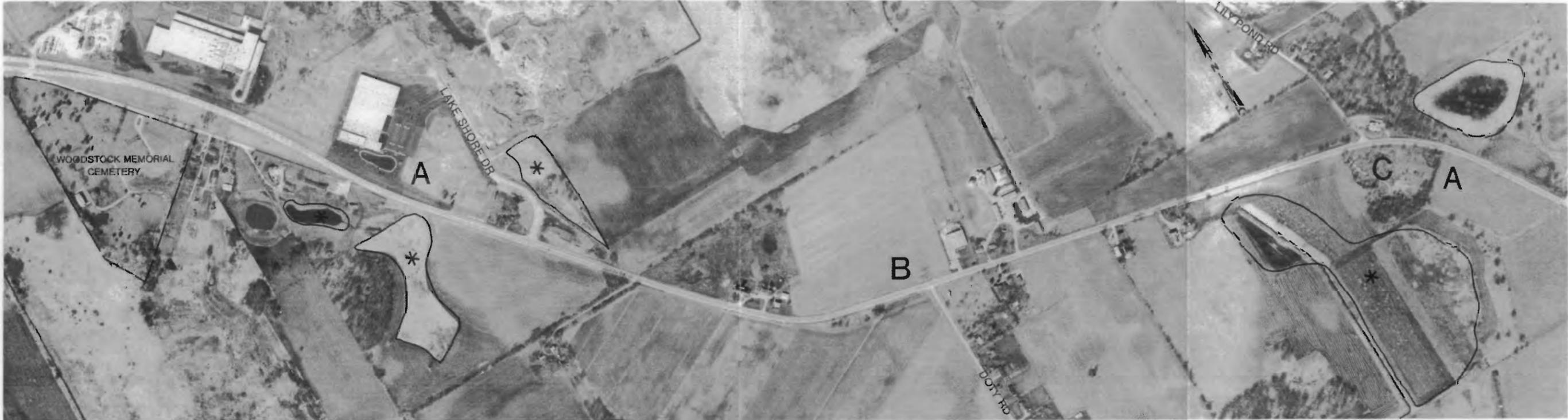
- Proximity of adjacent wetlands may limit capacity improvements

**B) DOTY ROAD AND U.S. 14 INTERSECTION**

- Address intersection geometry

**C) LILY POND ROAD AND U.S. 14 INTERSECTION**

- Address intersection geometry



RURAL SRA -- 168' TO 210' RIGHT OF WAY  
(Desirable)

**LEGEND**

A	Planning Focus-Area I.D
	Hazardous Waste Site
	Leaking Underground Storage Tank
	Historic Building/District
*	Wetland
	Church/Synagogue/Religious Institution
	Agricultural Land
	Special Use Areas
	Major Utility Lines

U.S. 14

### **Segment III—“Crystal Lake” (Ridgefield Road [North] to Cuba Road)**

Segment III of the U.S. 14 SRA is approximately 14 miles long, extending from Ridgefield Road on the north to Cuba Road on the south. This segment travels through Crystal Lake, Cary, and Fox River Grove, and through portions of Barrington Hills and Lake Barrington. Segment III is located in McHenry and Lake Counties.

#### ***Physical Characteristics***

The northern portion of this segment, from the Ridgefield Road (north) intersection to the Ridgefield Road (south) intersection, consists of a rural, two-lane cross section (one lane in each direction of travel). No median is present, drainage is open, and ditches are provided on the outside of the roadway with paved or aggregate shoulders.

From Ridgefield Road (south) to Crystal Lake Road, the cross section is expanded to provide four lanes (two lanes in each direction of travel). The cross section is essentially an urban section with closed drainage and no median. South of Crystal Lake Road to Dole Avenue, the cross section maintains four basic lanes, provides a 14-foot flush median, and has closed drainage. South of Dole Avenue to McHenry Avenue, the cross section is comprised of four through lanes with an 11-foot, two-way left-turn lane. A 10-foot parking lane also is provided on east side of the roadway.

From McHenry Avenue to north of Illinois 31, the U.S. 14 cross section is a four-lane urban cross section with a variable (11- to 16-foot) flush median. Through the Illinois 31 interchange, the median is expanded to provide a 16-foot mountable median. There is no median south of Illinois 31 to Sands Road. South of Sands Road to Silver Lake Road, U.S. 14 transitions back to a two-lane undivided rural cross section. From Silver Lakes Road (south) to north of Illinois 22, the cross section again expands to four basic lanes; a closed drainage system is provided and a variable-width, flush median (zero to 12 feet wide) exists. From Illinois 22 to Cary Road, four basic lanes are maintained. The roadway in this area features a 40-foot open, grass median and open drainage.

The horizontal alignment throughout this section is comprised mostly of mild horizontal curves (less than 6 degrees) and tangents. Exceptions are noted south of the C&NW Railroad, where the horizontal curvature of U.S. 14 is 9°30' (45 mph) and at the Main Street intersection in Cary, where the curvature is approximately 32°45'. The vertical alignment along this segment is relatively level, with no significant upgrades in terms of length or magnitude of grade.

The right-of-way within this segment varies from 60 to 200 feet, and generally is limited in more developed areas. In Crystal Lake, for example, where existing right-of-way is 60 to 100 feet, development at some locations is built just off the existing right-of-way. Similarly, the right-of-way in Cary is limited, especially in the vicinity of Cary Road and Main Street, where existing right-of-way is only 66 feet. The 200-foot right-of-way accommodates the four-lane cross section with a 40-foot-wide median between Kelsey Road and Cuba Road.

There are several other physical characteristics to note in this segment. U.S. 14 crosses over and interchanges with Illinois 31 southeast of Crystal Lake. Just southeast of Illinois 31, U.S. 14 is grade-separated from the Metra C&NW Northwest Railroad. Horizontal clearance underneath this structure accommodates only two lanes of travel (one lane in each direction of travel). In addition, a five-lane (55-foot) structure carries U.S. 14 over the Fox River south of Cary. South of Kelsey Road, a pair of two-lane structures carries U.S. 14 over Flint Creek. In addition, a major retaining wall runs parallel to U.S. 14 and the Metra C&NW Railroad. This wall extends southeast from the Jandus Road Cut-off to the Fox River, and from the Fox River south to Lincoln Avenue. Table 8 summarizes structures along this segment.

<p align="center"><b>Table 8</b>  <b>Existing Structures Along Segment III</b>  <b>(Ridgefield Road to Cuba Road) of U.S. 14</b></p>		
<p align="center"><b>IDOT Structure Reference</b></p>	<p align="center"><b>Feature</b></p>	
	<p align="center"><b>Over</b></p>	<p align="center"><b>Under</b></p>
056-0002	Illinois 31	—
056-0042	—	C&NW Railroad
056-0039	—	Cary Road
049-0001	Flint Creek	—
049-0002	Flint Creek	—

***Traffic Control, Operations, and Safety***

Numerous signalized intersections exist along U.S. 14 in this segment; major intersections, from northwest to southeast, include Illinois 176, Illinois 31, and Illinois 22. Illinois 176 is a principal east-west arterial that extends east from Illinois 23 to east of U.S. 41. This intersection is signal-controlled with left-turn lanes provided on U.S. 14. Illinois 176 is a designated SRA east and west of U.S. 14, but not at U.S. 14. Illinois 31 is a major north-south arterial with partial access control extending south from the Wisconsin state line through northeastern Illinois. The Illinois 31 intersection with U.S. 14 is accommodated through an existing cloverleaf interchange. The U.S. 14 intersection with Illinois 22, an east-west arterial that extends west from U.S. 14 to U.S. 41, is a “T-intersection,” with signal control and left-turn protection provided. Illinois 22 is also a designated SRA east from U.S. 14 to U.S. 41. All of the other signalized intersections along U.S. 14 in this segment provide left-turn lanes on U.S. 14 at the intersection approaches. Exhibits A-14 to A-26 summarize existing conditions along Segment III.

Traffic operations throughout this segment are highly variable. Through Crystal Lake, congestion is evident during peak periods. The intensity of commercial development adjacent to the corridor and the resulting large number of access points onto U.S. 14 affect operations through this area. Similarly, in Cary, from south of Cary-Algonquin

Road to south of Main Street, peak period congestion occurs. In addition, the existing horizontal alignment of U.S. 14 at the Main Street intersection and the resulting change in direction of U.S. 14 causes less than desirable traffic operations. The posted speed limits through this segment range from 30 to 55 mph; higher speed limits are north of Ridgefield Road where the speed is posted at 50 mph and south of Illinois 22 where the speed limits reaches 55 mph, and lower speed limits are posted in the commercial areas though Crystal Lake (30 mph) and Cary (35 mph).

Although parking is prohibited along most segments of U.S. 14, 1-hour parking is permitted in Crystal Lake from Dole Avenue to McHenry Avenue, and 2-hour parking is permitted in Cary just north of Main Street along a small stretch of roadway. In Fox River Grove between Lincoln Avenue and Algonquin Road, 2-hour parking is permitted along U.S. 14.

Existing traffic demand within this segment, based on a 1989 McHenry County ADT Map and the 1988 Lake County ADT Map (see Exhibits A-14 to A-26), ranges from 12,300 to 25,500 vpd. The northern portion of this segment has the lowest ADT (12,300 vpd). Through the commercial areas of Crystal Lake, the ADT is between 18,000 and 23,000 vpd. Between Crystal Lake and Cary, ADT is nearly 20,000 vpd, and in Cary in the vicinity of Main Street, ADT reaches 25,500 vpd. South of Illinois 22, ADT drops off to 15,900 vpd (resulting from diversion of traffic to/from U.S. 14, to/from Illinois 22).

Accident data (see Exhibits A-14 to A-26) for 1987 to 1989 were obtained from IDOT accident summaries. Intersection accident rates were calculated at 11 intersections along this segment. Intersection accident rates ranged from 0.28 to 1.66 accidents per MEV, with the highest accident rate reported at McHenry Avenue. No intersections were identified as high-accident locations. Segment accident rates, in terms of accidents per MVM, also were computed along this segment of U.S. 14. Segments accident rates ranged from 1.89 to 12.92 accidents per MVM. The highest segment rate (12.92 accidents per MVM) was calculated along U.S. 14 in Crystal Lake from McHenry Avenue to Main Street. This segment accident rate and the segment from Illinois 176 to McHenry Avenue (12.02 accidents per MVM) are higher than the 1989 statewide average accident rates for similar roadways. No other segments were identified as high-accident locations.

### ***Public Transportation***

As in the other segments, the Metra C&NW Northwest commuter rail line operates in this segment (see Table 3). This railroad runs roughly parallel and approximately ½ mile northeast of U.S. 14 within Crystal Lake. A train station in Crystal Lake serves Crystal Lake and the surrounding areas, and other Metra stations are located in Cary and Fox River Grove. Pace bus routes that serve the corridor include Route 808, which serves U.S. 14 from Ridgefield Road to Illinois 176 (Terra Cotta Road). Pace Route 805 serves the corridor from Crystal Lake Avenue to south of Main Street. No other Pace routes operate in this segment of the corridor.

### ***Environmental Constraints and Land Use***

The environmental concerns within this segment are summarized in Table 9 and from north to south on the Planning Focus Area Exhibits (see Exhibits B-14 to B-26). There are a number of wetlands in the corridor at various locations. The most notable include locations identified between Crystal Lake Avenue and Carpenter Street in Crystal Lake, on the east side of U.S. 14 between Spring Beach Road and the Fox River, south of Illinois 22 and Doyle Road, and just north of Cuba Road. In addition, there are two locations on U.S. 14 within an existing floodplain: south of Doyle Road and Illinois 22, and north of Cuba Road where U.S. 14 passes over the Flint Creek.

Parks and forest preserves that are within this segment of U.S. 14 include the McCormick Park in Crystal Lake, the Hollows Preserve south of Illinois 31 and north of Three Oaks Road in Cary, Lions Park north of Cary Road, and Cary Park at the intersection of U.S. 14 and Main Street in Cary.

**Table 9**  
**Summary of Environmentally Sensitive Land Uses**  
**and Sites Along Segment III of U.S. 14**

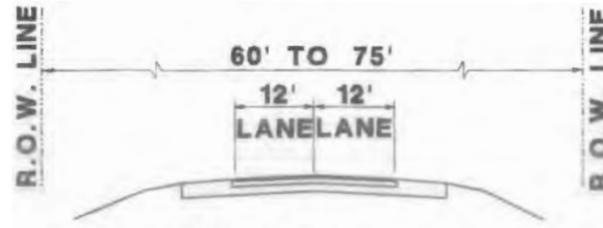
Item	Exhibit No.	Reference	Description
Historic Sites	—	—	None Noted
CERCLIS Sites <sup>a</sup>	—	—	None Noted
LUST Sites <sup>b</sup>	B-15	L-2	Mike Scimeca, 154 Virginia Street, Crystal Lake
	B-17	L-3	Site of former Ames Department Store, 230 Virginia Street, Crystal Lake
	B-17	L-4	Shell Oil, 220 E. Virginia, Crystal Lake
	B-18	L-5	Vulcan Materials, 5517 Northwest Highway, Crystal Lake

<sup>a</sup>CERCLIS = Comprehensive Environmental Response, Compensation, and Liability Information System; sites that reportedly have accepted hazardous substances or possess a record of accidental or illegal dumping.

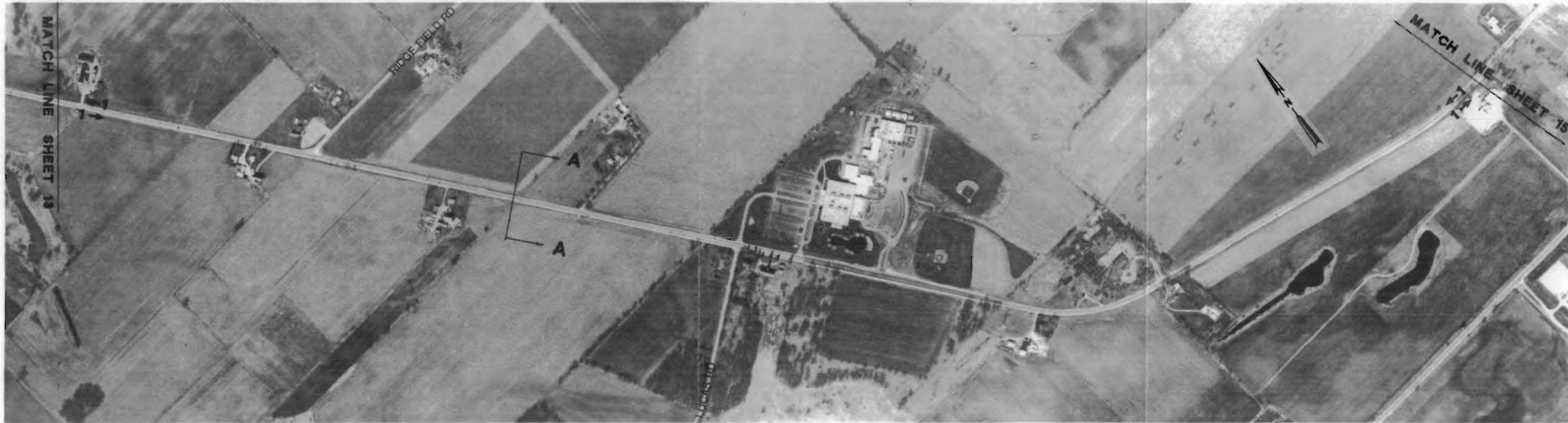
<sup>b</sup>LUST = Leaking Underground Storage Tank.

In the northern portion of this segment, land use consists of open or agricultural land. Zoned commercial areas are located along U.S. 14 between Ridgefield Road and Illinois 176, between Dole Avenue and Illinois 31, north and south of Main Street in Cary, and from the Fox River to south of Illinois 22 in Fox River Grove. Areas where land use is zoned industrial include large parcels south of Illinois 31, areas north and south of Three Oaks Road, and land in the vicinity of Cuba Road. Outside these areas, land use is zoned mostly residential.

LEGEND	
△	SIGNALIZED INTERSECTION
↔	LANE ARRANGEMENTS AT KEY INTERSECTIONS
Ⓟ	PARKING ALLOWED
Ⓢ	PARKING PROHIBITED
Ⓝ	NO POSTED RESTRICTIONS
Ⓟ	DESIGNATED BUS STOP
CTA	RAPID TRANSIT STATION
METRA	METRA STATION



**ROADWAY SECTION A - A**  
**WEST OF RIDGEFIELD RD. TO EAST OF LUCAS RD.**



1988 - 1990  
 AVERAGE  
 DAILY  
 TRAFFIC

ACCIDENT  
 RATE

TRANSIT  
 ROUTES

EDGE OF  
 ROAD USE

	12,800	12,300	12,400	
		2.19 / MVM		2.56 / MVM
	0.55/MEV		0.28/MEV	
	METRA RAIL NONE			
	PACE BUS ROUTE 808 (1 PEAK BUS/HR)			
EAST	Ⓢ	Ⓢ	Ⓢ	Ⓢ
WEST	Ⓢ	Ⓢ	Ⓢ	Ⓢ

**U.S. 14 - EXISTING CONDITIONS**

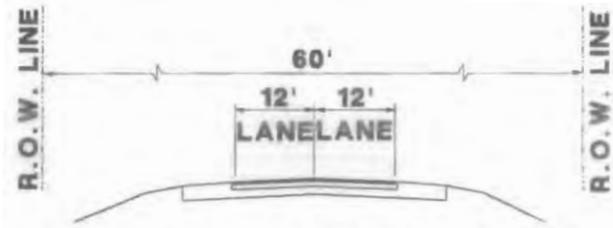
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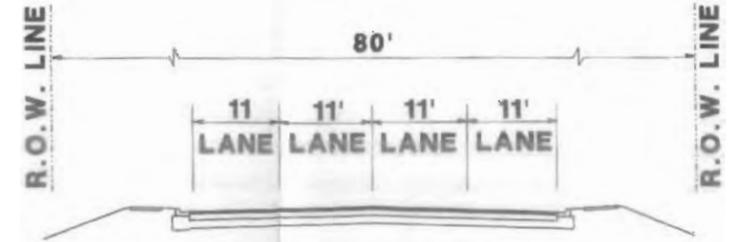
**SRA** Strategic  
 Regional  
 Arterial EXHIBIT A-14  
 Planning Study

Scale 0 200 400 feet

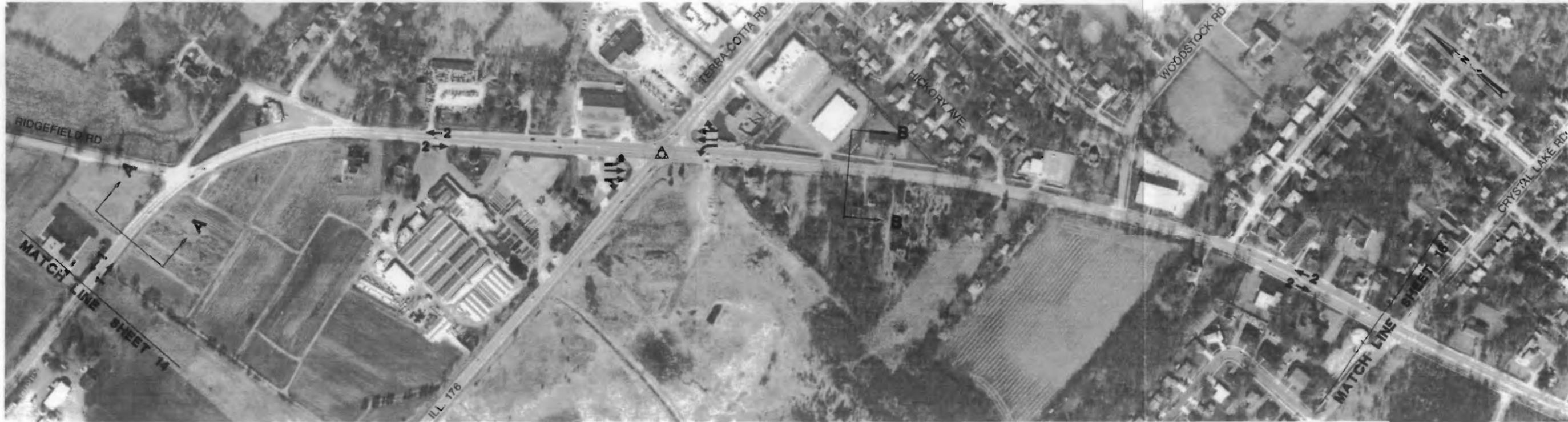
LEGEND	
△	SIGNALIZED INTERSECTION
→	LANE ARRANGEMENTS AT KEY INTERSECTIONS
(P)	PARKING ALLOWED
(P)	PARKING PROHIBITED
(NR)	NO POSTED RESTRICTIONS
■	DESIGNATED BUS STOP
CTA	RAPID TRANSIT STATION
METRA	METRA STATION



**ROADWAY SECTION A - A**  
WEST OF RIDGEFIELD RD. TO RIDGEFIELD RD.



**ROADWAY SECTION B - B**  
RIDGEFIELD RD. TO CRYSTAL LAKE RD.



1988 - 1990  
AVERAGE  
DAILY  
TRAFFIC

ACCIDENT  
RATE

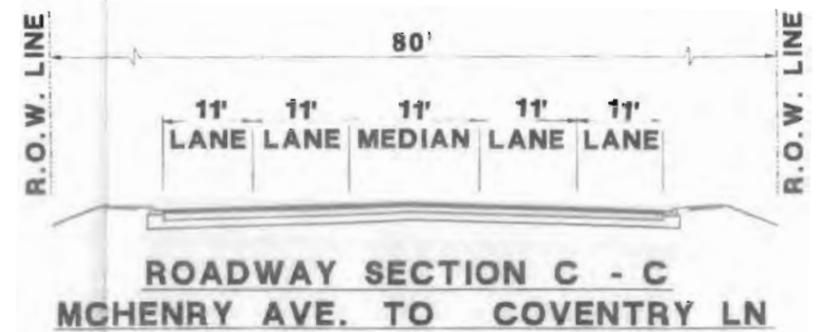
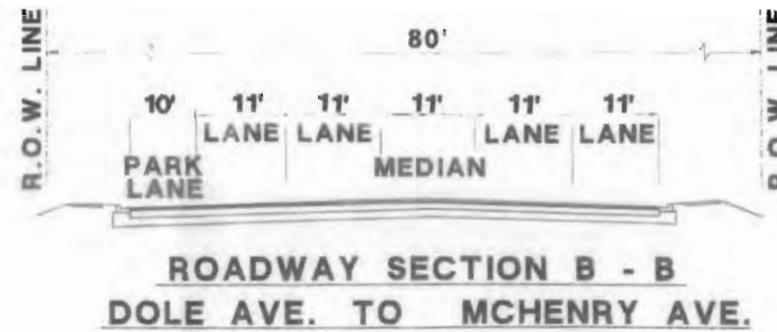
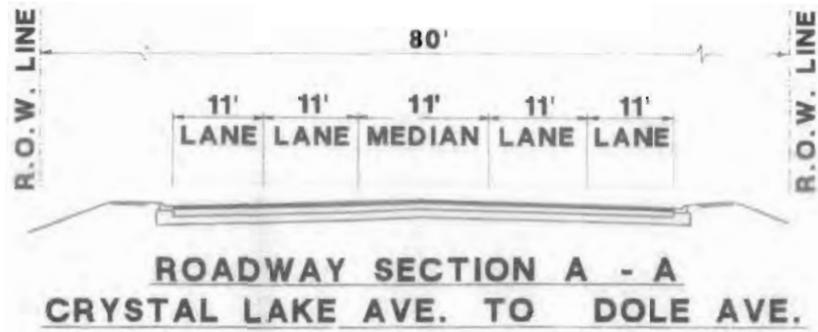
TRANSIT  
ROUTES

EDGE OF  
ROAD USE

	12,400	17,000	18,100
	0.73/MEV	7.06 / MVM	12.02 / MVM
	PACE BUS ROUTE 808 (1 PEAK BUS/HR)	METRA RAIL NONE	PACE BUS NONE
EAST	(P)	(P)	(P)
WEST	(P)	(P)	(P)

**U.S. 14 - EXISTING CONDITIONS**

LEGEND	
	SIGNALIZED INTERSECTION
	LANE ARRANGEMENTS AT KEY INTERSECTIONS
	PARKING ALLOWED
	PARKING PROHIBITED
	NO POSTED RESTRICTIONS
	DESIGNATED BUS STOP
	RAPID TRANSIT STATION
	METRA STATION



1988 - 1990  
AVERAGE  
DAILY  
TRAFFIC

ACCIDENT  
RATE

TRANSIT  
ROUTES

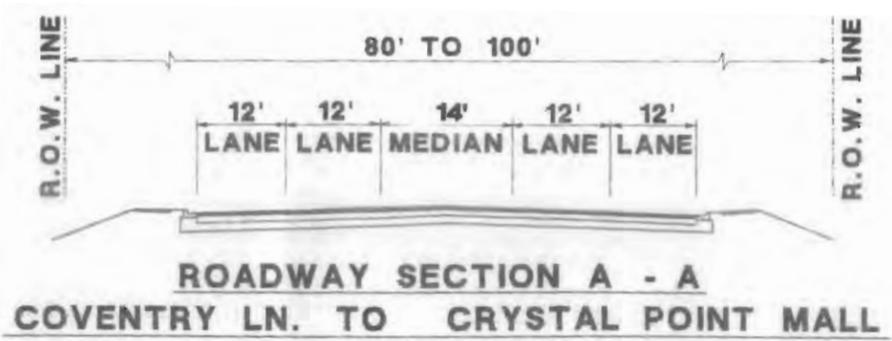
EDGE OF ROAD USE EAST WEST

	18,100										23,100										
	12.02 / MVM										12.92 / MVM										
	METRA RAIL NONE										1.65/MEV										
	PACE BUS NONE										PACE BUS ROUTE 805 (1 PEAK BUS/HR)										

### U.S. 14 - EXISTING CONDITIONS

**LEGEND**

- SIGNALIZED INTERSECTION
- LANE ARRANGEMENTS AT KEY INTERSECTIONS
- PARKING ALLOWED
- PARKING PROHIBITED
- NO POSTED RESTRICTIONS
- DESIGNATED BUS STOP
- RAPID TRANSIT STATION
- METRA STATION



1988 - 1990  
AVERAGE  
DAILY  
TRAFFIC

ACCIDENT  
RATE

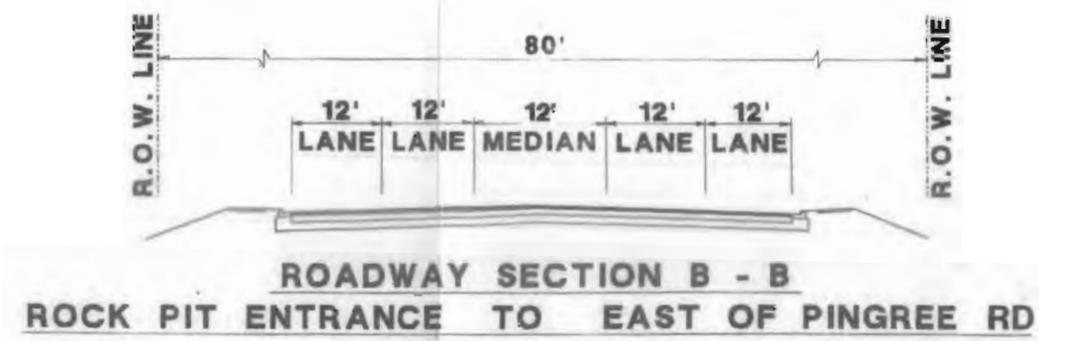
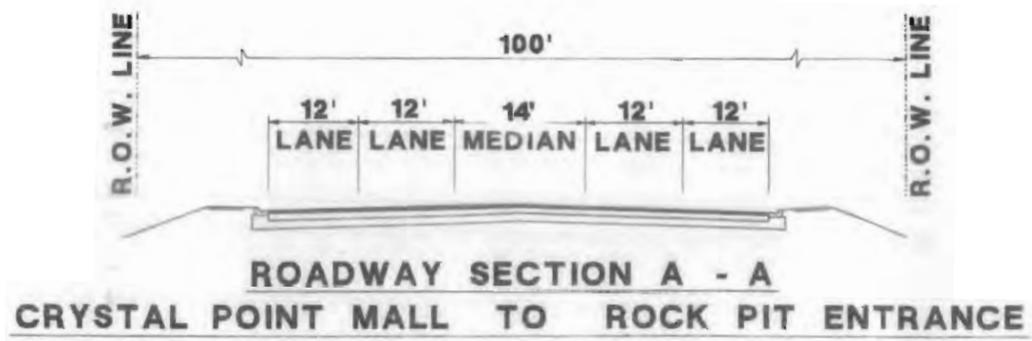
TRANSIT  
ROUTES

EDGE OF EAST  
ROAD USE WEST

	23,100					21,000									
	12.92 / MVM					12.92 / MVM					6.54 / MVM				
	<b>0.73/MEV</b>										<b>1.66/MEV</b>				
	METRA RAIL NONE														
	PACE BUS ROUTE 805 (1 PEAK BUS/HR)					PACE BUS ROUTE 805 (1 PEAK BUS/HR)					PACE BUS NONE				

**U.S. 14 - EXISTING CONDITIONS**

LEGEND	
△	SIGNALIZED INTERSECTION
↔	LANE ARRANGEMENTS AT KEY INTERSECTIONS
(P)	PARKING ALLOWED
(P)	PARKING PROHIBITED
(NR)	NO POSTED RESTRICTIONS
■	DESIGNATED BUS STOP
CTA	RAPID TRANSIT STATION
METRA	METRA STATION



1988 - 1990  
AVERAGE  
DAILY  
TRAFFIC

ACCIDENT  
RATE

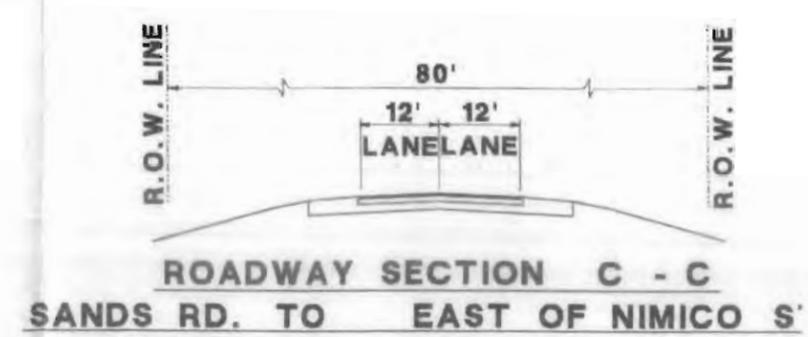
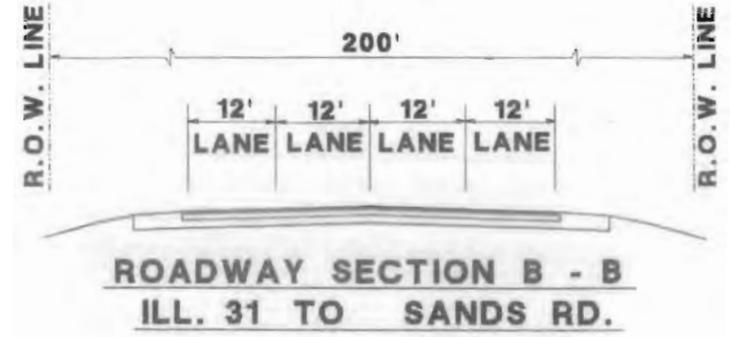
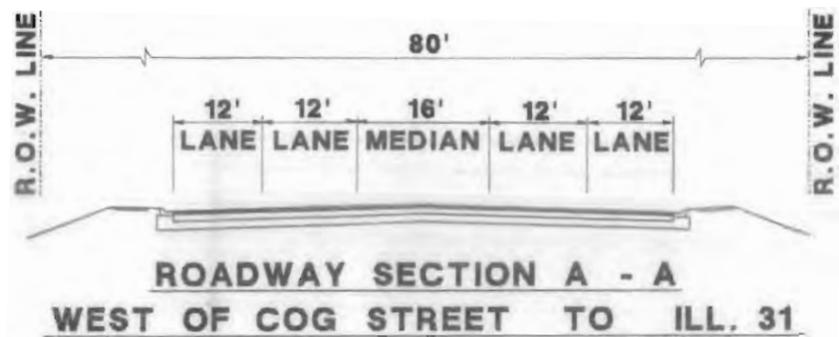
TRANSIT  
ROUTES

EDGE OF ROAD USE EAST WEST

21,000	19,300
6.54 / MVM	
METRA RAIL NONE	
PACE BUS NONE	
(P)   (P)   (P)   (P)   (P)	(P)   (P)   (P)
(P)   (P)   (P)   (P)   (P)	(P)   (P)   (P)

**U.S. 14 - EXISTING CONDITIONS**

LEGEND	
△	SIGNALIZED INTERSECTION
↔	LANE ARRANGEMENTS AT KEY INTERSECTIONS
(P)	PARKING ALLOWED
(P)	PARKING PROHIBITED
(NR)	NO POSTED RESTRICTIONS
■	DESIGNATED BUS STOP
CTA	RAPID TRANSIT STATION
METRA	METRA STATION



1988 - 1990  
AVERAGE  
DAILY  
TRAFFIC

ACCIDENT  
RATE

TRANSIT  
ROUTES

EDGE OF ROAD USE EAST WEST

19,300	15,100	18,800
6.54 / MVM	1.20 / MEV	8.53 / MVM
	METRA RAIL NONE PACE BUS NONE	METRA RAIL 1000
(P)	(P)	(P)
(P)	(P)	(P)

**U.S. 14 - EXISTING CONDITIONS**

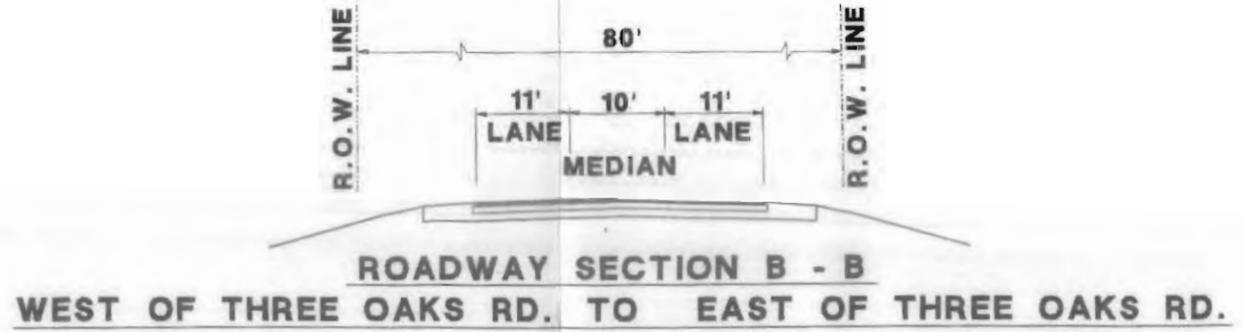
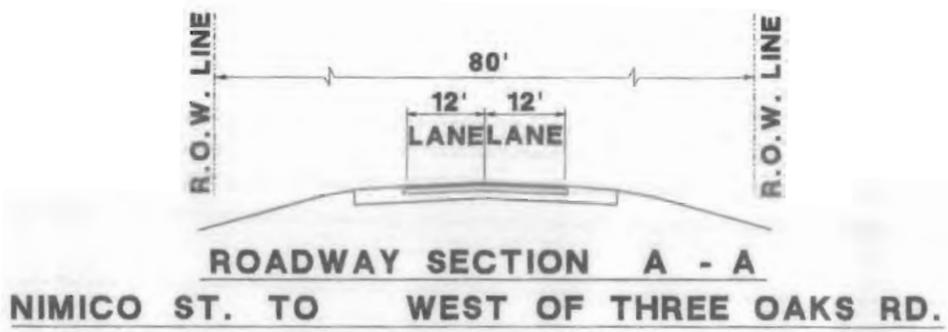
Prepared by CH2M HILL in association with  
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Scale: 0 100 200 feet

**LEGEND**

- △ SIGNALIZED INTERSECTION
- ↔ LANE ARRANGEMENTS AT KEY INTERSECTIONS
- Ⓟ PARKING ALLOWED
- Ⓡ PARKING PROHIBITED
- NR NO POSTED RESTRICTIONS
- Ⓡ DESIGNATED BUS STOP
- CTA RAPID TRANSIT STATION
- METRA METRA STATION



1988 - 1990  
AVERAGE  
DAILY  
TRAFFIC

ACCIDENT  
RATE

TRANSIT  
ROUTES

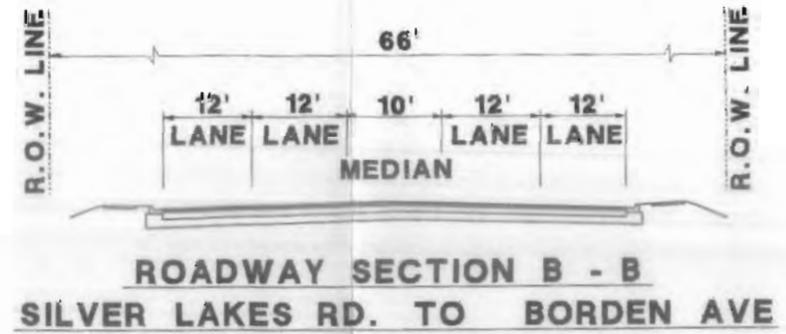
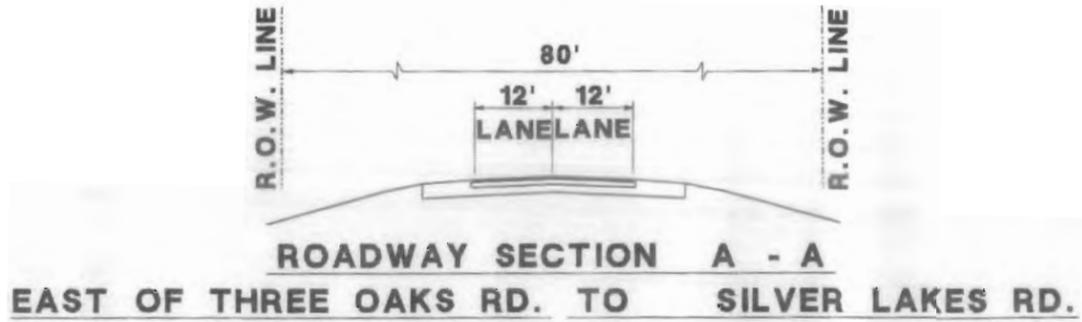
EDGE OF EAST  
ROAD USE WEST

	18,800	17,000
	3.35 / MVM	
	PACE BUS NONE	
	METRA RAIL RIDERSHIP 1000	
	Ⓟ	Ⓟ
	Ⓡ	Ⓡ

**U.S. 14 - EXISTING CONDITIONS**

**LEGEND**

- △ SIGNALIZED INTERSECTION
- ↔ LANE ARRANGEMENTS AT KEY INTERSECTIONS
- (P) PARKING ALLOWED
- (P) PARKING PROHIBITED
- NR NO POSTED RESTRICTIONS
- B DESIGNATED BUS STOP
- CTA RAPID TRANSIT STATION
- METRA METRA STATION



1988 - 1990 AVERAGE DAILY TRAFFIC	17,000		19,000	
ACCIDENT RATE	4.71 / MVM		5.79 / MVM	
TRANSIT ROUTES	PACE BUS		NONE	
EDGE OF ROAD USE EAST	(P)	(P)	(P)	(P)
EDGE OF ROAD USE WEST	(P)	(P)	(P)	(P)

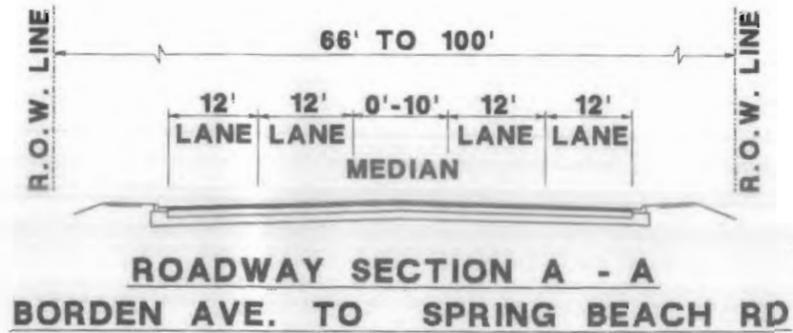
0.87/MEV

METRA RAIL RIDERSHIP 1000

**U.S. 14 - EXISTING CONDITIONS**

**LEGEND**

- △ SIGNALIZED INTERSECTION
- ↔ LANE ARRANGEMENTS AT KEY INTERSECTIONS
- (P) PARKING ALLOWED
- (P) PARKING PROHIBITED
- (N) NO POSTED RESTRICTIONS
- B DESIGNATED BUS STOP
- CTA RAPID TRANSIT STATION
- METRA METRA STATION



**1988 - 1990  
AVERAGE  
DAILY  
TRAFFIC**

**ACCIDENT  
RATE**

**TRANSIT  
ROUTES**

**EDGE OF ROAD USE** EAST WEST

19,000					25,500																
5.79 / MVM					6.87 / MVM																
PACE BUS NONE																					
METRA RAIL RIDERSHIP 1000																					
(P)		(P)		1/2 (P) 2HR		(P)		(P)		(P)		(P)		(P)		(P)		(P)			
(P)		(P)		(P)		(P)		(P)		(P)		(P)		(P)		(P)		(P)			

**U.S. 14 - EXISTING CONDITIONS**

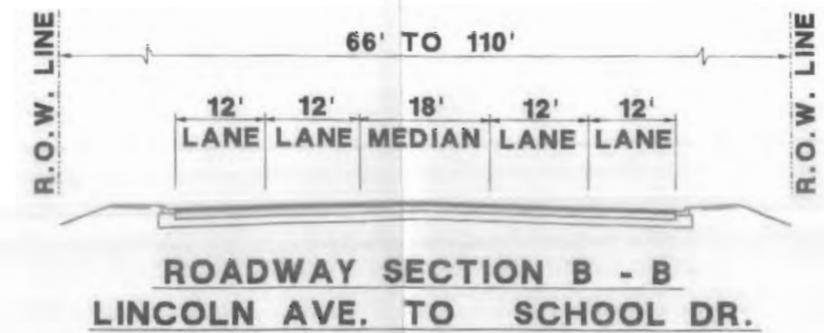
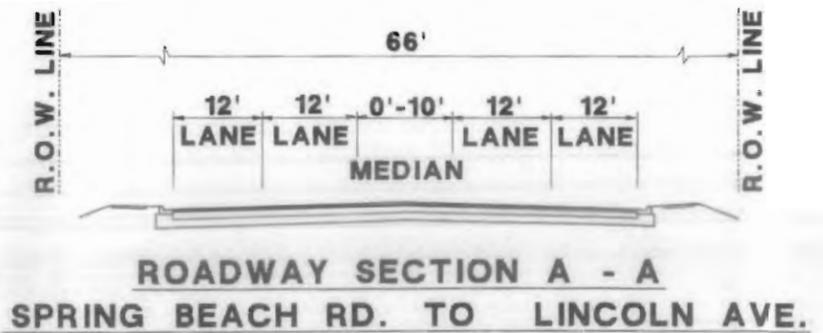
Prepared by CH2M HILL in association with  
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Scale: 0 100 200 feet

**LEGEND**

- SIGNALIZED INTERSECTION
- LANE ARRANGEMENTS AT KEY INTERSECTIONS
- PARKING ALLOWED
- PARKING PROHIBITED
- NO POSTED RESTRICTIONS
- DESIGNATED BUS STOP
- RAPID TRANSIT STATION
- METRA STATION



**1988 - 1990  
AVERAGE  
DAILY  
TRAFFIC**

**ACCIDENT  
RATE**

**TRANSIT  
ROUTES**

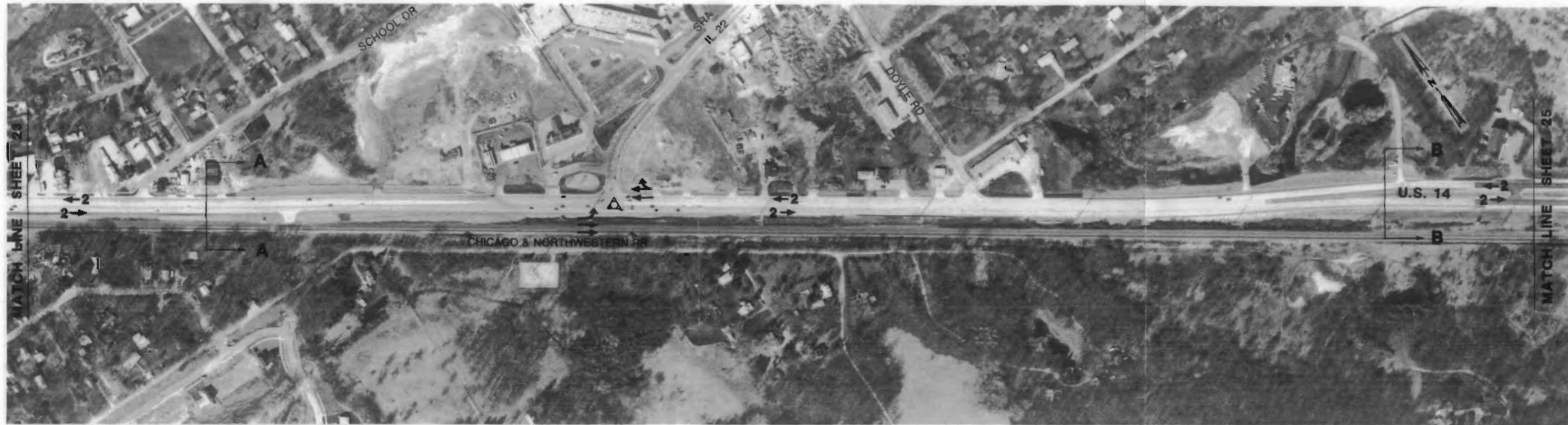
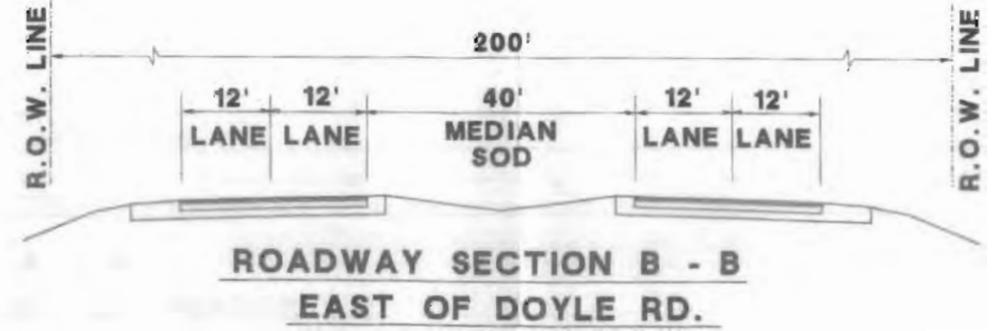
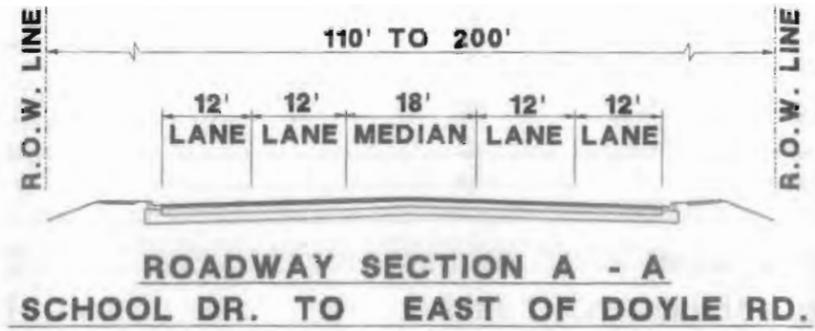
**EDGE OF ROAD USE** EAST WEST

25,500	24,100
6.87 / MVM	7.05 / MVM
FACE BUS METRA RAIL RIDERSHIP	NONE 1000

**U.S. 14 - EXISTING CONDITIONS**



LEGEND	
△	SIGNALIZED INTERSECTION
↔	LANE ARRANGEMENTS AT KEY INTERSECTIONS
(P)	PARKING ALLOWED
(P)	PARKING PROHIBITED
(NR)	NO POSTED RESTRICTIONS
B	DESIGNATED BUS STOP
CTA	RAPID TRANSIT STATION
METRA	METRA STATION



1988 - 1990  
AVERAGE  
DAILY  
TRAFFIC

ACCIDENT  
RATE

TRANSIT  
ROUTES

EDGE OF  
ROAD USE

	24,100	1.35/MEV	15,900
	7.05 / MVM		3.33 / MVM
		PACE BUS NONE	
		METRA RAIL RIDERSHIP 1000	
EAST	(P)	(P)	(P)
WEST	(P)	(P)	(P)

**U.S. 14 - EXISTING CONDITIONS**

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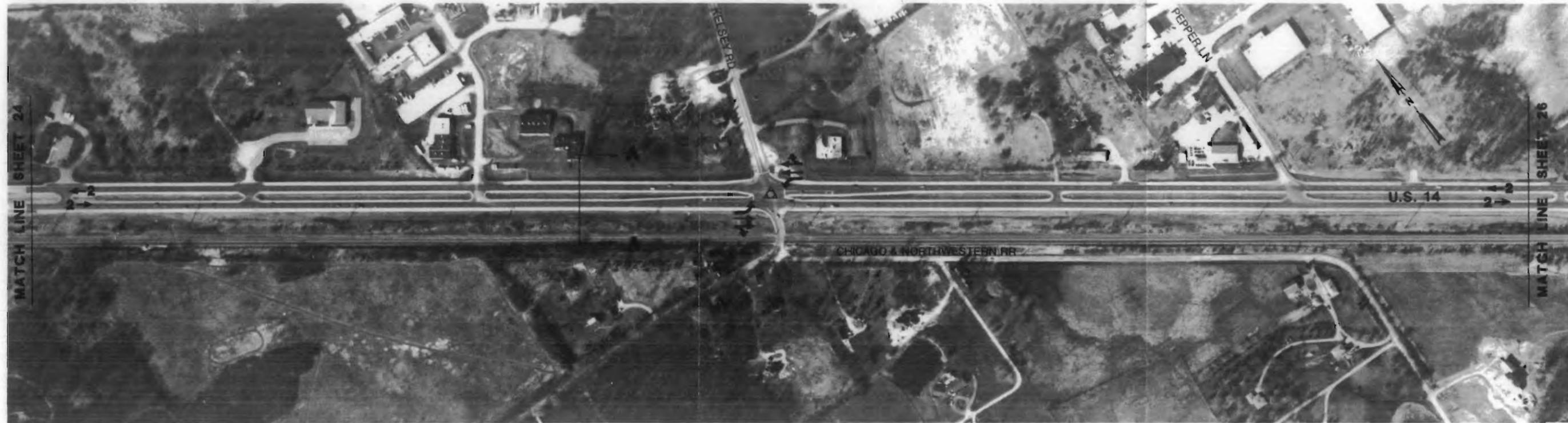
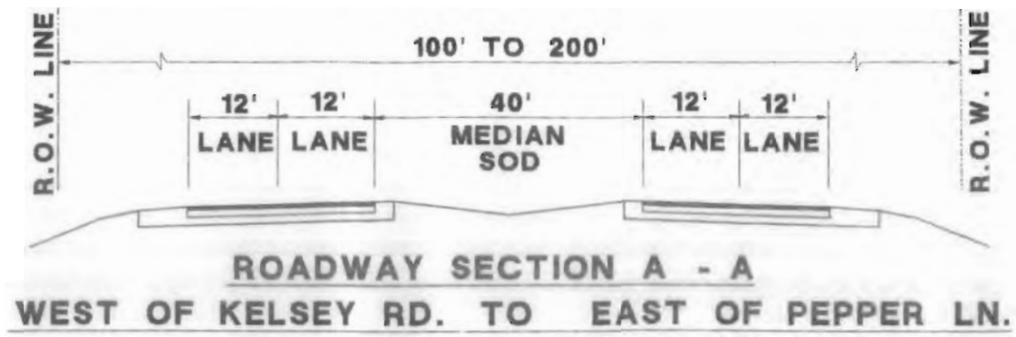
ILLINOIS DEPARTMENT OF TRANSPORTATION



Scale 0 100 200 feet

**LEGEND**

- △ SIGNALIZED INTERSECTION
- ↔ LANE ARRANGEMENTS AT KEY INTERSECTIONS
- (P) PARKING ALLOWED
- (P) PARKING PROHIBITED
- (NR) NO POSTED RESTRICTIONS
- B DESIGNATED BUS STOP
- CTA RAPID TRANSIT STATION
- METRA METRA STATION



1988 - 1990  
AVERAGE  
DAILY  
TRAFFIC

ACCIDENT  
RATE

TRANSIT  
ROUTES

EDGE OF ROAD USE EAST WEST

	16,400		19,700
	3.33 / MVM	0.74/MEV	2.78 / MVM
	PACE BUS NONE		
	METRA RAIL RIDERSHIP 1000		
	(P)	(P)	(P)
	(P)	(P)	(P)

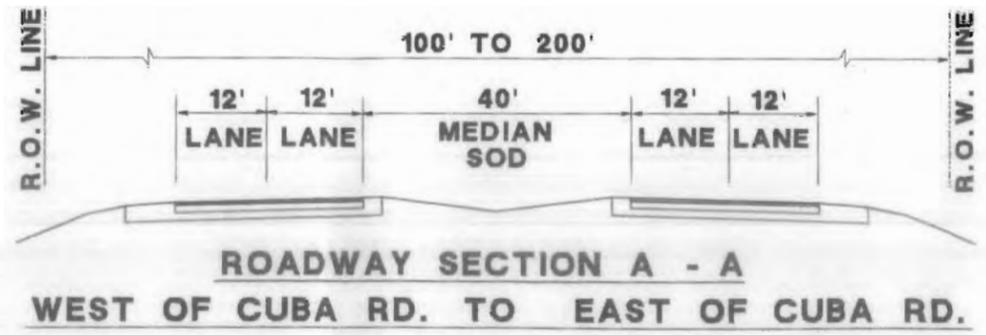
**U.S. 14 - EXISTING CONDITIONS**

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**LEGEND**

- △ SIGNALIZED INTERSECTION
- ↔ LANE ARRANGEMENTS AT KEY INTERSECTIONS
- (P) PARKING ALLOWED
- (P) PARKING PROHIBITED
- (NR) NO POSTED RESTRICTIONS
- B DESIGNATED BUS STOP
- CTA RAPID TRANSIT STATION
- METRA METRA STATION



1988 - 1990  
AVERAGE  
DAILY  
TRAFFIC

ACCIDENT  
RATE

TRANSIT  
ROUTES

EDGE OF  
ROAD USE

	19,700	20,300
	2.78 / MVM	1.89 / MVM
	PACE BUS NONE	
	METRA RAIL RIDERSHIP 1000	
EAST	(P)	(P)
WEST	(P)	(P)

**U.S. 14 - EXISTING CONDITIONS**



# PLANNING FOCUS AREAS

## A) WEST OF RIDGEFIELD ROAD

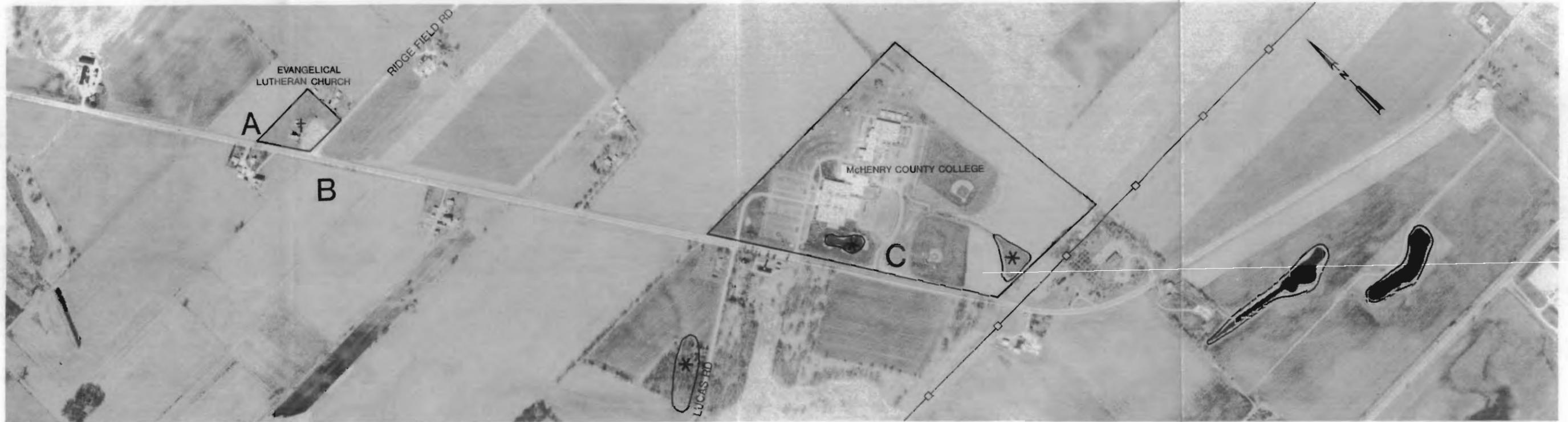
- Proximity of adjacent church may limit improvement alternatives

## B) RIDGEFIELD ROAD AND U.S. 14 INTERSECTION

- Address intersection geometry

## C) MCHENRY COUNTY COLLEGE EAST OF LUCAS ROAD

- Proximity of adjacent college may limit improvement alternatives



SUBURBAN SRA -- 120' TO 150' RIGHT OF WAY  
(Desirable)

### LEGEND

- Planning Focus Area ID
- Hazardous Waste Site
- Leaking Underground Storage Tank
- Historic Building/District
- Wetland
- Church/Synagogue/Religious Institution
- Agricultural Land
- Special Use Areas
- Major Utility Lines

U.S. 14

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ILLINOIS DEPARTMENT OF TRANSPORTATION

Scale:  
0 200 400 600 800 feet

**SRA** Strategic  
Regional  
Aerial EXHIBIT B-14  
Planning Study

# PLANNING FOCUS AREAS

## A) RIDGEFIELD ROAD AND U.S. 14 INTERSECTION

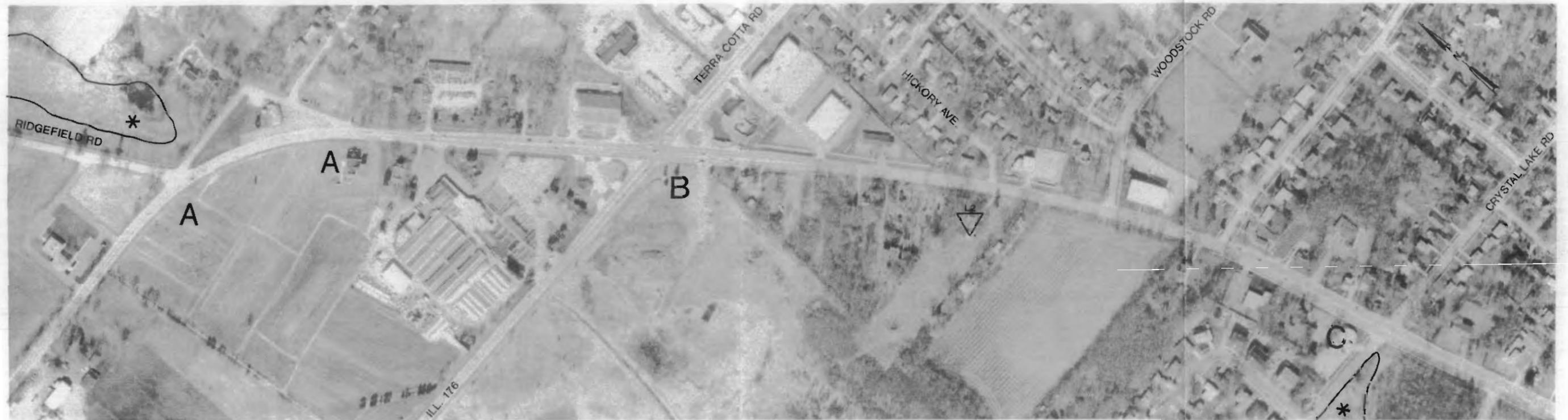
- Address intersection geometry

## B) IL. 176 AND U.S. 14 INTERSECTION

- Address intersection geometry
- Capacity improvements for intersection are constrained by adjacent land use

## C) CRYSTAL LAKE ROAD AND U.S. 14 INTERSECTION

- Address intersection geometry



SUBURBAN SRA -- 120' TO 150' RIGHT OF WAY  
(Desirable)

### LEGEND

- A Planning Focus Area I.D.
- ⬇ Hazardous Waste Site
- ⬇ Leaking Underground Storage Tank
- ⬇ Historic Building/District
- \* Wetland
- † Church/Synagogue/Religious Institution
- - - Agricultural Land
- Special Use Areas
- Major Utility Lines

U.S. 14

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Scale:  
0 100 200 300 400 Feet

**SRA** Strategic Regional Arterial Planning Study  
EXHIBIT B-15

# PLANNING FOCUS AREAS

## A) CARPENTER STREET TO MCHENRY AVENUE

- Limited available right-of-way
- Multiple driveway/cross street access points may affect SRA operation

## B) MCHENRY AVENUE AND U.S. 14 INTERSECTION

- Address intersection geometry
- Capacity improvements for high-volume intersection are constrained by adjacent land use



SUBURBAN SRA -- 120' TO 150' RIGHT OF WAY  
(Desirable)

### LEGEND

- A Planning Focus Area I.D.
- (C1) Hazardous Waste Site
- (L1) Leaking Underground Storage Tank
- (H1) Historic Building/District
- \* Wetland
- † Church/Synagogue/Religious Institution
- Agricultural Land
- Special Use Area
- Major Utility Lines

U.S. 14

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Scale:  
0 100 200 300 400 feet

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Regional  
Arterial Planning Study  
EXHIBIT B-16

# PLANNING FOCUS AREAS

## A) DEVONSHIRE LANE TO EAST OF MAIN STREET

- Multiple driveway/cross street access points may affect SRA operation

## B) VIRGINIA ROAD AND U.S. 14 INTERSECTION

- Address intersection geometry

## C) MAIN STREET AND U.S. 14 INTERSECTION

- Capacity improvements for high-volume intersection are constrained by adjacent land use
- At-grade railroad crossing



SUBURBAN SRA -- 120' TO 150' RIGHT OF WAY  
(Desirable)

### LEGEND

- A Planning Focus Area I.D.
- ☒ Hazardous Waste Site
- ▽ Leaking Underground Storage Tank
- ⬡ Historic Building/District
- \* Wetland
- † ⚙ Church/Synagogue/Religious Institution
- Agricultural Land
- Special Use Areas
- Major Utility Lines

U.S. 14

**SRA** Strategic Regional Arterial Planning Study EXHIBIT B-17

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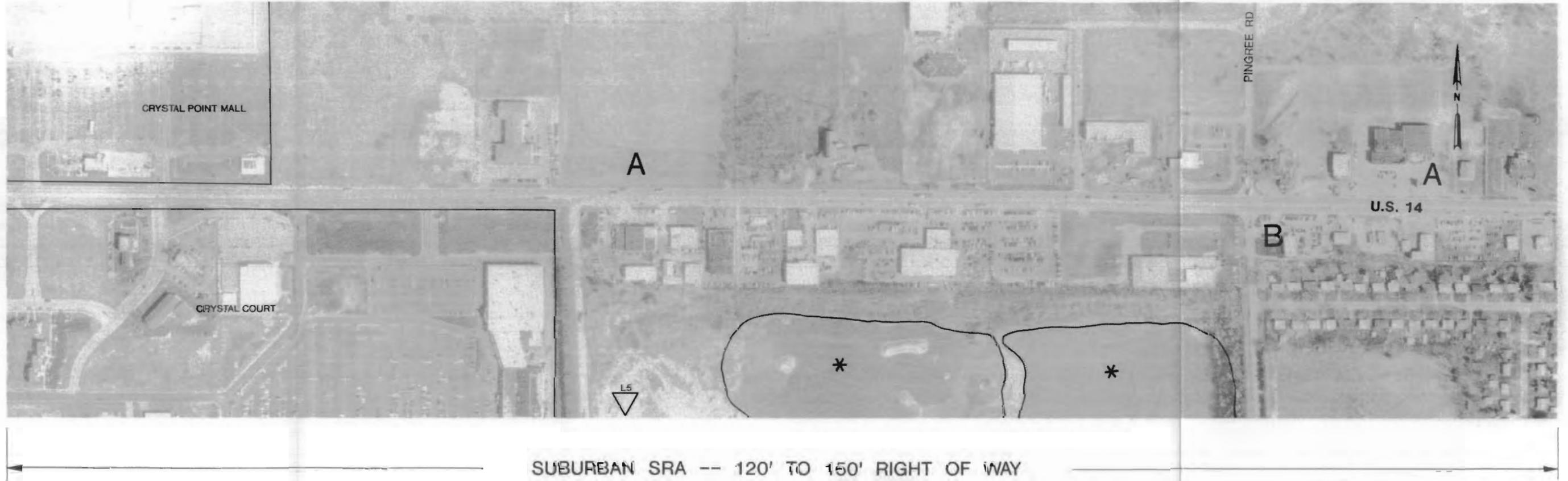
# PLANNING FOCUS AREAS

## A) CRYSTAL POINT MALL TO EAST OF PINGREE LANE

- Multiple driveway/cross street access points may affect SRA operation

## B) PINGREE ROAD AND U.S. 14 INTERSECTION

- Capacity improvements for intersection are constrained by adjacent land use



SUBURBAN SRA -- 120' TO 150' RIGHT OF WAY  
(Desirable)

### LEGEND

- A Planning Focus Area (B)
- Hazardous Waste Site
- Leaking Underground Storage Tank
- Historic Building/District
- \* Wetland
- Church/Synagogue/Religious institution
- Agricultural Land
- Special Use Areas
- Major Utility Lines

U.S. 14

**SRA** Strategic Regional Arterial Planning Study EXHIBIT B-18

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# PLANNING FOCUS AREAS

## A) WEST OF COG STREET

- Multiple driveway/cross street access points may affect SRA operation

## B) ILL 31 AND U.S. 14 INTERSECTION

- Intersection of two SRA routes

## C) CHICAGO & NORTHWESTERN RAILROAD

- Railroad Crossing
- Limited horizontal clearance for U.S. 14 under railroad overpass

## D) NIMICO STREET AND U.S. 14 INTERSECTION

- Address intersection geometry



SUBURBAN SRA -- 120' TO 150' RIGHT OF WAY (Desirable)

### LEGEND

- A Planning Focus Area I.D.
- (G1) Hazardous Waste Site
- (L1) Leaking Underground Storage Tank
- (H1) Historic Building/District
- \* Wetland
- † ☆ Church/Synagogue/Religious Institution
- Agricultural Land
- Special Use Areas
- Major Utility Lines

U.S. 14

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Scale: 0 100 200 300 400 feet

**SRA** Strategic Regional Arterial EXHIBIT B-19 Planning Study

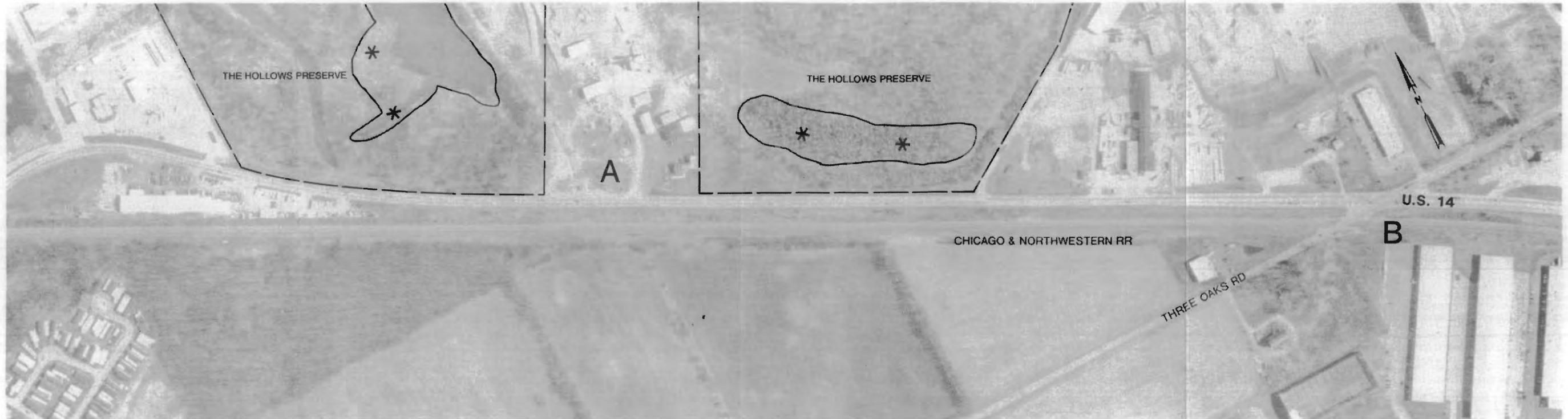
# PLANNING FOCUS AREAS

## A) WEST OF THREE OAKS ROAD

- Limited available right-of-way
- Future improvement alternatives may be affected by nature preserve

## B) THREE OAKS ROAD AND U.S. 14 INTERSECTION

- Address intersection geometry



SUBURBAN SRA -- 120' TO 150' RIGHT OF WAY (Desirable)

### LEGEND

- A Planning Focus Area I.D.
- (Cl) Hazardous Waste Site
- (L1) Leaking Underground Storage Tank
- (H1) Historic Building/District
- \* Wetland
- † Church/Synagogue/Religious Institution
- Agricultural Land
- Special Use Areas
- Major Utility Lines

U.S. 14

**SRA** Strategic Regional Arterial Planning Study EXHIBIT B-20

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# PLANNING FOCUS AREAS

## A) WEST OF CARY ROAD

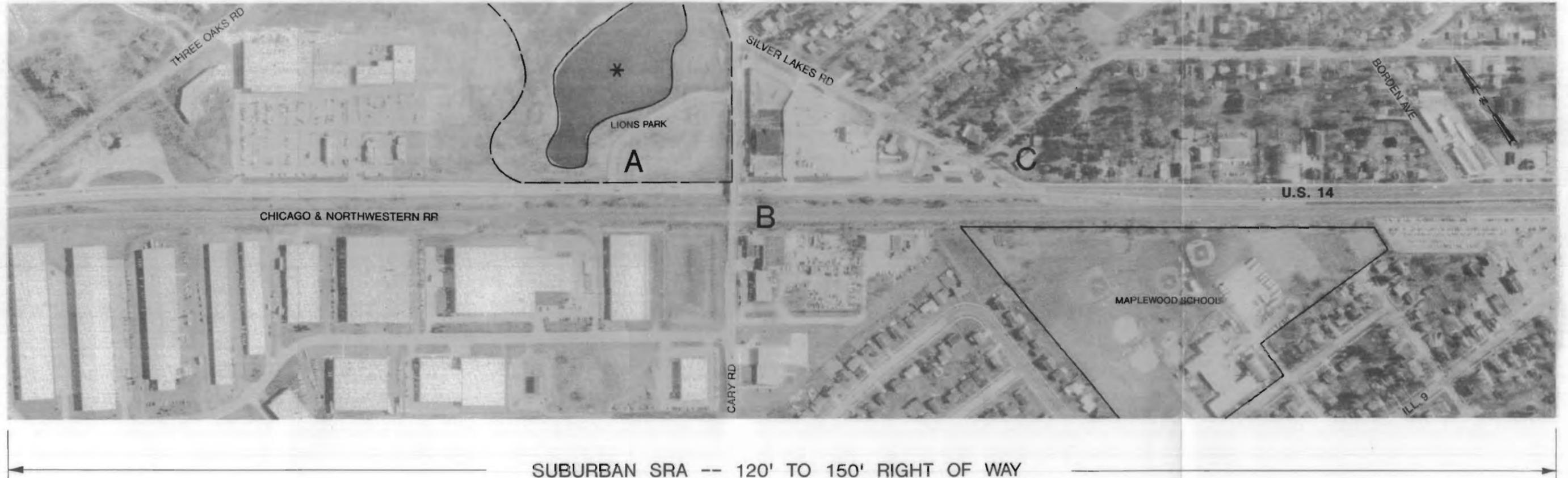
- Future improvement alternatives may be affected by park

## C) SILVER LAKES ROAD AND U.S. 14 INTERSECTION

- Address intersection geometry

## B) CARY ROAD OVERPASS

- Limited horizontal clearance for U.S. 14 under overpass



**LEGEND**

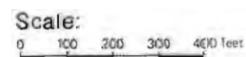
- A Planning Focus Area I.D.
- HW Hazardous Waste Site
- L Leaking Underground Storage Tank
- H Historic Building/District
- \* Wetland
- † ☆ Church/Synagogue/Religious Institution
- Agricultural Land
- Special Use Areas
- Major Utility Lines

**SRA** Strategic Regional Arterial Planning Study  
EXHIBIT B-21

U.S. 14

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# PLANNING FOCUS AREAS

## A) BORDEN AVENUE TO LAKE JULIAN LANE

- Limited available right-of-way
- Multiple driveway/cross street access points may affect SRA operation

## B) MAIN STREET AND U.S. 14 INTERSECTION

- Address intersection geometry
- Capacity improvements for high-volume intersection are constrained by adjacent land use
- Commuter rail station and access to parking located in close proximity to intersection



SUBURBAN SRA -- 120' TO 150' RIGHT OF WAY (Desirable)

### LEGEND

- A Planning Focus Area I.B.
- (G) Hazardous Waste Site
- (L) Leaking Underground Storage Tank
- (H) Historic Building/District
- \* Wetland
- † Church/Synagogue/Religious Institution
- Agricultural Land
- Special Use Areas
- Major Utility Lines

U.S. 14

# PLANNING FOCUS AREAS

## A) EAST OF SPRING BEACH ROAD

- Proximity of adjacent wetlands may limit capacity improvements

## B) FOX RIVER BRIDGE CROSSING

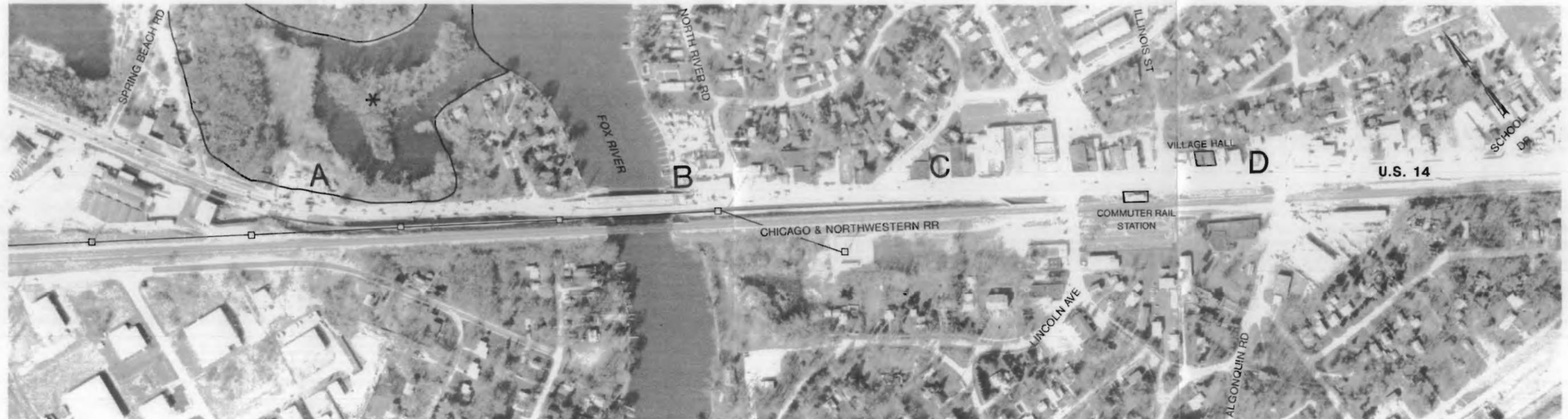
- Existing structure may require widening

## C) FOX RIVER TO SCHOOL DRIVE

- Limited available right-of-way
- Multiple driveway/cross street access points may affect SRA operation
- At-grade railroad crossings in close proximity to signalized intersections

## D) ALGONQUIN ROAD AND U.S. 14 INTERSECTION

- Address intersection geometry
- Capacity improvements for intersection are constrained by adjacent land use

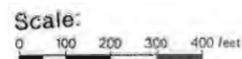


SUBURBAN SRA -- 120' TO 150' RIGHT OF WAY (Desirable)

**LEGEND**

- A Planning Focus Area I.D.
- (CI) Hazardous Waste Site
- (L) Leaking Underground Storage Tank
- (H) Historic Building/District
- \*
- † ☆ Church/Synagogue/Religious Institution
- - - Agricultural Land
- - - Special Use Areas
- - - Major Utility Lines

U.S. 14



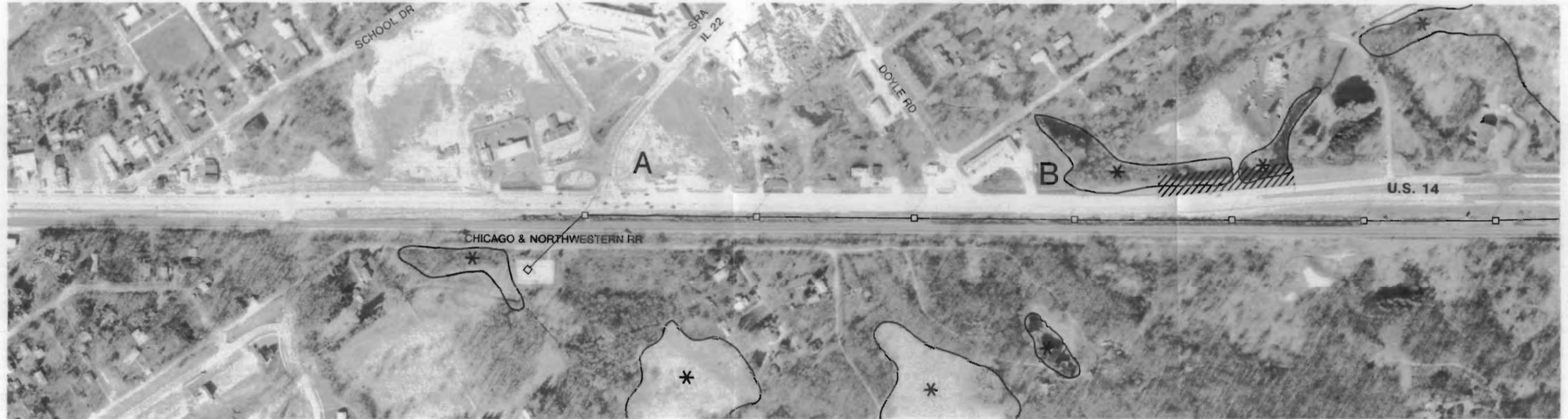
# PLANNING FOCUS AREAS

## A) ILL 22 AND U.S. 14 INTERSECTION

- Intersection of two SRA routes
- Capacity improvements for high-volume intersection are constrained by adjacent land use

## B) EAST OF DOYLE ROAD

- Proximity of adjacent wetlands may limit capacity improvements



SUBURBAN SRA -- 120' TO 150' RIGHT OF WAY (Desirable)

### LEGEND

- A Planning Focus Area I.D.
- (C1) Hazardous Waste Site
- ⬇ Leaking Underground Storage Tank
- (H) Historic Building/District
- \* Wetland // Floodplain/Floodway
- † ⬠ Church/Synagogue/Religious Institution
- Agricultural Land
- Special Use Areas
- Major Utility Lines

U.S. 14

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ILLINOIS DEPARTMENT OF TRANSPORTATION

Scale: 0 100 200 300 400 feet

**SRA** Strategic Regional Arterial Planning Study EXHIBIT B-24

# PLANNING FOCUS AREAS

## A) PEPPER LANE AND U.S. 14 INTERSECTION

- Address intersection geometry



SUBURBAN SRA -- 120' TO 150' RIGHT OF WAY  
(Desirable)

### LEGEND

- A Planning Focus Area I.D.
- (C1) Hazardous Waste Site
- LI Leaking Underground Storage Tank
- (H1) Historic Building/District
- \* Wetland
- † ☆ Church/Synagogue/Religious Institution
- Agricultural Land
- Special Use Areas
- Major Utility Lines

U.S. 14

**SRA** Strategic Regional Arterial Planning Study  
EXHIBIT B-25

# PLANNING FOCUS AREAS

## A) FLINT CREEK BRIDGE

- Existing structure may require widening/replacement

## B) WEST OF CUBA ROAD

- Proximity of adjacent wetlands may limit capacity improvements



SUBURBAN SRA -- 120' TO 150' RIGHT OF WAY (Desirable)

LEGEND	
A	Planning Focus Area I.D.
	Hazardous Waste Site
	Leaking Underground Storage Tank
	Historic Building/District
*	Wetland
	Floodplain/Floodway
†	Church/Synagogue/Religious Institution
	Agricultural Land
	Special Use Areas
	Major Utility Lines

U.S. 14



## **Segment IV—“Palatine” (Cuba Road to Palatine Road)**

Segment IV of U.S. 14, approximately 10 miles long, extends from Cuba Road southeast to the southern study area terminus at Palatine Road. This segment of U.S. 14 travels through portions of Lake Barrington, Barrington Hills, Barrington, Inverness, and Palatine, and through both Lake and Cook Counties.

### ***Physical Characteristics***

All portions of this segment of U.S. 14 consist of two basic lanes in each direction of travel. From Cuba Road (south) to Old Northwest Highway, the cross section is rural in nature, with a 40-foot open median and open drainage. South of Old Northwest Highway to approximately Eastern Avenue, the cross section transitions into an urban-type design, featuring a flush 11- to 12-foot median with closed drainage and curb and gutter design. South of Hillside Road, in the vicinity of the Thunderbird Country Club, the cross section narrows and provides no median. Although this basic cross section design continues southeast to Smith Street, left-turn protection is provided at major intersections. South of Smith Street to Palatine Road, the cross section returns to an urban-type design, with segments of raised median and segments of flush median (varying in width from 11 to 30 feet).

Horizontal alignment along this segment is comprised of tangents and a few curves. Horizontal curvature in excess of 8 degrees (the maximum value for a designated suburban SRA) were identified at Lake Zurich Road (degree of curvature = 12 degrees), and south of Lake-Cook Road (degree of curvature = 10 degrees). All other horizontal curves meet the criteria for a suburban SRA. The vertical alignment within this segment is relatively level, with mild grades.

The right-of-way within this segment varies from 80 to 200 feet. The right-of-way is 200 feet in the northern portion of this segment from Cuba Road (south) to approximately south of Old Northwest Highway. South of Old Northwest Highway, the right-of-way becomes constrained and varies between 80 and 90 feet, with the most constrained right-of-way located in more developed areas (see Exhibits A-27 to A-35).

There are several other physical characteristics worth noting in this segment: U.S. 14 crosses under and interchanges with Illinois 68 (Dundee Road), and the EJ&E Railway crosses U.S. 14 at grade just north of Lake Zurich Road. Table 10 summarizes structures along this segment.

<b>Table 10</b> <b>Existing Structures Along Segment III</b> <b>(Cuba Road to Palatine Road) of U.S. 14</b>		
<b>IDOT Structure Reference</b>	<b>Feature</b>	
	<b>Over</b>	<b>Under</b>
049-003 016-2410	Flint Creek —	EJ&E Railway Illinois 68 (Dundee Road)

***Traffic Control, Operations, and Safety***

Major intersections within the segment, from northwest to southeast, include Illinois 59 (Hough Street), Lake Cook Road, Quentin Road, and Palatine Road. Illinois 59 and Quentin Road both are major north-south facilities and are designated SRAs. Illinois 59 is designated a SRA north from the U.S. 14 intersection; the existing intersection is signal-controlled with left-turn protection on all approaches. Quentin Road is designated a SRA through the U.S. 14 intersection, which is controlled by signals and has left-turn lanes. Lake Cook Road and Palatine Road are principal east-west arterials. Lake Cook Road is designated a SRA east of the U.S. 14 intersection from U.S. 12 to U.S. 41. The intersection is controlled by a signal with left-turn protection provided. Palatine Road is designated a SRA beginning at U.S. 14 and extending west to I-94. This intersection also is controlled by a signal, and left-turn lanes are provided on all approaches. Illinois 68 (Dundee Road), although it is not designated a SRA, also is a vital east-west arterial. The Illinois 68 intersection with U.S. 14 is accommodated through a grade-separated interchange.

The operation of existing traffic throughout Segment IV varies. In the northern portion of this segment, south from Cuba Road, the corridor operates at high speeds with no apparent safety problems. Further to the south through Barrington, congestion is evident during peak periods. The intensity of commercial development adjacent to the corridor, residential areas, and the resulting frequency of access points onto U.S. 14 affect operations through this area. South from Barrington to approximately Illinois 68, traffic operates at a high level of service (a lack of development adjacent to the corridor contributes to this operation). South from Illinois 68 through the more urbanized segments of Palatine, congestion and lower levels of service exist (resulting from a relatively narrow cross section, frequent driveways/access points, and intense development directly abutting U.S. 14).

The posted speed limits through this segment range from 30 to 55 mph. Higher speed limits are posted south from Cuba Road to Taylor Road (55 mph) and south of Illinois 22. Speed limits of 50 mph are posted along the rural-type portions of this segment between Taylor Road and Hart Road, and south of Eastern Avenue to north of Ela Road (opposite Thunderbird Country Club). The lower speed limits are posted in the commercial areas through Barrington (30 mph) and through Palatine (35 mph). On-street parking is prohibited along this entire segment.

Existing traffic demand for this segment, based on the 1988 Lake County and 1986 Cook County ADT Maps (see Exhibits A-29 to A-35), ranges from 12,800 to 36,400 vpd. The heaviest traffic volume was identified between Quentin Road and Hicks Road, through the commercial area of Palatine. The lowest volumes are found between Lake Cook Road and Hillside Road. Generally, ADT is less than 20,000 vpd north of Quentin Road and approximately 30,000 vpd south of Quentin Road.

Accident data (see Exhibits A-29 to A-35) for 1987 to 1989 were obtained from IDOT accident summaries. Intersection accident rates were calculated at nine intersections along this segment. Intersection accident rates ranged from 0.29 to 2.87 accidents per MEV, with the highest accident rate reported at the Ela Road intersection. All intersections where accident rates were investigated, including Ela Road, were below statewide averages for similar intersections. Segment accident rates, in terms of accidents per MVM, also were computed along this segment of

U.S. 14. Segment accident rates ranged from 1.89 to 18.42 accidents per MVM. The highest segment rate (18.42 accidents per MVM) was calculated along U.S. 14 from Hicks Road to Palatine Road. The accident rate from Main Street (Lake Cook Road) to Hillside Road was calculated as 13.86 accidents per MVM. (Note, however, that the segment from Hicks Road to Palatine Road was reconstructed in 1991. The rates were computed from available accident data that reflect conditions before the reconstruction.) No other segments were identified as high-accident locations.

### ***Public Transportation***

The Metra C&NW Northwest commuter rail line is the other major transportation facility operating in this corridor. This Metra rail line parallels U.S. 14, traveling south from Cuba Road to Palatine Road. Existing train stations are located in Barrington and Palatine. There are also a number of Pace bus routes that serve portions of this corridor. Pace Routes 725, 726, and 728 serve U.S. 14 between Lake Zurich Road and Lake Cook Road, with three buses operating in the peak hour. In addition, Pace Route 699, which serves the Palatine Road corridor, crosses U.S. 14 at Palatine Road.

### ***Environmental Constraints and Land Use***

The environmental concerns within Segment IV, from north to south, are summarized in Table 11 and in the Planning Focus Area Exhibits (Exhibits B-27 through B-35). Floodplains were identified along U.S. 14 at Taylor Road north of Hart Road. CERCLIS sites, listed in Table 11, are identified at a number of locations along the corridor, but are located generally a sufficient distance from U.S. 14. Forest preserves and parks along the corridor include the Bakers Lake Nature Preserve, along the west side of the corridor opposite the Thunderbird Country Club; the Deer Grove Forest Preserve, directly adjacent to the east side of U.S. 14 and north of Illinois 68; the Palatine Park District, north of Doe Drive; and the Community Park in Palatine, north of Palatine Road. Wetlands also are delineated on the Planning Focus Area Exhibits. Notable wetlands include an area along the east side of U.S. 14, south of Doe Drive, and wetlands east and west of U.S. 14 (north and south of Smith Street). Other identified wetlands are located a significant distance from U.S. 14.

**Table 11**  
**Summary of Environmentally Sensitive Land Uses and**  
**Sites Along Segment IV of U.S. 14**

Item	Exhibit No.	Reference	Description
Historic Sites	—	—	None Noted
CERCLIS Sites <sup>a</sup>	—	—	None Noted
LUST Sites <sup>b</sup>	B-28	L-6	Barrington Dodge, 505 W. Northwest Highway, Barrington
	B-28	L-7	Robert W. Louis, 495 W. Northwest Highway, Barrington
	B-28	L-8	Dale Destree, 250 N. Northwest Highway, Barrington
	B-29	L-9	Pittas Greenhouse, 141 S. Northwest Highway, Barrington
	B-32	L-10	Camelot Care Center, 1502 N. Northwest Highway, Palatine
	B-34	L-11	Palatine Associates, Ltd., 315 to 345, Northwest Highway, Palatine
	B-35	L-12	Mobil Oil, 7 N. Northwest Highway, Palatine

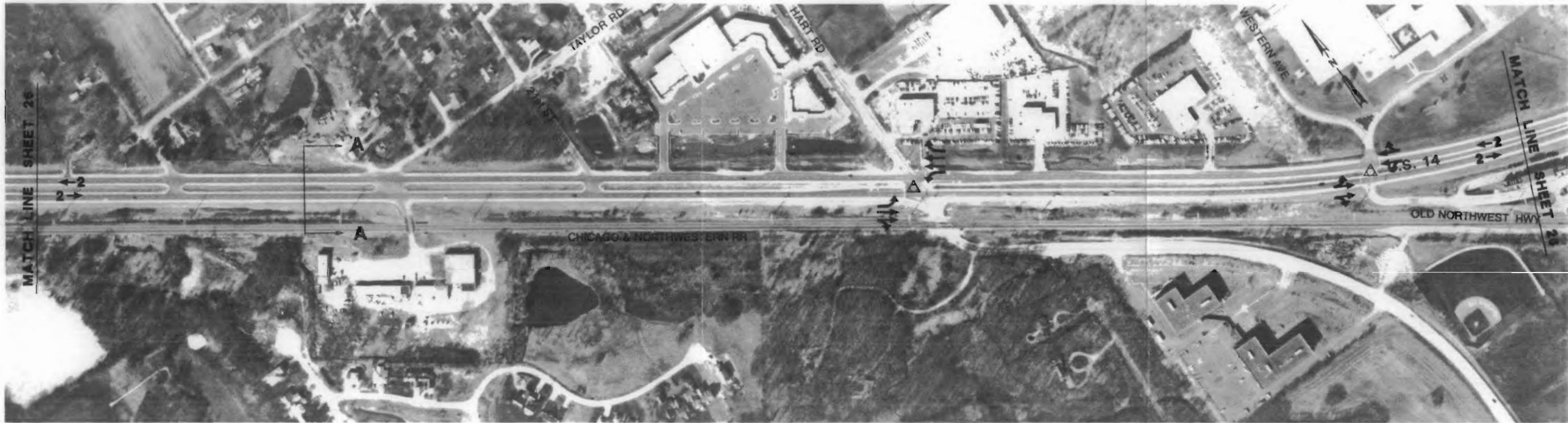
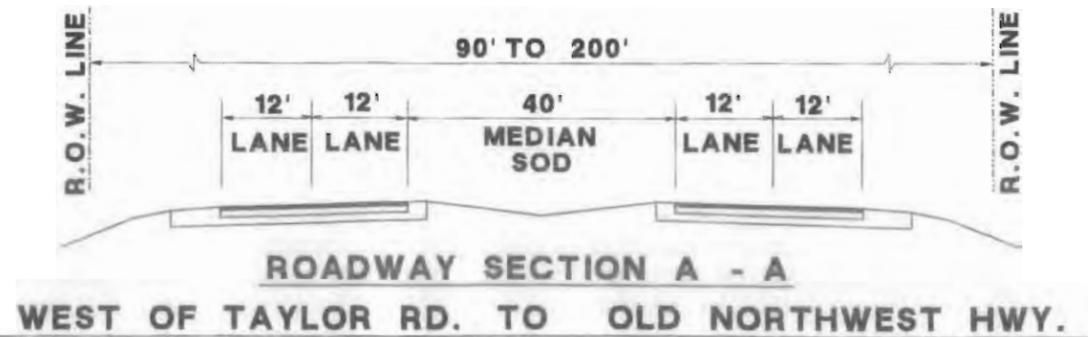
<sup>a</sup>CERCLIS = Comprehensive Environmental Response, Compensation, and Liability Information System; sites that reportedly have accepted hazardous substances or possess a record of accidental or illegal dumping.

<sup>b</sup>LUST = Leaking Underground Storage Tank.

The land use within this segment consists primarily of residential and commercial development. In general, land use is zoned residential north of Illinois 59. Zoned commercial areas are located primarily in Barrington, between Illinois 59 and Eastern Avenue, and through Palatine south of Illinois 68 to Palatine Road. The area between Hillside Avenue and Illinois 68, which is forest preserve and land belonging to the Thunderbird County Club, is not available to development.

**LEGEND**

- △ SIGNALIZED INTERSECTION
- ↔ LANE ARRANGEMENTS AT KEY INTERSECTIONS
- (P) PARKING ALLOWED
- (P) PARKING PROHIBITED
- (NR) NO POSTED RESTRICTIONS
- ⊞ DESIGNATED BUS STOP
- CTA RAPID TRANSIT STATION
- METRA METRA STATION



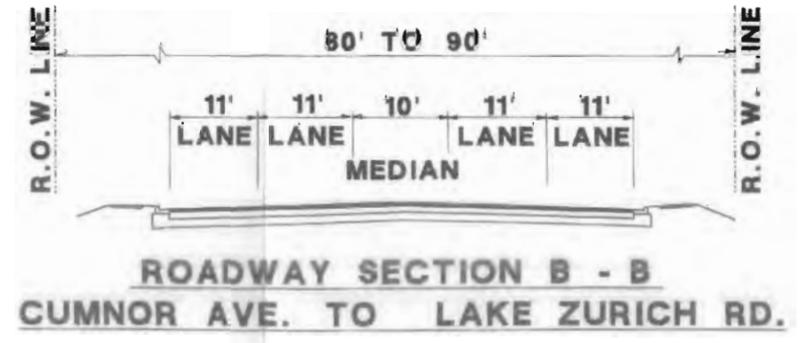
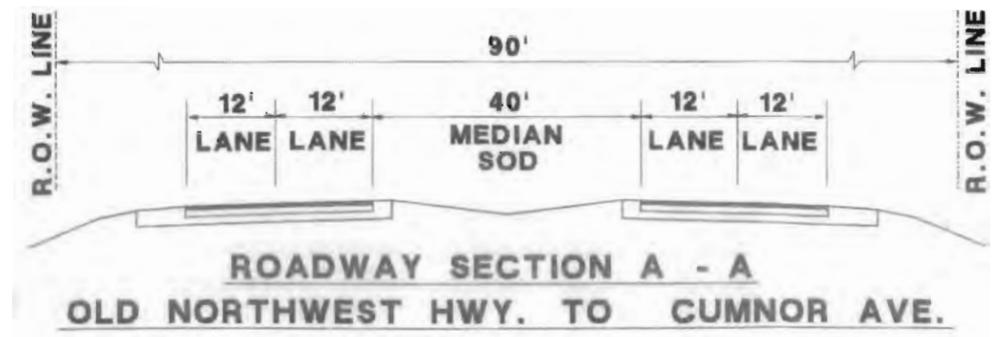
1988 - 1990 AVERAGE DAILY TRAFFIC	20,600		20,900	
ACCIDENT RATE	1.89 / MVM		5.88 / MVM	
TRANSIT ROUTES	PACE BUS NONE		1.94/MEV	
EDGE OF ROAD USE	METRA RAIL RIDERSHIP 1000			
EAST	(P)	(P)	(P)	(P)
WEST	(P)	(P)	(P)	(P)

**U.S. 14 - EXISTING CONDITIONS**

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LEGEND	
△	SIGNALIZED INTERSECTION
↔	LANE ARRANGEMENTS AT KEY INTERSECTIONS
P	PARKING ALLOWED
P	PARKING PROHIBITED
NR	NO POSTED RESTRICTIONS
B	DESIGNATED BUS STOP
CTA	RAPID TRANSIT STATION
METRA	METRA STATION



1988 - 1990  
AVERAGE  
DAILY  
TRAFFIC

ACCIDENT  
RATE

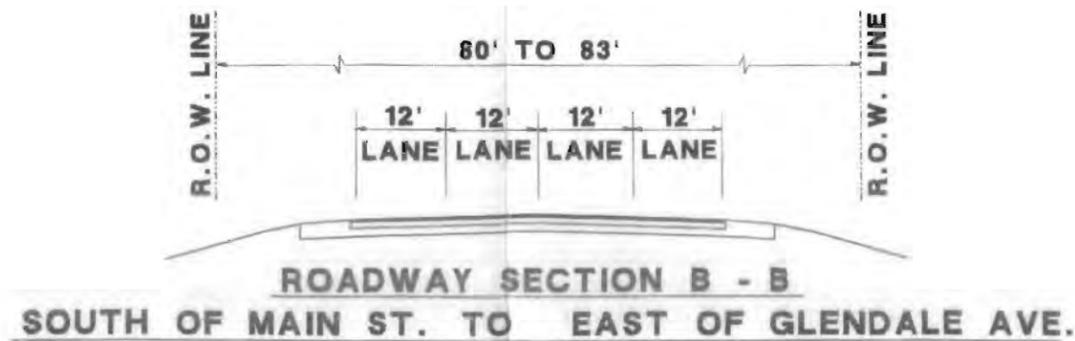
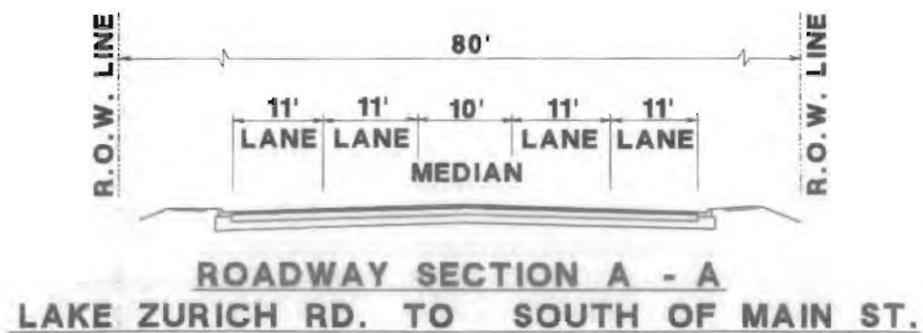
TRANSIT  
ROUTES

EDGE OF EAST  
ROAD USE WEST

	20,900								25,200			
	5.88 / MVM								7.52 / MVM			
									1.64/MEV			
	PACE BUS NONE											
	METRA RAIL RIDERSHIP 1000											
	P	P	P	P	P	P	P	P	P	P	P	P
	P	P	P	P	P	P	P	P	P	P	P	P

**U.S. 14 - EXISTING CONDITIONS**

LEGEND	
	SIGNALIZED INTERSECTION
	LANE ARRANGEMENTS AT KEY INTERSECTIONS
	PARKING ALLOWED
	PARKING PROHIBITED
	NO POSTED RESTRICTIONS
	DESIGNATED BUS STOP
	RAPID TRANSIT STATION
	METRA STATION



1988 - 1990  
AVERAGE  
DAILY  
TRAFFIC

ACCIDENT  
RATE

TRANSIT  
ROUTES

EDGE OF EAST  
ROAD USE WEST

	25,200										20,900							
	7.52 / MVM										13.86 / MVM							
	METRA RAIL RIDERSHIP 1,500 TO 2,400										1.36/MEV							
	NO BUS										PACE BUS ROUTE 725, 726, 728 (3 PEAK BUS/HR)				NO BUS			

### U.S. 14 - EXISTING CONDITIONS

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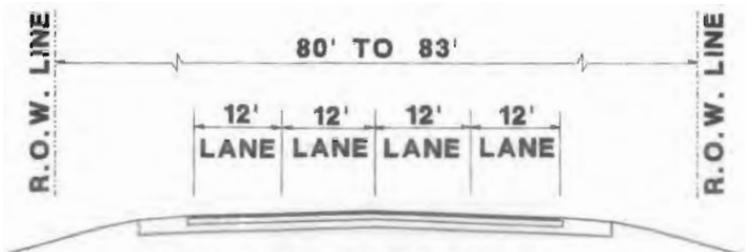
ILLINOIS DEPARTMENT OF TRANSPORTATION

**SRA** Strategic  
Regional  
Arterial EXHIBIT A-29  
Planning Study

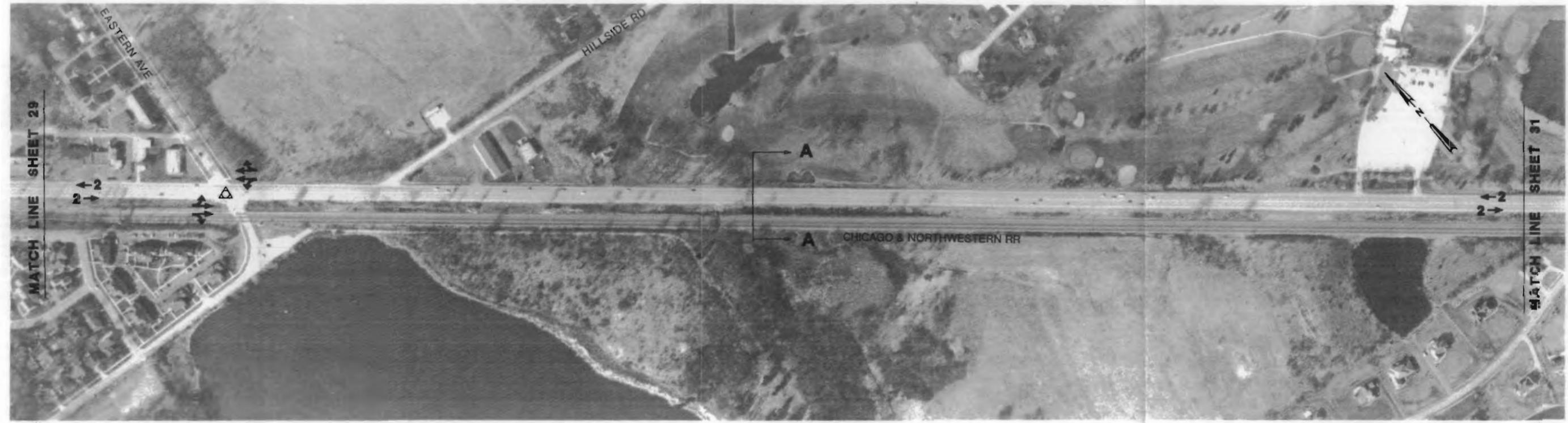
Scale: 0 100 200 feet

**LEGEND**

- △ SIGNALIZED INTERSECTION
- ↔ LANE ARRANGEMENTS AT KEY INTERSECTIONS
- (P) PARKING ALLOWED
- (P) PARKING PROHIBITED
- (NR) NO POSTED RESTRICTIONS
- ⊞ DESIGNATED BUS STOP
- CTA RAPID TRANSIT STATION
- METRA METRA STATION



**ROADWAY SECTION A - A**  
WEST OF EASTERN AVE. TO EAST OF HILLSIDE RD.



1988 - 1990  
AVERAGE  
DAILY  
TRAFFIC

ACCIDENT  
RATE

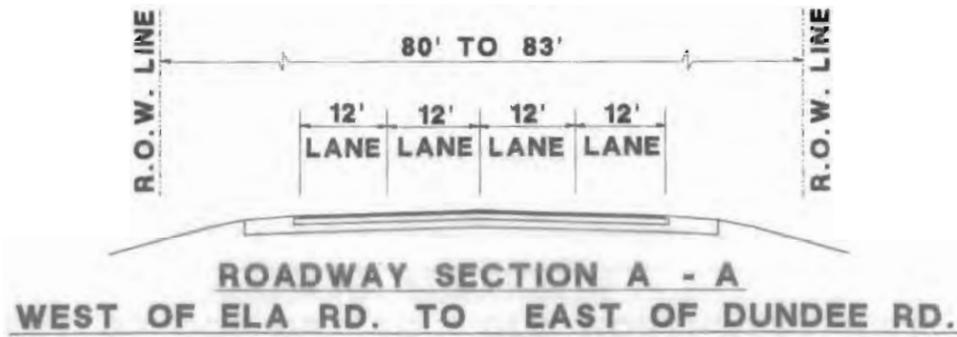
TRANSIT  
ROUTES

EDGE OF  
ROAD USE

20,900		16,900
13.86 / MVM		2.68 / MVM
PACE BUS NONE		
METRA RAIL RIDERSHIP 1,500 TO 2,400		
(P)	(P)	(P)
(P)	(P)	(P)

**U.S. 14 - EXISTING CONDITIONS**

LEGEND	
△	SIGNALIZED INTERSECTION
↔	LANE ARRANGEMENTS AT KEY INTERSECTIONS
P	PARKING ALLOWED
P	PARKING PROHIBITED
NR	NO POSTED RESTRICTIONS
B	DESIGNATED BUS STOP
CTA	RAPID TRANSIT STATION
METRA	METRA STATION



1988 - 1990 AVERAGE DAILY TRAFFIC	16,900	25,500	15,800
ACCIDENT RATE	2.68 / MVM	2.87 / MEV	3.57 / MVM
TRANSIT ROUTES	PACE BUS NONE METRA RAIL RIDERSHIP 1,500 TO 2,400		
EDGE OF ROAD USE EAST	P	P	P
EDGE OF ROAD USE WEST	P	P	P

## U.S. 14 - EXISTING CONDITIONS

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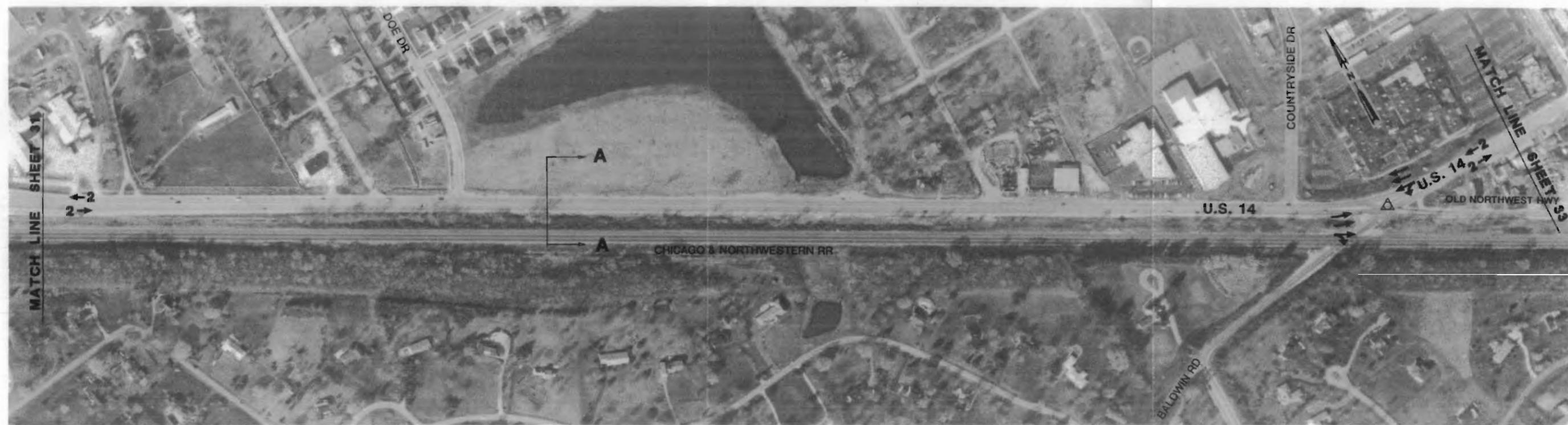
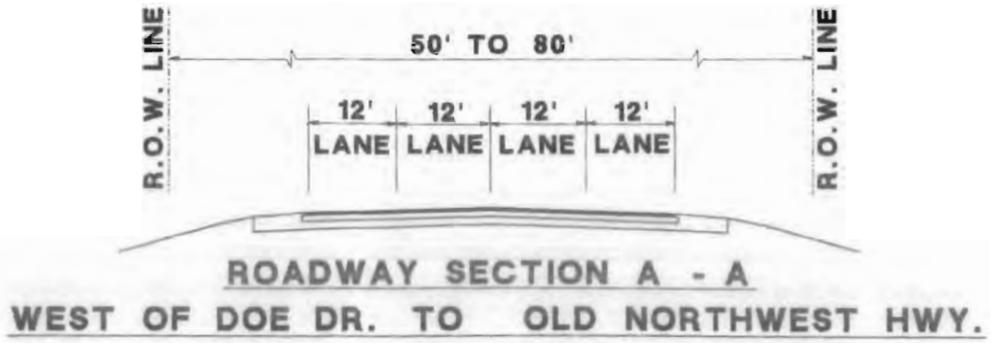
ILLINOIS DEPARTMENT OF TRANSPORTATION

**SRA** Strategic Regional Arterial EXHIBIT A31 Planning Study

Scale: 0 100 200 feet

**LEGEND**

- △ SIGNALIZED INTERSECTION
- ↔ LANE ARRANGEMENTS AT KEY INTERSECTIONS
- (P) PARKING ALLOWED
- (P) PARKING PROHIBITED
- (NR) NO POSTED RESTRICTIONS
- Ⓟ DESIGNATED BUS STOP
- CTA RAPID TRANSIT STATION
- METRA METRA STATION



**1988 - 1990  
AVERAGE  
DAILY  
TRAFFIC**

**ACCIDENT  
RATE**

**TRANSIT  
ROUTES**

**EDGE OF EAST  
ROAD USE WEST**

	15,800	18,500	16,000
	3.57 / MVM		
	PACE BUS NONE METRA RAIL RIDERSHIP 1,500 TO 2,400		
	(P)	(P)	(P)
	(P)	(P)	(P)

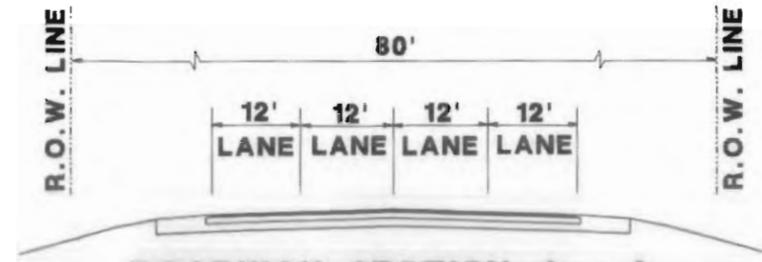
**U.S. 14 - EXISTING CONDITIONS**



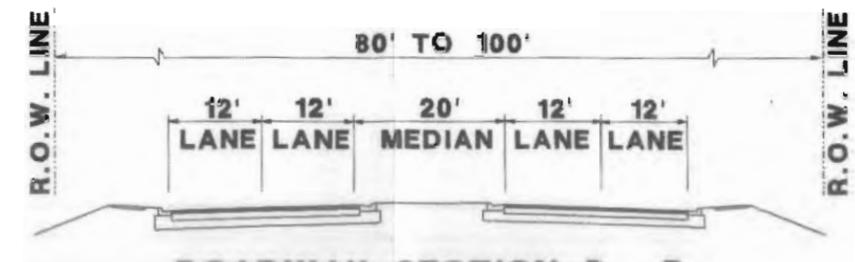


**LEGEND**

- △ SIGNALIZED INTERSECTION
- LANE ARRANGEMENTS AT KEY INTERSECTIONS
- (P) PARKING ALLOWED
- (P) PARKING PROHIBITED
- (NR) NO POSTED RESTRICTIONS
- B DESIGNATED BUS STOP
- CTA RAPID TRANSIT STATION
- METRA METRA STATION



**ROADWAY SECTION A - A**  
AUBURN WOODS DR. TO PLUM GROVE RD.



**ROADWAY SECTION B - B**  
PLUM GROVE RD. TO EAST BANK DR.



1988 - 1990  
AVERAGE  
DAILY  
TRAFFIC

ACCIDENT  
RATE

TRANSIT  
ROUTES

EDGE OF EAST  
ROAD USE WEST

	29,990		29,700					27,500	
	4.35 / MVM		7.45 / MVM					8.80 / MVM	
			0.29/MEV						
			PACE BUS NONE						
			METRA RAIL RIDERSHIP 1,500 TO 2,400						
	(P)		(P)	(P)	(P)	(P)	(P)	(P)	
	(P)		(P)	(P)	(P)	(P)	(P)	(P)	

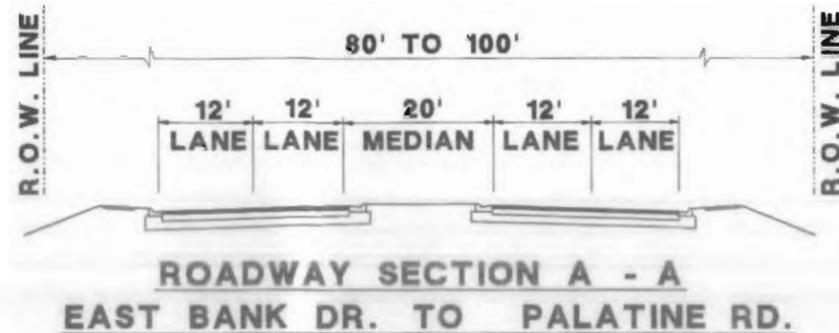
**U.S. 14 - EXISTING CONDITIONS**

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**LEGEND**

- △ SIGNALIZED INTERSECTION
- LANE ARRANGEMENTS AT KEY INTERSECTIONS
- (P) PARKING ALLOWED
- (P) PARKING PROHIBITED
- (NR) NO POSTED RESTRICTIONS
- DESIGNATED BUS STG.
- (CTA) RAPID TRANSIT STATION
- (METRA) METRA STATION



- 1988 - 1990 AVERAGE DAILY TRAFFIC
- ACCIDENT RATE
- TRANSIT ROUTES
- EDGE OF ROAD USE

	27,600	30,300	
	8.80 / MVM	18.42 / MVM	
	0.67/MEV		1.49/MEV
	PACE BUS NONE METRA RAIL RIDERSHIP 1,500 TO 2,400 PACE BUS ROUTE 699 (2 PEAK BUS/HR)		
EAST	(P)	(P)	(P)
WEST	(P)	(P)	(P)

**U.S. 14 - EXISTING CONDITIONS**

# PLANNING FOCUS AREAS

## A) TAYLOR ROAD AND U.S. 14 INTERSECTION

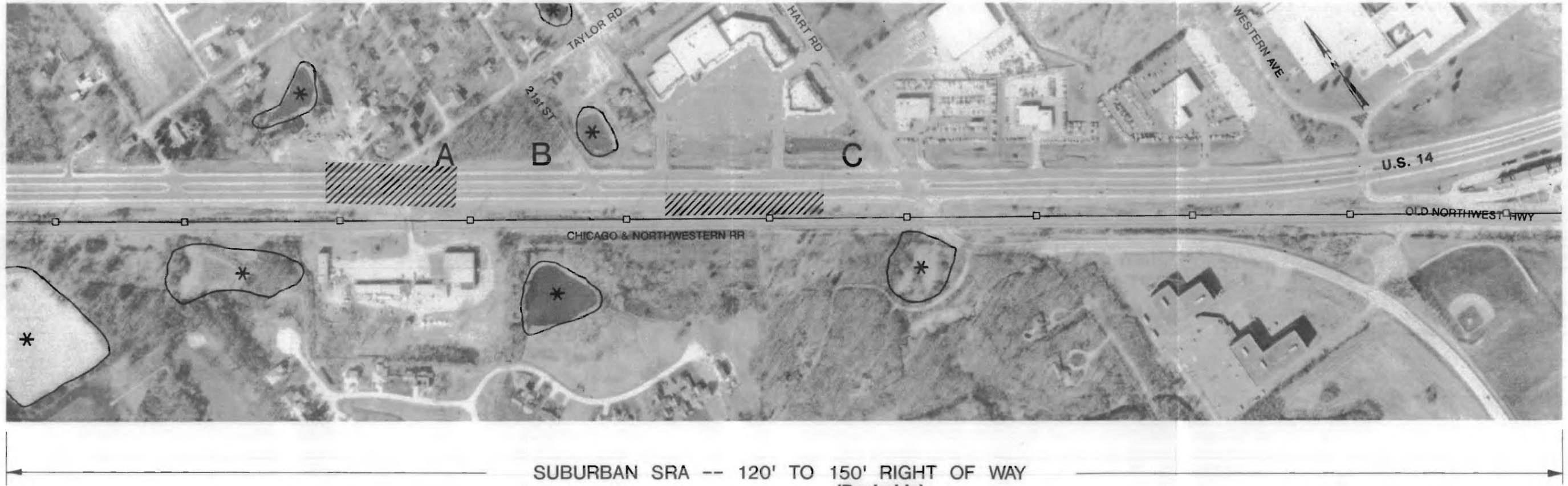
- Address intersection geometry

## B) EAST OF 21ST STREET

- Proximity of adjacent wetlands may limit capacity improvements

## C) HART ROAD AND U.S. 14 INTERSECTION

- Address intersection geometry



### LEGEND

- A Planning Focus Area I.D.
- (G1) Hazardous Waste Site
- (L1) Leaking Underground Storage Tank
- (H1) Historic Building/District
- \* Wetland
- † Church/Synagogue/Religious Institution
- Agricultural Land
- Special Use Areas
- Major Utility Lines
- /// Floodplain/Floodway

U.S. 14

# PLANNING FOCUS AREAS

## A) CUMNOR AVENUE TO IL. 59

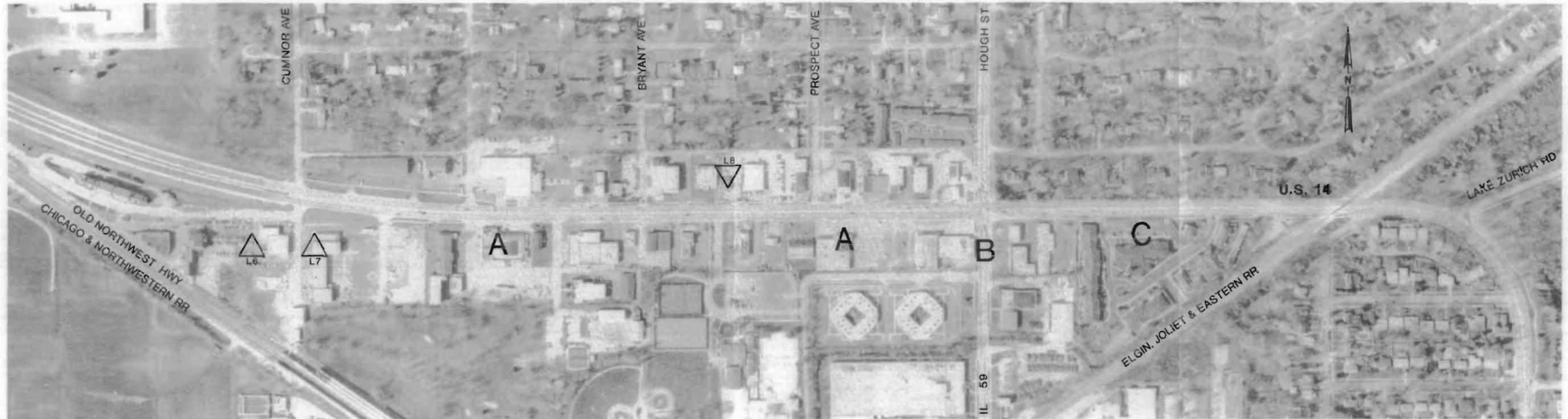
- Limited available right-of-way
- Multiple driveway/cross street access points may affect SRA operation

## B) IL. 59 AND U.S. 14 INTERSECTION

- Intersection of two SRA routes
- Capacity improvements for high-volume intersection are constrained by adjacent land use

## C) EAST OF IL. 59

- Limited available right-of-way



SUBURBAN SRA -- 120' TO 150' RIGHT OF WAY  
(Desirable)

### LEGEND

- A Planning Focus Area I.D.
- (C) Hazardous Waste Site
- L Leaking Underground Storage Tank
- (H) Historic Building/District
- \* Wetland
- † Church/Synagogue/Religious Institution
- - - Agricultural Land
- - - Special Use Areas
- - - Major Utility Lines

U.S. 14

**SRA** Strategic Regional Arterial Planning Study EXHIBIT B-28

# PLANNING FOCUS AREAS

## A) ELGIN, JOLIET & EASTERN RAILROAD

- At-grade railroad crossing

## B) NORTH AVENUE TO GLENDALE AVENUE

- Limited available right-of-way
- Multiple driveway/cross street access points may affect SRA operation
- No EJ&E could affect operations of intersection and U.S. 14

## C) LAKE ZURICH ROAD AND U.S. 14 INTERSECTION

- Address intersection geometry

## D) MAIN STREET AND U.S. 14 INTERSECTION

- Capacity improvements for high-volume intersection are constrained by adjacent land use



SUBURBAN SRA -- 120' TO 150' RIGHT OF WAY (Desirable)

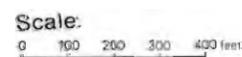
### LEGEND

- A Planning Focus Area ID.
- Hazardous Waste Site
- Leaking Underground Storage Tank
- Historic Building/District
- \* Wetland
- Church/Synagogue/Religious Institution
- Agricultural Land
- Special Use Areas
- Major Utility Lines

U.S. 14

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**SRA** Strategic Regional Arterial EXHIBIT B-29 Planning Study

# PLANNING FOCUS AREAS

## A) EASTERN AVENUE AND U.S. 14 INTERSECTION

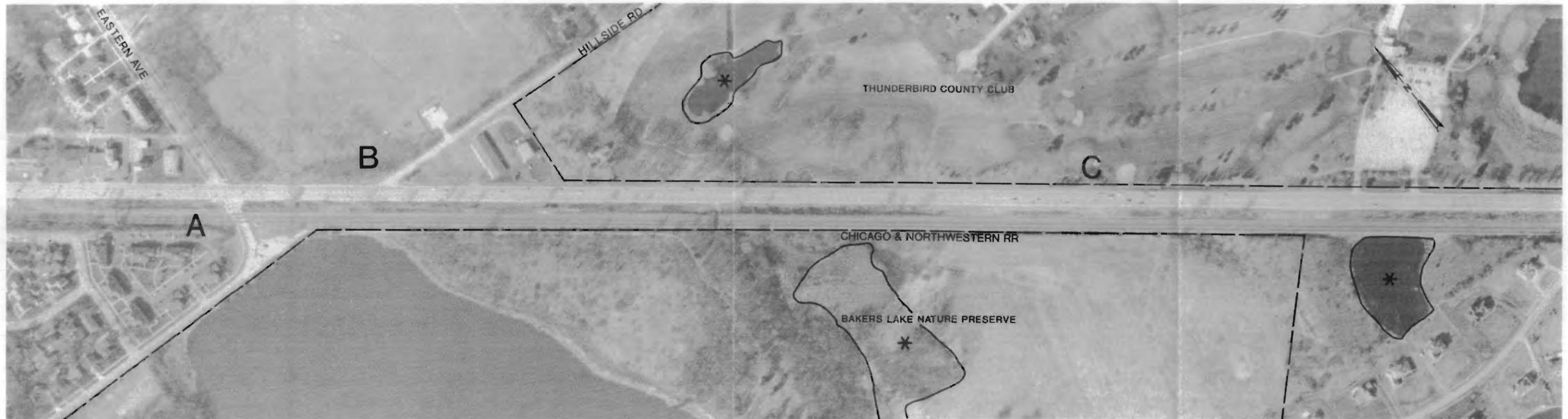
- Address intersection geometry

## B) HILLSIDE ROAD AND U.S. 14 INTERSECTION

- Address intersection geometry

## C) EAST OF HILLSIDE ROAD

- Limited available right-of-way



SUBURBAN SRA -- 120' TO 150' RIGHT OF WAY (Desirable)

### LEGEND

- A Planning Focus Area I.D.
- ⊗ Hazardous Waste Site
- ▽ Leaking Underground Storage Tank
- Ⓜ Historic Building/District
- \* Wetland
- † ☆ Church/Synagogue/Religious Institution
- Agricultural Land
- Special Use Areas
- Major Utility Lines

U.S. 14



# PLANNING FOCUS AREAS

## A) WEST OF ELA ROAD

- Limited available right-of-way

## B) EAST OF ELA ROAD

- Proximity of adjacent forest preserve may limit capacity improvements

## C) IL. 68 OVERPASS

- Limited horizontal clearance for U.S. 14 under overpass



SUBURBAN SRA -- 120' TO 150' RIGHT OF WAY (Desirable)

### LEGEND

- A Planning Focus Area I.D.
- (C1) Hazardous Waste Site
- (L1) Leaking Underground Storage Tank
- (H1) Historic Building/District
- \* Wetland
- † ☆ Church/Synagogue/Religious Institution
- - - Agricultural Land
- Special Use Areas
- Major Utility Lines

U.S. 14

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Scale:  
0 100 200 300 400 feet

**SRA** Strategic Regional Arterial Planning Study  
EXHIBIT B-31

# PLANNING FOCUS AREAS

## A) WEST OF DOE DRIVE

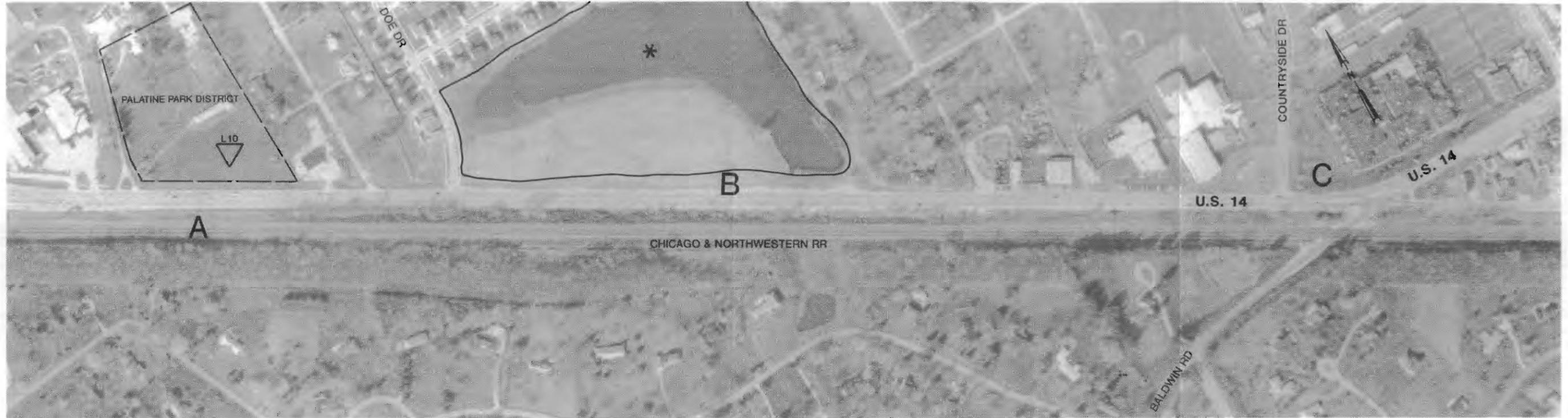
- Future improvement alternatives may be affected by park

## B) EAST OF DOE DRIVE

- Proximity of adjacent wetland may limit capacity improvements

## C) BALDWIN ROAD AND U.S. 14 INTERSECTION

- Address intersection geometry



SUBURBAN SRA -- 120' TO 150' RIGHT OF WAY  
(Desirable)

### LEGEND

- A Planning Focus Area ID
- ⊖ CI Hazardous Waste Site
- ▽ LUST Leaking Underground Storage Tank
- ⬡ H1 Historic Building/District
- \* Wetland
- † ⬠ Church/Synagogue/Religious Institution
- - - Agricultural Land
- Special Use Areas
- □ — Major Utility Lines

U.S. 14

**SRA** Strategic Regional Arterial Planning Study EXHIBIT B-32

# PLANNING FOCUS AREAS

## A) STERLING AVENUE AND U.S. 14 INTERSECTION

- Capacity improvements for intersection are constrained by adjacent land use

## B) EAST OF STERLING AVENUE

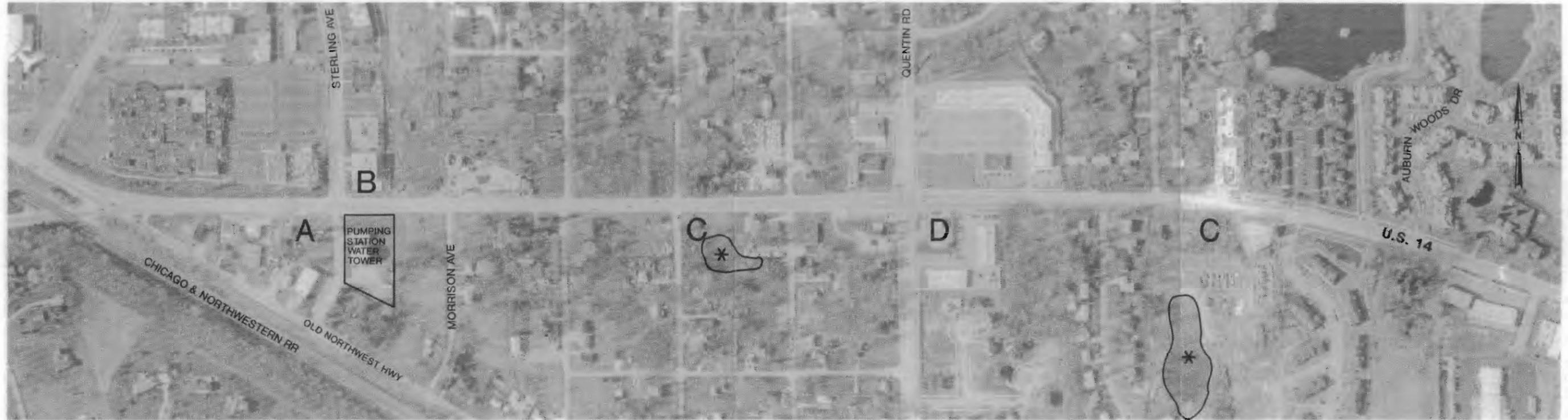
- Limited available right-of-way

## C) MORRISON AVENUE TO EAST OF AUBURN WOODS DRIVE

- Multiple driveway/cross street access points may affect SRA operation

## D) QUENTIN ROAD AND U.S. 14 INTERSECTION

- Intersection of two SRA routes
- Capacity improvements for high-volume intersection are constrained by adjacent land use



SUBURBAN SRA -- 120' TO 150' RIGHT OF WAY  
(Desirable)

### LEGEND

- A Planning Focus Area I.D.
- Ⓛ Hazardous Waste Site
- Ⓛ Leaking Underground Storage Tank
- Ⓛ Historic Building/District
- \* Wetland
- † Ⓛ Church/Synagogue/Religious Institution
- Agricultural Land
- Special Use Areas
- Major Utility Lines

U.S. 14

Prepared by CH2M HILL in association with  
METRO Transportation Group and EJM Engineering

ILLINOIS DEPARTMENT OF TRANSPORTATION

Scale:  
0 100 200 300 400 feet

**SRA** Strategic Regional Arterial Planning Study  
EXHIBIT B-33

# PLANNING FOCUS AREAS

## A) AUBURN WOODS DRIVE TO FIRST BANK DRIVE

- Multiple driveway/cross street access points may affect SRA operation

## B) WEST OF SMITH STREET

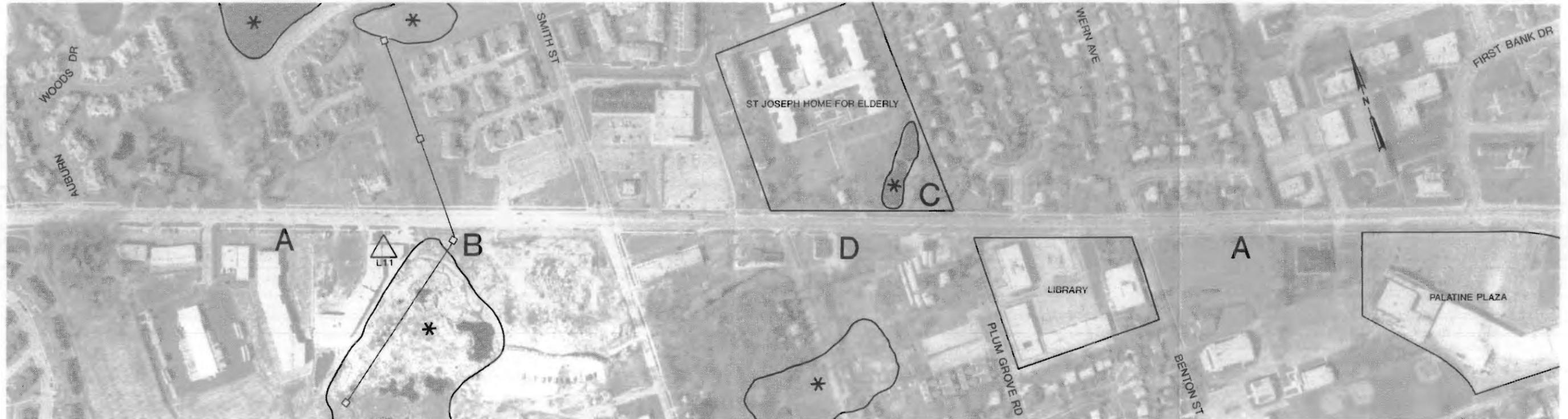
- Proximity of adjacent wetland may limit capacity improvements

## C) EAST OF SMITH STREET

- Proximity of adjacent wetland may limit capacity improvements

## D) WEST OF WERN AVENUE

- Limited available right-of-way



SUBURBAN SRA -- 120' TO 150' RIGHT OF WAY  
(Desirable)

### LEGEND

- A Planning Focus Area I.D.
- (C) Hazardous Waste Site
- (L) Leaking Underground Storage Tank
- (H) Historic Building/District
- \* Wetland
- † ☆ Church/Synagogue/Religious Institution
- - - Agricultural Land
- - - Special Use Areas
- - - Major Utility Lines

U.S. 14

Prepared by CH2M HILL in association with  
METRO Transportation Group and EJM Engineering

ILLINOIS DEPARTMENT OF TRANSPORTATION

Scale:  
0 100 200 300 400 feet

**SRA** Strategic  
Regional  
Arterial Planning Study  
EXHIBIT B-34

# PLANNING FOCUS AREAS

## A) HICKS ROAD TO PALATINE ROAD

- Limited available right-of-way
- Multiple driveway/cross street access points may affect SRA operation

## B) LINCOLN STREET AND U.S. 14 INTERSECTION

- Address intersection geometry

## C) PALATINE ROAD AND U.S. 14 INTERSECTION

- Intersection of two SRA routes
- Capacity improvements for high-volume intersection are constrained by adjacent land use



SUBURBAN SRA -- 120' TO 150' RIGHT OF WAY (Desirable)

### LEGEND

- ▲ Planning Focus Area (D)
- Ⓛ Hazardous Waste Site
- ▽ Leaking Underground Storage Tank
- Ⓜ Historic Building/District
- \* Wetland
- † Church/Synagogue/Religious Institution
- Agricultural Land
- Special Use Areas
- Major Utility Lines

U.S. 14

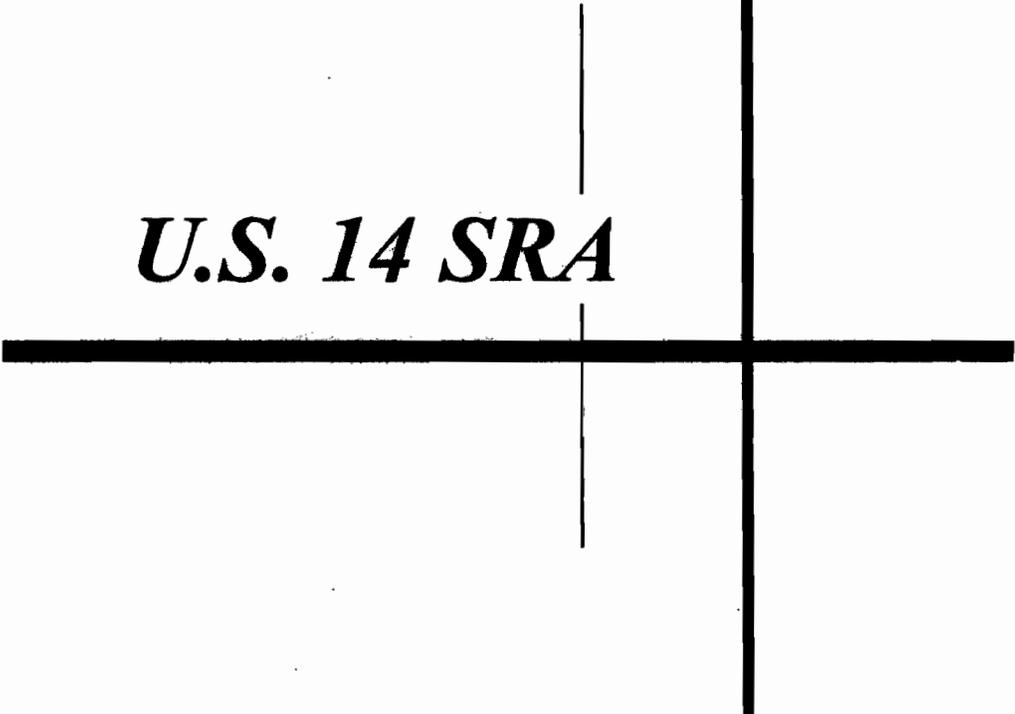
**SRA** Strategic Regional Arterial Planning Study EXHIBIT B-35

## Summary

The U.S. 14 SRA corridor, which is approximately 48 miles long, is characterized by many different land uses and environmental concerns. The character of the roadway varies from its northern terminus at the Illinois-Wisconsin state line to its southern terminus at Palatine Road. The northern end of U.S. 14 is rural in nature and is relatively undeveloped (with the exception of U.S. 14 through Harvard). South from Crystal Lake to Palatine, the corridor is more suburban in nature with increased density of existing development.

In the less developed segments in the northern portion of U.S. 14 (north of Crystal Lake), land use development is expected to intensify. Opportunities and options exist in these open areas for improving the capacity and operation of U.S. 14. Extending south, intense commercial and residential development limit improvement alternatives along U.S. 14. Traffic volumes also increase as the corridor travels from north to south. In the northern segments (between Harvard and Crystal Lake) average daily traffic volumes range from 4,000 to 12,000 vpd, and in the developed areas to the south, traffic volumes range from 17,000 to 30,000 vpd. Over the next 20 years, traffic volumes are expected to increase along the entire corridor.

Chapter III describes the planning framework within which the recommended plan is developed. Topics discussed in Chapter III include route design considerations, expected year 2010 transportation system changes and traffic volumes, year 2010 land use planning and development information, and any future areas of concern identified during improvement planning.



*U.S. 14 SRA*

Chapter III

**U.S. 14 SRA**  
**Planning Framework**



## **Chapter III**

# **U.S. 14 SRA Planning Framework**

Long-range planning for the U.S. 14 corridor must be based on a range of transportation, land use, and community concerns. Regional transportation needs require balancing and coordination with local interests, plans, and constraints.

This chapter outlines the planning framework within which the U.S. 14 corridor should be viewed. It includes both existing problems and conditions, as well as expected or forecast conditions for the long range. Important elements of the U.S. 14 planning framework include:

- Functional classification (the roles of SRAs in general, and U.S. 14 specifically, in serving regional transportation needs)
- SRA route design considerations and characteristics
- Long-range forecasts of highway traffic activity along U.S. 14
- Other planned transportation improvements within, crossing, or near the U.S. 14 corridor
- Long-range land use plans for the communities along U.S. 14 and for McHenry, Lake, and Cook Counties
- Existing safety and traffic operational problems along U.S. 14
- Existing environmental conditions and constraints
- Community concerns, interests, and attitudes

These comprehensive and often conflicting inputs were used to establish a basic plan for U.S. 14, which specifies:

- The number of continuous through lanes in each direction along U.S. 14
- Locations of future major signalized intersections
- Locations of special intersection design needs (i.e., possible interchanges)
- A general approach to access management, including the type of cross section by location, locations of major access points, and off-SRA improvements
- The need for and locations of special or unique highway solutions
- Provision for enhancement of public transportation, including additional bus stops, park-n-ride facilities, and the interaction of parking facilities with Metra, Pace, or CTA service

### **Functional Classification**

Previous planning efforts by IDOT and CATS have established U.S. 14 as a SRA. The northern 24 miles have been classified as rural, based on the expected long-range character of land use adjacent to the corridor. South of Illinois 176, U.S. 14 is classified as a suburban SRA.

Planning guidelines developed for all SRA corridors specify that rural SRAs be planned as four-lane, continuous arterials. Suburban SRAs should desirably be planned as six-lane, continuous arterials. These guidelines represent an initial goal in planning improvements for U.S. 14. At a minimum, it is essential that U.S. 14 (and other SRAs) be planned for four continuous through lanes (two lanes in each direction of travel). Implementation of six-lane sections in suburban areas is considered desirable only if it can be accomplished over significant lengths.

## **Route Design Considerations**

The SRA Design Concept Report, which serves as a guide in the planning of the SRA system, presents desirable cross sections for each SRA route designation to provide adequate traffic service and to enable appropriate geometric design within the indicated right-of-way width. The SRA desirable cross sections for rural and suburban designs are shown on Exhibit 3.

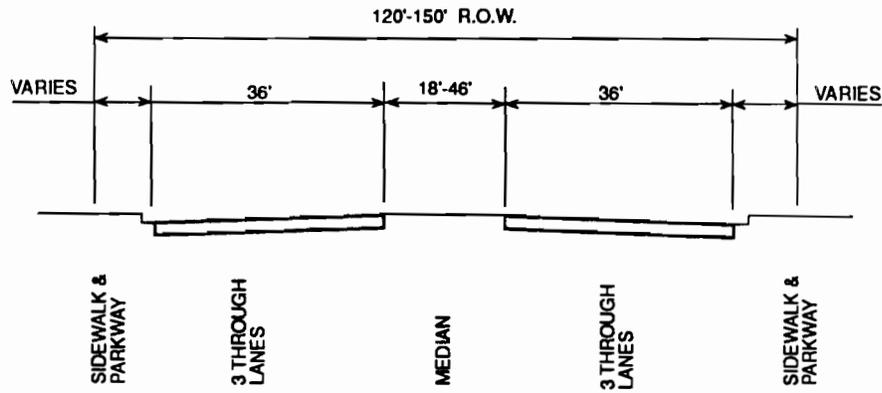
Rural SRAs require up to 210 feet of right-of-way in order to implement an open and wide median, open drainage, shoulders, and adequate clear zones for safety. Provision for a frontage road also is included in the 210 feet. Where no frontage roads are planned, a 192-foot right-of-way is specified in the Design Concept Report. Table 12 describes other information about the desirable route characteristics of rural SRAs.

The desirable suburban SRA concept cross section includes 120 to 150 feet of right-of-way. This width accommodates a six-lane roadway (three lanes in each travel direction) with an 18- to 46-foot raised median. The typical suburban cross section implies a closed drainage system by including curb and gutter at the pavement edge. Other information about the desirable route characteristics of a suburban SRA are listed in Table 13.

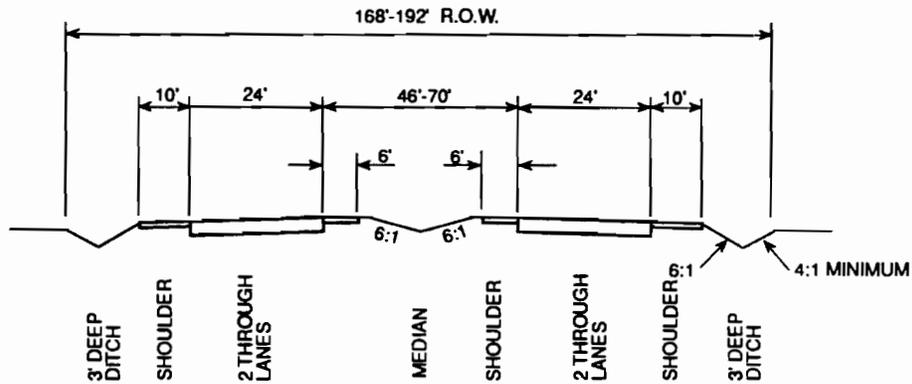
## **The 2010 Transportation Network**

In a more regional context (see Exhibit 4), the corridor is crossed by eight SRA routes (Illinois 173, Illinois 23, Illinois 47, Illinois 31, Illinois 22, Illinois 59, Quentin Road, and Palatine Road). These routes, in combination with U.S. 14, form a network of roadways that are intended to supplement the freeway system of northeastern Illinois by serving long-distance, regional through trips as well as shorter, local trips. Other major arterials that cross U.S. 14 include Illinois 120, Illinois 176, Lake Cook Road, and Illinois 68. These non-SRA roadways also have significant impacts on the operation of U.S. 14.

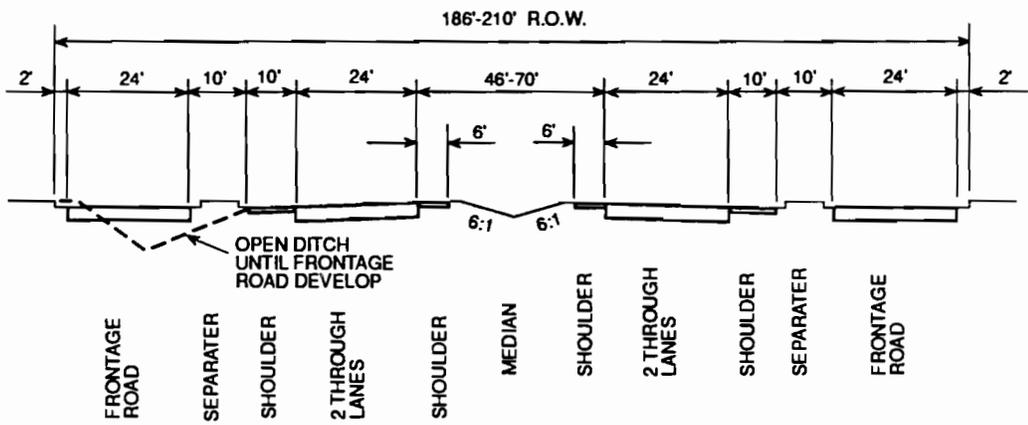
U.S. 14 travels diagonally, in a northwest-to-southeast direction. Two to 13 miles to the east, U.S. 12 approximately parallels U.S. 14.



**Suburban Classification**  
North of Illinois 176 To Palatine Road



**RURAL**



**RURAL WITH FRONTAGE ROADS**

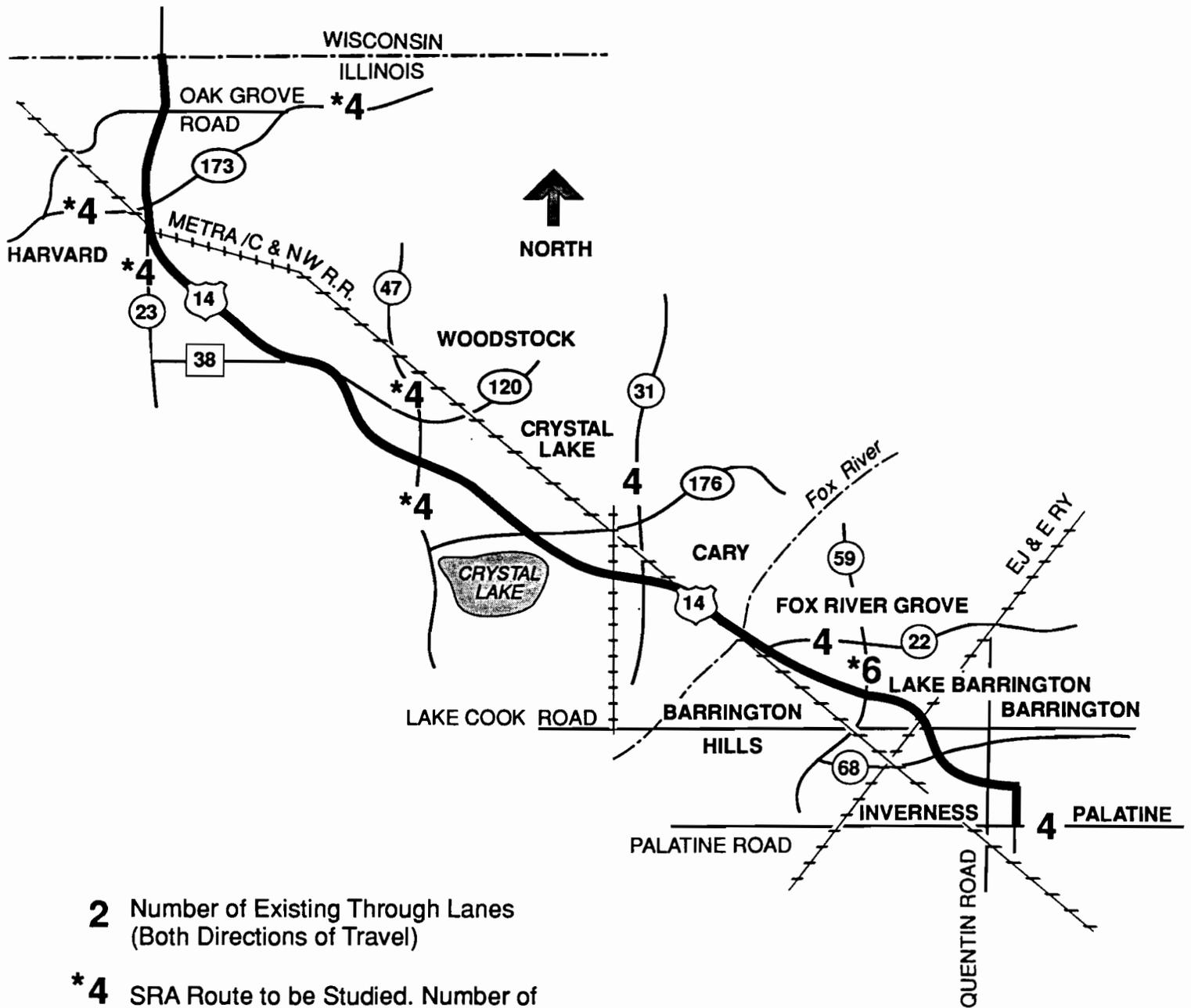
**Rural Classification**  
Wisconsin State Line To North of Illinois 176

**Table 12**  
**Year 2010 Desirable Route Characteristics for Rural SRAs**

<b>Right-of-Way Width</b>	168 to 210 feet
<b>Level of Service (Peak Hour)/Design Speed</b>	C/60 mph
<b>Number of Through Lanes</b>	Two in each direction; 12-foot width; with provision for future expansion to six total lanes
<b>Median Width</b>	46 to 70 feet, raised
<b>Right Turns</b>	Turn lanes at major cross-streets
<b>Left Turns</b>	Turn lanes at all intersections
<b>Shoulders</b>	10 feet paved (right), 6 feet paved (left)
<b>Curbs</b>	No
<b>Sidewalks</b>	If needed
<b>Parking</b>	No
<b>Cross Street Intersections</b>	Permitted; stop sign control for cross-street
<b>Curb Cut Access</b>	Project right-of-way for post-2010 construction of two-way frontage roads
<b>Transit</b>	Bus pull-off and shelter; express bus service and signal pre-emption potential
<b>Number of Traffic Signals per Mile</b>	Two
<b>Signalization</b>	Fully-actuated
<b>Freight: Radii</b>	WB-60; Standard
<b>Vertical Clearances</b>	New Structures: 16' - 3"
	Existing Structures: 14' - 6"
<b>Loading</b>	Off-street

**Table 13**  
**Year 2010 Desirable Route Characteristics for Suburban SRAs**

Right-of-Way Width	120 to 150 feet
Level of Service (Peak Hour)/Design Speed	C or D/45 mph
Number of Through Lanes	Three in each direction; 12-foot width
Median Width	18 to 46 feet, raised
Right Turns	Turn lanes at all major intersections
Left Turns	Dual left turn lanes at all major intersections
Shoulders	Where appropriate, 10-foot width paved
Curbs	Yes, with 2-foot-wide gutters
Sidewalks	Where appropriate, 5-foot width
Parking	Not recommended
Cross Street Intersections	Signals with collectors and arterials, new local roads right-in/right-out only
Curb Cut Access	Consolidate access points at 500-foot spacing with cross easements
Transit	Bus turnouts, signs and shelters; express bus service only; signal pre-emption and HOV potential
Number of Traffic Signals per Mile	Four maximum
Signalization	Synchronization with pedestrian actuation where needed
Freight:       Radii	WB-55 typical/WB-60 Type II truck route
Vertical Clearances	New Structures:       16' - 3"
	Existing Structures:   14' - 6"
Loading	Off-street



**2** Number of Existing Through Lanes  
(Both Directions of Travel)

**\*4** SRA Route to be Studied. Number of  
Lanes Shown Reflect Desirable Per  
The SRA Design Concept Report

# CORRIDOR MAP U.S. 14 (NORTHWEST HWY)



Transit routes or crossings within the U.S. 14 corridor include two railroad facilities. The Metra C&NW Northwest rail line is grade-separated with U.S. 14 in Harvard and travels roughly parallel to U.S. 14 throughout the study area. The EJ&E Railway crosses U.S. 14 at grade north of Lake Zurich Road in Barrington.

### **Year 2010 and Existing Traffic**

Forecasts of traffic volumes were prepared by CATS to illustrate the level and pattern of traffic under expected future conditions. The forecasts were based on regional land use assumptions furnished by NIPC, and assume a network as specified in the year 2010 plan, with the full SRA system in place, with each element of the system assumed to be developed to full SRA standards.

The traffic forecasts are used as a reference only—not as a primary tool in corridor sizing. They provide a means, particularly when compared to existing traffic, of judging the long-range need for corridor improvements. Table 14 illustrates that traffic volumes are expected to increase over the next 20 years, with employment and population growth continuing to be significant in Lake and McHenry Counties.

As Table 14 shows, forecast volumes on U.S. 14 are generally between 10,000 and 20,000 vpd north of Illinois 47. (Within the town of Harvard, the forecast of 20,000 to 30,000 vpd reflects an overlap of the Illinois 173 and U.S. 14 SRA routes.)

Forecast traffic volumes increase to the south, with the segment between Crystal Lake Road and Illinois 22 (through Crystal Lake, Cary, and Fox River Grove) forecast to carry 40,000 vpd or more. Similarly high traffic volumes are forecast for U.S. 14 on the south segments of the SRA, with year 2010 ADT in the 40,000- to 50,000-vpd range.

### **Other Corridor Planning Activities**

#### **Roadway Improvements**

Previous and concurrent planning information was obtained for the U.S. 14 SRA corridor from IDOT, CATS, McHenry County, Lake County, Cook County, the Wisconsin Department of Transportation, and the surrounding communities. All information received was considered in the planning effort, and some projects were

**Table 14**  
**Year 2010 ADT Forecast for U.S. 14\***

<b>Location</b>	<b>Existing ADT (1986-1989)</b>	<b>2010 ADT Forecast</b>
State Line Road to Illinois 173	4,000 - 8,000	5,000 - 10,000
Illinois 173 to Illinois 23	6,500 - 13,000	20,000 - 30,000
Illinois 23 to Lucas Road	6,500 - 13,000	10,000 - 20,000
Lucas Road to Dole Avenue	12,400 - 18,100	20,000 - 30,000
Dole Avenue to Illinois 22	18,100 - 25,500	40,000 -> 50,000
Illinois 22 to Illinois 59	20,300 - 20,900	30,000 - 40,000
Illinois 59 to Illinois 68	16,900 - 25,500	40,000 -> 50,000
Illinois 68 to Palatine Road	18,500 - 30,300	40,000 - 50,000

\*Source: Chicago Area Transportation Study.

considered as existing conditions. Projects listed in IDOT's *Proposed Improvements for Illinois Highways FY 1992* were considered as "existing" conditions, including:

- Land acquisition for intersection improvements at U.S. 14 and Illinois 173, in Harvard
- Signal implementation at the intersection of U.S. 14 and Airport Road/McGuire Road and addition of left-turn lanes
- Channelization improvements and signal replacement at the U.S. 14/Kishwaukee Valley Road intersection
- Land acquisition east of Illinois 31 to west of Borden Avenue

Another major study considered in the planning process for this study is the IDOT *Combined Location/Design Report* (Phase I study) for U.S. 14 from Woodstock to Fox River Grove in McHenry County (performed in July 1984). Portions of this study have been implemented already from south of Ridgefield Road through Crystal Lake, and south through Cary, from south of Cary Road to south of the Fox River. In addition, a preliminary engineering study (Phase II) is ongoing at Illinois 31. This study is developing interchange alternatives for the interchange between U.S. 14 and Illinois 31.

U.S. 14 is addressed in the *Year 2010 Transportation Plan* for Walworth County, Wisconsin. The plan, prepared with input from the Southeastern Wisconsin Regional Planning Commission, identifies U.S. 14 as a future four-lane facility from Walworth County south to the Illinois state line.

### **City and Village Comprehensive Plans**

Planning information was received and reviewed from the communities of Harvard, Woodstock, Crystal Lake, Cary, Lake Barrington, and Palatine. These communities have developed local land use and transportation plans that would be affected by decisions regarding U.S. 14.

## Transit Improvements

Several transit-related improvements in the vicinity of U.S. 14 have been proposed, studied, or planned (see Table 15). There are no new bus routes or upgrades of bus routes planned on U.S. 14. Metra is studying the potential of using the EJ&E Railway as a commuter rail service, in a project that is part of Metra's year 2010 transportation plan. Because of its status, the EJ&E Railway project was considered a possibility during the SRA study. Between Aurora and Barrington, station locations have been identified already. Near the U.S. 14 corridor, a proposed alternative is to use the existing Metra station in Barrington for both commuter and freight lines.

The C&NW Northwest line and other Metra lines are being evaluated for service extensions. Metra is evaluating extending the McHenry Branch of the C&NW line to Richmond, and proposes a new station at Pingree Road with the extension.

<b>Table 15</b> <b>Future Transit Facilities and Operations Proposed and/or Planned By Others for U.S. 14</b>		
<b>Transit Facility or Route</b>	<b>Location</b>	<b>Status/Comment</b>
New Bus Routes	None	
Upgraded Service on Existing Routes	None	
New Metra Stations/Stops	Pingree Road/Crystal Lake	
New Metra Service	EJ&E Railway	CATS 2010 Plan—Corridor of the Future

## **Future Land Use and Development**

Information regarding existing and future land use plans was obtained from field observation, input from the U.S. 14 Advisory Panel, and the various communities and counties affected by the U.S. 14 corridor (see Table 16).

### **Future Conditions**

Land use adjacent to the U.S. 14 corridor varies. Open-space agricultural areas are planned for the northern segments, while the more dense commercial areas are located where U.S. 14 bisects communities, such as Crystal Lake, Cary, Barrington, and Palatine. Notable areas of evolving land use, or locations where particularly intensive development is anticipated, include:

- From State Line Road south to Illinois 47, land use along the corridor will continue as rural/agricultural with some industrial development.
- From Illinois 47 to Illinois 176, corridor land use will continue to develop as industrial, office park, and institutional. Commercial land use is anticipated to intensify in the vicinity of Illinois 120. Planned industrial developments are underway along Lake Shore Drive, and a hospital complex is being developed at the intersection of Doty Road and U.S. 14.
- Southeast of Crystal Lake, the land use adjacent to U.S. 14 becomes retail/commercial in nature with shopping malls and plazas. This development is expected to continue with several development proposals pending. In the vicinity of Illinois 31, existing retail mall development is also expected to intensify.

**Table 16  
Summary of Previous and Concurrent Planning Studies Relevant to U.S. 14**

<b>Study, Plan, or Report</b>	<b>Source</b>
<b>Transportation Planning Studies</b>	
<ul style="list-style-type: none"> <li>• CATS 2010 Transportation System Development Plan</li> </ul>	CATS
<ul style="list-style-type: none"> <li>• Combined Location/Design Report and Environmental Assessment, U.S. 14 from Woodstock to Fox River Grove (1984)</li> </ul>	IDOT
<ul style="list-style-type: none"> <li>• Site Traffic Impact Analysis, Barrington Library Expansion, Barrington, Illinois (1990)</li> </ul>	Village of Barrington
<ul style="list-style-type: none"> <li>• Preliminary Site Traffic Analysis, Proposed Community Center, Crystal Lake, Illinois (1988)</li> </ul>	City of Crystal Lake
<ul style="list-style-type: none"> <li>• Site Traffic Analysis, Crystal Point Mall Expansion, Crystal Lake, Illinois (1989)</li> </ul>	City of Crystal Lake
<ul style="list-style-type: none"> <li>• Traffic Impact Analysis, Proposed Commercial Center, Crystal Lake, Illinois (1990)</li> </ul>	City of Crystal Lake
<ul style="list-style-type: none"> <li>• Fox Valley Freeway Corridor Feasibility Study, Project Information Brochure (1992)</li> </ul>	IDOT
<ul style="list-style-type: none"> <li>• Walworth County (Wisconsin) Year 2010 Transportation Plan</li> </ul>	Wisconsin Department of Transportation
<b>Land Use and Comprehensive Plans</b>	
<ul style="list-style-type: none"> <li>• Comprehensive Plan (1990)</li> </ul>	Village of Palatine
<ul style="list-style-type: none"> <li>• Comprehensive Plan (1976)</li> </ul>	Village of Barrington
<ul style="list-style-type: none"> <li>• Comprehensive Plan (1982)</li> </ul>	Village of Cary
<ul style="list-style-type: none"> <li>• Planning Notebook (1974)</li> </ul>	Village of Fox River Grove
<ul style="list-style-type: none"> <li>• Comprehensive Land Use Plan (1988)</li> </ul>	City of Crystal Lake
<ul style="list-style-type: none"> <li>• McHenry County Land Use Plan (2010 Updated)</li> </ul>	McHenry County Regional Planning Commission
<ul style="list-style-type: none"> <li>• Comprehensive Plan (1989 Updated)</li> </ul>	Village of North Barrington
<ul style="list-style-type: none"> <li>• Comprehensive Plan (1989 Revised)</li> </ul>	Village of Lake Barrington
<ul style="list-style-type: none"> <li>• McHenry County Township Zoning Map (1982 Updated)</li> </ul>	McHenry County Regional Planning Commission
<ul style="list-style-type: none"> <li>• Land Use Plan 2000 (1983)</li> </ul>	Town of Harvard

- Between Fox River Grove and Barrington, land along the corridor is undeveloped but zoned for commercial and industrial uses. Continuing development is expected.
- South through Palatine, land along U.S. 14 will continue to develop as commercial and office uses. Land on the north side of U.S. 14 at Doe Road has been recommended for specific office sites.

### **Existing Environmental Constraints, Unique Conditions, and Areas of Concern**

#### **State Line Road to South of Lembcke Road**

South of the Wisconsin-Illinois border, through the town of Big Foot, existing right-of-way is limited (60 to 70 feet). There is existing development on the west side of the corridor, and a cemetery on the east side. Within this segment, numerous wetlands and floodplains border the corridor. In addition, existing right-of-way through Harvard is especially limited, and the proximity of existing land use and the number of churches, schools, and potential historic sites would make additional right-of-way difficult to acquire. South of Harvard, a parcel of land has been dedicated for a wildlife preserve along U.S. 14.

#### **South of Lembcke Road to North of Ridgefield Road**

South of Lembcke Road to north of Ridgefield Road (south), environmental constraints include wetlands located along the corridor. In some cases, these wetlands (identified from the National Wetland Inventory Map) are located close to U.S. 14. Although there are also parks and cemeteries near the corridor, their locations are set back from the corridor sufficiently to accommodate future expansion of the highway. Due to the orientation of U.S. 14 (northwest to southeast), there are a number of intersections that intersect at “skewed” angles (i.e., less than 90 degrees).

## **North of Ridgefield Road (South) to South of Cuba Road**

South of the southern intersection of Ridgefield Road with U.S. 14, through Crystal Lake, the existing right-of-way is relatively limited (60 to 100 feet). The magnitude and intensity of commercial development through this area and the lack of access control onto U.S. 14 result in multiple driveway access points along U.S. 14. North of Three Oaks Drive along the east side of U.S. 14, the Hollows Preserve, a sensitive land use, limits the availability of additional right-of-way. This area is further constrained by the Metra C&NW rail line on the west side of U.S. 14. Proceeding south through Cary, the presence of commercial development and the railroad restrict available right-of-way. In addition, U.S. 14 turns northward at Main Street, and the continuity of U.S. 14 is maintained through a relatively sharp curve at the signalized intersection (a radius of 175 feet). Similarly, through Fox River Grove, the cross section is constrained not only by local land use, but also by the newly-reconstructed crossing of the Fox River.

## **South of Cuba Road to Palatine Road**

Through Barrington, from Cumnor Avenue south to Lake Cook Road, the commercial and residential areas limit available right-of-way (with existing right-of-way of 80 to 90 feet). In addition to the land use constraints, there are a number of intersections on horizontal curves or with skewed geometry, and frequent driveways along U.S. 14. South of Eastern Avenue, available right-of-way along U.S. 14 is limited by the railroad on the west side and by the Thunderbird Country Club on the east side. The Deer Grove Forest Preserve is located further south between Ela Road and Dundee Road. South of Dundee Road to Baldwin Road, the railroad limits future right-of-way along the west side of U.S. 14. Through Palatine, from Sterling Avenue to Palatine Road, the availability of additional right-of-way is limited by the buildup of land use (both residential and commercial) adjacent to the corridor. Multiple access points serve development, and there are many offset driveways along the route.

## **Community Concerns, Interests, and Attitudes**

The interests of the communities that U.S. 14 passes through are important factors in arriving at a reasonable, feasible consensus plan for the U.S. 14 corridor. Two U.S. 14 corridor Advisory Panels were established, comprised of elected officials and technical staff of these communities. Three rounds of panel meetings were held to assist the study team. The first two sets of meetings were held to present SRA concepts, to discuss and comment on the corridor, and to provide background on community interests and concerns.

Chapter V contains minutes from the U.S. 14 corridor Advisory Panel Meetings. The following is a summary of key concerns discussed:

- The environmental and physical constraints along U.S. 14 through Harvard were discussed. The resulting impacts associated with developing a four-lane cross section through Harvard were a concern. In general, the panel concurred with the need for developing a continuous, four-lane facility north to the Wisconsin border, but also recognized the impacts of widening U.S. 14 on its existing alignment through Harvard.
- Some panel members expressed interest in improvements to the Lake Avenue intersection with U.S. 14 within Woodstock. In addition, the increasing intensity of industrial development in the vicinity of Lake Shore Drive and Doty Road was noted, with the panel concerned that SRA improvements address this development.
- Crystal Lake officials discussed the potential need for a U.S. 14 bypass of Crystal Lake. Also, retaining the existing parking between Dole Avenue and McHenry Avenue was considered desirable.
- Though Cary north of Main Street, a desire to retain the existing parking was expressed.

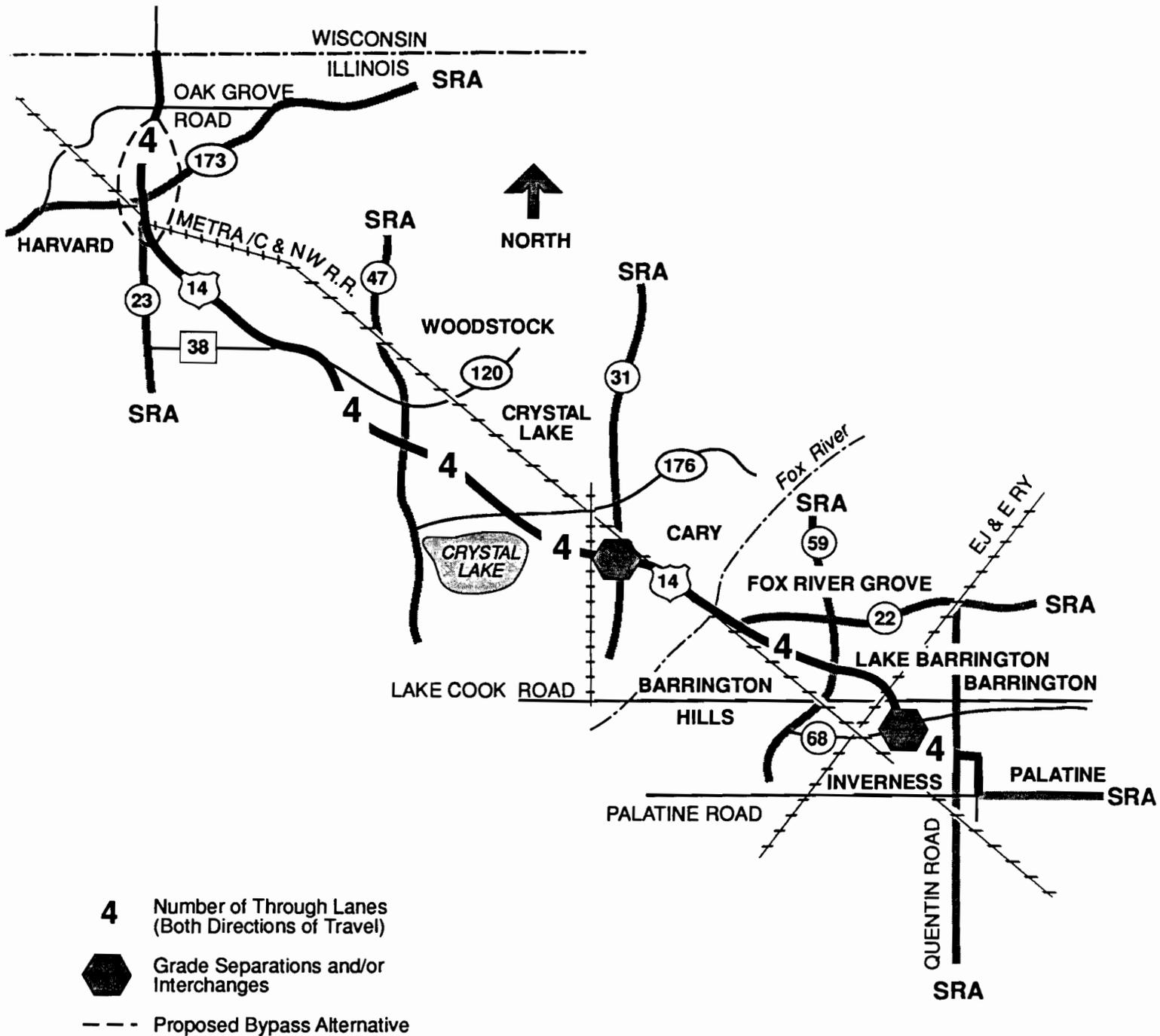
- The operation of intersections directly adjacent to the Metra C&NW Railroad was discussed. Concerns were expressed regarding vehicles queuing as a result of conflicts with trains crossing at grade (i.e., at Kelsey Road and Cuba Road).
- The issue of curb and gutter requirements along the suburban cross section was discussed by several panel members. Impacts to existing drainage patterns were a concern.
- The operation of the Ela Road intersection was discussed. In particular, the proximity of the intersection relative to the existing interchange at Dundee Road was noted as an operational problem.
- Concerns were expressed regarding recommendations for any future widening through Barrington. However, there also were concerns that a four-lane cross section would not accommodate the traffic forecasted by CATS. It was recognized that should such traffic demand occur, it would have to be accommodated somewhere on the regional highway network.

### **Recommended SRA Corridor Concept for U.S. 14**

Based on the above input, the recommended corridor concept illustrated in Exhibit 5 was established for U.S. 14. The concept's elements include basic number of through lanes, intersection and interchange requirements, access control and median treatments, and special design features.

#### **Basic Number of Lanes**

The importance of U.S. 14 is heightened by its significant regional continuity. From Wisconsin, U.S. 14 offers a unique, continuous route for 48 miles. The closest alternative or nearby freeway or toll facility is I-90, which is 10 miles or more from U.S. 14. Another parallel SRA, U.S. 12, is about 10 miles east of U.S. 14. Furthermore, U.S. 14 serves rapidly-developing areas of Lake and McHenry Counties and, in particular, areas south of the town of Harvard.



# RECOMMENDED SRA CORRIDOR CONCEPT U.S. 14 (NORTHWEST HWY)

For the northern 24 miles of the U.S. 14 SRA, the long-range need for a high-quality, four-lane divided rural facility is evident. Developing the northern rural segment to full, four-lane SRA standards would be compatible with planning in Wisconsin, and with expected long-range travel demand. For the most part, sufficient right-of-way to implement the U.S. 14 corridor concept is available or already exists.

The U.S. 14 existing alignment through the town of Harvard represents a major exception to the rural character and generally available right-of-way noted above. Development of a four-lane, continuous facility for regional through traffic, with operating characteristics consistent with the rural nature of U.S. 14 both north and south of Harvard, requires a new bypass alignment. See the discussion related to special design features (below) and Appendix B.

For the southern 24 miles of U.S. 14, the facility becomes suburban in character. Adjacent land use, traffic demands, and, hence, design requirements, suggest the need for a continuous six-lane SRA. Any such corridor concept, however, must be based on its feasibility relative to land availability, environmental factors, and other non-transportation considerations.

Many suburban segments of U.S. 14 are seriously constrained in terms of the availability of right-of-way for expansion to six lanes. Through Crystal Lake, Cary, Barrington, and Palatine, implementation of six lanes could be accomplished only with significant acquisitions and disruption to these communities. In some areas, right-of-way is available and a six-lane design could be implemented. Such segments, however, are short, discontinuous, and are not expected to develop the greatest traffic demands.

Based on the above, it is the recommendation of this study that U.S. 14 be planned as a continuous four-lane suburban arterial from its tie to the rural four-lane section north of Crystal Lake, to its SRA terminus at Palatine Road.

## **Intersection and Interchange Improvements**

With a four-lane concept versus the desirable six-lane design, focus on key intersections is critical. Maintaining reasonable speeds and achieving peak period levels of service per SRA criteria will be possible only if proper attention is placed on capacity improvements to U.S. 14's major intersections. The basic corridor concept calls for spot widening (requiring some additional right-of-way) for double left- and right-turn lanes, particularly at the intersections of other SRAs (see Exhibit 5).

The SRA concept for U.S. 14 does not include any new interchange locations, but does call for reconstructing and upgrading existing interchanges at Illinois 31 and Illinois 68 (Dundee Road).

## **Access Control**

The frequency and spacing of full access points, and provision for appropriate median treatments, are important considerations in implementing the recommended four-lane concept.

Recommended median treatments include open, wide medians in the rural portions of U.S. 14 with carefully-located median crossovers. In the suburban portions of the corridor, three types of median designs are utilized. Raised 18- to 30-foot medians are provided wherever they are physically and operationally feasible. Flush and/or mountable medians are implemented where right-of-way is more restricted and where frequent existing roadside access concerns are evident. In all cases, along the entire length of the SRA, the width of medians should be sufficient to provide safe shelter for left-turning vehicles.

## **Special Design Features—Harvard Bypass**

As noted above, implementing the rural, four-lane SRA concept will not be feasible along the existing alignment of U.S. 14 through the town of Harvard. The U.S. 14 corridor concept calls for a bypass of Harvard, with the existing road reverting to local service only through the town.

The concept of a bypass is not new, having been originally presented in the town's 1967 comprehensive plan. Appendix B and Chapter IV present more specific discussion of bypass options and their relationship to U.S. 14 and the town of Harvard. In addition, Chapter IV outlines the proposed plan for U.S. 14 in greater detail, including cross section, right-of-way, access control, traffic control, and intersection design requirements.