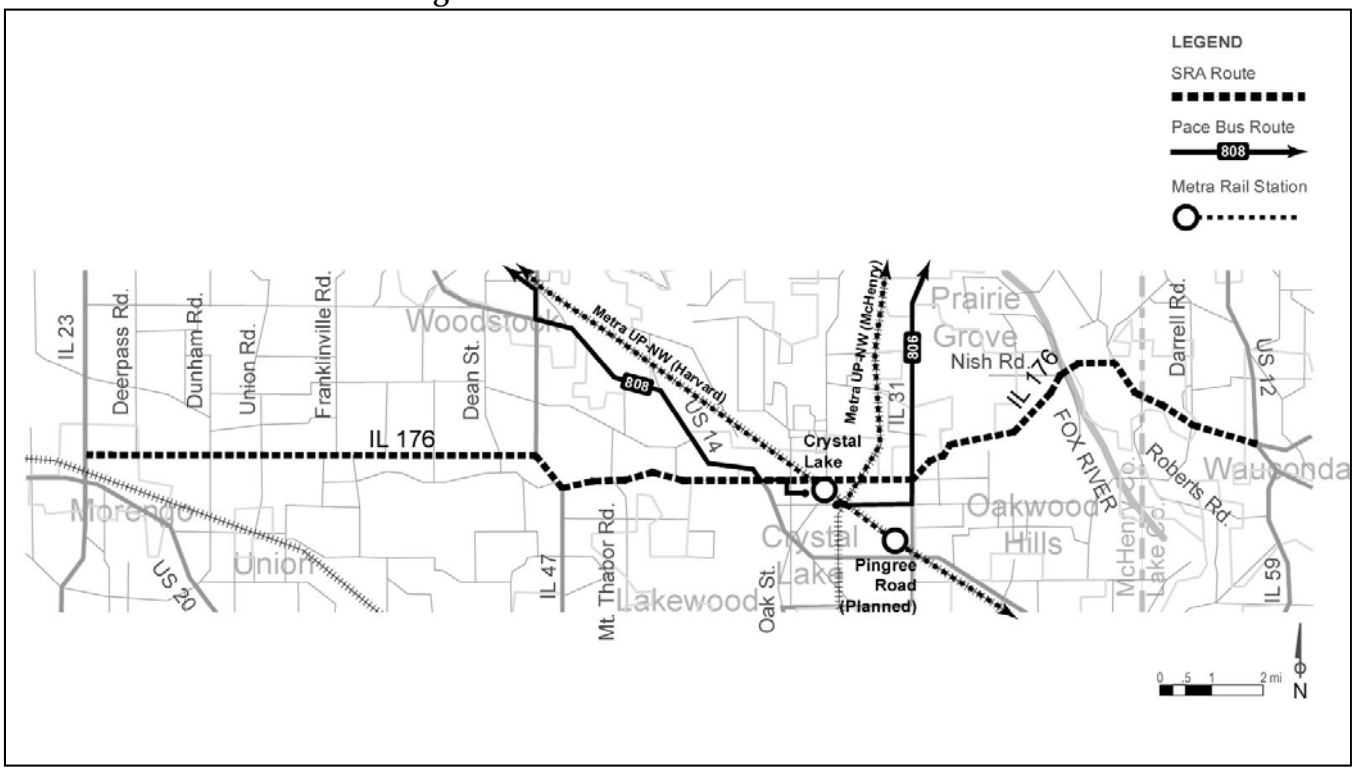
Chapter 2 – Route Overview

This chapter summarizes the existing conditions along the IL 176 SRA Corridor (**Figure 2.1**). Existing roadway and right-of-way plans were reviewed, aerial photography was obtained, the Department of Natural Resources was contacted, field checks were conducted, and individual community interviews were held to collect the following information: land use/development characteristics, regional transportation facilities, roadway/right-of-way characteristics, transit operations, endangered and threatened species, and community concerns.

Figure 2.1 The IL 176 SRA Corridor



2.1 Land Use/Development Characteristics

IL 176 is an SRA route that extends from IL 23 (State Street) in the City of Marengo approximately 25.5 miles east through rural McHenry County and the communities of Crystal Lake, Prairie Grove, and Island Lake to the US 12 (Rand Road) interchange in the City of Wauconda. The western one mile of the corridor in the City of Marengo is urban. The next 9.8 miles between Deerpass Road and Mt. Thabor Road is rural. The eastern 14.4 miles from Mt. Thabor Road to US 12 (Rand Road) is suburban. There is commercial development along IL 176 in Island Lake, Crystal Lake and in the vicinity of the US 12 (Rand Road) Interchange. Residential areas with driveways onto IL 176 occur in Marengo and in Crystal Lake. There are parks, churches, schools, and government buildings with access along IL 176. Bridge structures along IL 176 between IL 23 (State Street) and US 12 (Rand Road) include a bridge over the Fox River, three bridges over the Kishwaukee River, a Union Pacific Railroad overpass, a bridge over Cotton Creek, and two US 12

(Rand Road) overpasses. IL 176 crosses the Union Pacific Railroad at-grade west of IL 31 in Crystal Lake.

The following are major developments that are either in the approval process or are under discussion:

- There is proposed residential and commercial development east of Prospect Street in the City of Marengo.
- At the southwest corner of the intersection with Millstream Road/Dunham Road, a 330-acre development concept plan has been submitted with limits between Center Road and Prospect Street south of IL 176, but not yet approved. This includes a total of 170 residential lots: 121 single-family, 53 multi-family.
- A commercial area is proposed northeast of the Deerpass Road and IL 176 intersection.
- There are tentative plans to change the IL 176 and IL 47 (Eastwood Drive) intersection areas into commercial uses. The Village of Lakewood has considered planning the area as a regional shopping center.
- At the western boundary of Crystal Lake (IL 47) and on the north side of IL 176, the Bryn Mawr development has been proposed that includes 300 single family homes and 40 acres of commercial office use. Crystal Lake has proposed extending water and sewer utilities along the north side of IL 176 to service this area in the next year.
- There is a proposed McHenry County Conservation District (MCCD) bicycle trail along the Commonwealth Edison right-of-way passing through development and providing a link between a city park, McHenry County College, and Veterans Park. It will cross IL 176 at Walkup Road. It will replace an existing bicycle path crossing at Glen Avenue/Lorraine Drive. A bicycle path entrance off IL 176 is included in the proposed Sunset Meadows Park Master Plan Concept B.
- At the northwest corner of the IL 176 intersection with Terra Cotta Road, an industrial and commercial development has been planned. The developer was required to make improvements to IL 176.
- At the northwest corner of the IL 176 intersection with Barreville Road, a development (previously called "The Fountains") is proposed that will include approximately 600 homes. This development will add an access drive to IL 176
- There is a new development on the north side of IL 176 at the bottom of the hill near Buhl Road. Plans submitted call for 36,000 square feet of development. The ten-acre site includes office/warehouse buildings on the front five acres. The developer has acquired an additional 20 acres adjacent to this property and an access permit from IDOT for access to IL 176.
- A development in the northwest corner of Prairie Grove would build 1,400 homes plus commercial properties over the next ten years.
- Crystal Lake has a proposed subdivision northwest of Barreville Road for 600 homes. The property has one access road to IL 31 and the City is seeking another access road to either IL 176 or Barreville Road.
- The Village of Island Lake is interested in developing all four corners of the Darrell Road intersection.
- Both north and south of IL 176 near Eastway Drive, there are plans for commercial development of the properties near the sewage treatment plant.

- Sanitary sewers are being extended by the Lake County Sanitary District from the existing lift station between Westridge Drive and Orchard Drive. The line will run along the south side of IL 176, cross on the east side of Darrell Road and service the north side of IL 176 near Darrell Road.
- The Village of Island Lake has planned the installation of streetlights on the west end of town on IL 176 from Lakeview Drive to South River Road.
- East of US 12 (Rand Road) in the City of Wauconda (and east of the current study area) there is a ten-year build out plan for 1,200 homes in three subdivisions along North Fairfield Road, which will add additional vehicles to IL 176.
- There is new development in the southeast corner of the IL 176 and Erick Street intersection, including a commercial strip mall and a funeral home.
- A new Walgreens was recently built in the northeast corner of the IL 176 and IL 31 intersection.
- There is a proposed commercial called Riverbirch Crossing on the north side of IL 176 near Walkup Road.

Following the August 25, 2010 Advisory Panel Meeting #3, Advisory Panel members reported the following additional major developments or changes to the developments listed above:

- There are tentative plans to change the IL 176 and IL 47 (Eastwood Drive) intersection areas into commercial uses. The Village of Lakewood has considered planning the area as a regional shopping center and now includes plans for an indoor sports and recreation facility.
- The Metra is considering a new depot in Ridgefield.
- In the southeast corner of the IL 176 and Ridge Avenue intersection, an addition to the Fair Oaks Nursing Home is planned.

2.2 Regional Transportation Facilities

IL 176 is an east-west arterial between IL 23 (State Street) and US 12 (Rand Road) providing access for the area in and around the communities of Marengo, Crystal Lake, Burton Bridge, Prairie Grove, Oakwood Hills, Island Lake, and Wauconda. Regionally, the route is important because it connects five major north-south SRA routes. These SRA routes are:

- IL 23 (State Street) from US 14 to the McHenry/Dekalb County Line in McHenry County
- IL 47 (Eastwood Drive) from IL 173 to IL 71 in McHenry, Kane and Kendall Counties
- US 14 (Northwest Highway) from the Wisconsin State Line to Palatine Road in Cook, Lake, and McHenry Counties
- US 12 (Rand Road)/IL 31/Randall Road/Orchard Road from the Wisconsin State Line to US 30 in Kane and McHenry Counties
- US 12 (Rand Road) from IL 31 to IL 58 in Cook, Lake, and McHenry Counties.

2.3 Roadway/Right-of-Way Characteristics

The IL 176 SRA route terminates at IL 23 (State Street) to the west and US 12 (Rand Road) to the east. Both US 12 (Rand Road) and IL 23 (State Street) have had a Pre-Phase 1 SRA Route Study conducted. The IL 176 corridor is primarily a two-lane roadway with no median and includes intersection widening to accommodate turn lanes.

Table 2.1 details the amount of existing right-of-way as well as the cross section dimensions for the IL 176 SRA corridor. The route was divided into logical segments based on changes in future roadway design.

Table 2.1 Existing Right-of-Way and Roadway Cross Section Dimensions

From	To	Lanes	Lane Width	Shoulder Width	ROW
IL 23 (State St.)	Grace St. STA 98+50	2	12 ft.	8 ft.	60 ft.
Grace St. STA 98+50	Millstream Rd. STA 200+00	2	12 ft.	8 ft.	80 ft.
Millstream Rd. STA 200+00	North Union Rd. STA 240+48	2	12 ft.	8 ft.	60 ft.
North Union Rd. STA 240+48	Franklinville Rd. STA 350+06	2	12 ft.	8 ft.	80 ft.
Franklinville Rd. STA 350+06	McCue Rd. STA 485+00	2	12 ft.	8 ft.	60 ft.
McCue Rd. STA 485+00	STA 485+00	2	12 ft.	8 ft.	80 ft.
STA 485+00	STA 495+00	2	12 ft.	8 ft.	60 ft.
STA 495+00	IL 47 (Eastwood Dr.)/IL 176 N	2	12 ft.	8 ft.	80 ft.
IL 47 (Eastwood Dr.)/IL 176 N	IL 47 (Eastwood Dr.)/IL 176 S	2	12 ft.	8 ft.	150 ft.
IL 47 (Eastwood Dr.)/IL 176 S	Oak Street	2	12 ft.	8 ft.	100 ft.
Oak Street	Lincoln Pkwy.	2*	12 ft.	8 ft.	120 ft.
Lincoln Pkwy.	Walkup Rd.	2	12 ft.	2 ½ ft. Curb and Gutter	80 ft.
Walkup Rd.	Ellsworth St.	2	12 ft.	2 ½ ft. Curb and Gutter	66 ft.
Ellsworth St.	Union Pacific Railroad Crossing	2	14 ft.	2 ½ ft. Curb and Gutter	66 ft.
Union Pacific Railroad Crossing	IL 31	2	12 ft.	3 ft.	80 ft.
IL 31	Nish Rd.	2	13 ft.	8 ft.	80 ft.
Nish Rd.	Dedlow Rd.	4	Two 13 ft. Lanes on IL 176 Two 11 ft. Lanes on Wright Road	8 ft. on IL 176	80-183 ft.
Dedlow Rd.	River Rd.	2	13 ft.	8 ft.	80 ft.
River Rd.	Roberts Rd.	2	13 ft.	8 ft.	100 ft.
Roberts Rd.	Anderson Rd.	2	13 ft.	8 ft.	80 ft.
Anderson Rd.	US 12 (Rand Rd.)	3	13 ft.	2½ ft. Curb and Gutter	80 – 106 ft.

* Frontage road along IL 176 south of IL 176 between Oak Street and Lincoln Parkway

2.3.1 Traffic Volumes

Traffic projections were developed using existing traffic data and the results from the most recent (year 2007) regional travel demand analysis. The regional travel model uses 2030 socioeconomic projections from the Northeastern Illinois Planning Commission, and assumes the implementation of the Chicago Metropolitan Agency for Planning (CMAP) 2030 Regional Transportation Plan for the Northeastern Illinois area (**Table 2.2**).

Table 2.2 IL 176 SRA Traffic Volumes

From	To	2007 Counts	2030 ADT
IL 23 (State St.)	Sunnyside Rd.	9,600	12,000
Sunnyside Rd.	IL 47 (Eastwood Dr.)/IL 176 N	10,300	17,000
IL 47 (Eastwood Dr.)/IL 176 N	IL 47 (Eastwood Dr.)/IL 176 S	21,800	30,000
IL 47 (Eastwood Dr.)/IL 176 S	Ohnstad Rd.	10,900	13,000
Ohnstad Rd.	US 14	15,100	19,000
US 14	Main St.	15,000	24,000
Main St.	IL 31	16,000	21,000
IL 31	Smith Rd.	13,800	19,000
Smith Rd.	Valley View Rd.	13,000	16,000
Valley View Rd.	Nish Rd.	16,100	19,000
Nish Rd.	River Rd.	17,900	25,000
River Rd.	Roberts Rd.	21,800	26,000
Roberts Rd.	Darrell Rd.	19,200	28,000
Darrell Rd.	US 12 (Rand Rd.)	20,000	30,000

2.3.2 Safety Concerns

An in-depth safety study is not part of the SRA study. Locations with a high number of crashes along IL 176 vary from year to year and the frequency of crash occurrence also may vary due to weather conditions, construction and utility work in the area, traffic volume, driver behavior, and other factors. There were two locations and two segments along the IL 176 SRA that were identified in the 2008 Illinois Five Percent Report to FHWA which describes, at a minimum, the top five percent of highway locations and segments with the most pressing safety needs **(Table 2.3)**. The 2009 Illinois Five Percent Report to FHWA identified four locations and four segments along IL 176 with pressing safety needs (**Table 2.3**).

Table 2.3 Five Percent Locations and Segments

Year	Five Percent Locations	Five Percent Segments
2008	Millstream Road	Deerpass Road to Millstream Road
	Valley View Road	Terra Cotta Road to IL 31
2009	Millstream Road	Briarwood Road to Lippold Road
	North Union Road	IL 31 to Smith Road
	Dean Street	Behan Road to Sherman Boulevard
	IL 47 (Eastwood Drive)/IL 176 South	Lakeview Drive Greenleaf Avenue

Source: 2008 and 2009 Illinois Five Percent Reports

2.4 Transit Operations

Today, the IL 176 SRA corridor is mostly agricultural. However, population and employment are increasing at extraordinary rates in McHenry County. The Northeast Illinois Planning Commission (NIPC) has projected the population of McHenry County to increase from 260,077 in 2000 to 449,523 in 2030. The projection for the employment was an increase from 105,118 jobs in 2000 to 167,765 jobs in 2030. Under this growth scenario, the demographics of portions, if not all, of IL 176 are likely to change so that they would support transit operations.

2.4.1 Existing Operations

Today, two Pace bus routes and the Union Pacific Northwest Line Metra commuter railroad provide public transportation service within the IL 176 corridor. The Metra station nearest to the corridor is in Crystal Lake located approximately one-quarter mile south of the IL 176 corridor off Grant Street between Railroad Street and Woodstock Street. The Union Pacific Northwest Line branches into two lines in Crystal Lake, one terminates in the City of Harvard and the other terminates in the City of McHenry. The Harvard branch overpasses the IL 176 corridor near Elmhurst Street, whereas the McHenry branch crosses at-grade the IL 176 corridor between Park Boulevard and Erick Street. The McHenry branch passes the Crystal Lake station without stopping. A new Metra station is under construction on Pingree Road approximately one-half mile south of IL 176 off Main Street.

Metra Services

- **Northwest Service**- The last on-board survey conducted in 1999 by Metra noted 1,468 boarding each weekday at the Crystal Lake Metra Station. Service at Crystal Lake is scheduled to serve commuters during the weekday morning and evening rush hour periods. Service during the midday and evening periods is frequent, leaving almost every hour during the day and at 8:00, 9:00, and 11:59 PM during the evening. Service on the weekends is frequent with 13 inbound trains on Saturday and seven on Sunday. The station meets national disability access standards and has enough parking to allow over half of the passengers boarding each day their own parking spot. Pace Routes 806 and 808 serve this station during morning and evening rush hours.

Pace Services

- **806-Crystal Lake-Fox Lake –** The Pace Route 806 carries on average 58 passengers a day along its route. This Pace route serves the IL 176 corridor at the IL 31 intersection. Each weekday, buses leave five times heading north from Crystal Lake Metra Station and seven times heading south from Fox Lake Metra Station. No service is provided on Saturdays, Sundays, or holidays. The buses make "flag" stops upon signal to driver at any intersection along the route where a stop is safe and possible.

- **808-Woodstock-Harvard -** The Pace Route 808 carries on average 78 passengers each day. This Pace route runs on IL 176 between Oak Street and US 14. Buses head northwest seven times each weekday from Crystal Lake to Harvard and head southeast from Harvard to Crystal Lake via Woodstock seven times each weekday. There is no service on Saturdays, Sundays, or holidays. The buses make "flag" stops upon signal to driver at any intersection along the route where a stop is safe and possible.

2.4.2 Future Potential Transit Service Programs

The CMAP 2030 Regional Transportation Plan included improvement recommendations for a strategic regional transit system, as well as potential expansion areas for Pace bus service. The Strategic Regional Transit (SRT) System detailed in the plan is an integrated network of existing high capacity commuter rail, rapid transit and bus services that are vital for mobility, congestion relief, and economic development. Many of the improvements recommended in the SRT System would be local in nature and impact. As a whole, however, these impacts could be substantial. In this regard, the SRT System should be viewed as the transit counterpart to the SRA System. The 2020 SRT System does not recommend any studies near the IL 176 corridor.

Potential expansion areas for Pace bus service were investigated in the Destination 2030 Plan. Potential areas would have 2030 population plus employment per square mile of 4,000 or greater and are located further than one-half mile from an existing Pace route. Given these criteria, the potential expansion areas identified near the IL 176 corridor are:

- In Marengo
- In Crystal Lake near the Metra stop
- In Island Lake
- In Wauconda near US 12 (Rand Road)

The McHenry County 2030 Comprehensive Land Use and Transportation Plan identified IL 176 between Marengo and Island Lake as a low priority tertiary transit corridor, indicating the desire for limited fixed-route bus service. US 14, which crosses IL 176 in Crystal Lake, has been identified as a primary transit corridor between Woodstock and Fox River Grove, indicating the desire for high levels of bus transit service.

The McHenry County 2030 Comprehensive Land Use and Transportation Plan calls for a line-haul arterial bus route incorporating bus rapid transit technologies from McHenry to Elgin. This route would operate mainly on IL 31 to the Crystal Lake Metra Station via IL 176 between Main Street

and IL 31. This portion of IL 176 has been identified as a high priority Pace Transit Corridor, indicating the desire for high levels of bus transit service.

2.4.3 Implication on SRA Implementation

The potential development in the area, as well as the current transit service in the area will likely require the following transit services:

- Bus rapid transit and related roadway requirements are to be considered along the IL 176 SRA Corridor. This includes transit signal prioritization (TSP) for transit operations at intersections.
- Designated bus stop locations at appropriate distances and major points of ridership access. While many bus stops may be designated at specific points, Pace operates with a casual flag-down policy which allows riders to wave for a bus at a non-designated but safe boarding location.
- Allowance for bus shelters at designated bus stop locations.
- Urban Street Section areas – The SRA design guidelines identify the possibility of bus/HOV lane facilities. However, transit ridership and vehicle frequency is not high enough on the IL 176 SRA Corridor to require such infrastructure.
- Suburban Street Section areas – The SRA design guidelines provide for the necessary physical characteristics for bus transit operations. However, the SRA guidelines recommend only express service on designated routes. Existing Pace routes may require non-express service in order to serve existing ridership markets along the IL 176 SRA Corridor.
- Park and Ride facilities should be considered at major intersections.
- Existing community character is to be maintained in compliance with local ordinance or as determined by the individual community's planning body.

2.5 Threatened and Endangered Species

An endangered species consultation program Agency Action Report was received in August 2003 from the Illinois Department of Natural Resources regarding the presence of threatened or endangered species and habitat along the SRA route within 1,000 feet of the existing road rights-of-way. Eleven species were identified along IL 176 which are listed by the State of Illinois as threatened or endangered (**Table 2.4**).

Table 2.4 Threatened and Endangered Species Summary

Scientific Name	Common Name	Illinois Status	Year Documented	Location
Emydoidea blandingi	Blanding's Turtle	Threatened	1993, 2000	Cotton Creek Marsh Nature Preserve, 900 ft. southwest of IL 176 in Island Lake; 1,400 ft. south of IL 176, approximately 600 ft. east of Dean Road
Cypripedium candidum	White Lady's Slipper	Threatened	1999	Cotton Creek Marsh Nature Preserve, 600 ft. southwest of IL 176 in Island Lake
Grus canadensis	Sandhill Crane	Threatened	2000	Cotton Creek Marsh Nature Preserve, 2,000 ft. southwest of IL 176 in Island Lake
Galium labrodoricum	Northern Bog Bedstraw	Threatened	1988	Cotton Creek Marsh Nature Preserve, 2,700 ft. southwest of IL 176 in Island Lake
Etheostoma exile	Iowa Darter	Endangered	2000	Tributary to the Kishwaukee River 1,400 ft. south of IL 176, approximately 600 ft. east of Dean Road
Lathyrus ochroleucus	Pale Vetchling	Threatened	1998	250 ft. south of IL 176, approximately 600 ft. west of Sunnyside Road
Xanthocephalus xanthocephalus	Yellow-headed Blackbird	Endangered	1998	1,400 ft. south of IL 176, just east of Briarwood Drive west of Crystal Lake
Ranunculus rhomboideus	Prairie Buttercup	Threatened	1998	Wingate Prairie Nature Preserve, 1,200 ft. north of IL 176
Filipendula rubra	Queen-of-the-Prairie	Endangered	1993	Wingate Prairie Nature Preserve, 1,550 ft. north of IL 176
Lontra canadensis	River Otter	Threatened	2002	1,000 ft. north of IL 176, two miles east of Marengo along the South Branch of the Kishwaukee River
Lechea intermedia	Large Pod Pinweed	Threatened	1998	Wingate Prairie Nature Preserve, 1,800 ft. north of IL 176

2.6 Community Concerns

Ten initial community interviews were held in April and May 2003 and two in December 2004 with the following communities/agencies:

- Village of Wauconda
- Village of Island Lake
- City of Crystal Lake
- Village of Prairie Grove
- City of Marengo
- Nunda Township Highway Department

- McHenry County Division of Transportation and Department of Planning and Development
- Lake County Division of Transportation and Lake County Planning, Building and Development
- Village of Lakewood
- Village of Union and Coral Township Highway Department

Several major concerns were expressed during these meetings and are summarized in the **Table 2.5**.

Table 2.5 Summary of Community Concerns IL 176 from IL 23 (State St.) to US 12 (Rand Rd.)

	Wauconda	Island Lake	Crystal Lake	Prairie Grove	Marengo	Nunda Township	McHenry County	Lake County	Lakewood	Union/Coral Township
Existing structures limit IL 176 widening.	US 12 (Rand Road) viaduct		UPRR bridge east of Elmhurst				RR crossings in Crystal Lake	US 12 (Rand Road) viaduct		
IL 176 from US 12 (Rand Road) west to River Road in Prairie Grove is a traffic bottleneck during morning rush hour, evening rush hour, and for four hours on Saturday mornings. The four stoplights within ¼ mile at US 12 (Rand Road) and west contribute to the problem. Traffic on other area roads increases as drivers try to avoid IL 176.	✓	✓	✓	✓		✓				
Traffic projections are too low.	✓	✓	✓							
Properties with frontage on IL 176 are being developed. IDOT should require the 120 to 150 foot setback of a SRA suburban cross section for these developments.	✓	✓	✓	✓	✓	✓				Village supportiv e of planning setbacks for IL 176
New residential developments will increase traffic on IL 176.	✓		✓	✓						✓
In some locations, existing buildings would lie within the 120 to 150 foot ROW needed for the SRA suburban cross section. The urban cross section should be considered, to reduce impact.		Roberts Road to N. Con-verse Road	Elmhurst Street and Erick Street		IL 23 (State Street) and Prospect Street	Dedlow Road and Griswold Avenue				
In some locations, terrain limits sight distance, contributing to accidents.		Between Eastway Drive & Lake-view Drive	US 14 inter-section	Fox River to Valley View Rd., and near Barreville Rd. and Smith Rd.			Rail crossing near Walkup Rd.			At Burnham Rd., Union Rd.
Additional traffic signals are needed.				Buhl Rd & Sherman Rd.	Prospect Street					
Flooding of IL 176 at several locations is due to inadequate roadway drainage design.		✓			✓					
This SRA study should be coordinated with three IDOT studies (Walkup Road, IL 31, US 14) and one local study (Erick Street) currently underway on intersecting roads.			✓				✓		✓	

	Wauconda	Island Lake	Crystal Lake	Prairie Grove	Marengo	Nunda Township	McHenry County	Lake County	Lakewood	Union/Coral Township
Crystal Lake has adopted a Watershed District that will require both infiltration and filtration for water quality for IL 176 roadside drainage. This District encompasses land draining into Crystal Lake as well as into Veterans Acres Park.			✓							
The westbound traffic queues for up to six blocks at the signal with Walkup Road.			✓							
The division between the suburban and rural SRA cross sections should begin a quarter mile west of IL 47 (Eastwood Drive) at Dean Street.							✓		✓	
The approximately one-mile segment that carries both IL 176 and IL 47 (Eastwood Drive) should have ten lanes rather than six or eight.							✓			
The SRA study should consider how the three proposed Marengo bypass routes to the southeast could tie into IL 176: Prospect Street, Dunham Road/Millstream Road, and an extended Franks Road.					✓					
The SRA study should consider how a potential Union Pacific RR Metra station near Marengo would be accessed from IL 176.					✓					
The centerline of the Fox River bridge should be moved to the south where there is more open land for the needed six lanes.						✓				
Near Walkup Road, the proposed McHenry County Conservation District's bike trail would cross IL 176 to the east.			✓			✓				
The SRA study should take into account the potential commercial development at IL 47 (Eastwood Drive).			✓							