Illinois Department of Transportation

IL120 STUDY

IL60 to Almond Road

Purpose and Need

Planning and Environmental Linkages Study
IL 120 from IL 60 to Almond Road

Lake County, Illinois

Illinois Department of Transportation
District 1, Contract P-91-028-20

September 9, 2024

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1 Introduction

1.1 Project Description

The Illinois Department of Transportation (IDOT) as lead sponsor, in cooperation with the Federal Highway Administration (FHWA), is conducting a Planning and Environmental Linkages Study (PEL) to consider future transportation improvements for the Illinois Route 120 (IL 120) Corridor from Illinois Route 60 (IL 60) to Almond Road in Lake County, Illinois (see **Figure 1**), approximately 9.3 miles. The PEL Study team includes IDOT and the consultant team led by the Prime Consultant, HDR Engineering, Inc.

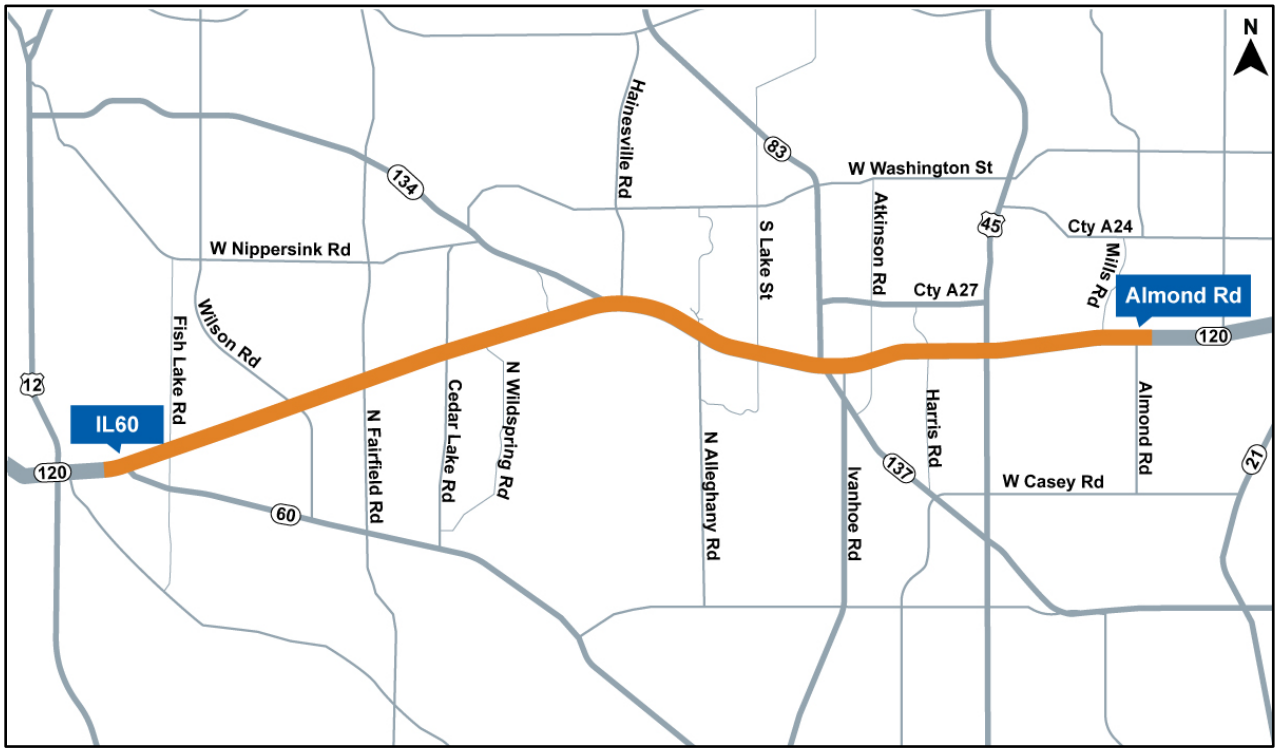


Figure 1: IL 120 PEL Study Project Limits

A PEL study is a collaborative approach to transportation decision-making that allows for consideration of environmental issues, community context, and economic and development goals early in the planning process. This integrated approach allows for the results of the PEL study to be carried forward into subsequent project development and environmental review processes. The PEL process can minimize duplication of effort, promote environmental stewardship, encourage meaningful engagement with the public and other stakeholders, and reduce delays in project implementation.

The following planning products and analyses will be adopted or incorporated by reference into the subsequent National Environmental Policy Act (NEPA) review, per 23 USC 168(c)(1) and 168(c)(2):

- Planning products
  - The Purpose and Need for the proposed action;
  - Preliminary screening of alternatives;
  - A basic description of the environmental setting;
  - A decision with respect to methodologies for analysis;

- Analyses
  - Travel demands;
  - Crash data;
  - Multi-modal transportation alternatives;
  - Regional development and growth;
  - Local land use, growth management, and development;
  - Population and employment;
  - Natural and built environmental conditions;
  - Environmental resources and environmentally sensitive areas;
  - Potential environmental effects, including the identification of resources of concern and potential direct, indirect, and cumulative effects on those resources; and
  - Potential mitigation needs for a proposed project.

The IL 120 PEL Study will develop a Purpose and Need based on input from stakeholders, a Community Advisory Group (CAG), and the public. In addition, a range of initial improvement alternatives will be developed and evaluated through a two-step screening process to identify potential improvements that best support the project goals, estimate project costs; consider constructability; and avoid or minimize environmental impacts. Alternatives will be evaluated against defined criteria and presented to project stakeholders, the CAG, and the public for input. The result of the alternatives evaluation, along with consideration of public and stakeholder input, will establish a determination on which alternatives should be carried forward into subsequent project development and NEPA studies.

The IL 120 PEL Study follows FHWA PEL guidance regarding the integration of transportation planning and the NEPA process, which encourages the use of planning studies to provide information for incorporation into future NEPA documents (23 Code of Federal Regulations [CFR] 450). As part of the PEL process, an FHWA PEL Questionnaire will be completed for this study. This study is also following IDOT's PEL process outlined in IDOT's Bureau of Design and Environment (BDE) Manual Section 11-7.04(b).

1.2 History of Project

With the current volume of traffic, the IL 120 corridor has become a bottleneck within the regional transportation system and there are areas with safety concerns. The area has been studied previously as part of major regional transportation studies, summarized below. There has been no system-wide alternative or set of alternatives that has previously achieved consensus to move towards construction. IDOT and local officials have supported studying the east-west capacity needed to accommodate present and projected traffic in the study area.

Previous regional and local planning documents for the study area include, but are not limited to the following plans:

- Chicago Metropolitan Agency for Planning (CMAP) ON TO 2050 (2022);
- Lake County 2040 Transportation Plan (2014);
- Village of Grayslake Highway Transportation Plan 2020-2024 (2020);
- Village of Hainesville Comprehensive Plan (2011);
- Village of Round Lake Comprehensive Plan (2016);
- Village of Volo Comprehensive Transportation Plan (2014);
- Driving Innovation: The Pace Strategic Vision Plan (2021); and
- Metra Systemwide Cost Benefit Analysis of Major Capital Improvements (2019).

1.3 Project Study Area

The IL 120 PEL Study limits encompass the IL 120 corridor from IL 60 to Almond Road. IL 120 is a major east-west state highway under the jurisdiction of IDOT that extends from U.S. Route 14 in Woodstock in McHenry County to Illinois Route 131 in Waukegan in Lake County. IL 120 provides direct access to and from Interstate 94 (I-94) or indirectly via Illinois Route 21. IL 120 is currently classified as an Other Principal Arterial within the PEL Study limits.

East and west of the PEL Study limits, IL 120 is a four-lane highway. Approximately 500 feet east of IL 60, within the PEL Study limits, IL 120 transitions to a two-lane undivided highway. IL 120 briefly widens to four lanes at the intersection with U.S. Route 45 (US 45) but returns to two lanes east of the US 45 intersection. IL 120 remains two lanes until approximately 500 feet west of Almond Road, where it transitions to four lanes. **Figure 2** depicts lane and intersection configurations within the Study limits. Travel lanes and auxiliary lanes on IL 120 are typically 12 feet wide. IL 120 has curb and gutter at the far west end of the project study limits where there are four lanes, and at a few intersections. The remainder of the corridor has shoulders with open drainage.

Land use surrounding the IL 120 corridor in the PEL Study area is primarily suburban with some agricultural and industrial areas, forest preserves and open space, as shown on **Figure 3**. There are 16 agricultural parcels adjacent to IL 120. The area along IL 120 from Alleghany Road to US 45 is primarily urbanized. The corridor crosses Metra's Milwaukee District North Rail Line and a Canadian National Railway (CN) North Central Service line.

The PEL Study area is rich in sensitive environmental and community resources, including streams, lakes, wetlands, and numerous protected lands. Lake County has habitat for more threatened and endangered species than any other county in Illinois, with 10 federally-listed species and 14 state-listed species with potentially suitable habitat in the PEL Study Area. The corridor crosses Manitou Creek and an Unnamed Tributary to Mill Creek. There are two lakes (Grays Lake and Gages Lake), as well as extensive wetlands that are mapped in the PEL Study area by the Lake County Wetland Inventory. The PEL Study area includes multiple forest preserves, Illinois Natural Areas Inventory sites, publicly owned parks, recreation areas, and open spaces, and several conservation easements. These "special lands" are protected for their recreational qualities and for their environmental or historical importance and are also valued deeply by residents and other stakeholders.

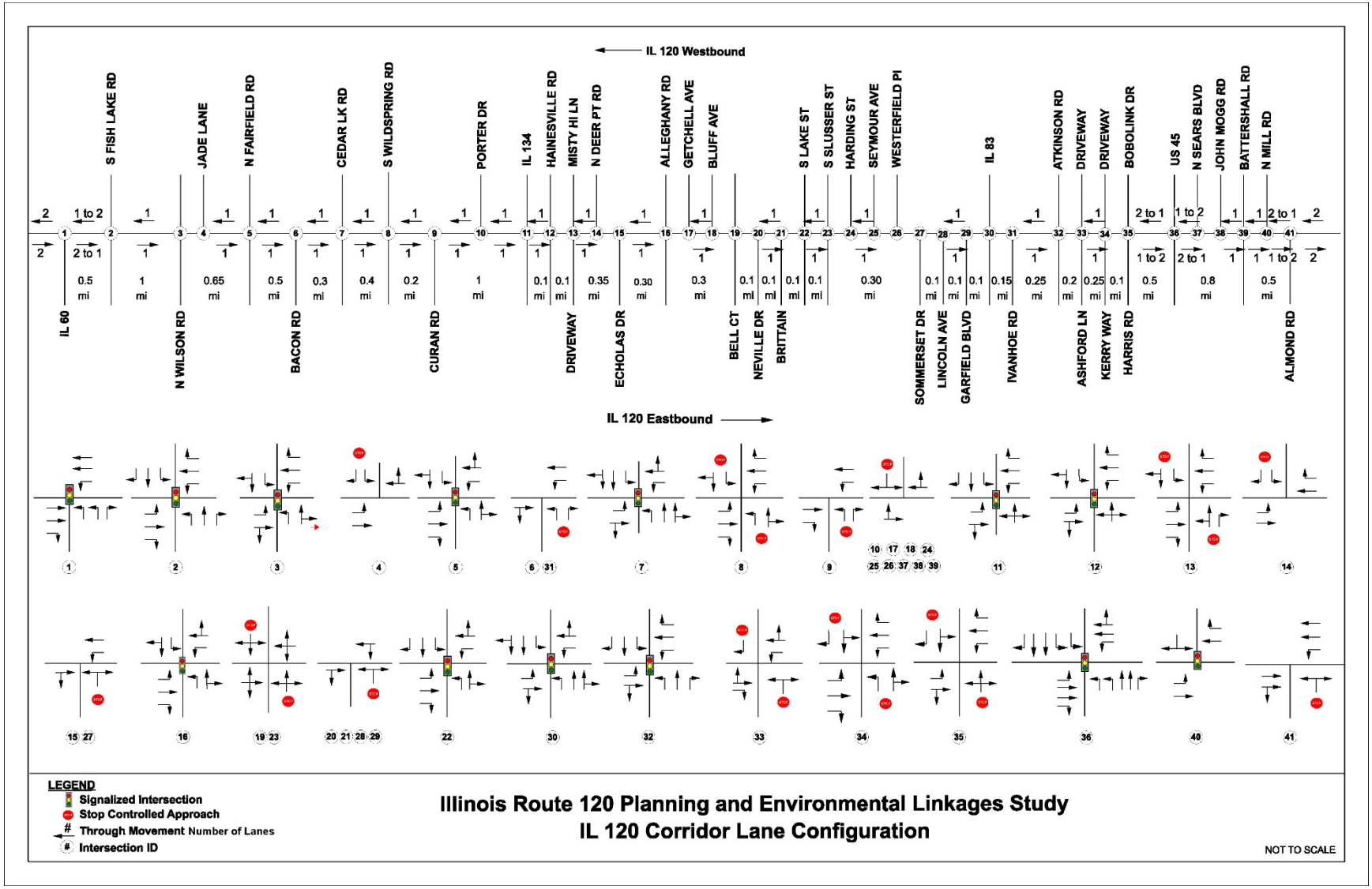


Figure 2. IL 120 Corridor Lane and Intersection Configuration

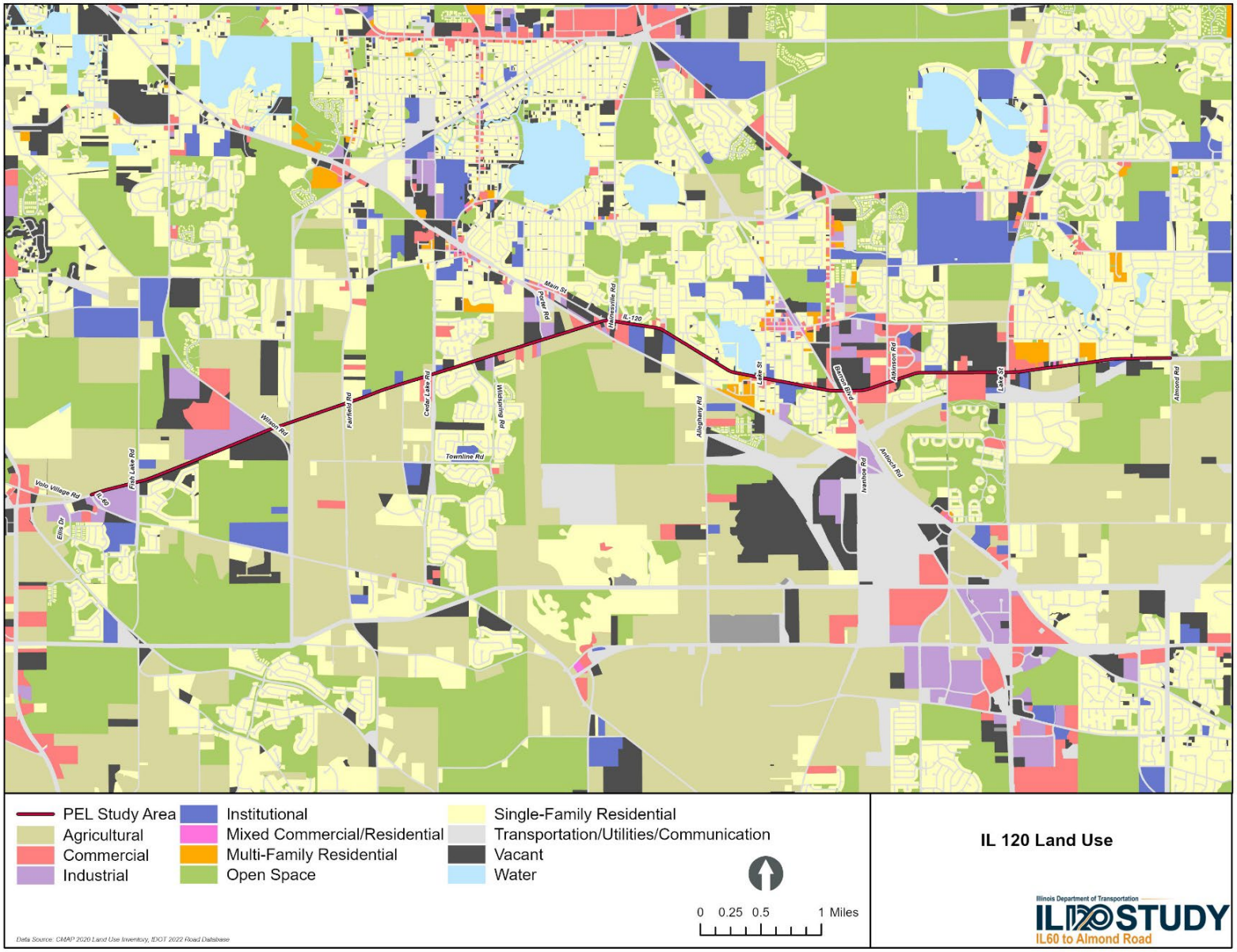


Figure 3: IL 120 Land Use

1.4 Methodology Used for Highway Types

IL 120 is classified as Other Principal Arterial. The limits of the project are located along a state route and therefore will follow BDE requirements where applicable. The design criteria for the project alternatives has been derived from IDOT's BDE Manual. The geometric design criteria referenced for each section of the corridor are defined in the Design Criteria Memo in **Appendix A**. Existing posted speeds are shown in **Table 1**.

Table 1: IL 120 Posted Speeds

Location		Distance (mi)	Posted Speed
From	To		
IL 60	Fish Lake Road	0.21	55
Fish Lake Road	West of entrance to Hendricks Roofing	3.8	50
West of entrance to Hendricks Roofing	S Lake Street	1.7	40
S Lake Street	N Mill Road	3.1	35
N Mill Road	Almond Road	0.31	45

2 Purpose and Need for the Improvements

2.1 Project Purpose

The purpose of the PEL study is to improve safety for motorized and non-motorized users, reduce congestion and travel delays, and enhance modal interrelationships along IL 120 from IL 60 to Almond Road.

2.2 Project Need

Transportation system improvement(s) are needed in the IL 120 PEL Study area to address the following issues that exist in the IL 120 corridor:

- Crashes on IL 120
- Travel delays and decreased traffic flow
- Gaps in the pedestrian and bicycle network
- Limited transit connectivity

These needs are described in more detail below.

2.2.1 Crashes on IL 120

Safety for all roadway users is a primary concern within the IL 120 corridor. The IL 120 corridor had 1,263 crashes and one fatality within the five-year period between 2017 and 2021, which represents 11 percent of the crashes in Lake County during the same period of time. Statewide, roads classified as Other Principal Arterial had the highest number of fatalities in crashes during the same period of time, with 390 fatalities[1]. Congestion, traffic queueing, and lack of bicycle and pedestrian facilities can create safety hazards and contribute to crashes, as discussed in this section.

SAFETY TIER ASSESSMENT

IDOT uses quantitative safety data to rate and identify locations with a higher potential for safety improvements that merit further analysis. Using relative ratings, segments and intersections are categorized as Critical, High, Medium, or Low safety tiers based on safety performance and opportunity for improvement. The IDOT 2020 Safety Tier Assessment identified 22 safety tier segments and 41 intersections within the PEL study area. Of the 22 safety tier segments, the IDOT 2020 Safety Tier assessment identified 5 as Critical and 10 as High safety tier segments. Two of the 41 intersections were identified as Critical, 8 as High, 15 as Medium, and 13 as Low. Critical Safety Tier segments and intersections are detailed in the IL 120 Crash Analysis Report provided in **Appendix B** and include the following locations:

- Intersections
    - IL 120 at Hainesville Road
    - IL 120 at IL 83
- Segments (approximate locations)
    - Wilson Road to Fairfield Road

[1] IDOT Illinois 2017-2021 Crash Data Trends

- Deer Point Drive to West Trail
- Seymour Avenue to Westerfield Place
- US 45 to Sears Boulevard
- Battershall Drive to Mill Road

The Critical Safety Tier segments and intersections generally correspond with the crash density map provided in **Figure 4**.

Figure 4. Crash Density Map, 2017-2021

CRASH DATA

Crash data collected by IDOT shows that 1,263 crashes occurred within the IL 120 corridor between years 2017 and 2021[2]. **Table 2** summarizes the overall crash types that were reported in the five-year analysis period from 2017 to 2021. Rear-end collisions accounted for 57.4 percent of the total crashes, indicative of heavy traffic congestion and vehicle queuing. Turning crashes accounted for 20.8 percent, the second largest number of crashes for the IL 120 corridor. Fixed object crashes were the third largest type of crash at 5.2 percent of crashes, followed by sideswipe same direction crashes at 5.1 percent, angle crashes at 4.0 percent, and animal crashes at 2.5 percent. The top six types of crashes account for 95 percent of all crash types along IL 120, as shown in **Figure 5**.

[2] Crash data for 2022 and 2023 will be used to supplement crash data when available in late 2024.

Table 2: Type of Crashes along IL 120 Corridor (2017-2021)

Type of Crash	2017	2018	2019	2020	2021	Total Crashes	Percentage
Angle	***9***	***13***	***13***	***6***	***10***	***51***	***4.0%***
Animal	***4***	***8***	***10***	***5***	***4***	***31***	***2.5%***
Fixed Object	***20***	***9***	***16***	***7***	***14***	***66***	***5.2%***
Front to Front	0	0	2	2	5	9	0.7%
Front to Rear	***171***	***147***	***150***	***116***	***141***	***725***	***57.4%***
Head On	6	2	0	0	0	8	0.6%
Other Non-Collision	1	2	0	1	1	5	0.4%
Other Object	0	3	3	2	6	14	1.1%
Overturned	0	0	0	2	1	3	0.2%
Parked Motor Vehicle	3	1	1	2	2	9	0.7%
Pedalcyclist	1	0	0	0	0	1	0.1%
Pedestrian	0	1	1	0	0	2	0.2%
Rear to Front	0	0	1	1	0	2	0.2%
Rear to Rear	0	0	0	0	1	1	0.1%
Rear to Side	0	0	0	1	0	1	0.1%
Sideswipe Opposite Direction	1	3	1	1	1	7	0.6%
Sideswipe Same Direction	***10***	***15***	***17***	***14***	***9***	***65***	***5.1%***
Turning	***49***	***57***	***63***	***34***	***60***	***263***	***20.8%***
Total	**275**	**261**	**278**	**194**	**255**	**1,263**	**100%**

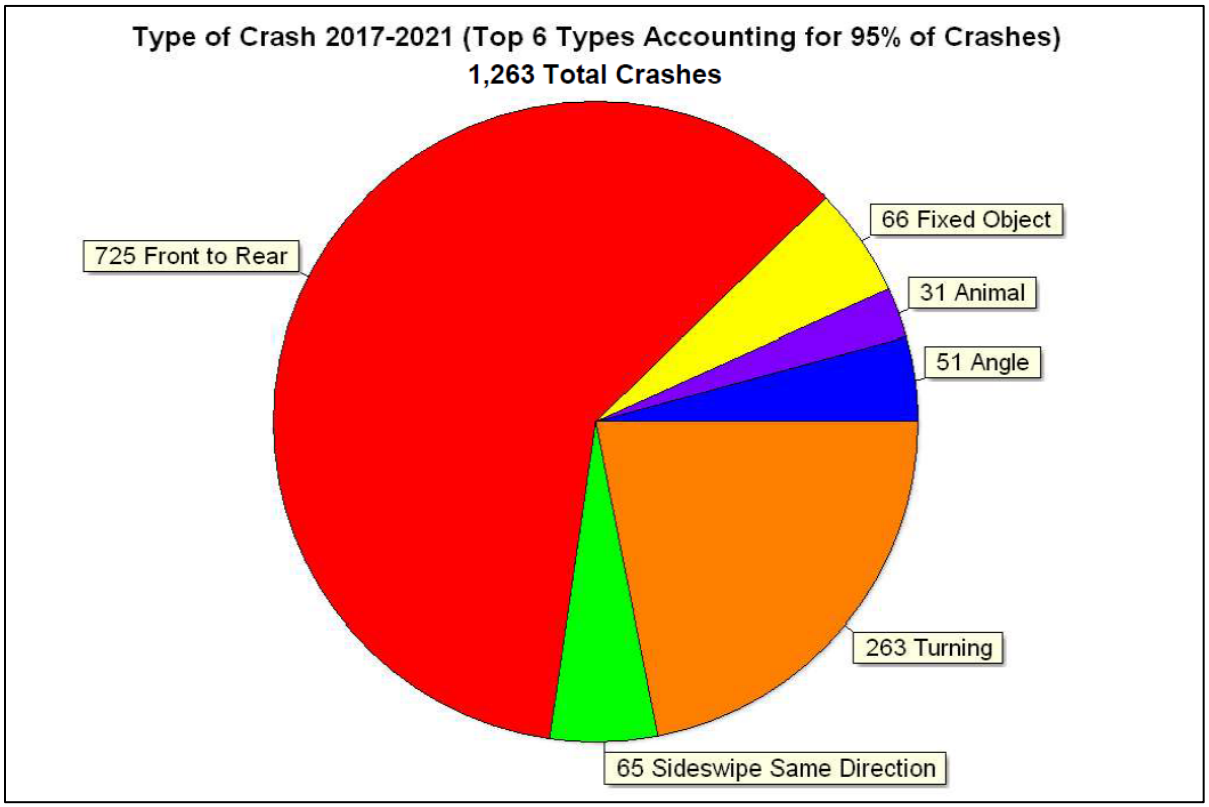


Figure 5. Crash Types 2017-2021 (1,263 Total Crashes)

A review of 2017-2021 crash data shows that in addition to Critical Safety Tier segments and intersections identified above, the intersections of IL 120 at IL 134, IL 120 at Ivanhoe Road, and IL 120 at US 45 have a higher crash density relative to the rest of the corridor. Likewise, the sections of IL 120 between IL 134 and Hainesville Road and Alleghany Road and Lake Street have a higher crash density relative to the rest of the corridor. High crash density locations are detailed in **Table 3**.

Table 3. High Crash Density Locations

	Crashes between 2017 and 2021	Share of Total Crashes	Most Frequent Crash Type
Intersections			
IL 120 at Hainesville Road	103	8.2%	Front to rear (48.5%)
IL 120 at IL 83	107	8.5%	Front to rear (43%)
IL 120 at IL 134	44	3.4%	Front to rear (63.6%)
IL 120 at Ivanhoe Road	24	1.9%	Turning (50%)
IL 120 at US 45	130	10.3%	Front to rear (36.2%)
Sections			
IL 134 to Hainesville Road	14	1.1%	Turning (42.9%)
Alleghany Road to Lake Street	53	4.2%	Front to rear (66.0%)

The primary causes of crashes were failure to reduce speed to avoid crash (475 / 37.6 percent), failing to yield right of way (169 / 13.4 percent), and following too closely (159 / 12.6 percent). The primary causes of these crash types could be a result of insufficient or absent channelized turn lane lengths or lane taper lengths, insufficient roadway capacity, inadequate intersection traffic controls and pavement markings, excessive speeds, or insufficient signal timing. **Table 4** summarizes the primary crash causes that were reported in the five-year analysis period from 2017 to 2021.

Table 4. Primary Crash Causes along IL 120 Corridor (2017-2021)

Type of Crash	2017	2018	2019	2020	2021	Total Crashes	Percentage
(N/A)	1	2	20	4	7	34	2.7%
Animal	4	9	8	5	5	31	2.5%
Cell Phone	2	2	0	0	2	6	0.5%
Disregarding Other Traffic Signs	0	0	1	0	0	1	0.1%
Disregarding Road Markings	0	2	0	0	0	2	0.2%
Disregarding Stop Sign	1	1	0	1	0	3	0.2%
Disregarding Traffic Signals	5	6	4	4	5	24	1.9%
Distraction – From Inside Vehicle	6	11	10	11	7	45	3.6%
Distraction – From Outside Vehicle	0	3	2	1	5	11	0.9%
Driving on Wrong Side/Wrong Way	1	0	1	1	1	4	0.3%
Driving Skills/Knowledge/Experience	18	11	7	12	14	62	4.9%
Equipment-Vehicle Condition	5	3	2	2	4	16	1.3%
Evasive Action Due to Animal/Object/Non-Motorist	1	0	1	0	0	2	0.2%
Exceeding Authorized Speed Limit	1	1	0	0	0	2	0.2%
Exceeding Safe Speed for Conditions	4	6	0	0	0	10	0.8%
Failing to Reduce Speed to Avoid Crash	***111***	***95***	***95***	***81***	***93***	***475***	***37.6%***
Failing to Yield Right of Way	***38***	***43***	***40***	***20***	***28***	***169***	***13.4%***
Following Too Closely	***35***	***29***	***35***	***25***	***35***	***159***	***12.6%***
Improper Backing	1	2	0	1	1	5	0.4%
Improper Lane Usage	6	8	8	5	7	34	2.7%
Improper Overtaking/Passing	2	4	6	2	1	15	1.2%
Improper Turning/No Signal	10	8	9	5	7	39	3.1%
Operating Vehicle in Reckless Manner	0	1	3	0	6	10	0.8%
Physical Condition of Driver	4	1	7	3	3	18	1.4%
Road Engineering/Surface/Marking Defects	0	0	0	0	1	1	0.1%
Turning Right on Red	1	0	0	0	1	2	0.1%

Type of Crash	2017	2018	2019	2020	2021	Total Crashes	Percentage
Unable to Determine	4	2	7	5	5	23	1.8%
Under Influence of Alcohol/Drugs	5	4	4	3	8	24	1.9%
Vision Obscured	0	2	2	0	1	5	0.4%
Weather	9	5	6	3	8	31	2.5%
Total	*275*	*261*	*278*	*194*	*255*	*1,263*	*100%*

INJURIES AND FATALITIES

The State of Illinois classifies injury crashes by injury severity, as reported in the individual crash reports. The legal reporting threshold for traffic crashes involving only property damage is $1,500 if all parties are insured, or $500 if any driver does not have insurance. The injury classification from most severe to least severe include K – fatal injury; A – suspected serious injury; B – suspected minor injury; C – possible injury; 0 – no apparent injury.

Out of the 358 injury crashes, 36 crashes (2.9 percent) were Type A and 155 (43.3 percent) were Type B crashes. There was one fatal head on crash in Grayslake, just west of Belle Court between Alleghany Road and Lake Street, shown in **Figure 4**. The cited causes of the head on crash were improper lane usage and physical condition of the driver. There were two pedestrian crashes, one at South Lake Street caused by failure to yield right of way, and one at South Atkinson Road caused by failure to reduce speed and failure to yield right of way. There was one bicycle crash west of West Trail in Grayslake, caused by improper lane usages and driver under the influence of alcohol or drugs. **Table 5** summarizes the crash injury severity that were reported in the five-year analysis period from 2017 to 2021. In addition to the five year analysis period, there were two fatal crashes in 2022, one of which lists the driver's impairment and physical condition as a contributing factor.

Table 5. Crash Injury Severity along IL 120 Corridor (2017-2021)

Type of Crash	2017	2018	2019	2020	2021	Total Crashes	Percentage
Fatal Crashes	0	1	0	0	0	1	0.1%
Type A Injury Crashes	7	13	5	5	6	36	2.9%
Type B Injury Crashes	34	31	40	26	24	155	12.3%
Type C Injury Crashes	41	37	41	22	25	166	13.1%
Total Injury Crashes	***82***	***82***	***86***	***53***	***55***	***358***	**-**
Total Number of Injuries	***121***	***121***	***137***	***86***	***82***	***547***	

2.2.2 Travel Delays and Decreased Traffic Flow

U.S. Census data shows the total Lake County population in 2020 as approximately 714,000. Population projections produced by CMAP for the ON TO 2050 Plan adopted in 2018 were adjusted downward for the 2022 ON TO 2050 Plan update to reflect population growth trends from the previous decade and impact of the COVID-19 pandemic on regional employment. The 2022 population projection updates by CMAP indicate that by 2050, the population of Lake County will reach approximately 832,000, an increase of 16 percent (see **Figure 6**). In addition, there are vacant parcels available for development, as illustrated on **Figure 3**, and local land use plans identified areas of potential development in Round Lake and Grayslake. As population, households, and jobs increase in Lake County, there will be increased travel demand in the IL 120 corridor, which is already at or approaching capacity in some areas.

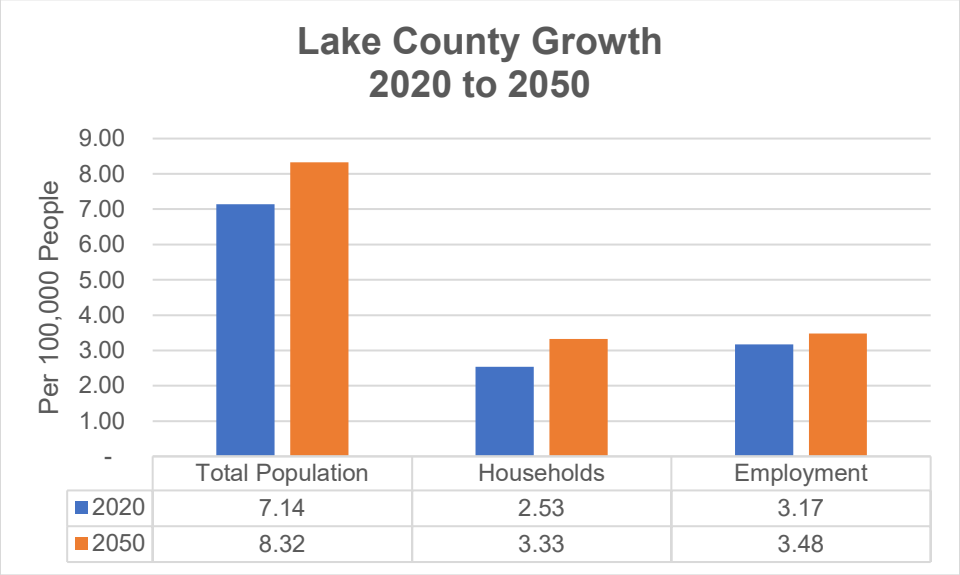


Figure 6. Lake County Growth 2020 to 2050

Based on existing conditions detailed in this section, congestion management strategies are needed to address the existing IL 120 corridor's performance, including safety and travel time resulting from delays.

EXISTING TRAFFIC CONDITIONS

The 2023 average daily traffic (ADT) for the IL 120 corridor ranges from 17,050 ADT near IL 60 to 27,550 ADT near Almond Road, as summarized in **Table 6**[3]. **Figure 7** and **Figure 8** depict the ADT for the west and east segments of the corridor, respectively. Truck traffic accounts for less than 2 percent of ADT.

[3] Traffic counts taken by IDOT in April and May, 2023. ADT is rounded to the nearest 50.

Table 6. Existing and Projected Average Daily Traffic

Description	Existing ADT	2050 No Build ADT	Percent Increase (%)
West of IL 60	26,350	31,500	7.4
IL 60 to Fish Lake Rd	18,350	19,700	10.9
Fish Lake Rd to Wilson Rd	17,050	18,900	10.0
Wilson Rd to Fairfield Rd	18,000	19,800	9.2
Fairfield Rd to Cedar Lake Rd	19,050	20,800	9.5
Cedar Lake Rd to IL 134	20,000	21,900	11.6
Hainesville Rd to Alleghany Rd	23,300	26,000	14.7
Alleghany Rd to S Lake St	19,350	22,200	5.9
S Lake St to IL 83	20,400	21,600	12.3
IL 83 to Atkinson Rd	19,850	22,300	15.3
Atkinson Rd to US 45	20,650	23,800	6.4
US 45 to Almond Rd	26,600	28,300	10.7
East of Almond Rd	27,550	30,500	7.4

Source: IDOT 2023 and CMAP 2023

Figure 7. Existing and Projected Average Daily Traffic, IL 60 to Hainesville Road (West Segment)

Figure 8. Existing and Projected Average Daily Traffic, Hainesville Road to Almond Road (East Segment)

The U.S. Census Bureau's Longitudinal Employer-Household Dynamics Origin-Destination Employment Statistics provides information on the inflow of people who work in the PEL study area but live elsewhere and the outflow of people who live in the PEL Study area but work elsewhere. The 2021 employee inflow for the IL 120 PEL Study area is 5,967 people and the outflow is 6,506 people. Approximately 234 people both live and work within the PEL Study area. Job density within the IL 120 corridor is primarily clustered near Fairfield Road and Wilson Road and near IL 83 and Atkinson Road (OnTheMap 2021). The inflow and outflow counts compared to the ADT indicates travel demand from through trips in the corridor.

There are 13 traffic signals within the corridor and two at-grade railroad crossings. The CN railroad crossing near IL 83 causes an average of 1 minute and 48 seconds of delay per delayed vehicle, which occurs during gate downtime and queue recovery. The Metra railroad crossing near IL 134 causes an average of 40 seconds of delay per delayed vehicle. Average delay per delayed vehicle calculations are shown in **Appendix C**.

IL 120 approaches the roadway capacity for a 2-lane arterial roadway with the existing ADT. The 95th percentile queue values shown in the Synchro outputs in **Appendix D** show movements where the volumes modeled exceed capacity. The Highway Capacity Manual 7th Edition states the capacity for a two lane highway is 3,200 vehicles per hour for both directions; however, this condition is rarely observed except in short segments because service quality of the facility deteriorates at lower demand flow rates.

EXISTING LEVEL OF SERVICE

Operating conditions are graded in terms of Level of Service (LOS), which assigns a letter from A to F based on the Highway Capacity Manual 7th Edition methodologies, and consider speed, delay, traffic interruptions, safety, driver comfort, and convenience. LOS A is the highest (best traffic flow and least delay), LOS E represents saturated or at capacity conditions, and LOS F is the lowest (oversaturated conditions).

For signalized intersections, LOS is calculated for lane groups, intersection approaches, and the intersection as a whole. The LOS analysis for signalized intersections was based on average total vehicle delay (in seconds of delay per vehicle). Delay can be a result of one or any combination of the following: high volumes entering the intersection, poor signal phasing, a lack of or inadequate number of auxiliary lanes, etc.

For two-way stop-controlled intersections, LOS is calculated for each minor street lane group and major street left-turn movements. Since the major street through movements experience zero delay, a weighted average control delay for the intersection is not a useful metric for intersection performance. For unsignalized intersections, delay can be a result of one of any combination of the following: high volumes entering the intersection, insufficient gap time for a vehicle to cross the non-stop-controlled major street movement, etc.

Intersection design criteria from the BDE Manual, as shown in **Appendix A**, Figure 48-6.A states that intersections should be designated to achieve a minimum LOS C for all movements and the overall intersection. Segment LOS and travel times are shown directionally following the dominant direction of travel along the IL 120 corridor, with eastbound representing the A.M. peak hour and westbound representing the P.M. peak hour.

Traffic analysis performed in November 2023 identified overall LOS and delay for signalized intersections for Existing and 2050 No Build conditions for A.M. and P.M. peak hours, which are summarized in **Table 7**. Eastbound and westbound Existing and 2050 No Build Segment LOS and running speed are summarized in **Table 8** and **Table 9**, respectively. Detailed information using Synchro outputs on turning movements and two-way stop controlled intersections are provided in **Appendix D**.

Table 7. Existing and 2050 No Build Signalized Intersection Level of Service and Travel Delay

	Existing				2050 No Build			
Intersection with IL 120	A.M. LOS	A.M. Delay (sec)	P.M. LOS	P.M. Delay (sec)	A.M. LOS	A.M. Delay (sec)	P.M. LOS	P.M. Delay (sec)
IL 60	A	7.7	C	20.7	A	10.0	C	23.5
Fish Lake Road	B	13.3	B	15.7	B	14.8	C	22.4
Wilson Road	C	31.0	E	56.0	D	36.2	D	49.9
Fairfield Road	E	63	E	67.3	E	78.9	E	77.7
Cedar Lake Road	C	26.5	C	30.7	C	29.6	D	36.6
IL 134 (Centre Drive)	E	56.8	C	29.0	E	66.7	C	26.2
Hainesville Road	C	33.9	C	31.7	C	33.7	D	49.6
Alleghany Road	B	11.1	C	28.0	B	11.6	C	32.8
Lake Street	C	21.1	C	29.1	C	24.4	D	39.1
IL 83	D	37.3	D	44.3	E	66.0	F	84.3
Atkinson Road	C	23.5	C	27.3	C	23.7	C	29.2
US 45	F	98.1	E	76.9	F	91.1	E	79.1
Mill Road	D	39.8	C	27.4	D	52.5	C	32.6

Table 8. Eastbound Existing and 2050 No Build Segment Level of Service and Running Speed

Segment		Existing				2050 No Build			
Begin	End	A.M. Speed (mph)	A.M. LOS	P.M. Speed (mph)	P.M. LOS	A.M. Speed (mph)	A.M. LOS	P.M. Speed (mph)	P.M. LOS
West of IL 60	IL 60	29.5	B	24.9	C	28.7	B	18.8	D
IL 60	Fish Lake Road	32.5	B	35.3	A	32.1	B	25.3	C
Fish Lake Road	Wilson Road	38.8	A	32.7	B	34.7	B	30.7	B
Wilson Road	Fairfield Road	20.3	D	20.5	D	18.9	D	24.7	C
Fairfield Road	Cedar Lake Road	35.6	A	32.6	B	34.4	B	31.5	B
Cedar Lake Road	IL 134 (Centre Drive)	31.9	B	37.8	A	29.6	B	36.4	A
IL 134 (Centre Drive)	Hainesville Road	19	D	23.5	C	13.2	E	20.6	D
Hainesville Road	Alleghany Road	34.4	B	29.2	B	33.7	B	30.3	B
Alleghany Road	Lake Street	28.5	B	28.4	B	28.4	B	28.5	B
Lake Street	IL 83	22.8	C	20.5	D	14.8	E	14.1	E
IL 83	Atkinson Road	26.8	C	22	C	23	C	19.5	D
Atkinson Road	US 45	28.1	B	25.8	C	19.4	D	21.1	D
US 45	Mill Road	24.4	C	30.5	B	22.9	C	31.2	B

Table 9. Westbound Existing and 2050 No Build Segment Level of Service and Running Speed

Segment		Existing				2050 No Build			
Begin	End	A.M. Speed (mph)	A.M. LOS	P.M. Speed (mph)	P.M. LOS	A.M. Speed (mph)	A.M. LOS	P.M. Speed (mph)	P.M. LOS
East of Almond Road	Mill Road	25	C	20.5	D	23.9	C	20.4	D
Mill Road	US 45	28	C	27.1	C	25.6	C	18.7	D
US 45	Atkinson Road	32	B	28.2	B	30.4	B	27.2	C
Atkinson Road	IL 83	24.1	C	19	D	22.8	C	11.3	F
IL 83	Lake Street	26.1	C	23.3	C	24.2	C	23.8	C
Lake Street	Alleghany Road	34.1	B	26.6	C	33.8	B	26.6	C
Alleghany Road	Hainesville Road	32	B	29.2	B	29.7	B	23.1	C
Hainesville Road	IL 134 (Centre Drive)	10.8	F	17.1	D	9.9	F	16	E
IL 134 (Centre Drive)	Cedar Lake Road	36.3	A	35.9	A	35.8	A	34.5	B
Cedar Lake Road	Fairfield Road	28.8	B	22.6	C	28.5	B	20.8	D
Fairfield Road	Wilson Road	40.9	A	37.4	A	36	A	31.7	B
Wilson Road	Fish Lake Road	39.4	A	36.7	A	39	A	38.1	A
Fish Lake Road	IL 60	37.8	A	34.7	B	36.2	A	33.9	B

The following five intersections and two sections currently operate at or below LOS D in the A.M. peak hour, as illustrated in **Figure 9:**

- Intersections
  - IL 120 at Fairfield Road, LOS E
  - IL 120 at Centre Drive/IL 134, LOS E
  - IL 120 at IL 83, LOS D
  - IL 120 at US 45, LOS F
  - IL 120 at Mill Road, LOS D
- Segments
  - Wilson Road to Fairfield Road, LOS D
  - Centre Drive/IL 134 to Hainesville Road, LOS D

Figure 9. Existing A.M. Level of Service

The following cross streets with two-way stop control have approaches for one or more movement that operate at or below LOS D in the A.M. peak hour:

- Wildspring Road, LOS E
- Misty Hill Lane, LOS F
- Deer Point Road, LOS F
- Ivanhoe Road, LOS D
- Ashford Lane, LOS D
- Kerry Way, LOS D
- Harris Road, LOS E
- Sears Boulevard, LOS F
- John Mogg Road, LOS F
- Battershall Road, LOS E

Traffic analysis for existing conditions indicates that the following four signalized intersections and three segments currently operate at or below LOS D in the P.M. peak hour, as illustrated in **Figure 10:**

- Intersections
  - IL 120 at Wilson Road, LOS E
  - IL 120 at Fairfield Road, LOS E
  - IL 120 at IL 83, LOS D
  - IL 120 at US 45, LOS E
- Segments
  - Hainesville Road to IL 134, LOS D
  - Atkinson Road to IL 83, LOS D
  - Mill Road to east of Almond Road, LOS D

Illinois Department of Transportation
ILLINOIS STUDY
IL 120 from Route 60 to Almond Road

EXISTING LEVEL OF SERVICE (P.M.)
IL 120 FROM IL ROUTE 60 TO ALMOND ROAD

Figure 10. Existing P.M. Level of Service

The following cross streets with two-way stop control have approaches for one or more movement that operate at or below LOS D in the P.M. peak hour:

- Wildspring Road, LOS F
- Porter Drive, LOS E
- Misty High Lane, LOS F
- Deer Point Road, LOS F
- Ivanhoe Road, LOS E
- Ashford Lane, LOS D
- Kerry Way, LOS F
- Harris Road, LOS F
- Sears Boulevard, LOS F
- John Mogg Road, LOS F
- Battershall Road, LOS F
- Almond Road, LOS F

FUTURE LEVEL OF SERVICE

Under the 2050 No Build Scenario, the change in ADT in the IL 120 PEL Study area has an average overall growth of 14.5 percent from 2023 to 2050. Additionally, other intersections throughout the IL 120 PEL Study area are expected to experience low to high growth with overall increases ranging from about 3 to 23 percent from 2023 to 2050. ADT is expected to range from 18,400 to 30,500 by 2050.

With the No Build Scenario, it is anticipated that six signalized intersections and four segments would operate at or below LOS D in the A.M. peak hour, as listed in **Table 7** and illustrated in **Figure 11**:

- Intersections
  - IL 120 at Wilson Road, LOS D
  - IL 120 at Fairfield Road, LOS E
  - IL 120 at Centre Drive/IL 134, LOS E
  - IL 120 at IL 83, LOS E
  - IL 120 at US 45, LOS F
  - IL 120 at Mill Road, LOS D
- Segments
  - Wilson Road to Fairfield Road, LOS D
  - Centre Drive/IL 134 to Hainesville Road, LOS E
  - Lake Street to IL 83, LOS E
  - Atkinson Road to US 45, LOS D

Figure 11. 2050 No Build A.M. Level of Service

The following cross streets with two-way stop control are projected to have approaches for one or more movement that operate at or below LOS D in the 2050 No Build A.M. peak hour:

- Wildspring Road, LOS F
- Porter Drive, LOS D
- Misty Hill Lane, LOS F
- Deer Point Road, LOS F
- Ivanhoe Road, LOS F
- Ashford Lane, LOS F
- Kerry Way, LOS E
- Harris Road, LOS F
- Hospital Entrance, LOS D
- Sears Boulevard, LOS F
- John Mogg Road, LOS F
- Battershall Road, LOS F
- Almond Road, LOS E

See **Appendix D** for detailed information on 2050 No Build LOS for A.M. and P.M. peak hours, turning movements and two-way stop controlled intersections.

With the No Build Scenario, it is anticipated that seven intersections and five segments would operate at or below LOS D in the P.M. peak hour, as illustrated in **Figure 12:**

- Intersections
  - IL 120 at Wilson Road, LOS D
  - IL 120 at Fairfield Road, LOS E
  - IL 120 at Cedar Lake Road, LOS D
  - IL 120 at Hainesville Road, LOS D
  - IL 120 at Lake Street, LOS D
  - IL 120 at IL 83, LOS F
  - IL 120 at US 45, LOS E
- Segments
  - Cedar Lake Road to Fairfield Road, LOS D
  - Hainesville Road to Centre Drive/IL 134, LOS E
  - Atkinson Road to IL 83, LOS F
  - US 45 to Mill Road, LOS D
  - Mill Road to east of Almond Road, LOS D

Illinois Department of Transportation
ILDOSTUDY
IL 120 from Route 60 to Almond Road

NO BUILD 2050 LEVEL OF SERVICE (P.M.)
IL 120 FROM IL ROUTE 60 TO ALMOND ROAD

Figure 12. 2050 No Build P.M. Level of Service

The following cross streets with two-way stop control have approaches for one or more movement that operate at or below LOS D in the 2050 No Build P.M. peak hour:

- Wildspring Road, LOS E
- Porter Drive, LOS F
- Misty Hill Lane, LOS F
- Deer Point Road, LOS F
- Ivanhoe Road, LOS E
- Ashford Lane, LOS F
- Kerry Way, LOS F
- Harris Road, LOS F
- Hospital Entrance, LOS D
- Sears Boulevard, LOS F
- John Mogg Road, LOS F
- Battershall Road, LOS F
- Almond Road, LOS F

IL 120 currently operates at LOS D, E, or F at multiple intersections and sections within the corridor. Without improvements to the IL 120 corridor and intersections, the anticipated increase of demand on the corridor will result in longer travel times, more congestion, and an increase in travel delays.

2.2.3 Gaps in the Pedestrian and Bicycle Network with Limited Transit Connectivity

Safe and efficient access for all modes of transportation is important to IDOT and IL 120 PEL Study area municipalities to provide safe and equitable access to jobs, school, food, community resources, and healthcare. Within a quarter-mile of the IL-120 corridor, 21.6 percent of households are low income, 40 percent of the population is Black, Indigenous, and people of color, and 8.7 percent of the population has a disability. **Table 10** provides demographics for a quarter-mile of the IL 120 corridor, municipalities along the corridor, and Lake County.

Table 10. IL 120 Corridor Demographics

	IL 120 Corridor (1/4 mile)	Volo	Round Lake	Hainesville	Grayslake	Lake County
Population	17,391	6,122	18,721	3,543	21,248	713,159
BIPOC (%)	40.0	28.8	47.2	40.3	25.8	41.1
Low Income Households (%)	21.6	9.6	19.4	22.2	9.9	20.0
Population with a disability (%)	8.7	5.6	10.0	5.2	9.9	9.7

Currently, bicycle and pedestrian accommodations along IL 120 are sparse and are primarily in Grayslake. Likewise, transit routes are only available along one section of the corridor. Modal interrelationship improvements are needed to enhance safe multi-modal transportation options.

PEDESTRIAN AND BICYCLE FACILITIES

There are some paths or bike routes planned along the corridor but gaps remain throughout the non-motorized transportation network. Existing and planned facilities are shown in **Figure 13**. Existing facilities along IL 120 include:

- Approximately 540 feet of sidewalk on the north and south sides of IL 120 from Hainesville Road to the east entrance of Walgreens and Prairie View School, respectively.
- Sidewalk on the south side of IL 120 from Belle Court to Seymour Street and from Westerfield Place to Lincoln Avenue.
- Sidewalk on the north side of IL 120 from South Lake Street to Westerfield Place.
- Shared-use path along the south side of IL 120 from Ivanhoe Road east to Ashford Lane. This path has connections to a shared-use path along Atkinson Road that extends north to a residential area and a shared-use path along Ashford Lane that extends south into a residential area.
- Shared-use path segment along the south side of IL 120 from Harris Road east to US 45 stops short of the US 45 intersection.

IDOT's Complete Streets Policy states that bicycle and pedestrian ways are considered in all state road projects and constructed when certain conditions are met. Creating "Complete Streets," which serve all anticipated users, including pedestrians, bicyclists, persons with mobility impairments, and transit riders, is an important goal to help to achieve a modern, efficient, and sustainable transportation system. Similarly, the development of a regional network of trails, which provide both transportation and recreational opportunities on the local and regional scales is of importance as well. Barriers to pedestrians, bicyclists, and pedestrians with disabilities can discourage mobility, require auto trips, or prevent trips.

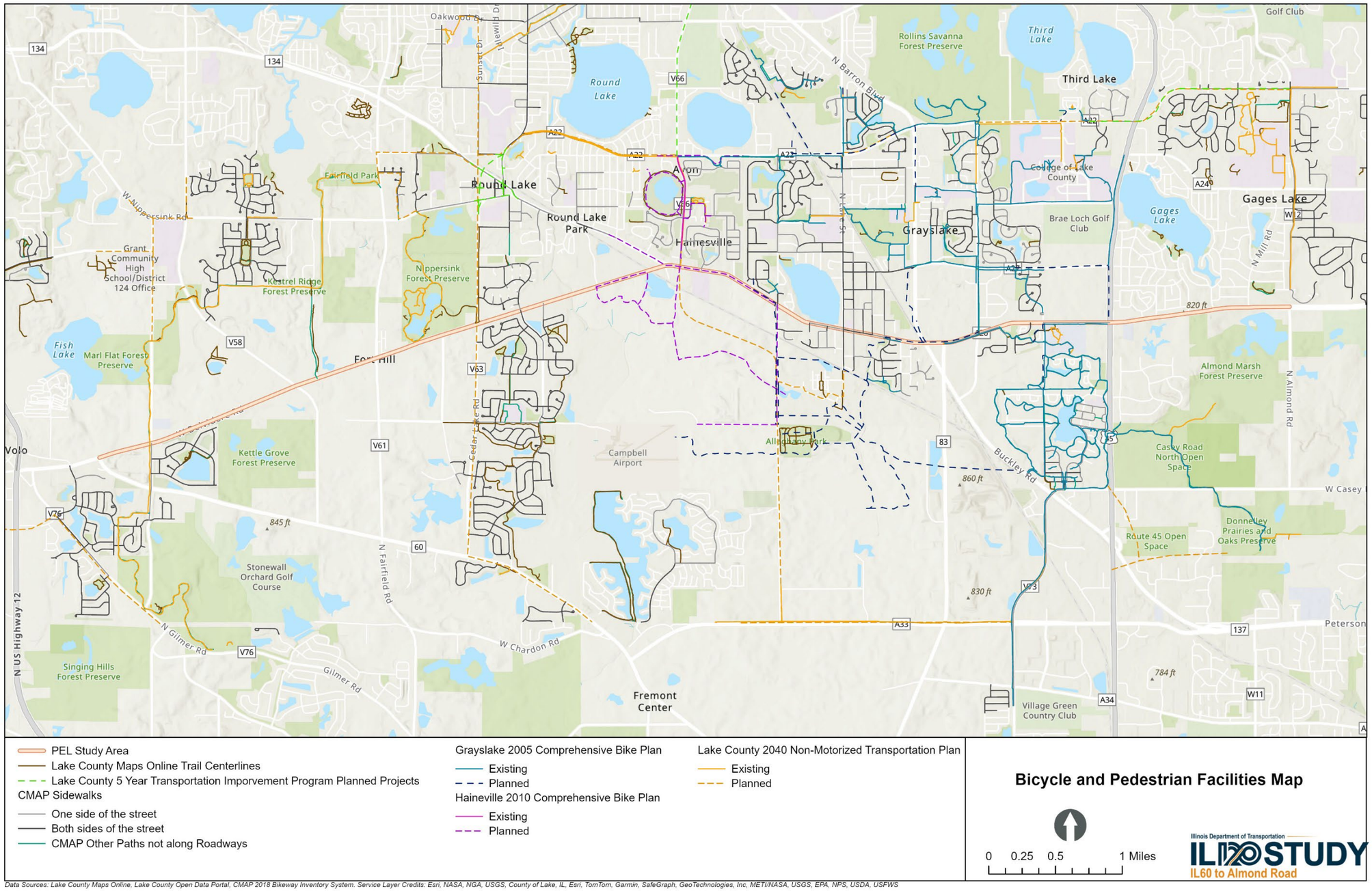
TRANSIT

Pace Bus Route 570 runs from Fox Lake Station in Fox Lake to the College of Lake County in Grayslake and offers once an hour weekday service from approximately 6 A.M. to 9 P.M. Service is limited on Saturdays and there is no Sunday or holiday service. The route runs along a short section of IL 120 from Lake Street in Grayslake to IL 134. Passengers can board or alight the bus at any intersection along the route where the driver deems it is safe to do so; however, passengers are encouraged to wait for the bus at bus stop signs, shown on **Figure 14**. The majority of these bus stop signs are located on the shoulder of IL 120, with sidewalks available only near Hainesville Road and near Lake Street.

Metra's Milwaukee District North and North Central Service lines cross the IL 120 corridor, as shown on **Figure 14**. The Grayslake Lake Street Metra Station on the Milwaukee District North Line is located approximately 1,500 feet south of IL 120 along Lake Street. Sidewalks are available along Lake Street to provide pedestrian access between the station and IL 120, where the nearest Pace bus stop is located. Current Metra schedules indicate there are 39 trains serving this station, with approximate 30 to 45 minute headways during peak hours.

The following stations are located more than one mile from IL 120 and do not have bicycle or pedestrian connections:

- Metra's Round Lake Station is located on the Milwaukee District North Line located approximately 1.4 miles north of IL 120 along IL 134. This station is served by Pace Bus Route 570 (Fixed Route) and Pace Bus Route 590 (On Demand – Round Lake Area). There are 30 weekday trains serving this station, with approximate 20 to 30 minute headways during peak hours.
- Prairie Crossing/Libertyville Station on the Milwaukee District North Line is located approximately 1.3 miles south of IL 120, with access off IL 137. There are no Pace bus connections at this station. There are 39 weekday trains serving this station, with approximate 20 to 30 minute headways during peak hours.
- Prairie Crossing/Libertyville North Central Service Station is located approximately 1.4 miles south of IL I20, with access off IL 137. There are no Pace bus connections at this station. There are 14 weekday trains serving this station, with approximate 20 to 25 minute headways during peak hours.



Data Sources: Lake County Maps Online, Lake County Open Data Portal, CMAP 2018 Bikeway Inventory System. Service Layer Credits: Esri, NASA, NGA, USGS, County of Lake, IL, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA, USFWS

Figure 13. Existing and Planned Bicycle and Pedestrian Facilities

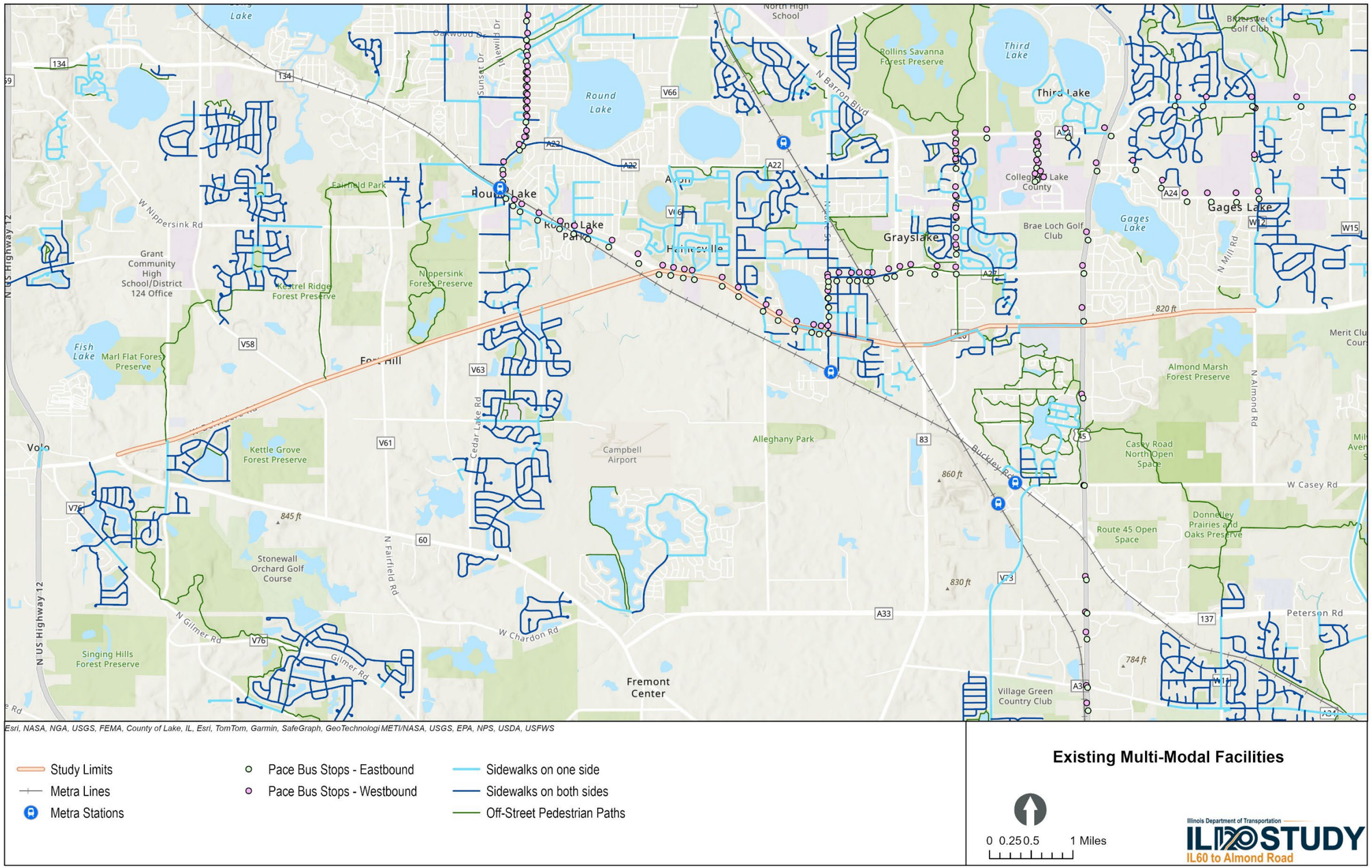


Figure 14. Existing Transit Stops and Pedestrian and Bicycle Facilities

3 Public Involvement

This IL 120 PEL Study is being developed per the IDOT Context Sensitive Solutions (CSS) principles. CSS is a process that requires early coordination with stakeholders to better understand the concerns and needs of the communities that encompass the PEL Study area. As part of ongoing stakeholder involvement efforts that will be scheduled throughout the IL 120 PEL Study process, an initial public informational meeting was conducted on Tuesday, April 23, 2024 from 3 P.M. to 6 P.M. in the Blue Ribbon Room at the Lake County Fairgrounds in Grayslake. Stakeholders were encouraged to provide input on issues within the IL 120 corridor and were invited to help define the area's context by completing a Community Context Audit Survey. All meeting materials and the Community Context Audit Survey are posted to the IL 120 PEL Study website at il120study.com. The Public Meeting #1 Report is attached as **Appendix E**.

Public comments included traffic flow and safety concerns, including the following:

- Intersections of IL 120 at IL 134, IL 120 at Hainesville Road, and IL 120 at IL 83
- Support for bicycle and pedestrian facilities to enhance connectivity, community, and safety;
- Increased traffic;
- Bottlenecks and railroad crossings; and
- Environmental considerations, including wetlands, water retention, air quality, noise, and wildlife.

Two additional public information meetings are planned for Fall 2024 and Spring 2025 with intent to conduct meaningful public involvement during the PEL Study process.

A CAG has been established to help engage stakeholders. Membership in the CAG was solicited at the first public meeting, and also includes local governments, community groups, special interest groups, and residents. A series of CAG meetings will be held strategically during the IL 120 PEL Study to help guide the development of the Purpose and Need and identification and screening of alternatives.

The first CAG meeting was held as a virtual meeting on Thursday, May 9, 2024 to introduce the project, discuss goals and objectives, and needs for the corridor. A summary is provided in **Appendix E.** CAG input highlighted the need for safety as a priority; bicycle and pedestrian facilities and connectivity; and improved traffic flow. A summary of specific needs and issues identified by the CAG include:

- Traffic volumes
- Traffic backups at railroad crossings
- Stop and go traffic
- Left turns and safety
- Increased truck traffic
- Deteriorating shoulders

- Better access to schools, libraries, and businesses
- Lack of walkways, pathways, and bicycle and pedestrian crossings at major intersections
- Pedestrian and bicycle safety
- Transit routes and accessibility
- Stormwater management
- Improved quality of life
- Wildlife crossings

CAG input is reflected in the Purpose and Need included in Section 2.0 above.

Appendices

Appendix A. Design Criteria

Memo

Date:	Tuesday, May 14, 2024
Project:	IDOT PTB 195-013 – Illinois Route 120 Safety and Mobility PEL Study – Illinois Route 60 to Almond Road
To:	Project Team
From:	Ryan Pater
Subject:	Design Criteria

The purpose of this memo is to document the design criteria that will be used in the development of the Planning and Environmental Linkages Report (PEL) for the subject project.

Project Description

HDR will develop NEPA-ready alternatives to be carried forward in accordance with Section 24-2.08 and Part 1 of Chapter 2 in Appendix D of the IDOT BDE Manual, to be coordinated with federal and state resource agencies through the NEPA/404 Merger Process.

The limits of the project are located along a state route and therefore will follow BDE requirements where applicable.

Design Criteria

The design criteria for the project has been derived from the following source:

(1) Bureau of Design and Environment Manual Revised January 2024 (BDE Manual) by IDOT
(2) Illinois Department of Transportation Drainage Manual July 2011

Requirements Hierarch:

1. BDE Manual
    a. Suburban Criteria
    b. Urban Criteria
    c. Rural Criteria

Note: Criteria for different roadway classifications shall follow the roadway classification types provided General Design Criteria sections in the tables below.

General Design Criteria		
Design Element	IL 120	(Source #) Figure / Section #
Design Classification	Other Principal Arterial	IDOT Functional Classification Map
Jurisdiction	IDOT	IDOT – IL Road Jurisdiction GIS Web Viewer
Two-Way DHV (2050)	Not yet Determined	-
ADT (2023)	8,500 – 27,150	Traffic Counts
ADT (2050)	24,400 – 44,500	CMAP
% Trucks (2050)	1-2%	Traffic Counts
Design Speed	Urban/Suburban: 30 - 45 MPH	(1) Fig. 48-6.A
	Rural: 70 MPH	(1) Fig. 47-2.J
Posted Speed	35 - 55 MPH	
Design Vehicle	WB-65	(1) Fig. 36-1.V
Truck Route	State Managed Class II	IDOT Designated Truck Routes Map

Design Criteria for
Urban/Suburban Two-Way Arterial

Design Element			Manual Section	Two-Way DHV 2900-2050 (1)	Two-Way DHV 2050-1250 (1)	Two-Way DHV < 1250 (1)
Design Controls	Highway Type		—	TWS-6	TWS-4	TWS-2
	Design Forecast Year		31-4.02	20 Years	20 Years	20 Years
	* Design Speed (**2a**)		48-2.01	30 mph – 45 mph	30 mph – 50 mph (**2b**)	30 mph – 40 mph
	Access Control		35-1	Consider Managed Access	Consider Managed Access	Consider Managed Access
	Level of Service (**3**)		31-4.04	C	C	C
	On-Street Parking (**4**)		48-2.05	Not Recommended	Not Recommended	Not Recommended
Cross Section Elements	* Surface Width	Without Parking	34-2.01	2 @ 38′ e-f	2 @ 26′ e-f	30′ f-f
		With Parking - 1 Side (**5**)		1 @38′ e-f 1 @46′ e-f	1 @ 26′ e-f 1 @ 34′ e-f	36′ f-f
		With Parking - 2 Sides (**5**)		2 @ 46′ e-f	2 @ 34′ e-f	44′ f-f
	Auxiliary Lanes	Lane Width	34-2.03	Single Left & Right: 12′, Min.: 11′ Dual Lefts: 24′, Min.: 22′		
		Curb Type and Width		B-6.12 or B-6.24 CC&G (**6**)		
	Shared Lane (Bicycle & Motor vehicles) (**7**)		Chp. 17	Min.: 14′	Min.: 14′	Min.: 14′
	Cross Slope	*Travel Lanes	34-2.01	1/4″/ft for Two Lanes Adjacent to Median (**8a**)	1/4″/ft for Two Lanes Adjacent to Median	1/4″/ft for Lanes Adjacent to Crown (**8b**)
		Auxiliary Lanes		—	—	—
	Outside Curb Type & Width		34-2.04	B-6.24 CC&G	B-6.24 CC&G	B-6.24 CC&G
	Median Width	Flush/TWLTL	34-3	12′ - 14′ (**9**)		
		Traversable TWLTL		16′		N/A
		Raised-Curb		18′, 22′, 30′		N/A
		Depressed		—	44′ - 50′	—
	Sidewalk Width		48-2.04	5′ with Buffer Strip Behind Curb	5′ with Buffer Strip Behind Curb	5′ with Buffer Strip Behind Curb
	Clear Zone		38-3	(**10**)	(**10**)	(**10**)
Roadway Slopes	Side Slopes	Cut Section (Curbed)	34-4.04	—	—	—
		Rock Cut	34-4.05	—	—	—
		Fill Section (Curbed)	34-4.02	—		
	Median Slopes	Concrete Surface/Traversable	34-3	3/16″/ft	3/16″/ft	N/A
		Flush/TWLTL Surface		1/4″/ft	1/4″/ft	N/A
		Grass Surface		5/8″/ft (Towards C&G)	5/8″/ft (Towards C&G)	N/A

TWS = Two-Way Street, e-f = edge of median to face of curb, f-f = face of curb to face of curb

* Controlling design criteria (see Section 31-8).

GEOMETRIC DESIGN CRITERIA FOR SUBURBAN/URBAN TWO-WAY ARTERIALS
(New Construction/Reconstruction)
(US Customary)

Figure 48-6.A
(1 of 4)

Design Element			Manual Section	Two-Way DHV 2900-2050	Two-Way DHV 2050-1250	Two-Way DHV < 1250
Bridges	Highway Type		—	TWS-6	TWS-4	TWS-2
	New and Reconstructed Bridges	*Structural Capacity	N/A	HS-20	HS-20	HS-20
		*Clear Roadway Width (**11**)	39-6	76′ plus Median Width	52′ plus Median Width	30′
	Existing Bridges to Remain in Place	*Structural Capacity	N/A	HS-20	HS-20	HS-20
		*Clear Roadway Width (**12**)	39-6	70′ plus Median Width	48′ plus Median Width	28′
	*Vertical Clearance (Arterial Under) (**13a**)	New and Replaced Overpassing Bridges	39-4	14′-9″ (**13b**)		
		Existing Overpassing Bridges		14′-0″ (**13c**)		
		Overhead Signs/ Pedestrian Bridges	33-5	New: 17′-3″ (**13b**)		
	*Vertical Clearance (Arterial over Railroad)		39-4.06	23′-0″		

* Controlling design criteria (see Section 31-8).

GEOMETRIC DESIGN CRITERIA FOR SUBURBAN/URBAN TWO-WAY ARTERIALS
(New Construction/Reconstruction)
(US Customary)
FIGURE 48-6.A
(2 of 4)

(1) Traffic Volumes. The design hourly volumes (DHV) are calculated using a PHF = 1.0; adjust these values using local peak-hour factors.

(2) Design Speed.

a. Consider using a minimum 40 mph (60 km/hr) design speed in relatively undeveloped areas where economics, environmental conditions, and signal spacing permit. The statutory speed limits in urbanized areas is 30 mph. Before the posted speed limit can be increased, complete an engineering study (Phase I report) and a speed study.

b. Only consider the 50 mph (80 km/hr) design speed in open-suburban areas. Do not place curb and gutter adjacent to the edges of the traveled way.

(3) Level of Service. In major urban areas, a level of service D may be considered with study and justification.

(4) Minimum Street Width. The minimum width of a two-way, two-lane street is set at 30 ft (9.2 m) f-f which allows two-way traffic to pass a stalled vehicle.

(5) Parking Lane Width. The desirable width of the parking lane is 10 ft (3.0 m) and includes the 2 ft (600 mm) gutter width. The minimum width is 8 ft (2.4 m) e-f.

(6) Gutter Width. Under restricted conditions, the gutter width adjacent to the edge of the turn lane may be narrowed or eliminated adjacent to a 12 ft (3.6 m) lane and narrowed adjacent to a 11 ft (3.3 m) lane.

(7) Shared Lane Width. Width of a shared lane for motor vehicle and bicyclist use shall be 14 ft (4.3 m) minimum to allow for vehicle passing of bicycles while staying within the lane.

(8) Cross Slope.

a. For the third lane away from the median, increase the cross slope by 1/16″ /ft (0.5%).
b. For reconstruction projects, an existing 3/16″ /ft (1.5%) cross slope may remain-in-place.

(9) TWLTL Median Width. Use a minimum 13 ft (4.0 m) wide median width if there are a significant number of trucks making left turns.

(10) Clear Zone. For curbed facilities, the minimum horizontal clearance to an obstruction is 1.5 ft (500 mm), measured from the face of curb.

GEOMETRIC DESIGN CRITERIA FOR SUBURBAN/URBAN TWO-WAY ARTERIALS
(New Construction/Reconstruction)

Footnotes for Figure 48-6.A
(3 of 4**)**

(11) New and Reconstructed Bridge Widths. Clear roadway bridge widths are measured from face to face of outside curbs or parapet walls. Urban bridge widths are defined as the sum of the approach traveled way widths, the width of the gutters, and the width of the median. A sidewalk or bikeway will result in additional bridge width. For proposed sidewalks on a bridge, add 5 ft (1.5 m) to each side of the bridge. Parking is prohibited on bridges.

(12) Existing Bridge Widths to Remain in Place. Clear roadway bridge widths are measured from face to face of outside curbs or parapet walls. At least one sidewalk must be carried across the bridge. Add a minimum 5 ft (1.5 m) for the sidewalk width.

(13) Vertical Clearance (Arterial Under).

a. The clearance must be available over the traveled way and flush or traversable median.
b. Table value includes allowance for future overlays.
c. A 14 ft 0 in (4.3 m) clearance may be allowed to remain in place with consideration for reconstruction to a clearance of 14 ft 9 in (4.5 m).

GEOMETRIC DESIGN CRITERIA FOR SUBURBAN/URBAN TWO-WAY ARTERIALS
(New Construction/Reconstruction)

Footnotes for Figure 48-6.A
(4 of 4**)**

Design Element		Manual Section	Design Speed			
			30 mph	40 mph	45 mph	50 mph
* Stopping Sight Distance (1)		31-3.01	200′	305′	360′	425′
Decision Sight Distance (2)		31-3.02	620′	825′	800′	890′
Intersection Sight Distance (3)		36-6	335′	445′	500′	555′
* Minimum Radii	e_{max} = 6% (open-roadway)	32-2.03/48-5	N/A	N/A	N/A	835′
	e_{max} = 4% (open-roadway)		N/A	N/A	N/A	930′
	e_{max} = 4% (low speed)		250′	535′	710′	N/A
* Superelevation Rate		48-5/32-3	e_{max} = 4% (4a)			e_{max} = 6% or 4% (4b)
* Horizontal Sight Distance		32-4	(5)			
* Vertical Curvature (K-values	Crest	33-4	19	44	61	84
	Sag		37	64	79	96
* Maximum Grade	Level	33-2.02	8%	7%	6%	4%
	Rolling		9%	8%	7%	5%
Minimum Grade		33-2.02	Desirable: 0.5% Minimum: 0.3% (with Curb and Gutter)			

* Controlling design criteria (see Section 31-8).

Footnotes:

(1) Stopping Sight Distance. Table values are for passenger cars on level grades.

(2) Decision Sight Distance. Table values 30 mph and 40 mph are for the avoidance maneuver on an urban street (speed/path/direction change) and for 45 mph and 50 mph for a suburban street.

(3) Intersection Sight Distance. Table values are for passenger cars. See Section 36-6 for trucks.

(4) Superelevation Rate:

a. For reconstruction projects with a design speed ≤ 45 mph, a maximum superelevation rate of 6% may remain in place.
b. The superelevation rate of 6% only may be used in open suburban areas.

(5) Horizontal Sight Distance. For a given design speed, the necessary middle ordinate will be determined by the radius of curve and the required sight distance.

ALIGNMENT CRITERIA FOR SUBURBAN/URBAN ARTERIALS
(New Construction/Reconstruction)
(US Customary)

Figure 48-6.C

Design Criteria for
Rural Two-Way Principal Arterial

Design Element				Manual Section	New Construction/Reconstruction Two-Way DHV: Under 650 (2)	Elements to Remain-In-Place (1) Two-Way DHV: Under 600 (2)
Design Controls	Design Forecast Year			31-4.02	20 Years	20 Years
	*Design Speed			31-2	70 mph (**3a**)	60 mph (**3b**)
	Access Control			35-1	Controlled by Regulation (**4**)	Controlled by Regulation
	Level of Service			31-4.04	B	B
Cross Section Elements	*Traveled Way Width			34-2.01	24′	22′
	*Shoulder Width	Total Width		34-2.02	10′	8′
		Paved			10′	8′
	Auxiliary Lanes	Lane Width		34-2.03	12′	11′
		Shoulder Width			4′ (Paved)	4′ (Paved)
	Flush/TWLTL Widths			34-3.03	14′	12′
	Cross Slope	*Travel Lane		34-2.01	3/16″/ft (**5**)	3/16″/ft (**5**)
		Shoulder		34-2.02	1/2″/ft	1/2″/ft to 3/4″ ft
	Clear Zone			38-3	(**6**)	(**6**)
Roadway Slopes	Side Slopes	Cut Section	Front Slope	34-4.03	1V:6H	1V:4H
			Ditch Bottom Width		4′ (**7**)	2′-0″ (**7**)
			Back Slope		1V:3H (**8**)	1V:3H (**8**)
		Rock Cut		34-4.05	—	—
		Fill Section		34-4.02	1V:6H to Clear Zone; 1V:3H max. to Toe of Slope (**9**)	1V:4H to Clear Zone; 1V:3H max. to Toe of Slope (**9**)
Bridges	New and Reconstructed Bridges	*Structural Capacity		N/A	HS-20	N/A
		*Clear Roadway Width (**10**)		39-6	44′	N/A
	Existing Bridges to Remain in Place	*Structural Capacity		N/A	N/A	HS-20
		*Clear Roadway Width (**11**)		39-6	N/A	38′ - 40′
	*Vertical Clearance (Arterial Under) (**12a**)	New and Replaced Overpassing Bridges		39-4	16′-6″ (**12b**)	
		Existing Overpassing Bridges			16′-0″	
		Overhead Signs/ Pedestrian Bridges		33-5	New: 17′-3″(**12b**)″	
	*Vertical Clearance (Arterial over Railroad)			39-4.06	23′-0″	

* Controlling design criteria (see Section 31-8).

GEOMETRIC DESIGN CRITERIA FOR RURAL TWO-LANE PRINCIPAL ARTERIALS
(New Construction/Reconstruction)
(US Customary)

Figure 47-2.J

(1) Design Criteria. The criteria in this column are the minimum cross-section elements allowed to remain in place provided it is cost effective and the safety record is satisfactory.

(2) Traffic Volumes. The design hourly volumes (DHV) assumes base conditions (except for 8% heavy vehicles) and a PHF = 1 for LOS shown. Adjust these values according to the actual factors.

(3) Design Speed.

a. In rolling terrain, a minimum design speed of 60 mph (100 km/h) may be considered with study and justification.
b. To determine the minimum design speed allowed to remain in place, see Section 45-2.02.

(4) Access Control. For bypass routes on new alignment, design the roadway with partial access control.

(5) Cross Slopes. Cross slopes for auxiliary lanes should be 1/16″/ft (0.5%) greater than the adjacent travel lane.

(6) Clear Zone. The clear zone will vary according to design speed, traffic volumes, side slopes, and horizontal curvature.

(7) Ditch Bottom Width. Provide a wider outside ditch bottom where detention storage of storm water is a consideration.

(8) Back Slope. Where the height of cut exceeds 10 ft (3 m), consider using a 1V:2H back slope beyond the clear zone. Also, for heights of cut greater than 30 ft (9 m), consider the use of benching.

(9) Fill Slope. For fill heights greater than 30 ft (9 m), use a 1V:2H uniform slope with a roadside barrier. Also, for heights greater than 30 ft (9 m), consider the use of benching.

(10) New and Reconstructed Bridge Widths. Clear roadway bridge widths are measured from face to face of parapets or rails. Bridge widths are normally defined as the sum of the approach traveled way width and the width of the paved shoulders. See Figure 39-6.A.

(11) Existing Bridge Widths to Remain in Place. Clear roadway bridge widths measured face to face of parapets or rails. Implies elements allowed to remain in place without a design exception when cost effective and when safety record is satisfactory. See Figure 39-6.A.

(12) Vertical Clearance (Arterial Under).

a. The clearance must be available over the traveled way and any paved shoulders.
b. Table value includes an additional allowance for future overlays.

GEOMETRIC DESIGN CRITERIA FOR RURAL TWO-LANE PRINCIPAL ARTERIALS
(New Construction/Reconstruction)

Footnotes for Figure 47-2.J

Design Element		Manual Section	Design Speed	
			60 mph	70 mph
* Stopping Sight Distance **(1)**		31-3.01	570′	730′
Passing Sight Distance		47-2.03	2135′	2480′
Decision Sight Distance **(2)**		31-3.02	990′	1105′
Intersection Sight Distance **(3)**		36-6	665′	775′
* Minimum Radii	e_{max} = 6%	32-2.03	Desirable: ≥ 3000′ Minimum: 1330′	Desirable: ≥ 3000′ Minimum: 2040′
* Superelevation Rate **(4)**		32-3	e_{max} = 6%	
* Horizontal Sight Distance **(5)**		32-4	**(5)**	
* Vertical Curvature (K-values)	Crest	33-4	151	247
	Sag		136	181
* Maximum Grade **(6)**	Level	33-2.02	New: 3%	
	Rolling		New: 4%	
Minimum Grade		33-2.03	Desirable: 0.5% Minimum: 0.0% (with Special Ditching)	

* Controlling design criteria (see Section 31-8).

(1) Stopping Sight Distance. Table values are for passenger cars on level grade.

(2) Decision Sight Distance. Table values are for the avoidance maneuver (speed/path/direction change).

(3) Intersection Sight Distance. Table values are for passenger cars for assumed conditions described in Figure 36-6.E. See Section 36-6 for trucks.

(4) Superelevation Rate. See Section 32-3 for superelevation rates based on e_{max}, design speed, and radii of horizontal curves. For horizontal curves to remain in place, an e_{max} of 8% may be considered to remain in place. Where a crossroad intersection lies within the limits of a mainline horizontal curve, see Figure 36-1.E for the maximum superelevation rates allowed on the mainline curve.

(5) Horizontal Sight Distance. For a given design speed, the necessary horizontal sight line offset will be determined by the radius of curve and the required sight distance.

(6) Maximum Grade. Grades 1% steeper may be allowed to remain in place for existing roadways.

ALIGNMENT CRITERIA FOR RURAL TWO-LANE HIGHWAYS
(US Customary)

Figure 47-2.M

MULTI-USE PATH

General Design Criteria		
Design Element	Multi-Use Path	(Source #) Figure / Section #
Design Classification	Shared Use Path	
Jurisdiction	McHenry County	
Design Speed	18 MPH Min. 30 MPH Max.	(1) 42-3.02(e)

Cross Section Criteria		
Design Element	Multi-Use Path	(Source #) Figure / Section #
Width	8 feet (< 100 peak hour users) 10 feet (100 to 300 peak hour users)	(1) Fig. 42-3A & Fig. 42-3B
Cross Slope	1.5% Preferred 2% Max	(1) 42-3.02(f)
Graded Turf or Gravel Shoulder	2 feet (both sides)	(1) Fig. 42-3A
Shoulder Cross Slope	4%	(1) Fig. 42-3B
Obstruction Free Zone Width	3 feet	(1) Fig. 42-3A & Fig. 42-3B
Minimum Separation from Roadway (curbed sections)	5 feet (from face of curb)	(1) Fig. 42-3C
Minimum Separation from Roadway (uncurbed sections, 45 MPH or less posted speed)	5 feet (from edge of paved shoulder; if no paved shoulder is present, from edge of travelled way)	(1) 42-3.02(d)
Minimum Separation from Roadway	5 feet (from edge of travelled way)	(1) 42-3.02(d)
Back Slope (cut section)	1V:3H	(1) Fig. 42-3B
Fill Slope	1V:3H	(1) Fig. 42-3B
Ditch Bottom Depth	1 foot	(1) Fig. 42-3B
Offset to Sign	3 feet Min. 6 feet Max.	(1) Fig. 42-3B

Horizontal Criteria		
Design Element	Multi-Use Path	(Source #) Figure / Section #
Minimum Radius	81 feet (15° Lean Angle) – for min design speed 60 feet (20° Lean Angle) – for min design speed	(1) Fig. 42-3D (1) Fig. 42-3E
Minimum Length of Curve	21 feet – for min design speed	(1) Fig. 42-3D & Fig. 42-3E
Superelevation (Max)	2%	(1) 42-3.02(f)

Vertical Criteria		
Design Element	Multi-Use Path	(Source #) Figure / Section #
Maximum Grade	See table	(2) Figure 17-2.FF
Stopping Sight Distance	See equation 42-3.1	(1) 42-3.02(g)
Minimum vertical curve length	See equation 42-3.2	(1) 42-3.02(g)

Appendix B. Crash Report

P-91-028-20

PLANNING & ENVIRONMENTAL LINKAGE STUDY FOR ILLINOIS ROUTE 120

ILLINOIS ROUTE 60 TO ALMOND ROAD

CRASH ANALYSIS REPORT (2017-2021)

December 2023

Prepared for: Illinois Department of Transportation

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Introduction

The Crash Analysis Report for Illinois Route 120/Belvidere Road (IL 120), as part of the Planning & Environmental Linkage (PEL) study, analyzes crash data from the Illinois Department of Transportation's (IDOT) online resources for the IL 120 corridor between Illinois Route 60 (IL 60) to the west and Almond Road to the east in Lake County, Illinois. This crash report has reviewed data for approximately nine (9) miles of IL 120. This report includes analysis of the existing crash and injury data, evaluates primary crash causes for the major crash types, and provides recommendations that may reduce the major crash types.

Methodology

Primera Engineers utilized crash data from IDOT's online Open Data Portal (Illinois Department of Transportation (arcgis.com)) for a five (5) year period of 2017, 2018, 2019, 2020 and 2021. When crash reports were needed for further evaluation, they were obtained from the IDOT Safety Portal (https://webapps.do.illinois.gov/SafetyPortal). Using Environmental Systems Research Institute's (ESRI) Geographic Information System (GIS) software, Primera analyzed crash data and developed exhibits detailing crash density, total injuries, injury types, major crash types, primary crash causes, and environmental causes such as road surface conditions and darkness/daylight conditions. These locations were evaluated by IL 120 intersections and the roadway segments found in between intersections. The major crash types were reviewed against the Highway Safety Manual (HSM) for causes and potential crash countermeasures. Intersections and segments containing relatively significant crash volumes were compared to the 2020 safety tier map that was previously provided by IDOT as a reference. The safety tier map can be found in the Appendix H of this report.

The intersections to be analyzed are based on existing crash data and the following intersection summary table found as Table 1. Information utilized to develop the intersection summary table can be found in the appendices.

Table 1: Intersection Crash Summary

IL Route 120 intersection with	Crash Totals & Major Crash Types			Primary Crash Causes			Injury Total & Injury Types				Environmental Causes	
	Number of Crashes	Front to Rear Crash Type	Turning Crash Type	Failing to Reduce Speed Cause	Following Too Closely Cause	Failing to Yield Right of Way Cause	Total Injury Producing Crashes	A-Injury Producing Crashes	B-Injury Producing Crashes	C-Injury Producing Crashes	Slippery Pavement Condition	Nighttime Condition
IL Route 60	MEDIUM	LOW	LOW	LOW	MEDIUM	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Fish Lake Road	LOW	LOW	LOW	LOW	MEDIUM	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Wilson Road	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Fairfield Road	MEDIUM	MEDIUM	LOW	MEDIUM	LOW	LOW	LOW	LOW	LOW	MEDIUM	LOW	MEDIUM
County Road V63 / Cedar Lake Road	MEDIUM	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	MEDIUM
IL Route 134 / Main Street	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	LOW	HIGH	MEDIUM	HIGH	HIGH
Hainesville Road	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	LOW	HIGH	MEDIUM	HIGH	HIGH
Alleghany Road	MEDIUM	MEDIUM	LOW	MEDIUM	LOW	LOW	LOW	LOW	LOW	MEDIUM	MEDIUM	MEDIUM
Lake Street	MEDIUM	MEDIUM	LOW	MEDIUM	MEDIUM	LOW	LOW	LOW	MEDIUM	MEDIUM	MEDIUM	HIGH
IL Route 83 / Buckley Road	HIGH	HIGH	HIGH	HIGH	MEDIUM	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH
Ivanhoe Road	HIGH	HIGH	HIGH	HIGH	MEDIUM	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH
Atkinson Road	MEDIUM	LOW	LOW	MEDIUM	MEDIUM	LOW	LOW	HIGH	LOW	LOW	MEDIUM	HIGH
US Route 45	HIGH	MEDIUM	HIGH	MEDIUM	LOW	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH
Almond Road	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW

Intersections that will be analyzed in the Detailed Crash Analysis part of this report are as follows:

- IL 120 at Illinois Route 134 / Main Street (IL 134)
- IL 120 at Hainesville Rd
- IL 120 at Illinois Route 83 / Barron Boulevard (IL 83)
- IL 120 at Ivanhoe Road
- IL 120 at US 45

IL 120 roadway segments to be analyzed are based on existing crash data and the following roadway segment summary table found as Table 2. Information utilized to develop the roadway segment summary table can be found in the appendices.

Table 2: Roadway Segment Crash Summary

IL Route 120 roadway segment between	Crash Totals & Major Crash Types			Primary Crash Causes			Injury Total & Injury Types				Environmental Causes	
	Number of Crashes	Front to Rear Crash Type	Turning Crash Type	Failing to Reduce Speed Cause	Following Too Closely Cause	Failing to Yield Right of Way Cause	Total Injury Producing Crashes	A-Injury Producing Crashes	B-Injury Producing Crashes	C-Injury Producing Crashes	Slippery Pavement Condition	Nighttime Condition
IL Route 60 & Fish Lake Road	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Fish Lake Road & Wilson Road	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Wilson Road & Fairfield Road	MEDIUM	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Fairfield Road & County Road V63 / Cedar Lake Road	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
County Road V63 / Cedar Lake Road & IL Route 134 / Main Street	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
IL Route 134 / Main Street & Hainesville Road	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	MEDIUM	LOW	HIGH	MEDIUM	HIGH	MEDIUM
Hainesville Road & Alleghany Road	MEDIUM	MEDIUM	LOW	LOW	MEDIUM	LOW	LOW	LOW	MEDIUM	LOW	MEDIUM	LOW
Alleghany Road & Lake Street	MEDIUM	MEDIUM	LOW	LOW	MEDIUM	LOW	HIGH	LOW	MEDIUM	MEDIUM	MEDIUM	LOW
Lake Street & IL Route 83 / Buckley Road	MEDIUM	MEDIUM	LOW	MEDIUM	MEDIUM	LOW	MEDIUM	LOW	LOW	MEDIUM	MEDIUM	MEDIUM
IL Route 83 / Buckley Road & Ivanhoe Road	MEDIUM	MEDIUM	MEDIUM	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Ivanhoe Road & Atkinson Road	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Atkinson Road & US Route 45	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
US Route 45 & Almond Road	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW

Roadway segments that will be analyzed in the Detailed Crash Analysis part of this report are as follows:

- IL 120 between IL 134 and Hainesville Road
- IL 120 between Alleghany Road and Lake Street (this segment contains a fatal crash)

Crash Data

Five years (2017-2021) of crash data were obtained from IDOT online resources for the intersections and roadway segments along IL 120 between IL 60 and Almond Road. This data was summarized by crash density, total injuries,

injury types, major crash types, primary crash causes, road surface conditions, and darkness/daylight conditions for each of the intersections and roadway segments studied. The Highway Safety Manual (HSM, AASHTO, 2010) Section 6.2.2 was referenced to identify the potential causes. The five years of crash data were compared to the 2020 Safety Tier Location Map (See Appendix H) to evaluate the intersections and segments that are discussed within this report.

Detailed Crash Analysis

The following analyses provide details regarding the intersections and roadway segments noted for analysis previously. The aforementioned roadway intersections or segments were given a detailed analysis found below. Crash Modification Factors (CMF's) found in Chapters 13 and 14 of the HSM were initially evaluated to develop recommendations. Additionally, primary crash causes were evaluated against the major crash types to provide additional recommendations that may reduce crash occurrences along the IL 120 corridor. The figures in Appendix B provide general details utilized for the following discussion.

IL 120 Intersection at IL 134 (Main Street)

The intersection of Main Street and IL 120 is signalized. Table 3 summarizes the crash types, primary causes, and injuries that were reported in the five-year analysis period from 2017 to 2021. A total of 44 crashes were reported between 2017 and 2021. The most frequently reported crash types were 28 (63.6%) front to rear, 9 (20.5%) turning, and 3 (6.8%) fixed object. Other types of crashes reported include 2 (4.5%) other object, 1 (2.2%) sideswipe same direction, and 1 (2.2%) angle crash. The primary causes were failing to reduce speed to avoid crash for 18 (40.9%) crashes, following too closely for 8 (18.2%) crashes, and failing to yield to right of way for 3 (6.8%) crashes. There were 0 fatal, 1 A-injury, 8 B-injury, and 6 C-injury crashes.

There were 32 (72.7%) crashes occurring on dry pavement conditions and 12 (27.2%) crashes occurring on ice/snow/slush/wet pavement conditions. There were 36 (81.8%) crashes occurring during the daylight condition and 8 (18.2%) occurring during darkness or darkness, lighted road conditions.

Table 3: IL 120 Intersection at IL 134 (Main Street) Crash Summary (2017-2021)

Type of Crash	**2017**	**2018**	**2019**	**2020**	**2021**	**Total Crashes**	**Percentage**
Angle	0	0	0	0	1	1	2.2%
Animal	0	0	0	0	0	0	0%
Fixed Object	1	1	0	0	1	3	6.8%
Front to Front	0	0	0	0	0	0	0%
Front to Rear	7	6	8	3	4	28	63.6%
Head On	0	0	0	0	0	0	0%
Other Non-Collision	0	0	0	0	0	0	0%
Other Object	0	0	1	1	0	2	4.5%
Overturned	0	0	0	0	0	0	0%
Parked Motor Vehicle	0	0	0	0	0	0	0%
Pedalcyclist	0	0	0	0	0	0	0%
Pedestrian	0	0	0	0	0	0	0%
Rear to Front	0	0	0	0	0	0	0%
Rear to Rear	0	0	0	0	0	0	0%
Rear to Side	0	0	0	0	0	0	0%
Sideswipe Opposite Direction	0	0	0	0	0	0	0%
Sideswipe Same Direction	0	0	0	0	1	1	2.2%
Turning	0	1	4	1	3	9	20.5%
Total	*8*	*8*	*13*	*5*	*10*	*44*	*100%*
Primary Crash Cause							
(N/A)	0	0	0	0	0	0	0%
Animal	0	0	0	0	0	0	0%
Cell Phone	0	0	0	0	0	0	0%
Disregarding Other Traffic Signs	0	0	0	0	0	0	0%
Disregarding Road Markings	0	0	0	0	0	0	0%
Disregarding Stop Sign	0	0	0	0	0	0	0%
Disregarding Traffic Signals	0	0	0	1	0	1	2.3%
Distraction – From Inside Vehicle	0	0	0	0	2	2	4.5%
Distraction – From Outside Vehicle	0	0	0	0	0	0	0%
Driving on Wrong Side/Wrong Way	0	0	0	0	0	0	0%
Driving Skills/Knowledge/Experience	1	0	1	1	1	4	9.1%
Equipment-Vehicle Condition	0	0	0	0	0	0	0%
Evasive Action Due to Animal/Object/Non-Motorist	0	0	0	0	0	0	0%
Exceeding Authorized Speed Limit	0	0	0	0	0	0	0%
Exceeding Safe Speed for Conditions	0	0	0	0	0	0	0%
Failing to Reduce Speed to Avoid Crash	4	6	3	2	3	18	40.9%
Failing to Yield Right of Way	0	1	2	0	0	3	6.8%
Following Too Closely	2	1	5	0	0	8	18.2%
Had Been Drinking	0	0	0	0	0	0	0%

Improper Backing	0	0	0	0	0	0	0%
Improper Lane Usage	0	0	0	0	1	1	2.3%
Improper Overtaking/Passing	0	0	0	0	0	0	0%
Improper Turning/No Signal	0	0	1	0	0	1	2.3%
Operating Vehicle in Reckless Manner	0	0	0	0	1	1	2.3%
Physical Condition of Driver	0	0	0	0	1	1	2.3%
Road Engineering/Surface/Marking Defects	0	0	0	0	0	0	0%
Turning Right on Red	0	0	0	0	0	0	0%
Unable to Determine	0	0	1	1	0	2	4.5%
Under Influence of Alcohol/Drugs	0	0	0	0	0	0	0%
Vision Obscured	0	0	0	0	0	0	0%
Weather	0	0	0	0	1	1	2.3%
Total	*8*	*8*	*13*	*5*	*10*	*44*	*100%*
Injury Severity							
Fatal Crashes	0	0	0	0	0	0	0%
Type A Injury Crashes	0	0	0	0	1	1	2.3%
Type B Injury Crashes	1	4	1	1	1	8	18.2%
Type C Injury Crashes	2	1	2	0	1	6	13.6%
Total Injury Crashes	*3*	*5*	*3*	*1*	*3*	*15*	*34.1%*
Total Number of Injuries	*6*	*7*	*3*	*3*	*6*	*25*	-

Front to rear crashes may be attributed to inadequate signal timing, inappropriate approach speeds, unexpected lane changes on approach and unexpected stops on approach. Turning crashes may be attributed to inadequate signal timings and sight distance. This location observes above average crashes on slippery pavement conditions. Average crash values for these items can be found in Appendix B. The environmental factors are displayed in Appendix G. This roadway intersection is identified as Medium from the 2020 Safety Tier Locations in Appendix H.

Providing additional through lane and turn lane capacity may reduce the number of front to rear crashes. Consideration should be given to adding capacity to the through and turn lanes at the intersection. Retiming existing traffic signals or changing intersection control types may reduce front to rear and turning crashes. Consideration should also be given to evaluating and reoptimizing existing traffic signal timings. A different intersection traffic control type such as conversion of signalized intersection into a modern roundabout may be warranted for this location. A traffic study and roundabout warrant analysis should be completed prior to any intersection control changes. Installing a raised median along IL 120 may reduce injury related crashes. Consideration should be given to constructing a raised median along IL 120. Installing changeable speed warning signs may reduce the number of front to rear crash types where the primary cause is failing to reduce speed. Consideration should be given to installing changeable speed warning signs ahead of posted speed limit changes. To mitigate crashes occurring on wet or icy pavement conditions, improving winter plowing operation response times, and applying a preventative chemical anti-icing agent during the entire winter season may reduce the number of crashes occurring on these road surface conditions.

IL 120 Intersection at Hainesville Road

The intersection of Hainesville Road and IL 120 is signalized. Table 4 summarizes the crash types, primary causes, and injuries that were reported in the five-year analysis period from 2017 to 2021. A total of 103 crashes were reported between 2017 and 2021. The most frequently reported crash types were 50 (48.5%) front to rear, 39 (37.9%) turning, and 9 (8.7%) angle. Other types of crashes reported include 3 (2.9%) sideswipe same direction, 1 (1.0%) fixed object, and 1 (1.0%) head on. The primary causes were failing to yield right of way for 33 (32.0%) crashes, failing to reduce speed to avoid crash for 32 (31.1%) crashes, and following too closely for 11 (10.7%) crashes. There were 0 fatal, 2 A-injury, 9 B-injury, and 10 C-injury crashes.

There were 86 (83.4%) crashes occurring on dry pavement conditions and 17 (16.5%) crashes occurring on ice/snow/slush/wet pavement conditions. There were 80 (77.7%) crashes occurring during the daylight condition and 23 (22.3%) occurring during darkness or darkness, lighted road conditions.

Table 4: IL 120 Intersection at Hainesville Road Summary (2017-2021)

Type of Crash	**2017**	**2018**	**2019**	**2020**	**2021**	**Total Crashes**	**Percentage**
Angle	2	4	2	0	1	9	8.7%
Animal	0	0	0	0	0	0	0%
Fixed Object	1	0	0	0	0	1	1.0%
Front to Front	0	0	0	0	0	0	0%
Front to Rear	11	10	12	7	10	50	48.5%
Head On	1	0	0	0	0	1	1.0%
Other Non-Collision	0	0	0	0	0	0	0%
Other Object	0	0	0	0	0	0	0%
Overturned	0	0	0	0	0	0	0%
Parked Motor Vehicle	0	0	0	0	0	0	0%
Pedalcyclist	0	0	0	0	0	0	0%
Pedestrian	0	0	0	0	0	0	0%
Rear to Front	0	0	0	0	0	0	0%
Rear to Rear	0	0	0	0	0	0	0%
Rear to Side	0	0	0	0	0	0	0%
Sideswipe Opposite Direction	0	0	0	0	0	0	0%
Sideswipe Same Direction	0	1	1	0	1	3	2.9%
Turning	8	8	8	4	11	39	37.9%
Total	*23*	*23*	*23*	*11*	*23*	*103*	*100%*
Primary Crash Cause							
(N/A)	0	0	0	0	0	0	0%
Animal	0	0	0	0	0	0	0%
Cell Phone	0	0	0	0	0	0	0%
Disregarding Other Traffic Signs	0	0	0	0	0	0	0%
Disregarding Road Markings	0	0	0	0	0	0	0%
Disregarding Stop Sign	0	0	0	0	0	0	0%
Disregarding Traffic Signals	1	2	0	0	2	5	4.9%
Distraction – From Inside Vehicle	1	1	2	1	0	5	4.9%
Distraction – From Outside Vehicle	0	0	0	0	0	0	0%
Driving on Wrong Side/Wrong Way	0	0	0	0	0	0	0%
Driving Skills/Knowledge/Experience	0	3	0	1	1	5	4.9%
Equipment-Vehicle Condition	0	0	0	0	0	0	0%
Evasive Action Due to Animal/Object/Non-Motorist	0	0	0	0	0	0	0%
Exceeding Authorized Speed Limit	0	0	0	0	0	0	0%
Exceeding Safe Speed for Conditions	0	1	0	0	0	1	1.0%
Failing to Reduce Speed to Avoid Crash	6	4	9	5	8	32	31.1%
Failing to Yield Right of Way	8	8	9	3	5	33	32.0%
Following Too Closely	4	1	2	0	4	11	10.7%
Had Been Drinking	0	0	0	0	0	0	0%

Improper Backing	0	1	0	0	0	1	1.0%
Improper Lane Usage	0	0	0	0	0	0	0%
Improper Overtaking/Passing	1	0	1	0	1	3	2.9%
Improper Turning/No Signal	0	0	0	1	2	3	2.9%
Operating Vehicle in Reckless Manner	0	0	0	0	0	0	0%
Physical Condition of Driver	0	0	0	0	0	0	0%
Road Engineering/Surface/Marking Defects	0	0	0	0	0	0	0%
Turning Right on Red	0	0	0	0	0	0	0%
Unable to Determine	1	0	0	0	0	1	1.0%
Under Influence of Alcohol/Drugs	0	1	0	0	0	1	1.0%
Vision Obscured	0	1	0	0	0	1	1.0%
Weather	1	0	0	0	0	1	1.0%
Total	*23*	*23*	*23*	*11*	*23*	*103*	*100%*
Injury Severity							
Fatal Crashes	0	0	0	0	0	0	0%
Type A Injury Crashes	1	0	0	0	1	2	1.9%
Type B Injury Crashes	2	1	2	3	1	9	8.7%
Type C Injury Crashes	1	2	4	2	1	10	9.7%
Total Injury Crashes	*4*	*3*	*6*	*5*	*3*	*21*	*20.3%*
Total Number of Injuries	*4*	*4*	*8*	*6*	*4*	*26*	-

Front to rear crashes may be attributed to inadequate signal timing, unexpected lane changes on approach, and unexpected stops on approach. Turning crashes may be attributed to acceptance of inadequate gaps in oncoming traffic, inadequate signal timings, and sight distance. The environmental factors are displayed in Appendix G. This roadway intersection is identified as Critical from the 2020 Safety Tier Locations in Appendix H.

Providing additional through lane and turn lane capacity may reduce the number of front to rear crashes. Consideration should be given to adding capacity to the through and turn lanes at the intersection. Retiming existing traffic signals or changing intersection control types may reduce front to rear and turning crashes. Consideration should also be given to evaluating and reoptimizing existing traffic signal timings. A different intersection traffic control type such as conversion of signalized intersection into a modern roundabout could also be warranted for this location. A traffic study and a traffic signal or roundabout warrant should be completed prior to any intersection control changes. Installing a raised median along IL 120 may reduce injury related crashes. Consideration should be given to constructing a raised median along IL 120. Installing changeable speed warning signs may reduce the number of front to rear crash types where the primary cause is failing to reduce speed. Consideration should be given to installing changeable speed warning signs ahead of posted speed limit changes.

IL 120 Intersection at IL 83 (Barron Boulevard)

The intersection of IL 83 (Barron Boulevard) and IL 120 is signalized. Table 5 summarizes the crash types, primary causes, and injuries that were reported in the five-year analysis period from 2017 to 2021. A total of 107 crashes were reported between 2017 and 2021. The most frequently reported crash types were 46 (43.0%) front to rear, 30 (28.0%) turning, and 15 (14.0%) sideswipe same direction. Other types of crashes reported include 5 (4.7%) angle, 5 (4.7%) fixed object, 2 (1.9%) front to front, 2 (1.9%) other object, 1 (0.9%) other non-collision, and 1 (0.9%) rear to front. The primary causes were failing to reduce speed to avoid crash at 35 (32.7%) crashes, failing to yield right of way at 25 (23.3%) crashes, and following too closely at 12 (11.2%) crashes. There were 0 fatal, 4 A-injury, 15 B-injury, and 19 C-injury crashes.

There were 73 (68.2%) crashes occurring on dry pavement conditions and 34 (31.8%) crashes occurring on ice/snow/slush/wet pavement conditions. There were 66 (61.7%) crashes occurring during the daylight condition and 41 (38.3%) occurring during darkness or darkness, lighted road conditions.

Table 5: IL 120 Intersection at IL 83 (Barron Boulevard) Crash Summary (2017-2021)

Type of Crash	**2017**	**2018**	**2019**	**2020**	**2021**	**Total Crashes**	**Percentage**
Angle	1	2	0	0	2	5	4.7%
Animal	0	0	0	0	0	0	0%
Fixed Object	1	2	0	0	2	5	4.7%
Front to Front	0	0	0	0	2	2	1.9%%
Front to Rear	10	6	8	7	15	46	43.0%
Head On	0	0	0	0	0	0	0%
Other Non-Collision	1	0	0	0	0	1	0.9%
Other Object	0	1	0	1	0	2	1.9%
Overturned	0	0	0	0	0	0	0%
Parked Motor Vehicle	0	0	0	0	0	0	0%
Pedalcyclist	0	0	0	0	0	0	0%
Pedestrian	0	0	0	0	0	0	0%
Rear to Front	0	0	0	1	0	1	0.9%
Rear to Rear	0	0	0	0	0	0	0%
Rear to Side	0	0	0	0	0	0	0%
Sideswipe Opposite Direction	0	0	0	0	0	0	0%
Sideswipe Same Direction	5	4	1	4	1	15	14.0%
Turning	5	10	7	1	7	30	28.0%
Total	*23*	*25*	*16*	*14*	*29*	*107*	*100%*
Primary Crash Cause							
(N/A)	0	0	0	0	0	0	0%
Animal	0	0	0	0	0	0	0%
Cell Phone	0	0	0	0	0	0	0%
Disregarding Other Traffic Signs	0	0	0	0	0	0	0%
Disregarding Road Markings	0	0	0	0	0	0	0%
Disregarding Stop Sign	0	0	0	0	0	0	0%

Disregarding Traffic Signals	2	1	0	0	1	4	3.7%
Distraction – From Inside Vehicle	0	1	0	0	0	1	0.9%
Distraction – From Outside Vehicle	0	0	0	0	0	0	0%
Driving on Wrong Side/Wrong Way	0	0	0	0	0	0	0%
Driving Skills/Knowledge/Experience	0	1	0	0	2	3	2.8%
Equipment-Vehicle Condition	1	1	0	0	0	2	1.9%
Evasive Action Due to Animal/Object/Non-Motorist	1	0	0	0	0	1	0.9%
Exceeding Authorized Speed Limit	0	0	0	0	0	0	0%
Exceeding Safe Speed for Conditions	0	1	0	0	0	1	0.9%
Failing to Reduce Speed to Avoid Crash	7	3	5	7	13	35	32.7%
Failing to Yield Right of Way	6	8	6	1	4	25	23.3%
Following Too Closely	3	1	3	1	4	12	11.2%
Had Been Drinking	0	0	0	0	0	0	0%
Improper Backing	0	0	0	1	0	1	0.9%
Improper Lane Usage	1	2	0	2	1	6	5.6%
Improper Overtaking/Passing	1	2	0	0	0	3	2.8%
Improper Turning/No Signal	1	1	1	1	1	5	4.7%
Operating Vehicle in Reckless Manner	0	0	0	0	0	0	0%
Physical Condition of Driver	0	0	0	0	0	0	0%
Road Engineering/Surface/Marking Defects	0	0	0	0	0	0	0%
Turning Right on Red	0	0	0	0	0	0	0%
Unable to Determine	0	1	0	0	1	2	1.9%
Under Influence of Alcohol/Drugs	0	1	1	1	0	3	2.8%
Vision Obscured	0	0	0	0	0	0	0%
Weather	0	1	0	0	2	3	2.8%
Total	*23*	*25*	*16*	*14*	*29*	*107*	*100%*
Injury Severity							
Fatal Crashes	0	0	0	0	0	0	0%
Type A Injury Crashes	1	2	0	0	1	4	3.7%
Type B Injury Crashes	3	3	2	3	4	15	14.0%
Type C Injury Crashes	6	4	3	1	5	19	17.8%
Total Injury Crashes	*10*	*9*	*5*	*4*	*10*	*38*	*35.5%*
Total Number of Injuries	*17*	*15*	*7*	*11*	*13*	*63*	-

Front to rear crashes may be attributed to inadequate signal timing, unexpected lane changes on approach, and unexpected stops on approach. Turning crashes may be attributed to acceptance of inadequate gaps in oncoming traffic, inadequate signal timings, and sight distance. This location observes above average crashes on slippery pavement and during nighttime traveling conditions. Average crash values for these items can be found in Appendix B. The environmental factors are displayed in Appendix G. This roadway intersection is identified as Critical from the 2020 Safety Tier Locations in Appendix H.

Providing additional through lane and turn lane capacity may reduce the number of front to rear crashes. Consideration should be given to adding capacity to the through and turn lanes at the intersection. Retiming existing traffic signals or changing intersection control types may reduce front to rear and turning crashes. Consideration should also be given to evaluating and reoptimizing existing traffic signal timings. A different intersection traffic control type such as conversion of signalized intersection into a modern roundabout could also be warranted for this location. A traffic study and a traffic signal or roundabout warrant should be completed prior to any intersection control changes. Installing a raised median along IL 120 may reduce injury related crashes. Consideration should be given to constructing a raised median along IL 120. Installing changeable speed warning signs may reduce the number of front to rear crash types where the primary cause is failing to reduce speed. Consideration should be given to installing changeable speed warning signs at this location. Providing adequate highway lighting along the IL 120 roadway segments and intersections will improve visibility at night and may reduce the number of crashes occurring in the nighttime hours. Consideration should be given to providing highway lighting along the IL 120 corridor. Improving winter plowing operation response times and applying a preventative chemical anti-icing during entire winter season may reduce the number of crashes occurring on slippery pavement conditions. Consideration should be given to reduce winter operation response times. Consideration should also be given to applying anti-icing agents for the entire winter season along IL 120.

IL 120 Intersection at Ivanhoe Road

The intersection of Ivanhoe Road and IL 120 is minor leg stop-controlled on Ivanhoe Road with IL 120 allowed to move in a free flow condition. Table 6 summarizes the crash types, primary causes, and injuries that were reported in the five-year analysis period from 2017 to 2021. At Ivanhoe Road and IL 120, a total of 24 crashes were reported between 2017 and 2021. The most frequently reported crash types were 12 (50%) turning, 8 (33.3%) front to rear, and 2 (8.3%) fixed object. Other crash types reported include 1 (4.2%) angle and 1 (4.2%) head-on. The primary causes were failing to reduce speed to avoid crash for 8 (33.3%) crashes, failing to yield right of way for 6 (25%) crashes, and improper turning/no signal for 5 (20.8%) crashes. There were 0 fatal, 0 A-injury, 5 B-injury, and 2 C-injury crashes.

There were 21 (87.5%) crashes occurring on dry pavement conditions and 3 (12.5%) crashes occurring on ice/snow/slush/wet pavement conditions. There were 21 (87.5%) crashes occurring during the daylight condition and 3 (12.5%) occurring during darkness or darkness, lighted road conditions.

Table 6: IL 120 Intersection at Ivanhoe Road Summary (2017-2021)

Type of Crash	**2017**	**2018**	**2019**	**2020**	**2021**	**Total Crashes**	**Percentage**
Angle	0	0	1	0	0	1	4.2%
Animal	0	0	0	0	0	0	0%
Fixed Object	1	1	0	0	0	2	8.3%
Front to Front	0	0	0	0	0	0	0%
Front to Rear	0	2	4	2	0	8	33.3%
Head On	0	1	0	0	0	1	4.2%
Other Non-Collision	0	0	0	0	0	0	0%
Other Object	0	0	0	0	0	0	0%
Overturned	0	0	0	0	0	0	0%
Parked Motor Vehicle	0	0	0	0	0	0	0%
Pedalcyclist	0	0	0	0	0	0	0%
Pedestrian	0	0	0	0	0	0	0%
Rear to Front	0	0	0	0	0	0	0%
Rear to Rear	0	0	0	0	0	0	0%
Rear to Side	0	0	0	0	0	0	0%
Sideswipe Opposite Direction	0	0	0	0	0	0	0%
Sideswipe Same Direction	0	0	0	0	0	0	0%
Turning	3	3	4	1	1	12	50%
Total	*4*	*7*	*9*	*3*	*1*	*24*	*100%*
Primary Crash Cause							
(N/A)	0	0	0	0	0	0	0%
Animal	0	0	0	0	0	0	0%
Cell Phone	0	0	0	0	0	0	0%
Disregarding Other Traffic Signs	0	0	0	0	0	0	0%
Disregarding Road Markings	0	0	0	0	0	0	0%
Disregarding Stop Sign	0	0	0	0	0	0	0%
Disregarding Traffic Signals	0	0	0	0	0	0	0%
Distraction – From Inside Vehicle	0	0	0	0	0	0	0%
Distraction – From Outside Vehicle	0	0	0	0	0	0	0%
Driving on Wrong Side/Wrong Way	0	0	0	0	0	0	0%
Driving Skills/Knowledge/Experience	1	1	0	0	0	2	8.3%
Equipment-Vehicle Condition	0	0	0	0	0	0	0%
Evasive Action Due to Animal/Object/Non-Motorist	0	0	0	0	0	0	0%
Exceeding Authorized Speed Limit	0	0	0	0	0	0	0%
Exceeding Safe Speed for Conditions	0	0	0	0	0	0	0%
Failing to Reduce Speed to Avoid Crash	0	2	4	2	0	8	33.3%
Failing to Yield Right of Way	1	1	2	1	1	6	25%
Following Too Closely	0	0	1	0	0	1	4.2%
Had Been Drinking	0	0	0	0	0	0	0%

Improper Backing	0	0	0	0	0	0	0%
Improper Lane Usage	0	0	0	0	0	0	0%
Improper Overtaking/Passing	0	0	0	0	0	0	0%
Improper Turning/No Signal	2	2	1	0	0	5	20.8%
Operating Vehicle in Reckless Manner	0	0	0	0	0	0	0%
Physical Condition of Driver	0	0	1	0	0	1	4.2%
Road Engineering/Surface/Marking Defects	0	0	0	0	0	0	0%
Turning Right on Red	0	0	0	0	0	0	0%
Unable to Determine	0	0	0	0	0	0	0%
Under Influence of Alcohol/Drugs	0	1	0	0	0	1	4.2%
Vision Obscured	0	0	0	0	0	0	0%
Weather	0	0	0	0	0	0	0%
Total	*4*	*7*	*9*	*3*	*1*	*24*	*100%*
Injury Severity							
Fatal Crashes	0	0	0	0	0	0	0%
Type A Injury Crashes	0	0	0	0	0	0	0%
Type B Injury Crashes	1	2	1	1	0	5	20.8%
Type C Injury Crashes	0	1	1	0	0	2	8.3%
Total Injury Crashes	*1*	*3*	*2*	*1*	*0*	*7*	*29.2%*
Total Number of Injuries	*1*	*6*	*4*	*1*	*0*	*12*	-

Front to rear crashes may be attributed to large number of turning vehicles, unexpected lane changes on approach, unexpected stops on approach, restricted sight distance, and inadequate gaps in traffic. Turning crashes may be attributed to acceptance of inadequate gaps in oncoming traffic and restricted sight distance. The environmental factors are displayed in Appendix G. This roadway intersection is not identified on the 2020 Safety Tier Locations in Appendix H.

Providing additional through lane and turn lane capacity may reduce the number of front to rear and turning crash types. Consideration should be given to adding capacity to the through and turn lanes at the intersection. A different intersection traffic control type such as conversion to a signalized intersection or a modern roundabout may be warranted for this location. Consideration should be given for either a signalized intersection or modern roundabout. A traffic study and traffic signal or roundabout warrants should be completed prior to any intersection control changes. Installing a raised median along IL 120 may reduce injury related crashes. Consideration should be given to constructing a raised median along IL 120. Installing changeable speed warning signs may reduce the number of front to rear crash types where the primary cause is failing to reduce speed. Consideration should be given to installing changeable speed warning signs along IL 120.

IL 120 Intersection at US 45

The intersection of US 45 and IL 120 is signalized. Table 7 summarizes the crash types, primary causes, and injuries that were reported in the five-year analysis period from 2017 to 2021. At US 45 and IL 120, a total of 130 crashes were reported between 2017 and 2021. The most frequently reported crash types were 47 (36.2%) front to rear, 44 (33.8%) turning, and 20 (15.4%) sideswipe same direction. Other crash types reported include 7 (5.4%) angle, 4 (3.1%) fixed object, 3 (2.3%) other object, 2 (1.5%) animal, 1 (0.7%) front to front, 1 (0.7%) parked motor vehicle, and 1 (0.7%) rear to side. The primary causes were failing to reduce speed to avoid crash at 41 (31.5%) crashes, failing to yield right of way at 25 (19.2%) crashes, and following too closely at 9 (6.9%) crashes. There were 0 fatal, 6 A-injury, 13 B-injury, and 23 C-injury crashes.

There were 99 (76.1%) crashes occurring on dry pavement conditions and 30 (23.1%) crashes occurring on ice/snow/slush/wet pavement conditions. There are 92 (70.8%) crashes occurring during the daylight condition and 37 (28.5%) occurring during darkness or darkness, lighted road conditions.

Table 7: IL 120 Intersection at US 45 Crash Summary (2017-2021)

Type of Crash	2017	2018	2019	2020	2021	Total Crashes	Percentage
Angle	3	2	1	0	1	7	5.4%
Animal	0	1	0	0	1	2	1.5%
Fixed Object	1	0	0	1	2	4	3.1%
Front to Front	0	0	0	0	1	1	0.7%
Front to Rear	13	10	9	5	10	47	36.2%
Head On	0	0	0	0	0	0	0%
Other Non-Collision	0	0	0	0	0	0	0%
Other Object	0	2	0	0	1	3	2.3%
Overturned	0	0	0	0	0	0	0%
Parked Motor Vehicle	1	0	0	0	0	1	0.7%
Pedalcyclist	0	0	0	0	0	0	0%
Pedestrian	0	0	0	0	0	0	0%
Rear to Front	0	0	0	0	0	0	0%
Rear to Rear	0	0	0	0	0	0	0%
Rear to Side	0	0	0	1	0	1	0.7%
Sideswipe Opposite Direction	0	0	0	0	0	0	0%
Sideswipe Same Direction	2	7	6	2	3	20	15.4%
Turning	4	10	10	6	14	44	33.8%
Total	*24*	*32*	*26*	*15*	*33*	*130*	*100%*
Primary Crash Cause							
(N/A)	0	0	0	0	0	0	0%
Animal	0	1	0	0	1	2	1.5%
Cell Phone	0	0	0	0	0	0	0%
Disregarding Other Traffic Signs	0	0	0	0	0	0	0%
Disregarding Road Markings	0	1	0	0	0	1	0.7%
Disregarding Stop Sign	0	0	0	0	0	0	0%
Disregarding Traffic Signals	2	1	2	0	0	5	3.8%
Distraction – From Inside Vehicle	0	1	0	1	0	2	1.5%
Distraction – From Outside Vehicle	0	0	0	0	0	0	0%
Driving on Wrong Side/Wrong Way	0	0	0	0	0	0	0%
Driving Skills/Knowledge/Experience	1	0	1	3	1	6	4.6%
Equipment-Vehicle Condition	0	1	0	1	1	3	2.3%
Evasive Action Due to Animal/Object/Non-Motorist	0	0	0	0	0	0	0%
Exceeding Authorized Speed Limit	0	0	0	0	0	0	0%
Exceeding Safe Speed for Conditions	0	1	0	0	0	1	0.7%
Failing to Reduce Speed to Avoid Crash	10	11	7	3	10	41	31.5%
Failing to Yield Right of Way	3	9	5	1	7	25	19.2%
Following Too Closely	3	0	1	4	1	9	6.9%
Had Been Drinking	0	0	0	0	0	0	0%

Improper Backing	0	0	0	0	0	0	0%
Improper Lane Usage	1	1	2	0	1	5	3.8%
Improper Overtaking/Passing	0	1	2	1	0	4	3.1%
Improper Turning/No Signal	2	2	1	0	2	7	5.4%
Operating Vehicle in Reckless Manner	0	0	1	0	0	1	0.7%
Physical Condition of Driver	1	0	0	0	0	1	0.7%
Road Engineering/Surface/Marking Defects	0	0	0	0	0	0	0%
Turning Right on Red	0	0	0	0	1	1	0.7%
Unable to Determine	0	1	3	1	3	8	6.2%
Under Influence of Alcohol/Drugs	1	1	0	0	2	4	3.1%
Vision Obscured	0	0	0	0	0	0	0%
Weather	0	0	1	0	3	4	3.1%
Total	*24*	*32*	*26*	*15*	*33*	*130*	*100%*
Injury Severity							
Fatal Crashes	0	0	0	0	0	0	0%
Type A Injury Crashes	1	3	1	1	0	6	4.6%
Type B Injury Crashes	2	2	1	1	7	13	10%
Type C Injury Crashes	6	3	6	2	6	23	17.7%
Total Injury Crashes	*9*	*8*	*8*	*4*	*13*	*42*	*32.3%*
Total Number of Injuries	*10*	*13*	*11*	*6*	*17*	*57*	-

Front to rear crashes may be attributed to excessive speeds, inadequate signal timings, poor visibility of traffic signals, large number of turning vehicles, unexpected lane changes or stops on approach, slippery pavement, restricted sight distance, and acceptance of inadequate gaps in oncoming traffic. Turning crashes may be attributed to inadequate signal timings, acceptance of inadequate gaps in oncoming traffic, and restricted sight distance. This location observes above average crashes during nighttime traveling conditions. Average crash values for these items can be found in Appendix B. The environmental factors are displayed in Appendix G. This roadway intersection is identified as High from the 2020 Safety Tier Locations in Appendix H.

Providing additional through lane and turn lane capacity may reduce the number of front to rear and turning crash types. Consideration should be given to adding capacity to the through and turn lanes at the intersection. Retiming existing traffic signals or changing intersection control types may reduce front to rear and turning crashes. Consideration should also be given to evaluating and reoptimizing existing traffic signal timings. A different intersection traffic control type such as conversion of signalized intersection into a modern roundabout could also be warranted for this location. A traffic study and a roundabout warrant should be completed prior to any intersection control changes. Installing a raised median along IL 120 may reduce injury related crashes. Consideration should be given to constructing a raised median along IL 120. Installing changeable speed warning signs may reduce the number of front to rear crash types where the primary cause is failing to reduce speed. Consideration should be given to installing changeable speed warning signs at this location. Providing adequate highway lighting along the IL 120 roadway segments and intersections will improve visibility at night and may reduce the number of crashes occurring in the nighttime hours. Consideration should be given to providing highway lighting along the IL 120 corridor.

IL 120 Roadway Segment between IL Route 134 (Main Street) and Hainesville Road

The roadway segment is located on IL 120 between IL Route 134 and Hainesville Road. Table 8 summarizes the crash types, primary causes, and injuries that were reported in the five-year analysis period from 2017 to 2021. Along this segment, a total of 14 crashes were reported between 2017 and 2021. The most frequently reported crash types were 6 (42.9%) turning, 5 (35.7%) front to rear, and 2 (14.3%) fixed object. Other crash types reported was 1 (7.1%) other object crash. The primary causes were failing to reduce speed to avoid crash at 5 (35.7%) crashes, failing to yield to right of way at 2 (14.3%) crashes, and following too closely at 2 (14.3%) crashes. There were 0 fatal, 0 A-injuries, 2 B-injury, and 1 C-injury crashes.

There were 9 (64.3%) crashes occurring on dry pavement conditions and 4 (28.6%) crashes occurring on ice/snow/slush/wet pavement conditions. There are 11 (78.6%) crashes occurring during the daylight condition and 2 (14.3%) crashes occurring during darkness or darkness, lighted road conditions.

Table 8: IL 120 Roadway Segment between IL 134 (Main Street) and Hainesville Road Crash Summary (2017-2021)

Type of Crash	**2017**	**2018**	**2019**	**2020**	**2021**	**Total Crashes**	**Percentage**
Angle	0	0	0	0	0	0	0%
Animal	0	0	0	0	0	0	0%
Fixed Object	1	0	0	0	1	2	14.3%
Front to Front	0	0	0	0	0	0	0%
Front to Rear	1	0	3	1	0	5	35.7%
Head On	0	0	0	0	0	0	0%
Other Non-Collision	0	0	0	0	0	0	0%
Other Object	0	0	0	1	0	1	7.1%
Overturned	0	0	0	0	0	0	0%
Parked Motor Vehicle	0	0	0	0	0	0	0%
Pedalcyclist	0	0	0	0	0	0	0%
Pedestrian	0	0	0	0	0	0	0%
Rear to Front	0	0	0	0	0	0	0%
Rear to Rear	0	0	0	0	0	0	0%
Rear to Side	0	0	0	0	0	0	0%
Sideswipe Opposite Direction	0	0	0	0	0	0	0%
Sideswipe Same Direction	0	0	0	0	0	0	0%
Turning	0	1	2	0	3	6	42.9%
Total	*2*	*1*	*5*	*2*	*4*	*14*	*100%*
Primary Crash Cause							
(N/A)	0	0	0	0	0	0	0%
Animal	0	0	0	0	0	0	0%
Cell Phone	0	0	0	0	0	0	0%
Disregarding Other Traffic Signs	0	0	0	0	0	0	0%
Disregarding Road Markings	0	0	0	0	0	0	0%
Disregarding Stop Sign	0	0	0	0	0	0	0%
Disregarding Traffic Signals	0	0	0	0	0	0	0%
Distraction – From Inside Vehicle	0	0	0	0	0	0	0%
Distraction – From Outside Vehicle	0	0	0	0	0	0	0%
Driving on Wrong Side/Wrong Way	0	0	0	0	0	0	0%
Driving Skills/Knowledge/Experience	0	0	0	0	0	0	0%
Equipment-Vehicle Condition	1	0	0	0	0	1	7.1%
Evasive Action Due to Animal/Object/Non-Motorist	0	0	0	0	0	0	0%
Exceeding Authorized Speed Limit	0	0	0	0	0	0	0%
Exceeding Safe Speed for Conditions	0	0	0	0	0	0	0%
Failing to Reduce Speed to Avoid Crash	0	0	2	1	2	5	35.7%
Failing to Yield Right of Way	0	1	1	0	0	2	14.3%
Following Too Closely	1	0	1	0	0	2	14.3%
Had Been Drinking	0	0	0	0	0	0	0%

Improper Backing	0	0	0	0	0	0	0%
Improper Lane Usage	0	0	0	0	1	1	7.1%
Improper Overtaking/Passing	0	0	0	0	0	0	0%
Improper Turning/No Signal	0	0	1	0	0	1	7.1%
Operating Vehicle in Reckless Manner	0	0	0	0	0	0	0%
Physical Condition of Driver	0	0	0	0	0	0	0%
Road Engineering/Surface/Marking Defects	0	0	0	0	0	0	0%
Turning Right on Red	0	0	0	0	0	0	0%
Unable to Determine	0	0	0	1	0	1	7.1%
Under Influence of Alcohol/Drugs	0	0	0	0	0	0	0%
Vision Obscured	0	0	0	0	0	0	0%
Weather	0	0	0	0	1	1	7.1%
Total	*2*	*1*	*5*	*2*	*4*	*14*	*100%*
Injury Severity							
Fatal Crashes	0	0	0	0	0	0	0%
Type A Injury Crashes	0	0	0	0	0	0	0%
Type B Injury Crashes	0	1	0	0	1	2	14.3%
Type C Injury Crashes	0	0	1	0	0	1	7.1%
Total Injury Crashes	*0*	*1*	*1*	*0*	*1*	*3*	*21.4%*
Total Number of Injuries	*0*	*1*	*1*	*0*	*1*	*3*	-

Front to rear and turning type crashes may be attributed to significant volume of through or turning traffic, excessive speeds, slippery pavement, unexpected lane changes or stops on approach, insufficient turn lane taper and storage lane lengths, or acceptance of inadequate gaps in oncoming traffic. This segment observes above average crashes on slippery pavement conditions. Average crash values for these items can be found in Appendix B. The environmental factors are displayed in Appendix G. This roadway segment is identified as High on the 2020 Safety Tier Locations in Appendix H.

This is a 600-foot-long segment located between two intersections analyzed in previous sections of this report due to substantial crash volumes. Providing additional through lane and turn lane capacity may reduce the number of front to rear and turning crash types along this segment. Consideration should be given to adding capacity to the through and turn lanes along this segment of IL 120. Installing a raised median along IL 120 may reduce injury related crashes. Consideration should be given to constructing a raised median along IL 120. Installing changeable speed warning signs may reduce the number of front to rear crash types where the primary cause is failing to reduce speed. Consideration should be given to installing changeable speed warning signs along Il 120. Improving winter plowing operation response times and applying a preventative chemical anti-icing during entire winter season may reduce the number of crashes occurring on slippery pavement conditions. Consideration should be given to reduce winter operation response times. Consideration should also be given to applying anti-icing agents for the entire winter season along IL 120.

IL 120 Roadway Segment between Alleghany Road and Lake Street

The roadway segment is located on IL 120 between Alleghany Road and Lake Street. Table 9 summarizes the crash types, primary causes, and injuries that were reported in the five-year analysis period from 2017 to 2021. Along this segment, a total of 53 crashes were reported between 2017 and 2021. The most frequently reported crash types were 35 (66.0%) front to rear, 9 (17.0%) turning, and 2 (3.8%) fixed object. Other crash types reported include 1 (1.9%) angle, 1 (1.9%) front to front, 1 (1.9%) head on, 1 (1.9%) other non-collision, 1 (1.9%) other object, 1 (1.9%) parked motor vehicle, and 1 (1.9%) sideswipe opposite direction. The primary causes were failing to reduce speed to avoid crash at 16 (30.2%) crashes, following too closely at 10 (18.9%) crashes, and driving skills/knowledge/experience at 9 (17.0%). There were 1 fatal, 1 A-injury, 5 B-injury, and 8 C-injury crashes.

There were 44 (83.0%) crashes occurring on dry pavement conditions and 9 (17.0%) crashes occurring on ice/snow/slush/wet pavement conditions. There are 42 (79.2%) crashes occurring during the daylight condition and 11 (20.8%) crashes occurring during darkness or darkness, lighted road conditions.

The fatality related crash is detailed as follows:

- Crash Type: Head On - Weather: Clear - Lighting: Daylight, No Road Defects - Road Surface Condition: Dry - Cause(s): Improper Lane Usage, Physical Condition of Driver

Based on information found on the fatality-related crash, on January 29th, 2018, at 10:56am, 2 fatalities were reported with no other injuries.

Table 9: IL 120 Roadway Segment between Alleghany Road and Lake Street Crash Summary (2017-2021)

Type of Crash	**2017**	**2018**	**2019**	**2020**	**2021**	**Total Crashes**	**Percentage**
Angle	0	0	0	1	0	1	1.9%
Animal	0	0	0	0	0	0	0%
Fixed Object	0	0	1	0	1	2	3.8%
Front to Front	0	0	0	0	1	1	1.9%
Front to Rear	7	6	10	6	6	35	66.0%
Head On	0	1	0	0	0	1	1.9%
Other Non-Collision	0	0	0	0	1	1	1.9%
Other Object	0	0	1	0	0	1	1.9%
Overturned	0	0	0	0	0	0	0%
Parked Motor Vehicle	0	0	0	0	1	1	1.9%
Pedalcyclist	0	0	0	0	0	0	0%
Pedestrian	0	0	0	0	0	0	0%
Rear to Front	0	0	0	0	0	0	0%
Rear to Rear	0	0	0	0	0	0	0%
Rear to Side	0	0	0	0	0	0	0%
Sideswipe Opposite Direction	0	1	0	0	0	1	1.9%
Sideswipe Same Direction	0	0	0	0	0	0	0%
Turning	1	3	2	1	2	9	17.0%
Total	*8*	*11*	*14*	*8*	*12*	*53*	*100%*
Primary Crash Cause							
(N/A)	0	0	0	0	0	0	0%
Animal	0	0	0	0	1	1	1.9%
Cell Phone	0	0	0	0	0	0	0%
Disregarding Other Traffic Signs	0	0	0	0	0	0	0%
Disregarding Road Markings	0	1	0	0	0	1	1.9%
Disregarding Stop Sign	0	0	0	0	0	0	0%
Disregarding Traffic Signals	0	0	0	0	0	0	0%
Distraction – From Inside Vehicle	0	0	1	0	1	2	3.8%
Distraction – From Outside Vehicle	0	0	0	0	1	1	1.9%
Driving on Wrong Side/Wrong Way	0	0	0	0	0	0	0%
Driving Skills/Knowledge/Experience	2	2	2	1	2	9	17.0%
Equipment-Vehicle Condition	0	0	0	0	1	1	1.9%
Evasive Action Due to Animal/Object/Non-Motorist	0	0	0	0	0	0	0%
Exceeding Authorized Speed Limit	0	0	0	0	0	0	0%
Exceeding Safe Speed for Conditions	0	1	0	0	0	1	1.9%
Failing to Reduce Speed to Avoid Crash	1	1	7	6	1	16	30.2%
Failing to Yield Right of Way	1	0	0	1	0	2	3.8%
Following Too Closely	3	3	2	0	2	10	18.9%
Had Been Drinking	0	0	0	0	0	0	0%

Improper Backing	0	0	0	0	0	0	0%
Improper Lane Usage	0	2	1	0	0	3	5.7%
Improper Overtaking/Passing	0	1	0	0	0	1	1.9%
Improper Turning/No Signal	0	0	0	0	1	1	1.9%
Operating Vehicle in Reckless Manner	0	0	0	0	1	1	1.9%
Physical Condition of Driver	0	0	1	0	0	1	1.9%
Road Engineering/Surface/Marking Defects	0	0	0	0	0	0	0%
Turning Right on Red	1	0	0	0	0	1	1.9%
Unable to Determine	0	0	0	0	0	0	0%
Under Influence of Alcohol/Drugs	0	0	0	0	0	0	0%
Vision Obscured	0	0	0	0	0	0	0%
Weather	0	0	0	0	1	1	1.9%
Total	*8*	*11*	*14*	*8*	*12*	*53*	*100%*
Injury Severity							
Fatal Crashes	0	1	0	0	0	1	1.9%
Type A Injury Crashes	0	0	0	0	1	1	1.9%
Type B Injury Crashes	0	2	2	1	0	5	9.4%
Type C Injury Crashes	2	2	3	1	0	8	15.1%
Total Injury Crashes	*2*	*5*	*5*	*2*	*1*	*15*	*28.3%*
Total Number of Injuries	*3*	*6*	*6*	*3*	*2*	*18*	-

Front to rear and turning type crashes may be attributed to significant volume of through or turning traffic, excessive speeds, unexpected lane changes or stops on approach, insufficient turn lane taper and storage lane lengths, or acceptance of inadequate gaps in oncoming traffic. The environmental factors are displayed in Appendix G. This roadway segment contains one subsegment, IL 120 between Bluff Avenue and Bell Court, that was identified as High from the Safety Tier Locations in Appendix H.

Providing additional through lane and turn lane capacity may reduce the number of front to rear crash types. Consideration should be given to adding capacity to the through and turn lanes along this segment of Il 120. Installing a raised median along IL 120 may reduce injury related crashes. Consideration should be given to constructing a raised median along IL 120. Installing changeable speed warning signs may reduce the number of front to rear crash types where the primary cause is failing to reduce speed. Consideration should be given to installing changeable speed warning signs along Il 120.

Conclusion

In total, there were 1,263 crashes reported between years 2017 and 2021, on the IL Route 120 corridor between IL Route 60 and Almond Road. Table 10 summarizes the overall crash types, primary causes, and injuries that were reported in the five-year analysis period from 2017 to 2021. The statistics detailing the crash type, crash injury, road surface condition, lighting condition, number of vehicles and crash counts are illustrated in Appendix B.

Table 10: Summary of All Crashes along IL 120 Corridor (2017-2021)

Type of Crash	**2017**	**2018**	**2019**	**2020**	**2021**	**Total Crashes**	**Percentage**
Angle	9	13	13	6	10	51	4.0%
Animal	4	8	10	5	4	31	2.5%
Fixed Object	20	9	16	7	14	66	5.2%
Front to Front	0	0	2	2	5	9	0.7%
Front to Rear	171	147	150	116	141	725	57.4%
Head On	6	2	0	0	0	8	0.6%
Other Non-Collision	1	2	0	1	1	5	0.4%
Other Object	0	3	3	2	6	14	1.1%
Overturned	0	0	0	2	1	3	0.2%
Parked Motor Vehicle	3	1	1	2	2	9	0.7%
Pedalcyclist	1	0	0	0	0	1	0.1%
Pedestrian	0	1	1	0	0	2	0.2%
Rear to Front	0	0	1	1	0	2	0.2%
Rear to Rear	0	0	0	0	1	1	0.1%
Rear to Side	0	0	0	1	0	1	0.1%
Sideswipe Opposite Direction	1	3	1	1	1	7	0.6%
Sideswipe Same Direction	10	15	17	14	9	65	5.1%
Turning	49	57	63	34	60	263	20.8%
Total	*275*	*261*	*278*	*194*	*255*	*1263*	*100%*
Primary Crash Cause							
(N/A)	1	2	20	4	7	34	2.7%
Animal	4	9	8	5	5	31	2.5%
Cell Phone	2	2	0	0	2	6	0.5%
Disregarding Other Traffic Signs	0	0	1	0	0	1	0.1%
Disregarding Road Markings	0	2	0	0	0	2	0.2%
Disregarding Stop Sign	1	1	0	1	0	3	0.2%
Disregarding Traffic Signals	5	6	4	4	5	24	1.9%
Distraction – From Inside Vehicle	6	11	10	11	7	45	3.6%
Distraction – From Outside Vehicle	0	3	2	1	5	11	0.9%
Driving on Wrong Side/Wrong Way	1	0	1	1	1	4	0.3%
Driving Skills/Knowledge/Experience	18	11	7	12	14	62	4.9%
Equipment-Vehicle Condition	5	3	2	2	4	16	1.3%

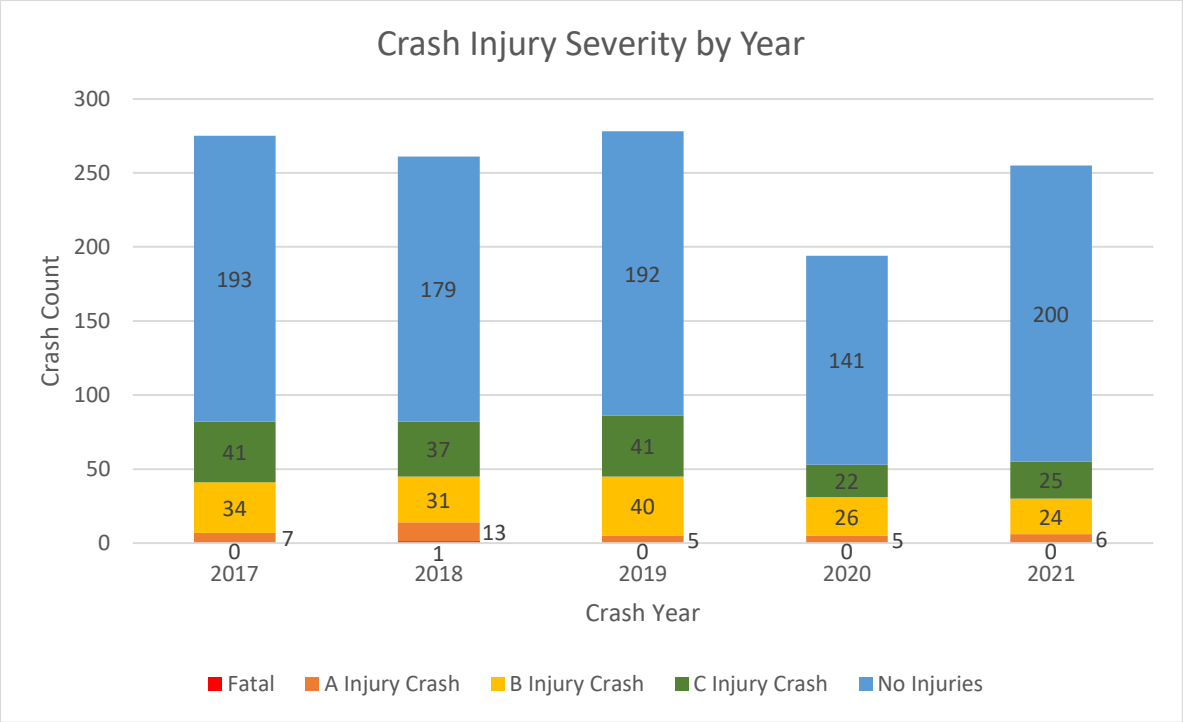
Evasive Action Due to Animal/Object/Non-Motorist	1	0	1	0	0	2	0.2%
Exceeding Authorized Speed Limit	1	1	0	0	0	2	0.2%
Exceeding Safe Speed for Conditions	4	6	0	0	0	10	0.8%
Failing to Reduce Speed to Avoid Crash	111	95	95	81	93	475	37.6%
Failing to Yield Right of Way	38	43	40	20	28	169	13.4%
Following Too Closely	35	29	35	25	35	159	12.6%
Had Been Drinking	0	0	0	0	1	1	0.1%
Improper Backing	1	2	0	1	1	5	0.4%
Improper Lane Usage	6	8	8	5	7	34	2.7%
Improper Overtaking/Passing	2	4	6	2	1	15	1.2%
Improper Turning/No Signal	10	8	9	5	7	39	3.1%
Operating Vehicle in Reckless Manner	0	1	3	0	6	10	0.8%
Physical Condition of Driver	4	1	7	3	3	18	1.4%
Road Engineering/Surface/Marking Defects	0	0	0	0	1	1	0.1%
Turning Right on Red	1	0	0	0	1	2	0.1%
Unable to Determine	4	2	7	5	5	23	1.8%
Under Influence of Alcohol/Drugs	5	4	4	3	7	23	1.8%
Vision Obscured	0	2	2	0	1	5	0.4%
Weather	9	5	6	3	8	31	2.5%
Total	*275*	*261*	*278*	*194*	*255*	*1263*	*100%*
Injury Severity							
Fatal Crashes	0	1	0	0	0	1	0.1%
Type A Injury Crashes	7	13	5	5	6	36	2.9%
Type B Injury Crashes	34	31	40	26	24	155	12.3%
Type C Injury Crashes	41	37	41	22	25	166	13.1%
Total Injury Crashes	*82*	*82*	*86*	*53*	*55*	*358*	*100%*
Total Number of Injuries	*121*	*121*	*137*	*86*	*82*	*547*	-

In general, the primary types of crashes that occurred at each intersection and segment studied were front to rear (725 crashes / 57.4%) and turning (263 crashes / 20.8%). The primary causes of the crashes were failure to reduce speed to avoid crash (475 / 37.6%), failing to yield right of way (169 / 13.4%), and following too closely (159 / 12.6%). One fatal crash occurred during the study period. Out of the 358 injury crashes, 36 crashes (10.1%) were of Type A. The primary causes of these crash types could be a result of insufficient or absent channelized turn lane lengths or lane taper lengths, insufficient roadway capacity, inadequate intersection traffic controls and pavement markings, excessive speeds, or insufficient signal timing.

Major Crash Types and Associated Injuries

Front to rear crashes account for the largest number of crashes (57.4%) and turning crashes account for the second largest number of crashes (20.8%) for the IL 120 corridor. Fixed object crashes account for 5.2% of total crashes, sideswipe same direction crashes account for 5.1% of total crashes, angle crashes account for 4.0% of total crashes, and animal crashes account for 2.5% of total crashes. These six crash types account for 95% of the total crashes along IL 120. The total number of injury-related crashes was 82 in 2017, 82 in 2018, 86 in 2019, 53 in 2020, and 55 in 2021.

Figure 1: Crash Severity by Year



In 2017, there were 0 (0%) fatal, 7 (2.5%) A-injury, 34 (9.1%) B-injury, and 41 (14.9%) C-injury crashes. In 2018, there were 1 (0.4%) fatal, 13 (5.0%) A-injury, 31 (11.9%) B-injuries, and 37 (14.2%) C-injury crashes. In 2019, there were 0 (0%) fatal, 5 (1.8%) A-injury, 40 (14.4%) B-injury, and 41 (14.7%) C-injury crashes. In 2020, there were 0 (0%) fatal, 5 (2.6%) A-injury, 26 (13.4%) B-injury, and 22 (11.3%) C-injury crashes. In 2021, there were 0 (0%) fatal, 6 (2.4%) A-injury, 24 (9.4%) B-injury, and 25 (9.8%) C-injury crashes.

Between 2017 and 2021, A-, B-, and C-injury type crashes produced the following ranges:

- A-injury: 5 (2019) to 13 (2018)
- B-injury: 24 (2021) to 40 (2017)
- C-injury: 22 (2020) to 41 (2017)

In Figure 1 above, the number of crashes is reduced in the year 2020, coinciding with the COVID-19 pandemic and correlating with the occurrence of the work-from-home movement and economic lockdowns. The reduced volume of vehicles on the road correlated to a reduction in crash numbers. However, with the reduced traffic

volumes in 2020, the number of injury related crashes falls within the ranges for years outside the pandemic year of 2020.

K-Injury and A-Injury Crash Summary

In Illinois, the Federal Highway Administration (FHWA) describes a K-Injury crash, also known as a fatal crash, as a traffic crash involving a motor vehicle in which at least one person dies within 30 days of the crash. There was one fatal crash recorded within the five-year study period along IL 120 corridor from IL 60 to Almond Road.

The K-Injury crash is detailed as follows:

- Crash Type: Head On - Weather: Clear - Lighting: Daylight, No Road Defects - Road Surface Condition: Dry - Cause(s): Improper Lane Usage, Physical Condition of Driver
- Crash Location: Roadway segment between Alleghany Road and Lake Street, approximately 200 feet west of Belle Court.

Information provided for the K-Injury crash that occurred on January 29th, 2018, at 10:56am indicates that two fatalities were produced by this crash with no other injuries reported.

The FHWA describes an A-Injury crash in Illinois as a crash that results in any injury, other than a fatal injury, which prevents the injured person from walking, driving, or normally continuing the activities he/she was capable of performing before the injury occurred. Table 11 summarizes the crash types and primary causes by year for all A-Injury crashes within the corridor. A total of 36 A-Injury crashes were reported between 2017 and 2021. The most frequently reported crash types were 11 (30.6%) turning, 7 (19.4%) front to rear, and 7 (19.4%) angle. The primary causes were failing to yield to right of way for 10 (27.8%) crashes, failing to reduce speed to avoid crash for 8 (22.2%) crashes, and disregarding traffic signals for 6 (16.7%) crashes.

There were 22 (61.1%) crashes occurring on dry pavement conditions and 14 (38.9%) crashes occurring on ice/snow/slush/wet pavement conditions. There were 22 (61.1%) crashes occurring during the daylight condition and 14 (38.9%) occurring during darkness or darkness, lighted road conditions.

Table 11: Summary of A-Injury Crashes along IL 120 Corridor (2017-2021)

Type of Crash	**2017**	**2018**	**2019**	**2020**	**2021**	**Total Crashes**	**Percentage**
Angle	1	1	3	1	1	7	19.4%
Animal	0	0	0	0	0	0	0%
Fixed Object	1	0	0	0	0	1	2.8%
Front to Front	0	0	0	1	2	3	8.3%
Front to Rear	0	4	1	1	1	7	19.4%
Head On	1	0	0	0	0	1	2.8%
Other Non-Collision	0	1	0	0	0	1	2.8%
Other Object	0	0	0	0	0	0	0%
Overturned	0	0	0	0	1	1	2.8%
Parked Motor Vehicle	0	1	0	0	0	1	2.8%
Pedalcyclist	1	0	0	0	0	1	2.8%
Pedestrian	0	0	0	0	0	0	0%
Rear to Front	0	0	0	0	0	0	0%
Rear to Rear	0	0	0	0	0	0	0%
Rear to Side	0	0	0	0	0	0	0%
Sideswipe Opposite Direction	0	1	0	0	0	1	2.8%
Sideswipe Same Direction	0	0	1	0	0	1	2.8%
Turning	3	5	0	2	1	11	30.6%
Total	*7*	*13*	*5*	*5*	*6*	*36*	*100%*
Primary Crash Cause							
(N/A)	0	0	0	0	0	0	0%
Animal	0	0	0	0	0	0	0%
Cell Phone	0	0	0	0	0	0	0%
Disregarding Other Traffic Signs	0	0	0	0	0	0	0%
Disregarding Road Markings	0	0	0	0	0	0	0%
Disregarding Stop Sign	0	0	0	0	0	0	0%
Disregarding Traffic Signals	1	3	1	0	1	6	16.7%
Distraction – From Inside Vehicle	0	1	0	0	0	1	2.8%
Distraction – From Outside Vehicle	0	0	0	0	0	0	0%
Driving on Wrong Side/Wrong Way	0	0	0	1	1	2	5.6%
Driving Skills/Knowledge/Experience	0	0	0	0	0	0	0%
Equipment-Vehicle Condition	0	0	0	0	0	0	0%
Evasive Action Due to Animal/Object/Non-Motorist	0	0	0	0	0	0	0%
Exceeding Authorized Speed Limit	0	1	0	0	0	1	2.8%
Exceeding Safe Speed for Conditions	0	0	0	0	0	0	0%
Failing to Reduce Speed to Avoid Crash	3	3	0	0	2	8	22.2%
Failing to Yield Right of Way	2	3	2	3	0	10	27.8%
Following Too Closely	0	1	1	1	0	3	8.3%
Had Been Drinking	0	0	0	0	0	0	0%

Improper Backing	0	0	0	0	0	0	0%
Improper Lane Usage	1	1	0	0	0	2	5.6%
Improper Overtaking/Passing	0	0	0	0	0	0	0%
Improper Turning/No Signal	0	0	0	0	0	0	0%
Operating Vehicle in Reckless Manner	0	0	0	0	2	2	5.6%
Physical Condition of Driver	0	0	1	0	0	1	2.8%
Road Engineering/Surface/Marking Defects	0	0	0	0	0	0	0%
Turning Right on Red	0	0	0	0	0	0	0%
Unable to Determine	0	0	0	0	0	0	0%
Under Influence of Alcohol/Drugs	0	0	0	0	0	0	0%
Vision Obscured	0	0	0	0	0	0	0%
Weather	0	0	0	0	0	0	0%
Total	*7*	*13*	*5*	*5*	*6*	*36*	*100%*

Front to rear and turning type crashes may be attributed to significant volume of through or turning traffic, excessive speeds, unexpected lane changes or stops on approach, insufficient turn lane taper and storage lane lengths, slippery pavement, or acceptance of inadequate gaps in oncoming traffic. Providing additional through lane and turn lane capacity may reduce the front to rear crash type. Consideration should be given to adding capacity to the through and turn lanes along IL 120. Angle type crashes may be attributed to significant volume traffic, restricted sight distance, poor visibility of signals or inadequate signal timings, excessive speeds, slippery pavement, and drivers running red lights. Reducing the number of access points per mile of IL 120 may reduce angle crash types. Consideration should be given to reducing access point density along IL 120. Installing red light cameras may reduce the number of vehicles running red lights and angle crash types. Consideration should be given to installing red light cameras at signalized intersections along IL 120. Retiming existing traffic signals or changing intersection control types may reduce front to rear, turning, and angle crash types. Consideration should be given to evaluating and reoptimizing existing traffic signal timings. Consideration for a different intersection traffic control type such as conversion of signalized intersection into a modern roundabout should also be given. A traffic study and traffic signal or roundabout warrants should be completed prior to any intersection control changes.

Installing changeable speed warning signs along the roadway segments may reduce the number of front to rear crash types where the primary causes are failing to reduce speed and following too closely. Consideration should be given to installing changeable speed warning signs ahead of posted speed limit changes. Installing a raised median along IL 120 may reduce injury related crashes.

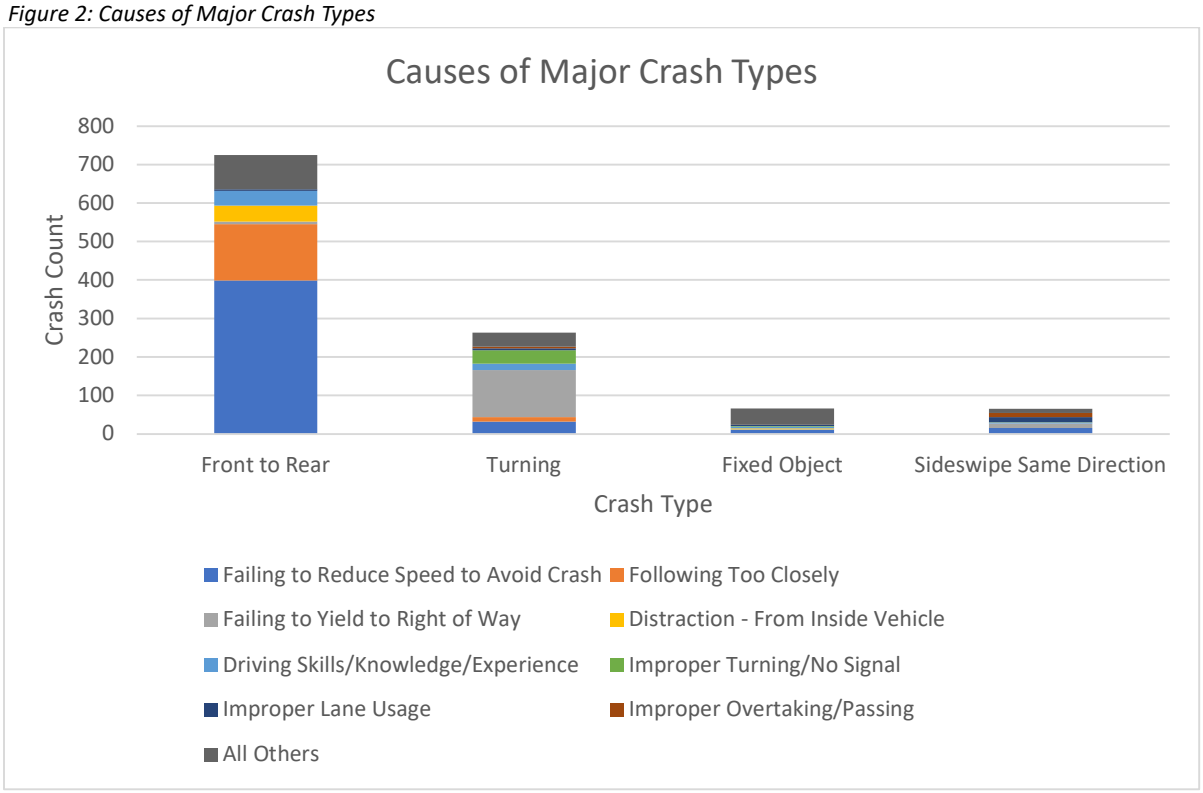
Providing adequate highway lighting along the IL 120 roadway segments and intersections will improve visibility at night and may reduce the number of injury crashes occurring in the nighttime hours. Consideration should be given to providing highway lighting along the IL 120 corridor.

Improving winter plowing operation response times and applying a preventative chemical anti-icing during entire winter season may reduce the number of injury crashes occurring on slippery pavement conditions. Consideration should be given to reduce winter operation response times. Consideration should also be given to applying anti-icing agents for the entire winter season along IL 120.

Major Crash Types and Primary Causes

Figure 2 displays the relationship between the major crash types and the recorded primary causes of them. For the 725 recorded front to rear crash types, the primary causes are failing to reduce speed to avoid crash (399), following too closely (146), distraction from inside vehicle (41), and driving skills/knowledge/experience (39). For the 263 recorded turning crash types, the primary causes are failing to yield right of way (123), improper turning or no signal used (35), and failing to reduce speed to avoid crash (32).

Figure 2: Causes of Major Crash Types



Recommendations to Mitigate Crashes

Crash Modification Factors (CMF's) found in Chapters 13 and 14 of the HSM were initially evaluated to develop recommendations. Additionally, primary crash causes were evaluated against the major crash types to provide additional recommendations that may reduce crash occurrences along the IL Route 120 corridor. To improve safety conditions at these intersections, consideration should be given to certain design improvements.

Providing additional through lane and turn lane capacity may reduce the front to rear crash type. Consideration should be given to adding capacity to the through and turn lanes along IL 120. Reducing the number of access points per mile of IL 120 may reduce angle crash types. Consideration should be given to reducing access point density along IL 120. Retiming existing traffic signals or changing intersection control types may reduce front to rear, turning, and angle crash types. Consideration should be given to evaluating and reoptimizing existing traffic signal timings. Consideration for a different intersection traffic control type such as conversion of signalized intersection into a modern roundabout should also be given. A traffic study and traffic signal or roundabout warrants should be completed prior to any intersection control changes.

Installing changeable speed warning signs along the roadway segments may reduce the number of front to rear crash types where the primary causes are failing to reduce speed and following too closely. Consideration should be given to installing changeable speed warning signs ahead of posted speed limit changes. Providing additional through lane and turn lane capacity may reduce the front to rear crash types where the primary causes are failing to reduce speed and following too closely. Consideration should be given to adding capacity to the through and turn lanes along IL 120. Retiming existing traffic signals or changing intersection control types may also reduce front to rear, turning, and angle crashes where the primary causes are failing to reduce speed and failing to yield right of way. Consideration should be given to evaluating and reoptimizing existing traffic signal timings. Installing red light cameras may reduce the number of angle crash types where the primary cause is disregarding traffic signals. Consideration should be given to installing red light cameras at signalized intersections along IL 120.

Providing adequate highway lighting along the IL 120 roadway segments and intersections will improve visibility at night and may reduce the number of crashes occurring in the nighttime hours. Consideration should be given to providing highway lighting along the IL 120 corridor. Installing a raised median along IL 120 may reduce injury related crashes. Consideration should be given to constructing a raised median along IL 120 where no raised median exists.

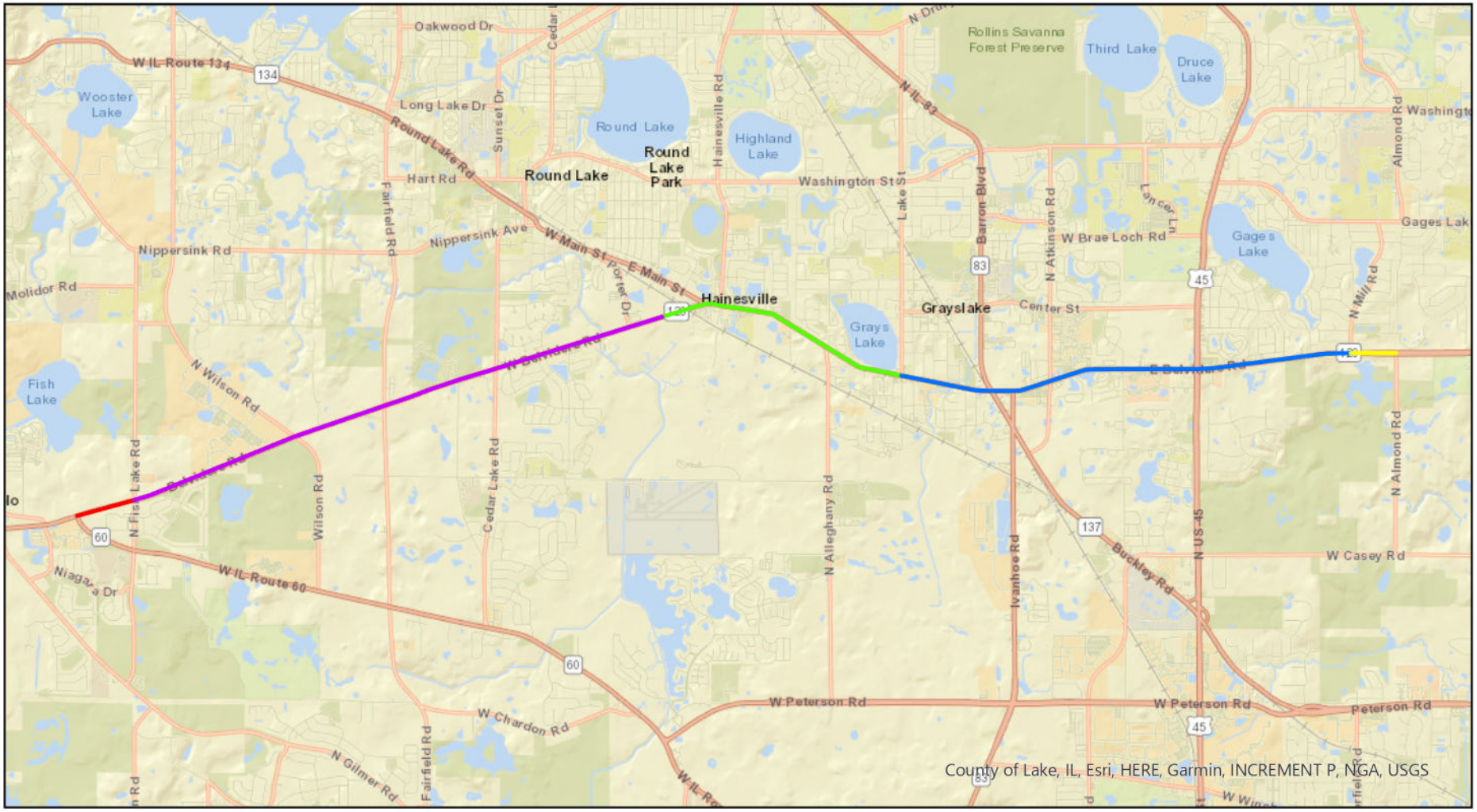
Improving winter plowing operation response times and applying a preventative chemical anti-icing during entire winter season may reduce the number of crashes occurring on slippery pavement conditions. Consideration should be given to reduce winter operation response times. Consideration should also be given to applying anti-icing agents for the entire winter season along IL 120.

Attachments

Attachment A – Speed Limit Map
Attachment B – Crash Charts
Attachment C – Overall Crash Density Map (2017 – 2021)
Attachment D – Major Crash Types Density Maps (2017-2021)
Attachment E – Primary Crash Causes Density Maps (2017-2021)
Attachment F – Injury Crash Density Maps (2017-2021)
Attachment G – Other Contributing Factors Density Maps (2017-2021)
Attachment H – IDOT Safety Tier Location Map (2020)

ATTACHMENT A SPEED LIMIT MAP

IL-120 Speed Limits

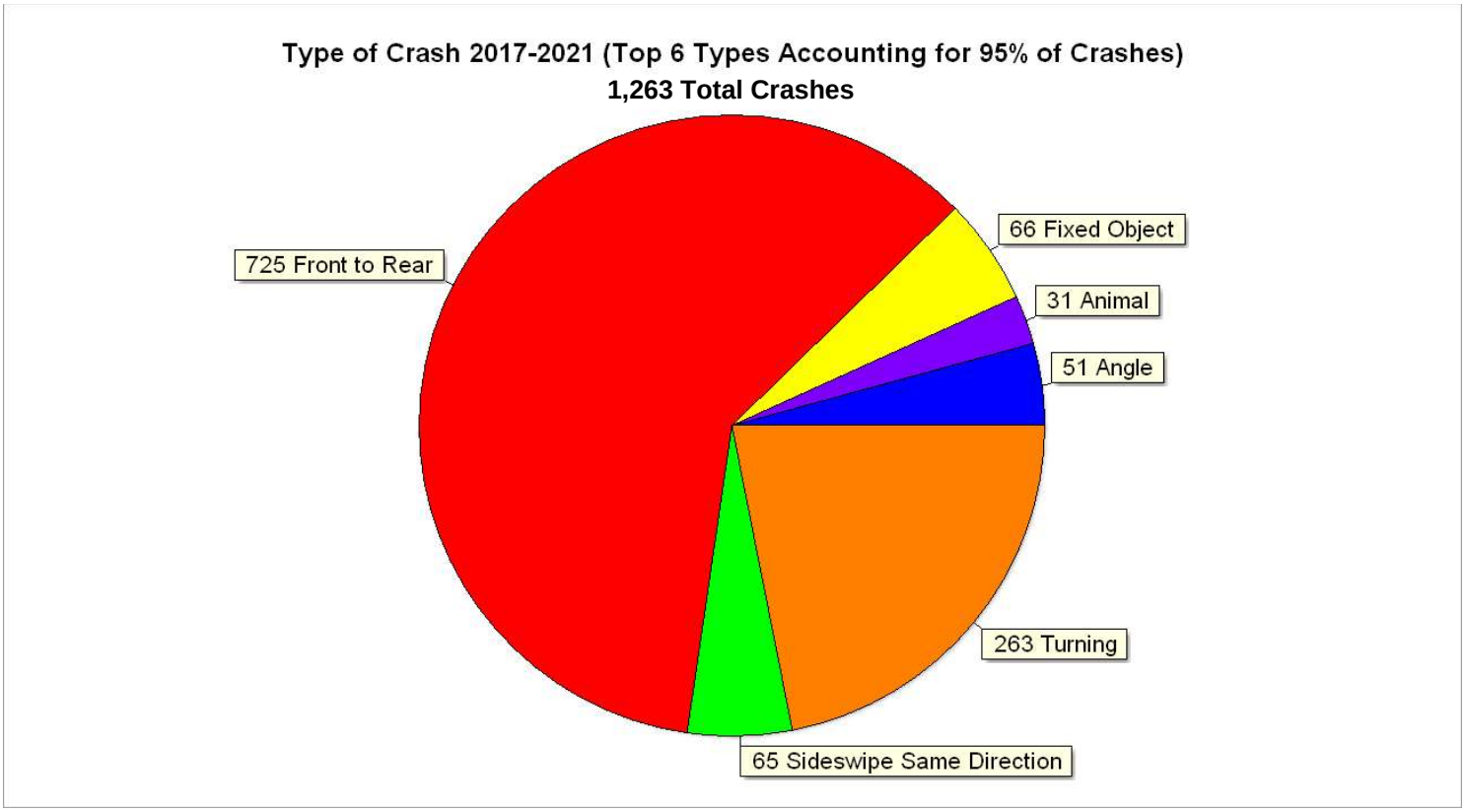


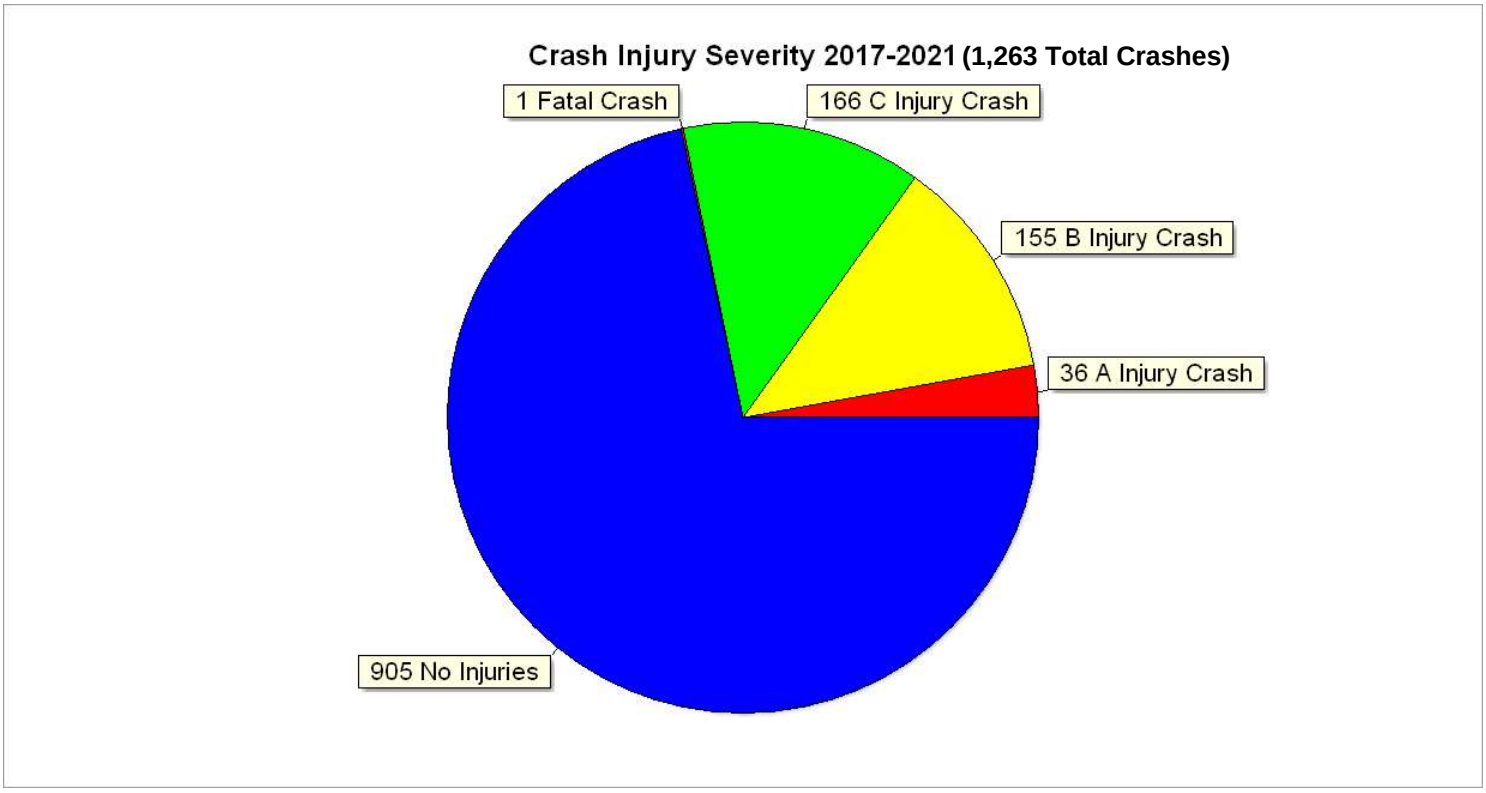
Legend

Speed Limit

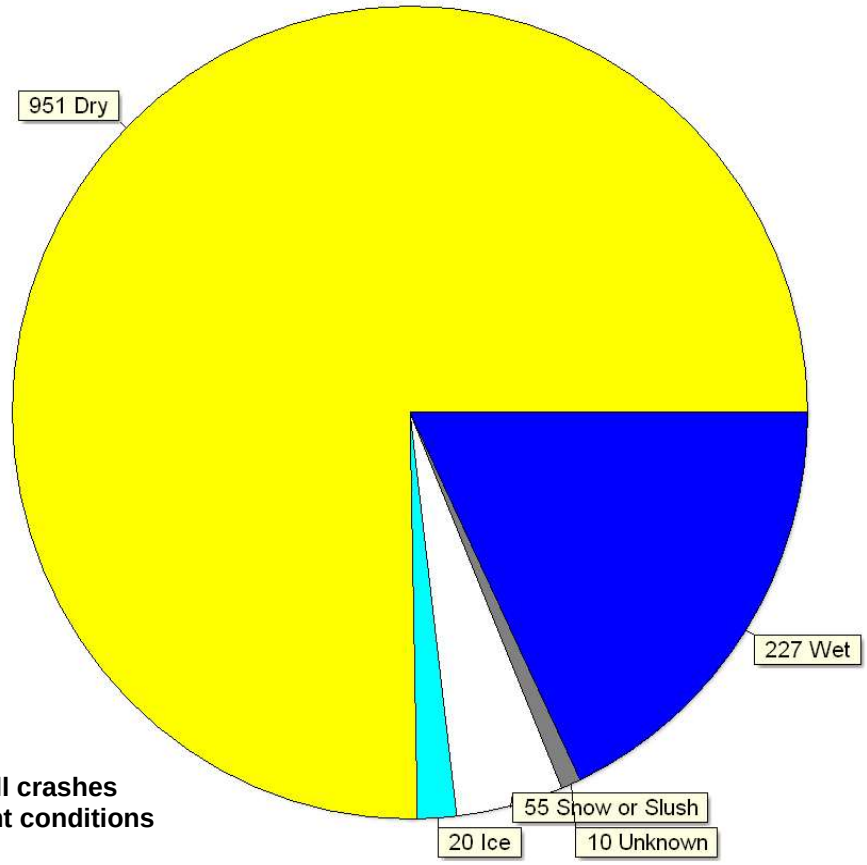
- 35
- 40
- 45
- 50
- 55

ATTACHMENT B CRASH CHARTS


Type of Crash 2017-2021 (Top 6 Types Accounting for 95% of Crashes)
1,263 Total Crashes
725 Front to Rear
66 Fixed Object
31 Animal
51 Angle
263 Turning
65 Sideswipe Same Direction

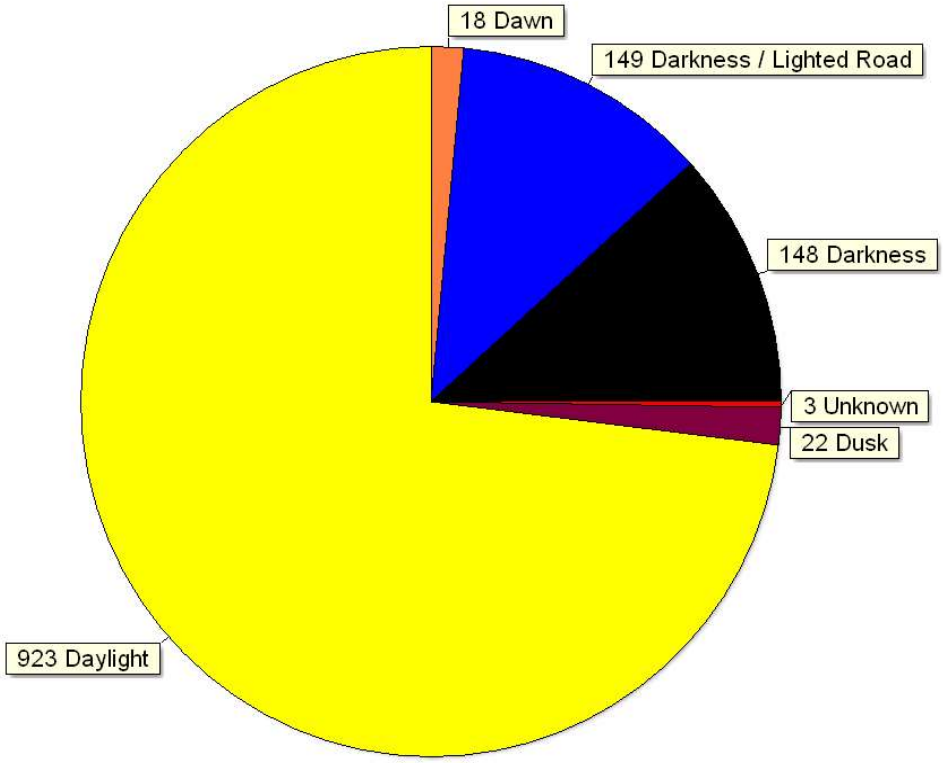

Crash Injury Severity 2017-2021 (1,263 Total Crashes)
1 Fatal Crash
166 C Injury Crash
155 B Injury Crash
36 A Injury Crash
905 No Injuries

Road Surface Conditions 2017-2021 (1,263 Total Crashes)

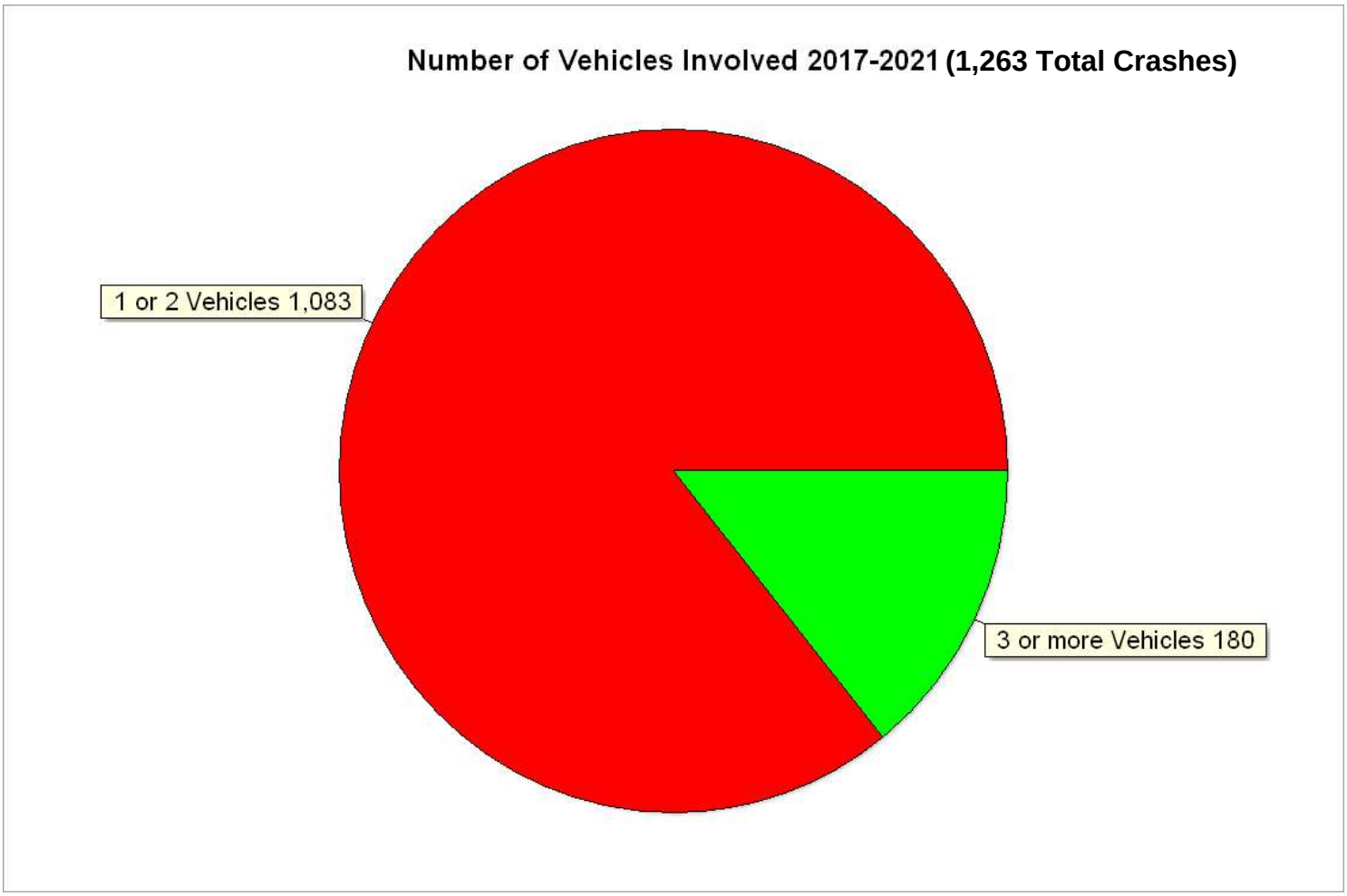


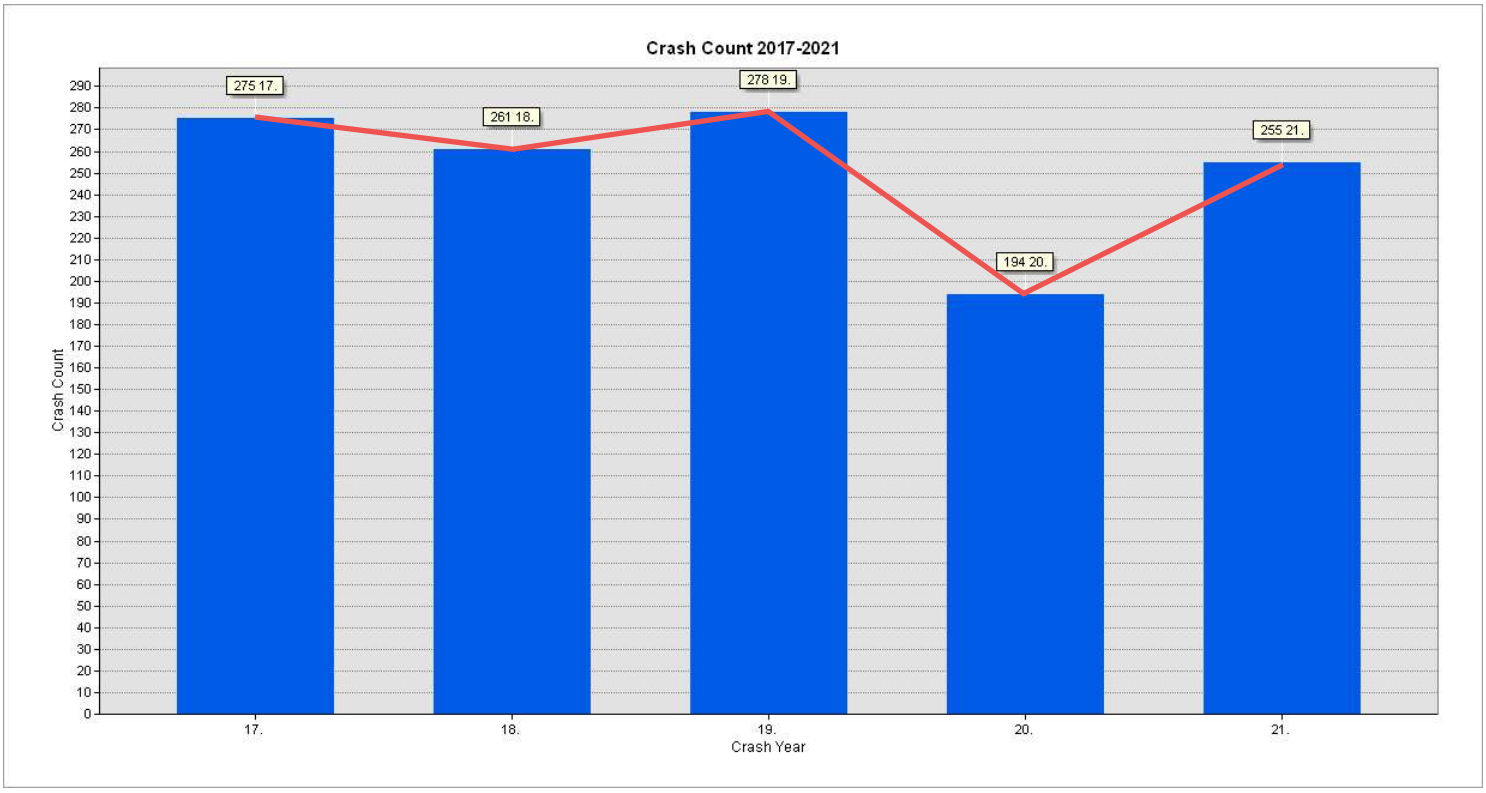
***NOTE: Approx. 75% of all crashes occurred on dry pavement conditions**

Lighting Condition 2017-2021 (1,263 Total Crashes)



***NOTE: Approx. 73% of all crashes occurred during daylight hours**

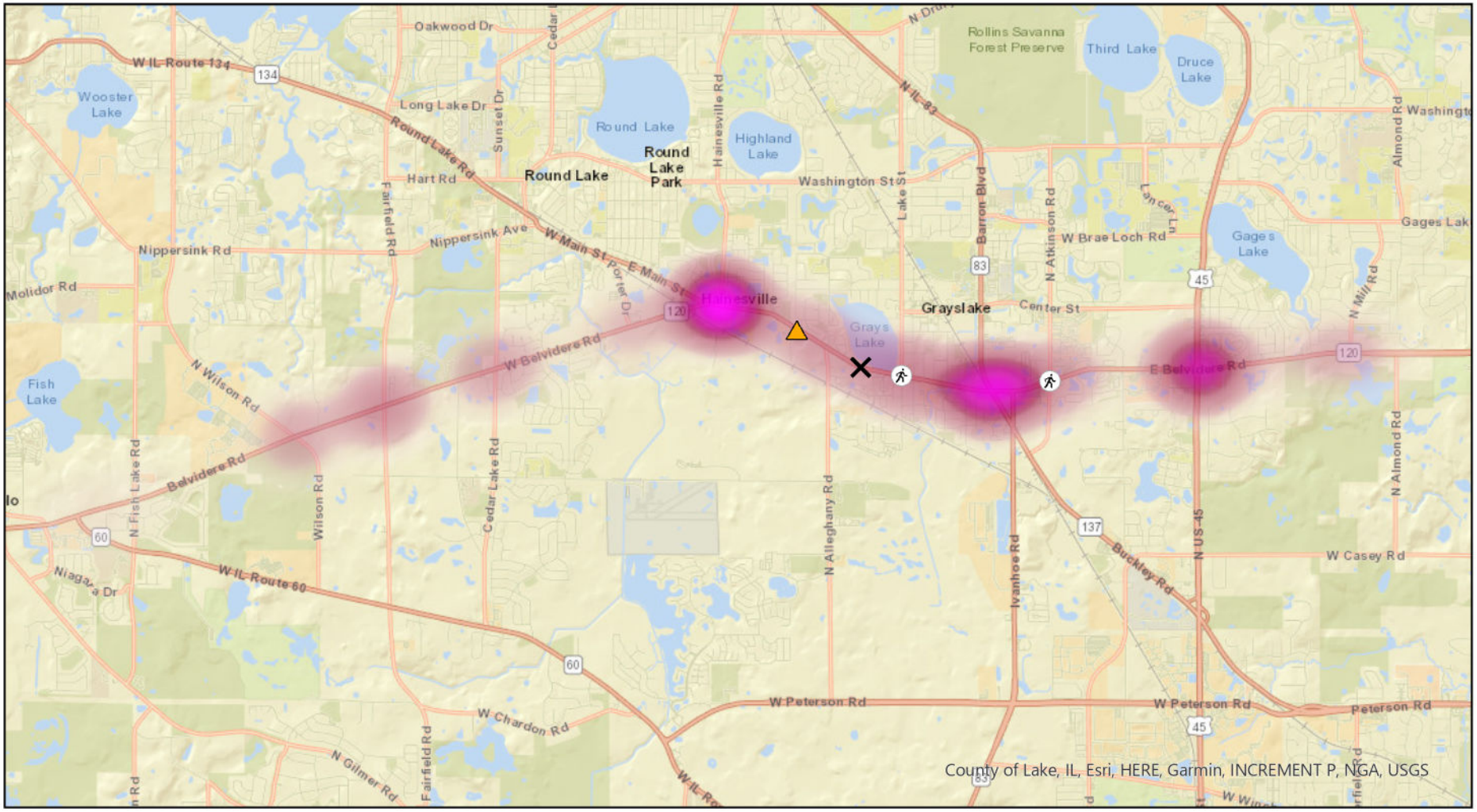




1,263 Total Crashes for the entire project area

ATTACHMENT C OVERALL CRASH DENSITY MAP

IL-120 Overall Crash Density 2017-2021

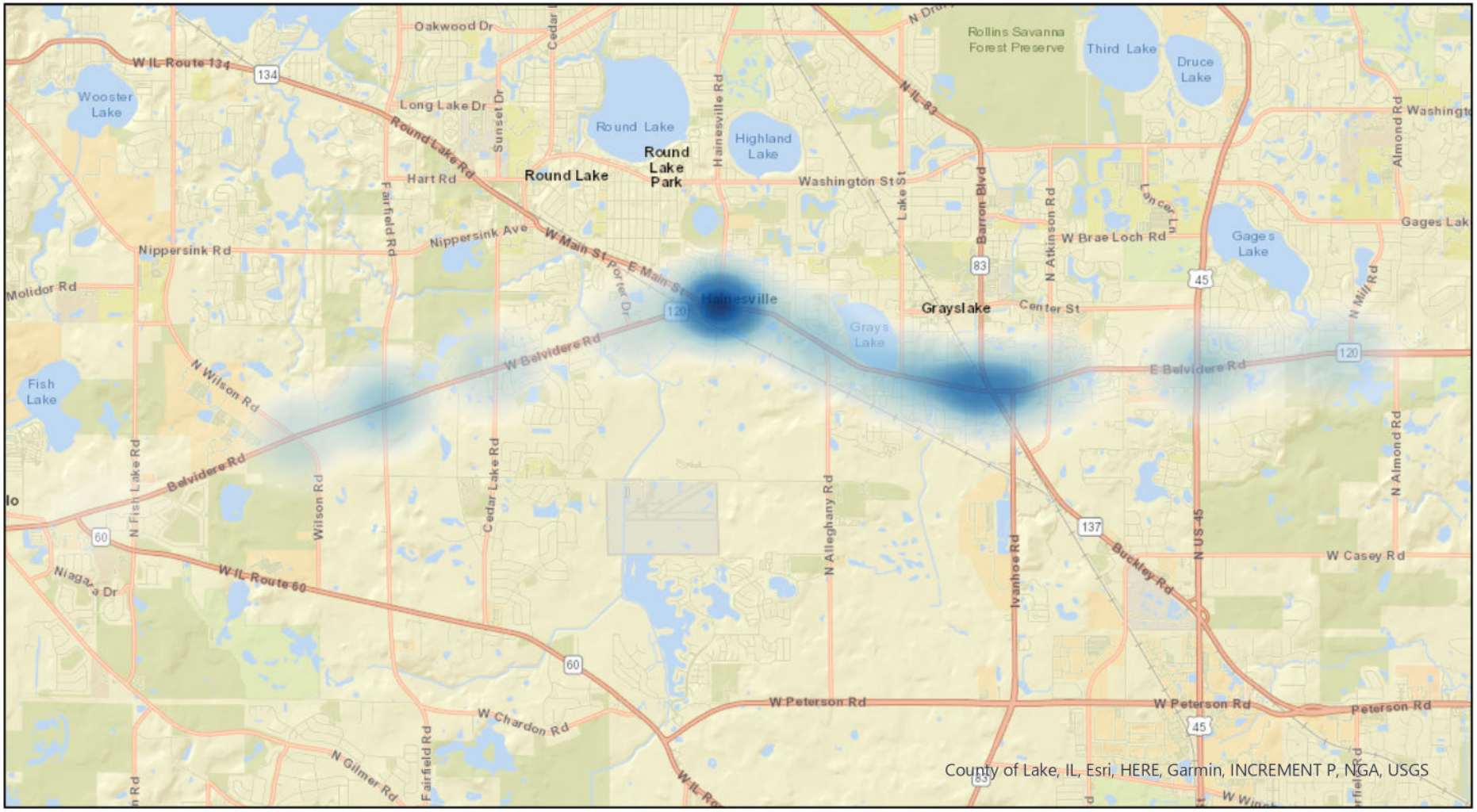


Legend

- Low Crash Density
- High Crash Density
- Fatal Crash
- Pedestrian Crash
- Bicycle Crash

ATTACHMENT D MAJOR CRASH TYPES DENSITY MAPS

IL-120 Front to Rear Crash Density 2017-2021

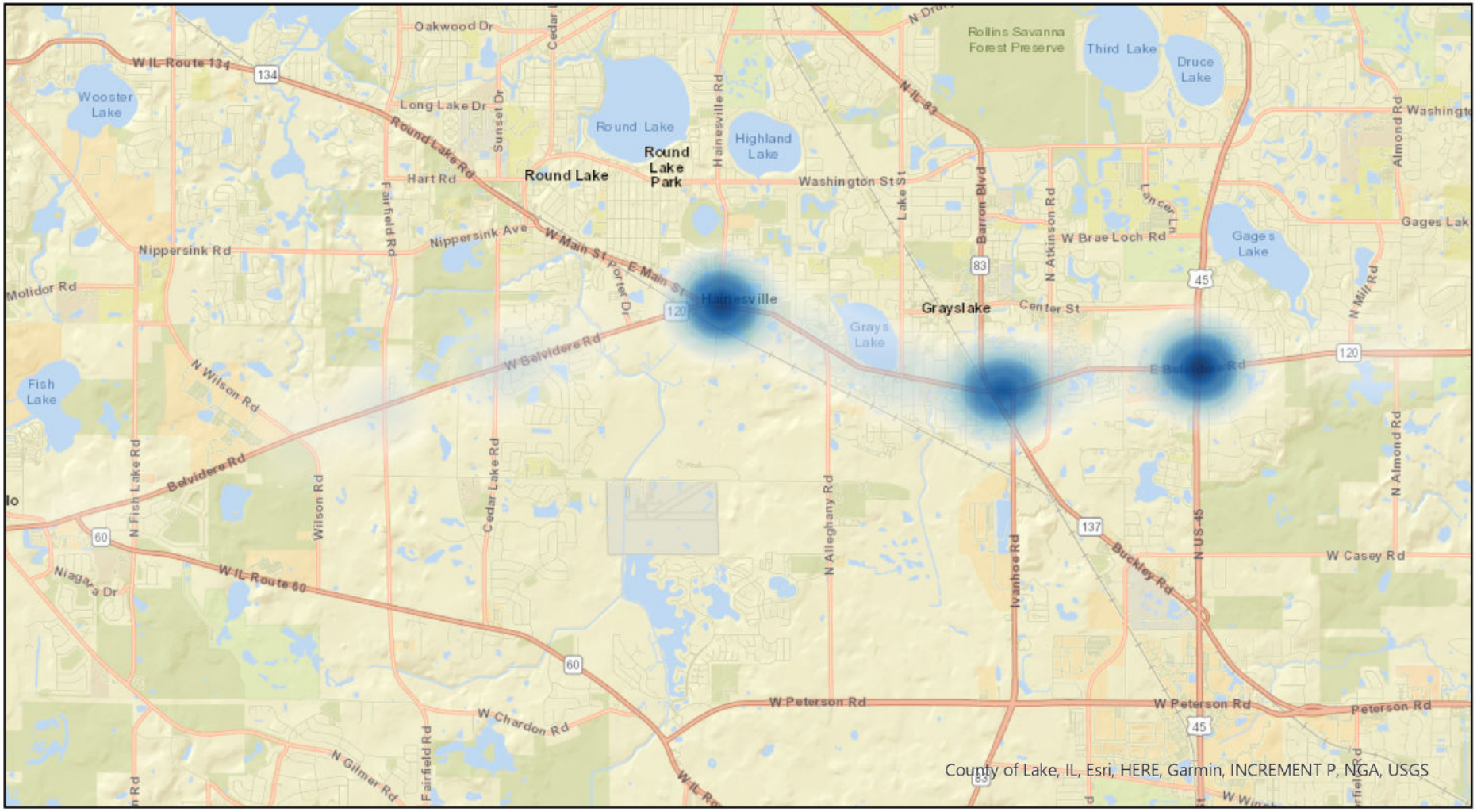


Legend

Low Crash Density

High Crash Density

IL-120 Turning Crash Density 2017-2021



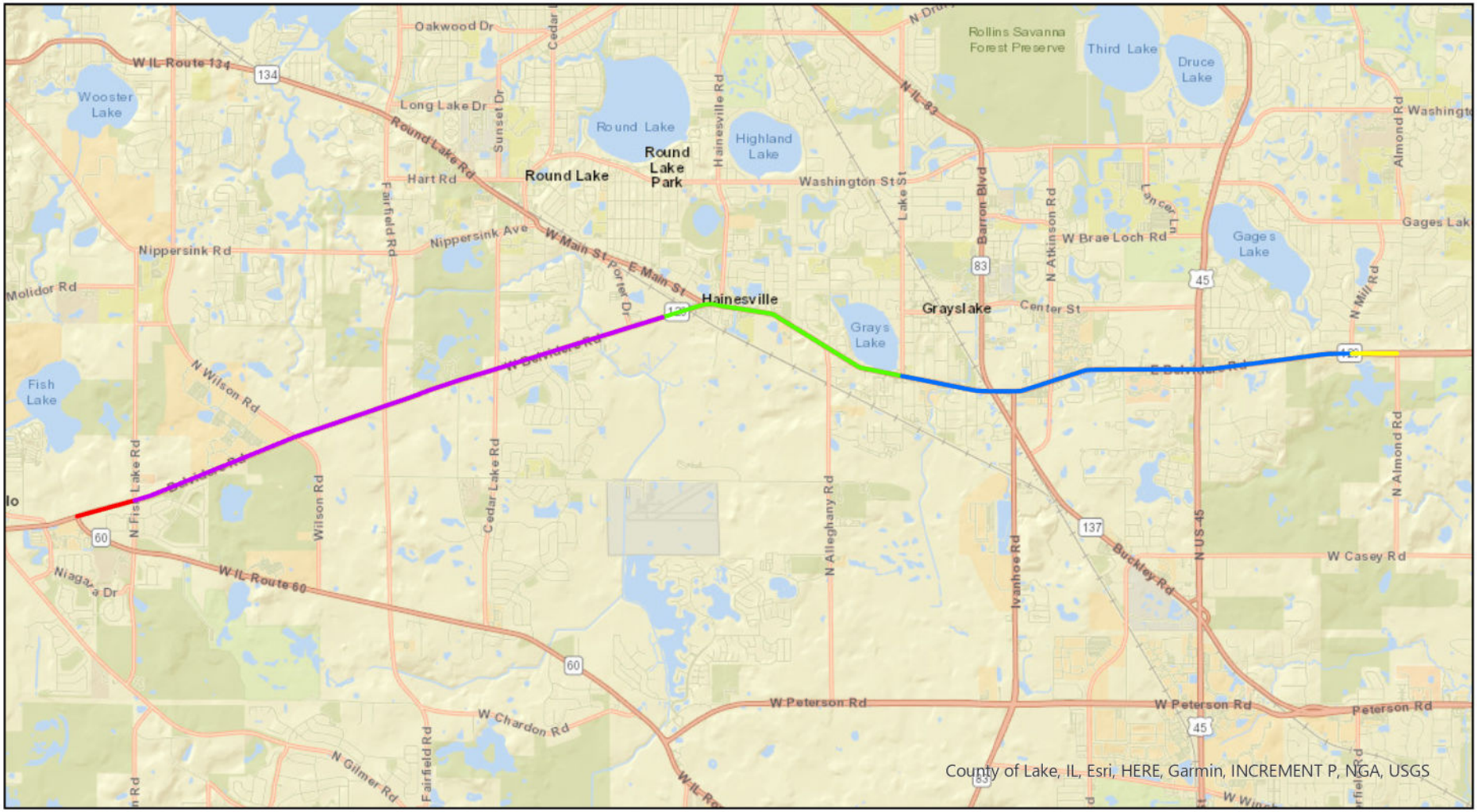
Legend

Low Crash Density

High Crash Density

ATTACHMENT E PRIMARY CRASH CAUSES DENSITY MAPS

IL-120 Speed Limits

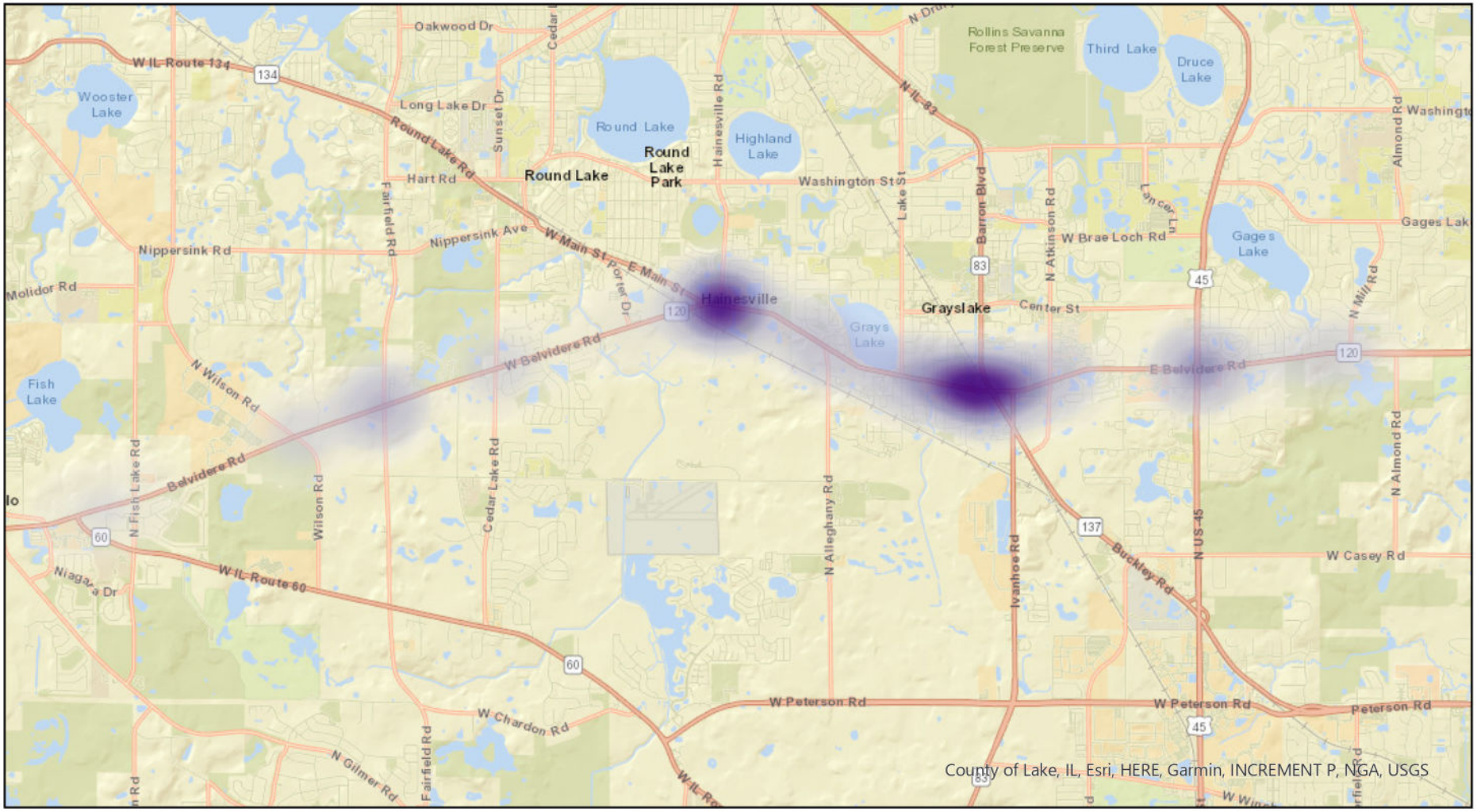


Legend

Speed Limit

- 35
- 40
- 45
- 50
- 55

Cause: Failing to Reduce Speed - IL-120 Crash Density 2017-2021

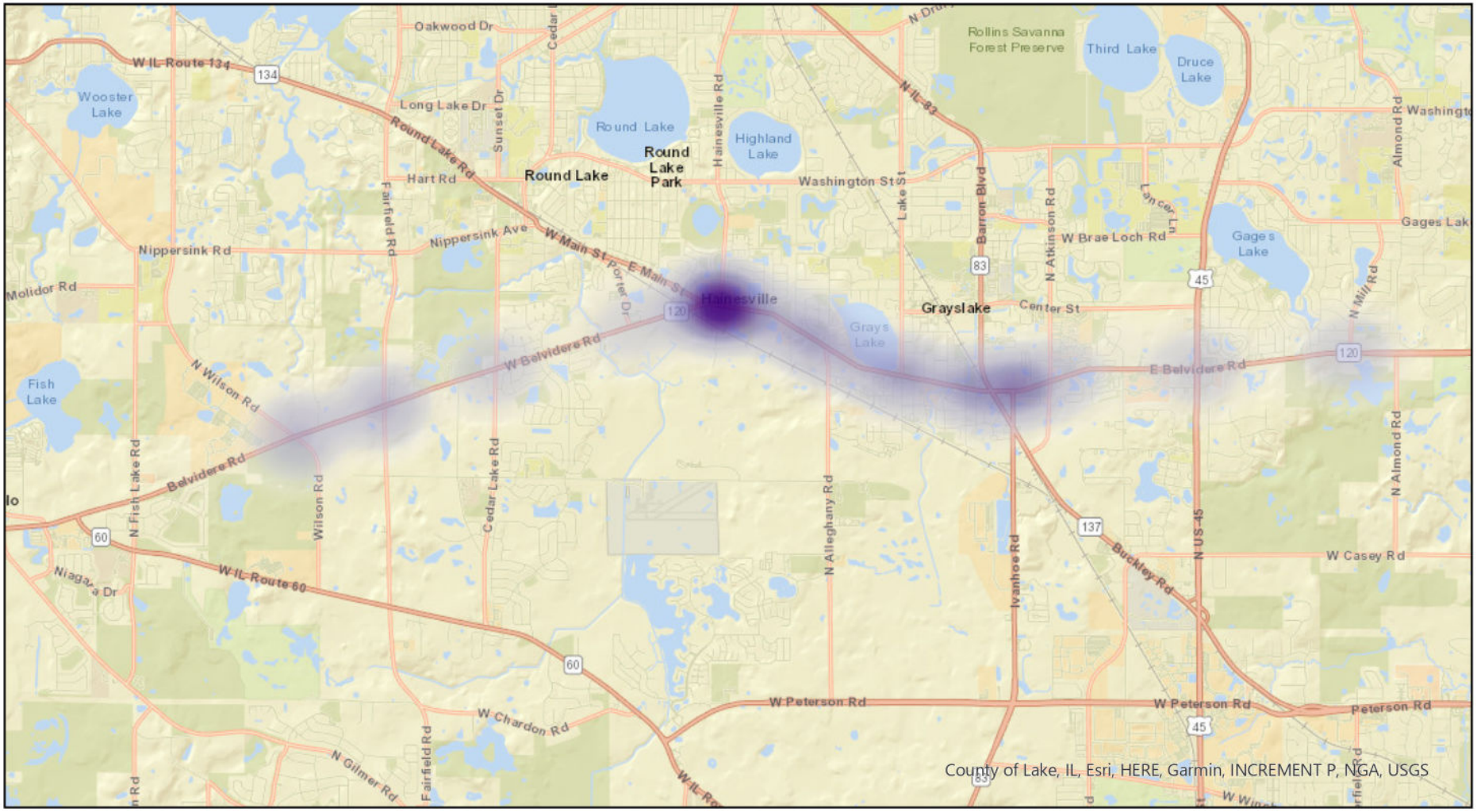


Legend

Low Crash Density

High Crash Density

Cause: Following Too Closely - IL-120 Crash Density 2017-2021

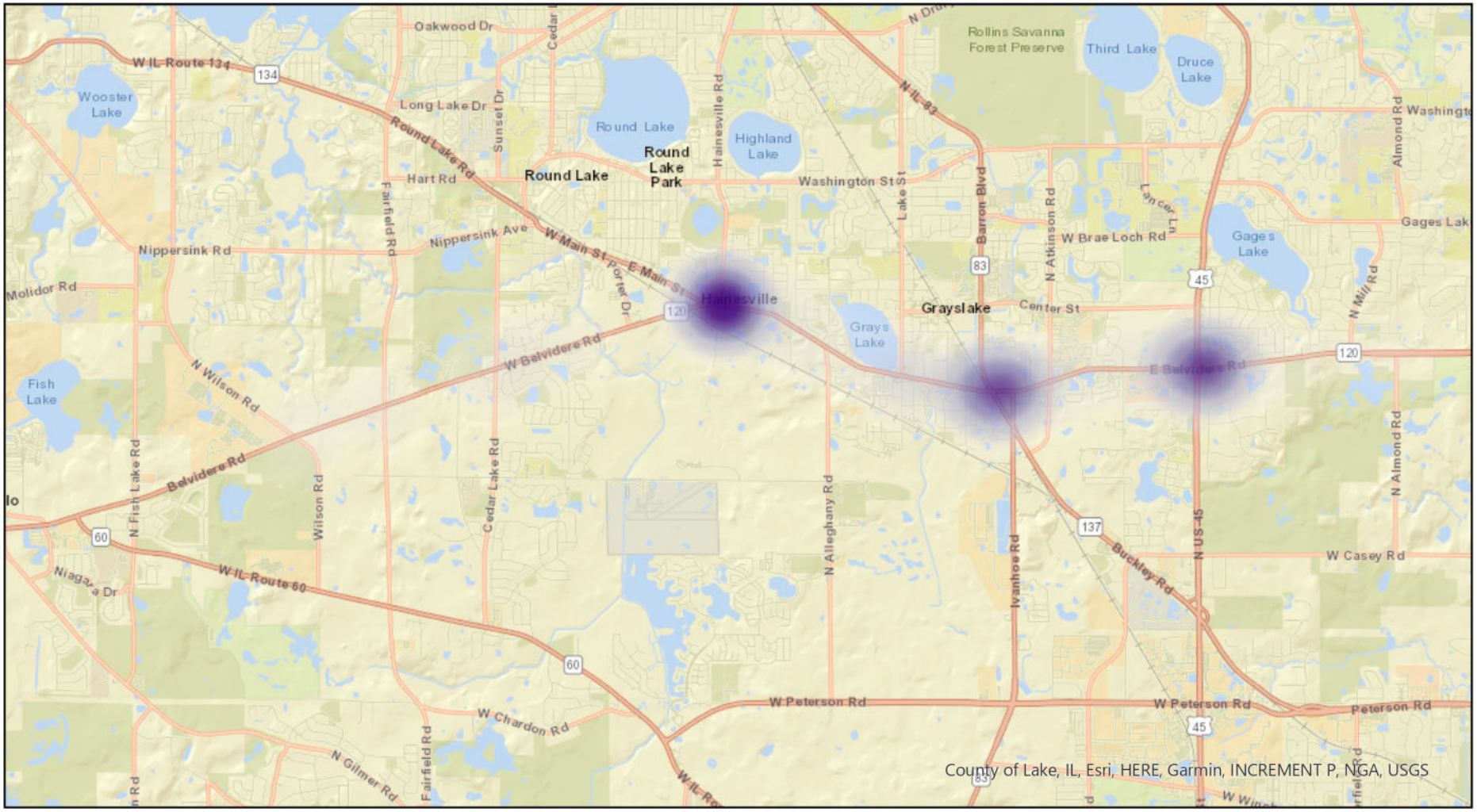


Legend

Low Crash Density

High Crash Density

Cause: Failing to Yield to Right of Way - IL-120 Crash Density 2017-2021



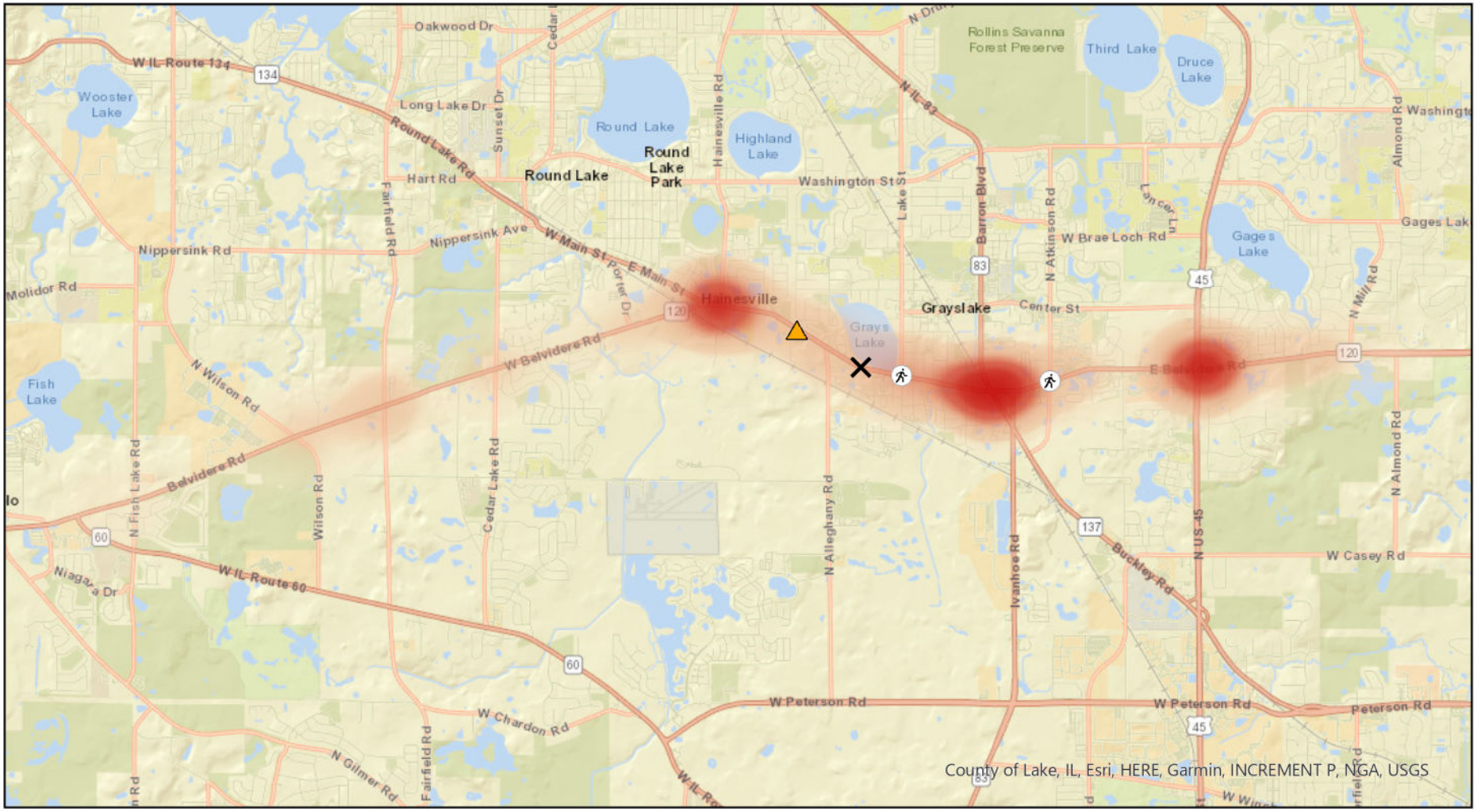
Legend

Low Crash Density

High Crash Density

ATTACHMENT F INJURY CRASH DENSITY MAPS

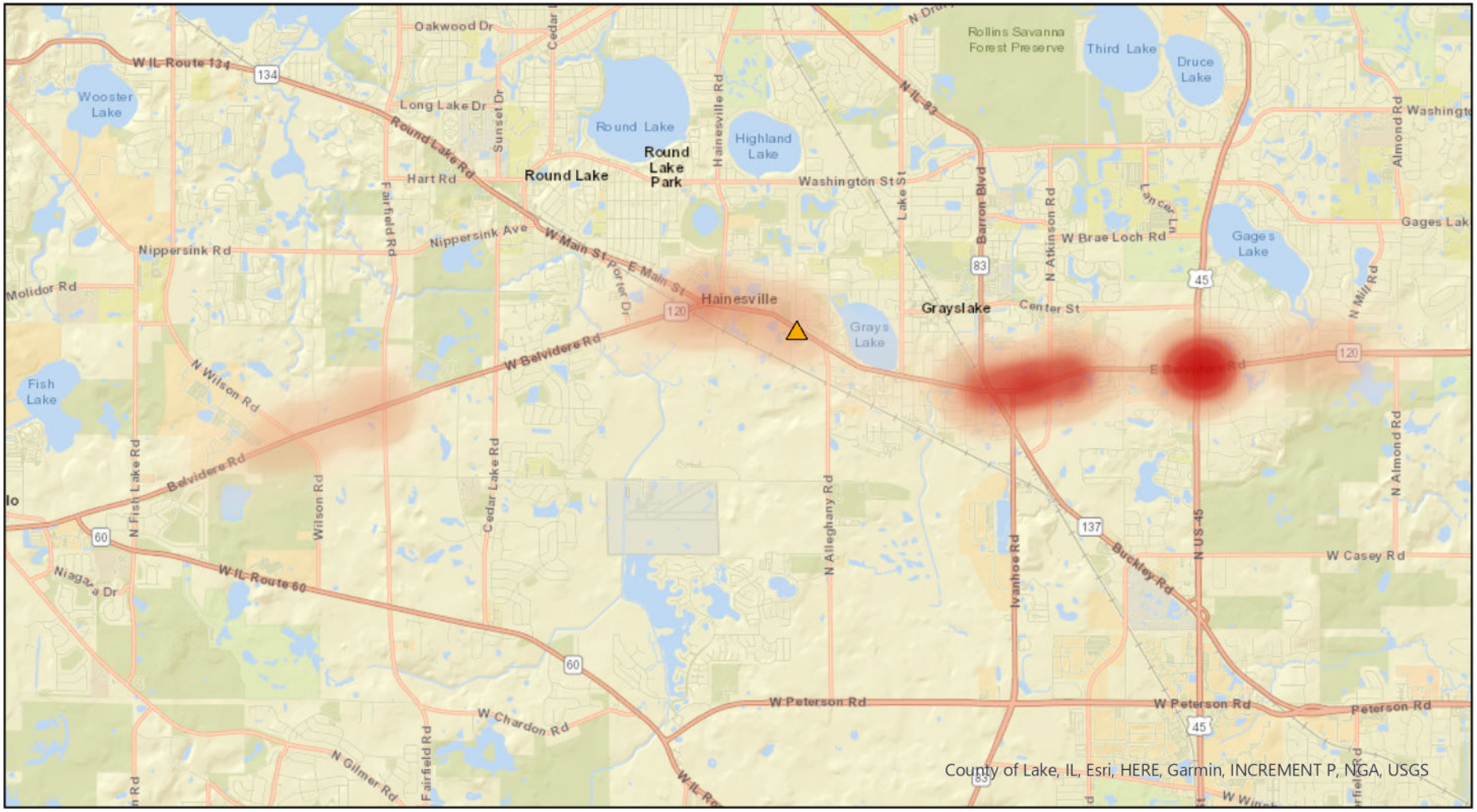
IL-120 Injury Crash Density 2017-2021



Legend

- Low Crash Density
- High Crash Density
- Fatal Crash
- Pedestrian Crash
- Bicycle Crash

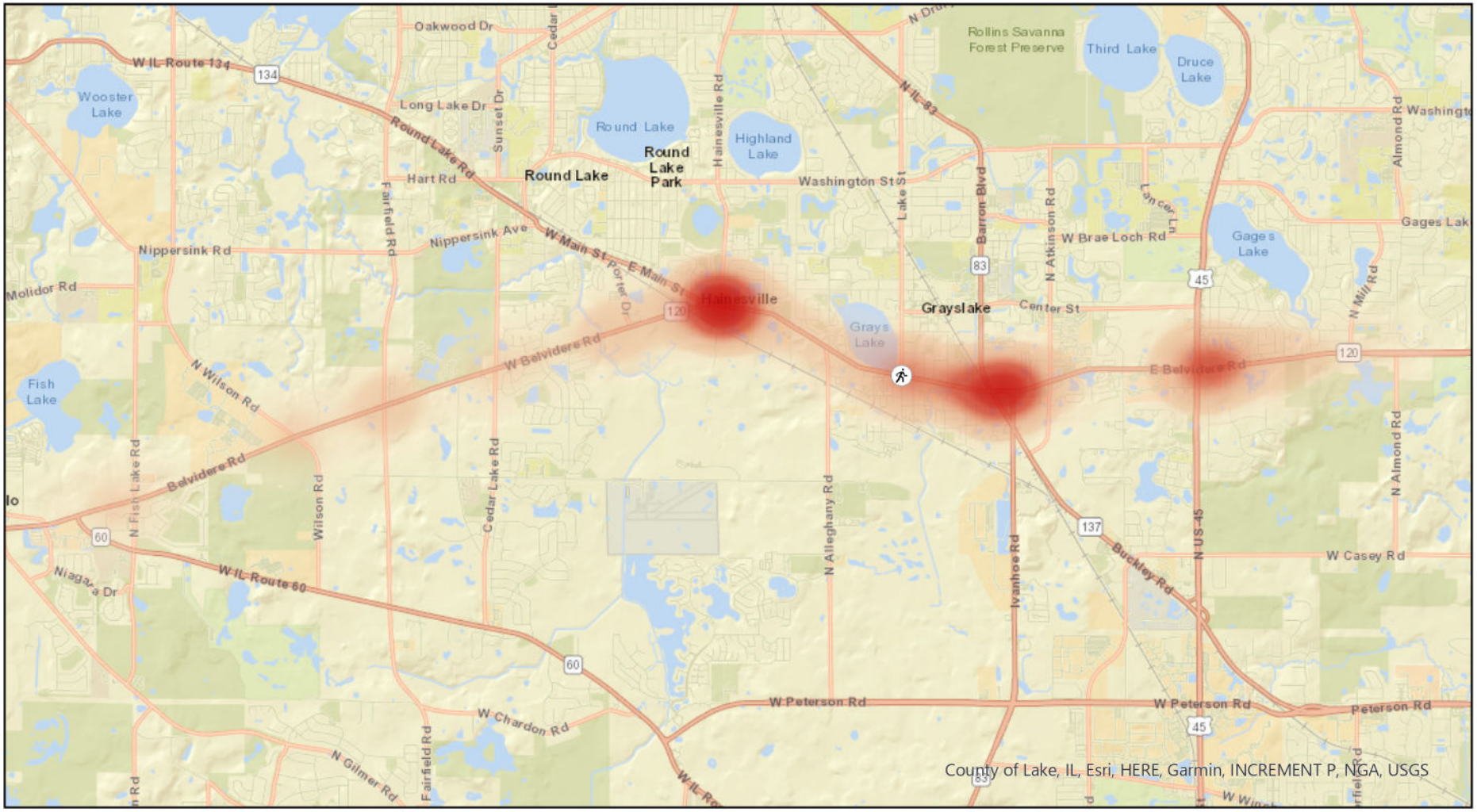
IL-120 A Injury Crash Density 2017-2021



Legend

- Bicycle Crash
- Low Crash Density
- High Crash Density

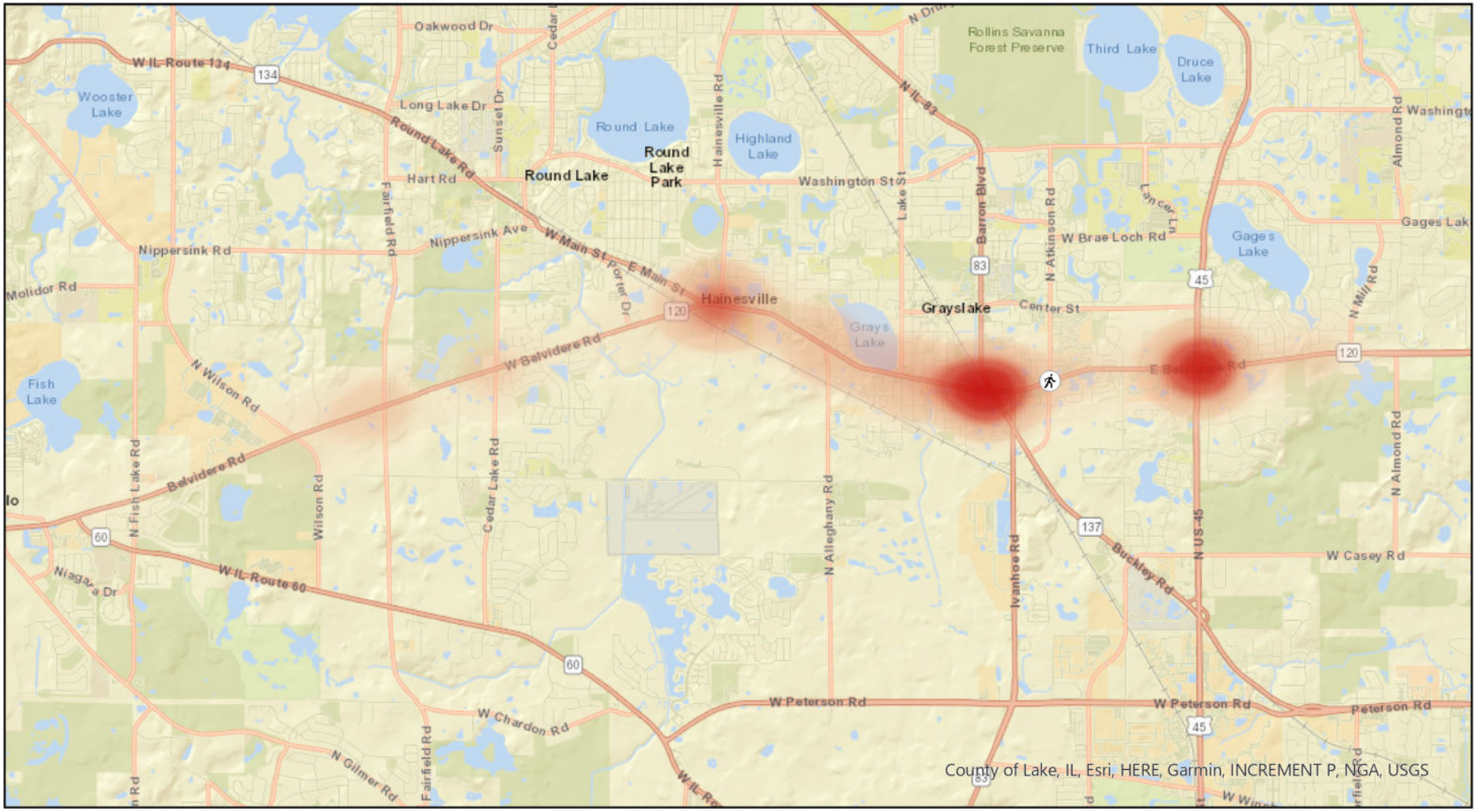
IL-120 B Injury Crash Density 2017-2021



Legend

- Pedestrian Crash
- Low Crash Density
- High Crash Density

IL-120 C Injury Crash Density 2017-2021

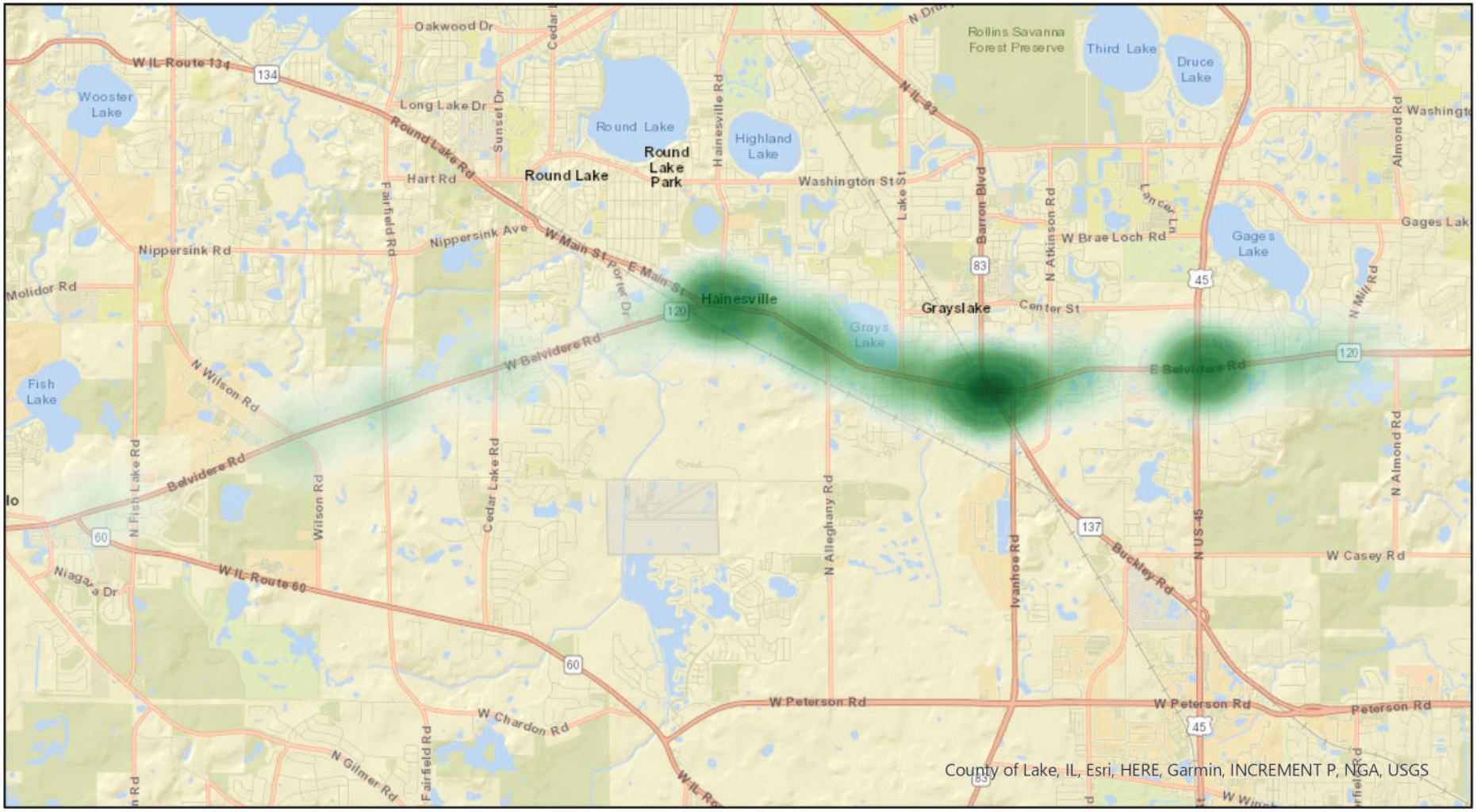


Legend

- Pedestrian Crash
- Low Crash Density
- High Crash Density

ATTACHMENT G OTHER CONTRIBUTING FACTORS DENSITY MAPS

IL-120 Wet/Snow/Ice Road Surface Condition Crash Density 2017-2021

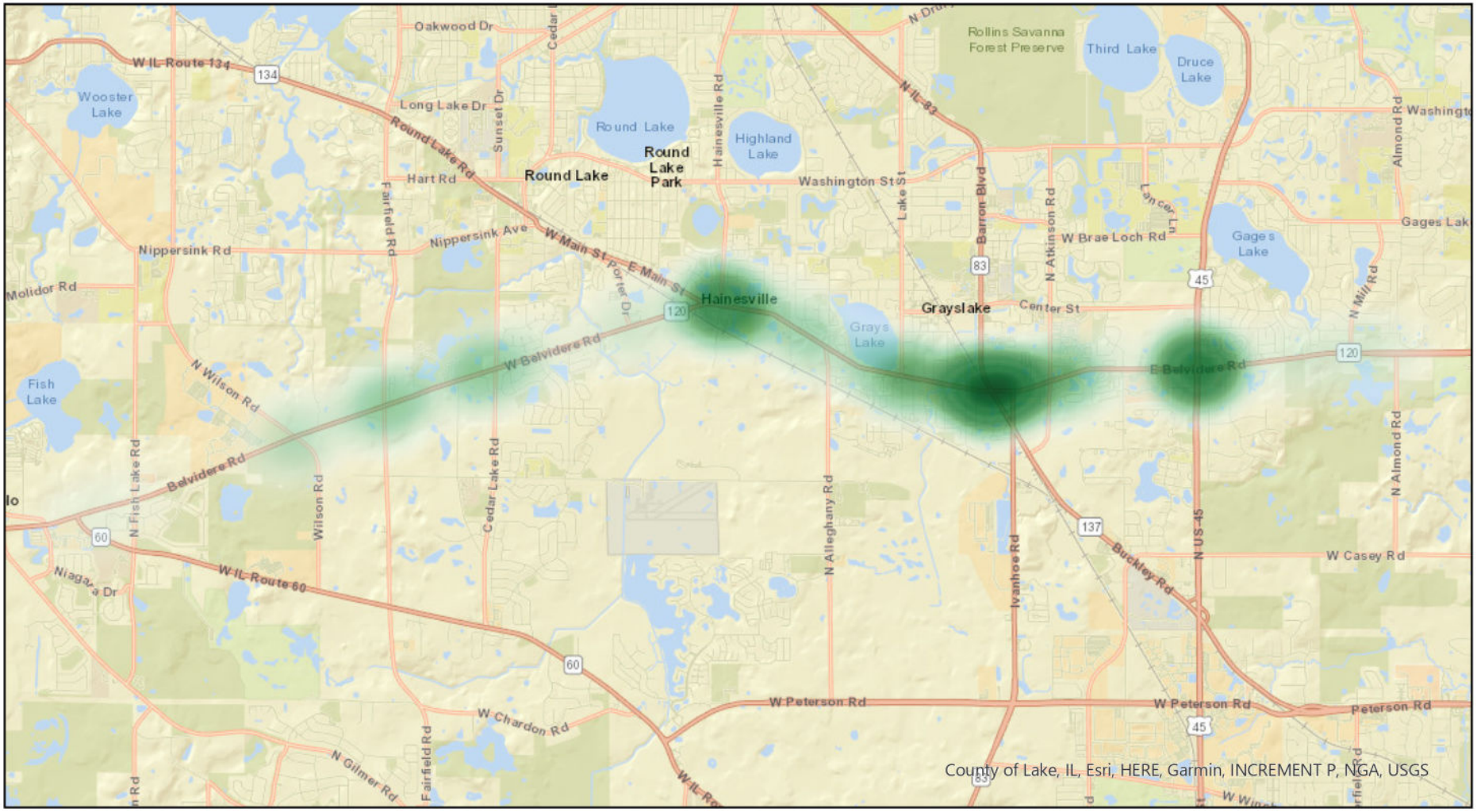


Legend

Low Crash Density

High Crash Density

IL-120 Darkness Crash Density 2017-2021



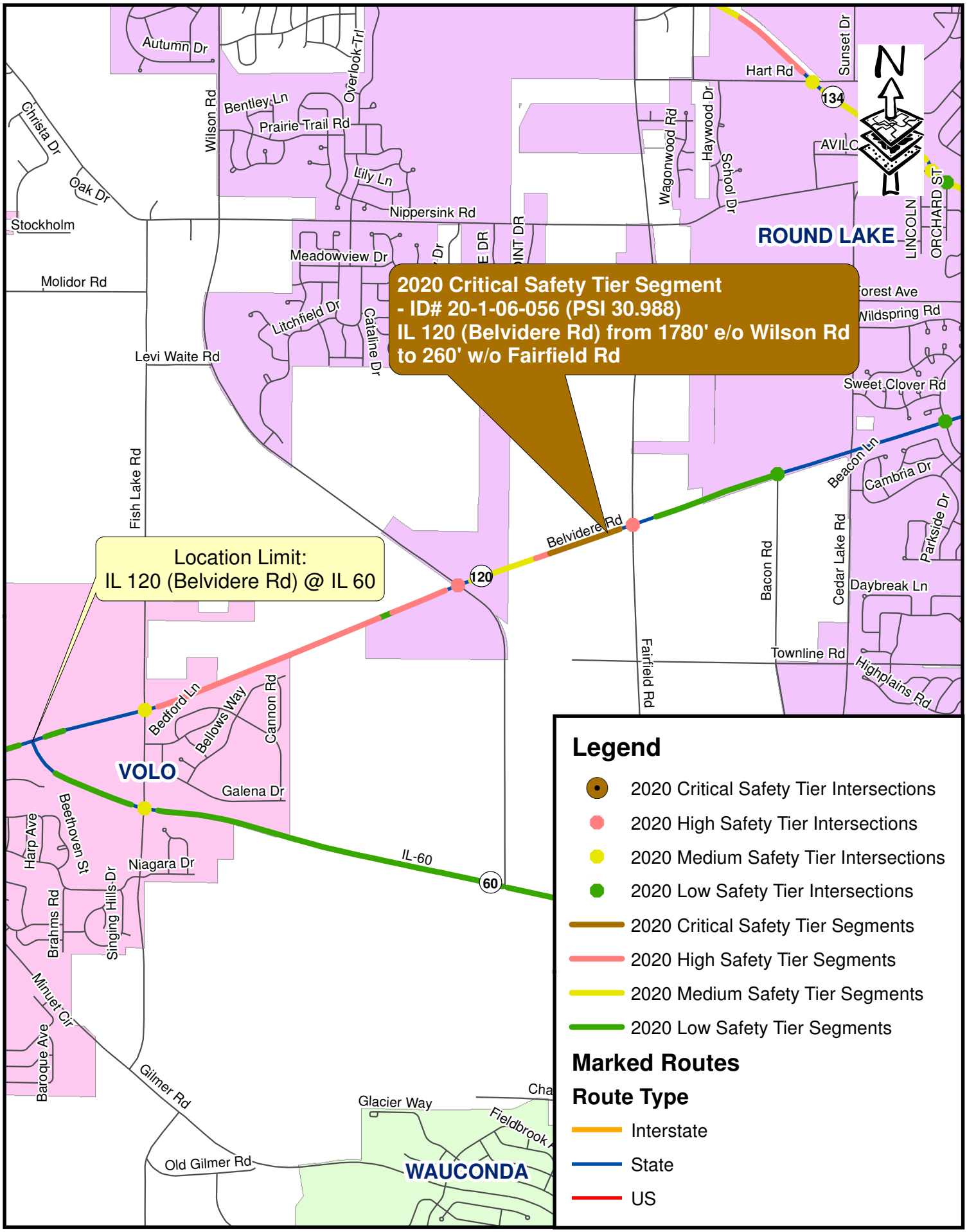
Legend

Low Crash Density

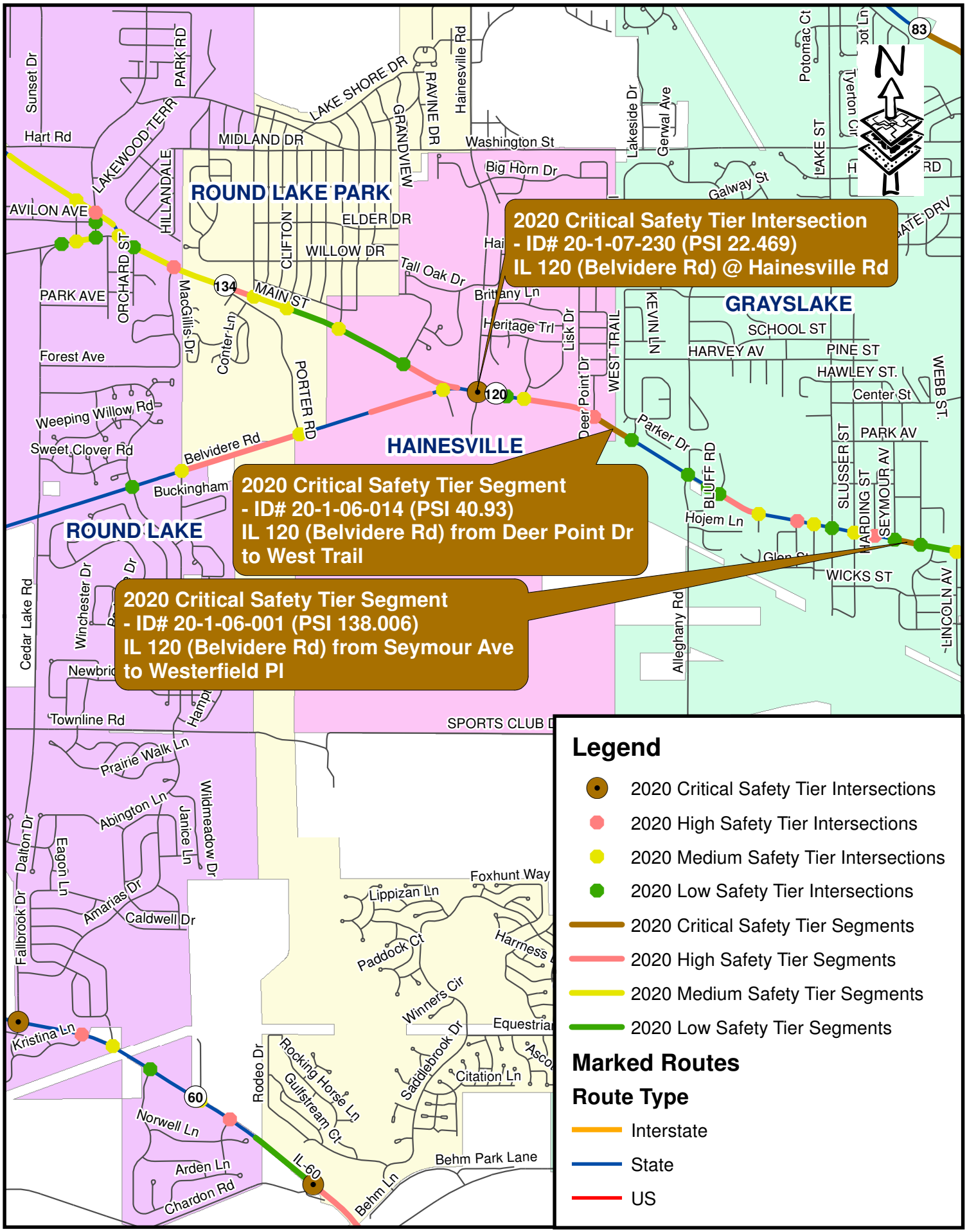
High Crash Density

ATTACHMENT H IDOT SAFETY TIER LOCATION MAP

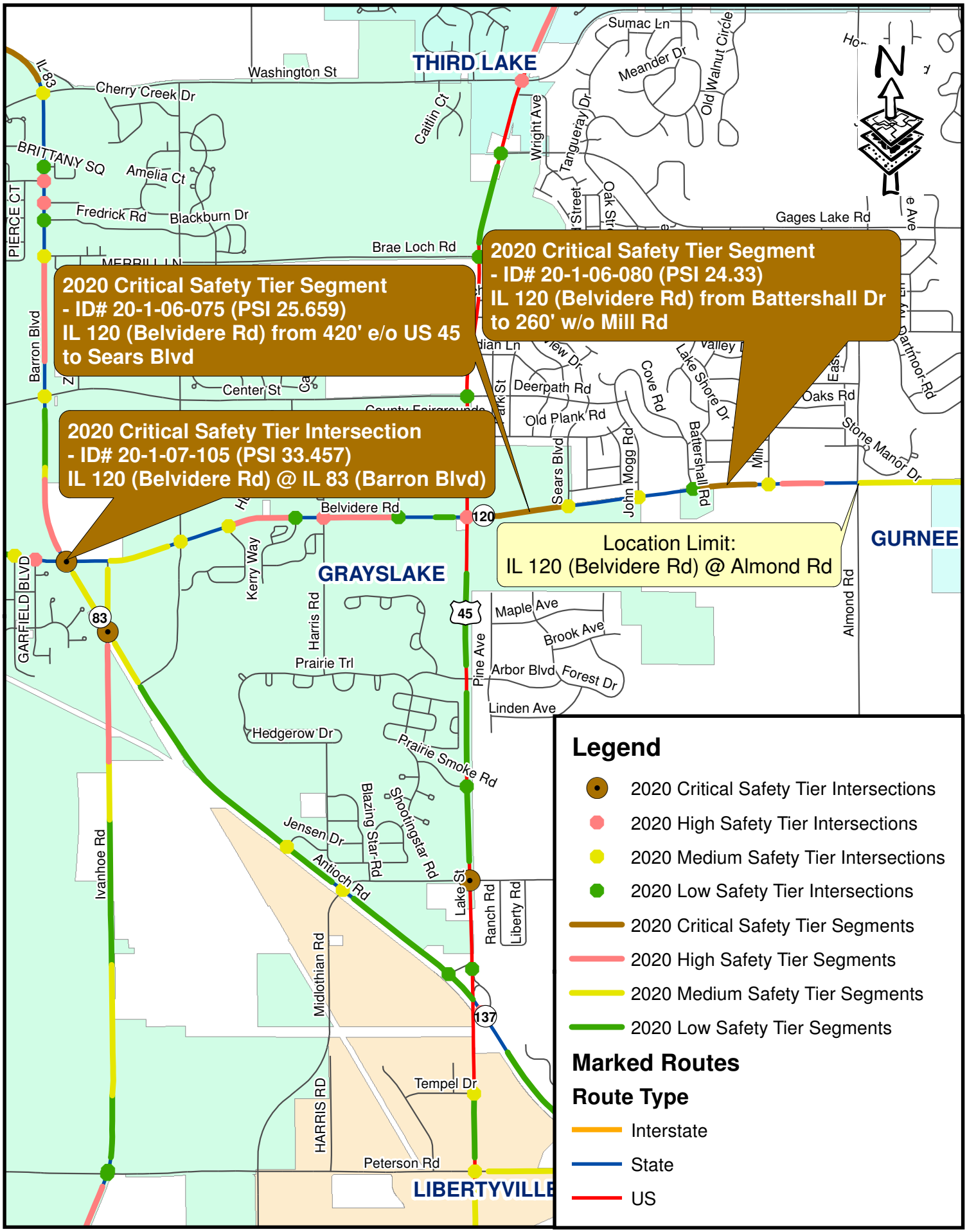
2020 Safety Tier Locations



2020 Safety Tier Locations



2020 Safety Tier Locations



Appendix C. Grade Crossing Delay Calculations

The average delay per delayed vehicle was calculated as follows:

$$D_a = \frac{D_C * \frac{D_r}{D_r - A_r}}{2}$$

With: $A_r = \frac{\frac{ADT}{24}}{NL}$

Where:
D_a = Average delay per delayed vehicle [minutes]
D_c = Average gate down time [minutes]
D_r = Departure Rate = 1,400 [vehicles/hour/lane]
A_r = Arrival Rate = [vehicles/hour/lane]
NL = Number of Lanes = 2
24 = Hours per day
ADT = Average Daily Traffic (20,400 at CN tracks, 27,150 at Metra tracks) [vehicles]

The average gate down time on the CN tracks near IL 83 is 2 minutes 30 seconds. The average gate down time on the Metra tracks near IL 134 is 56 seconds. The vehicle departure rate depends on a range of factors such as presence or absence of signals, number and type of lanes, lane width, grade, sight distances, type and peak of vehicle traffic, and horizontal curve radius. Based on the Highway Capacity Manual (TRB 2010), a departure rate of 1,400 vehicles per hour should be applied for arterials. Two lanes were used to determine arrival rate.

Appendix D. Synchro Reports for Existing and 2050 No Build Conditions

Illinois Department of Transportation

ILSTUDY

IL60 to Almond Road

Appendix D. Synchro Reports

Existing AM

Intersection Name (Control Type)	Link Name	Movement	Volume	v/c Ratio	95th Queue Length (ft)	Delay (sec)	LOS	Approach Delay (sec)	Approach LOS	Intersection Delay (sec)	Intersection LOS
IL 60 & IL 120 (Signalized)	IL 120	EBT	737	0.3	-	5.2	A	3.7	A	7.7	A
		EBR	465	0.38	161	1.4	A				
	IL 120	WBL	1	0.01	33	57	E	3.8	A		
		WBT	708	0.28	m2	3.7	A				
	IL 60	NBL	151	0.5	96	56.9	E	56.7	E		
		NBR	1	0.01	-	36	D				
Fish Lake Road & IL 120 (Signalized)	IL 120	EBL	48	0.1	18	4.4	A	9.4	A	13.3	B
		EBT	668	0.56	200	10	B				
		EBR	22	0.02	0	0	A				
	IL 120	WBL	17	0.04	11	4.6	A	12.9	B		
		WBT	607	0.53	423	13.2	B				
		WBR	2	0	0	0	A				
	Fish Lake Road	NBL	22	0.11	38	41.6	D	25.7	C		
		NBT	25	0.11	47	47.6	D				
		NBR	36	0.14	0	1.1	A				
	Fish Lake Road	SBL	3	0.02	10	39	D	29.9	C		
		SBT	44	0.3	73	58	E				
		SBR	80	0.39	43	14.2	B				
Wilson Road & IL 120 (Signalized)	IL 120	EBL	98	0.23	50	8.2	A	17.0	B	31.0	C
		EBT	594	0.62	530	18.4	B				
		EBR	15	-	-	-	-				
	IL 120	WBL	14	0.05	m3	3.6	A	8.4	A		
		WBT	533	0.58	m143	10.2	B				
		WBR	125	0.15	m7	1.2	A				
	Wilson Road	NBL	13	0.13	29	42.7	D	79.3	E		
		NBT	141	0.81	#293	82	F				
		NBR	32	-	-	-	-				
	Wilson Road	SBL	127	0.58	168	53.3	D	70.6	E		
		SBT	202	0.89	#533	78.3	E				
		SBR	80	-	-	-	-				

Notes:
1. The # symbol in the 95th percentile queue indicates that the volume modeled exceeds capacity for that movement.
2. The m symbol in the 95th percentile queue indicates that the volume is metered by an upstream signal.

Intersection Name (Control Type)	Link Name	Movement	Volume	v/c Ratio	95th Queue Length (ft)	Delay (sec)	LOS	Approach Delay (sec)	Approach LOS	Intersection Delay (sec)	Intersection LOS
Fairfield Road & IL 120 (Signalized)	IL 120	EBL	116	0.43	m116	23.1	C	61.0	E	63.0	E
		EBT	565	0.98	#974	67.6	E				
		EBR	101	-	-	-	-				
	IL 120	WBL	158	0.81	#215	59	E	45.7	D		
		WBT	521	0.74	#628	41.8	D				
		WBR	15	-	-	-	-				
	Fairfield Road	NBL	21	0.17	29	26.2	C	36.5	D		
		NBT	156	0.4	222	37.5	D				
		NBR	53	-	-	-	-				
	Fairfield Road	SBL	42	0.12	47	24.8	C	93.8	F		
		SBT	482	1.06	#869	98.6	F				
		SBR	119	-	-	-	-				
Cedar Lake Road & IL 120 (Signalized)	IL 120	EBL	147	0.38	81	10.4	B	20.2	C	26.5	C
		EBT	463	0.63	477	23	C				
		EBR	55	-	-	-	-				
	IL 120	WBL	78	0.19	47	9.1	A	27.7	C		
		WBT	510	0.76	566	30.3	C				
		WBR	56	-	-	-	-				
	Cedar Lake Road	NBL	25	0.11	39	30.9	C	33.6	C		
		NBT	159	0.33	113	33.9	C				
		NBR	52	-	-	-	-				
	Cedar Lake Road	SBL	12	0.04	23	30.6	C	31.3	C		
		SBT	200	0.59	157	31.3	C				
		SBR	161	-	-	-	-				

Notes:
1. The # symbol in the 95th percentile queue indicates that the volume modeled exceeds capacity for that movement.
2. The m symbol in the 95th percentile queue indicates that the volume is metered by an upstream signal.

Intersection Name (Control Type)	Link Name	Movement	Volume	v/c Ratio	95th Queue Length (ft)	Delay (sec)	LOS	Approach Delay (sec)	Approach LOS	Intersection Delay (sec)	Intersection LOS
Wildspring Road & IL 120 (Two-Way Stop Control)	IL 120	EBL	2	0.003	0	9.8	A	0	-	3.8	-
		EBT	511	-	-	-	-				
		EBR	14	-	-	-	-				
	IL 120	WBL	84	0.087	8	8.9	A	1.1	-		
		WBT	605	-	-	-	-				
		WBR	8	-	-	-	-				
	Wildspring Road	NBL	29	0.26	25	46.6	E	20.4	C		
		NBT	3	0.268	28	14.6	B				
		NBR	128	-	-	-	-				
	Wildspring Road	SBL	18	0.231	20	62.4	F	44.6	E		
		SBT	0	-	-	-	-				
		SBR	10	-	-	-	-				
Curan Road & IL 120 (Two-Way Stop Control)	IL 120	EBT	654	-	-	-	-	0	-	1.1	-
		EBR	3	-	-	-	-				
	IL 120	WBL	20	0.024	2	9.1	A	0.3	-		
		WBT	681	-	-	-	-				
	Curan Road	NBL	16	0.06	5	18.5	C	15.7	C		
		NBR	70	0.17	15	15	C				
IL 120 & Porter Drive (Two-Way Stop Control)	IL 120	EBL	35	0.046	2	9.7	A	0.5	-	1.1	-
		EBT	689	-	-	-	-				
	IL 120	WBT	653	-	-	-	-	0	-		
		WBR	15	-	-	-	-				
	Porter Drive	SBL	9	-	-	-	-	22.3	C		
		SBR	48	-	-	-	-				

Notes:
1. The # symbol in the 95th percentile queue indicates that the volume modeled exceeds capacity for that movement.
2. The m symbol in the 95th percentile queue indicates that the volume is metered by an upstream signal.

Intersection Name (Control Type)	Link Name	Movement	Volume	v/c Ratio	95th Queue Length (ft)	Delay (sec)	LOS	Approach Delay (sec)	Approach LOS	Intersection Delay (sec)	Intersection LOS
Centre Drive/IL 134 & IL 120 (Signalized)	IL 120	EBL	11	0.04	15	14.9	B	43.8	D	56.8	E
		EBT	644	0.84	#854	44.2	D				
		EBR	27	-	-	-	-				
	IL 120	WBL	42	0.21	m26	13.7	B	26.5	C		
		WBT	632	0.74	575	27.3	C				
		WBR	0	-	-	-	-				
	Centre Drive	NBL	21	-	-	-	-	56.5	E		
		NBT	22	0.62	124	56.5	E				
		NBR	53	-	-	-	-				
	IL 134	SBL	402	-	-	-	-	121.9	F		
		SBT	34	1.11	#707	126.3	F				
		SBR	16	0.04	0	0.1	A				
Hainesville Road & IL 120 (Signalized)	IL 120	EBL	269	0.52	m80	4.8	A	10.4	B	33.9	C
		EBT	813	0.69	m444	12.3	B				
		EBR	17	-	-	-	-				
	IL 120	WBL	3	0.01	4	6.7	A	15.1	B		
		WBT	532	0.51	486	18	B				
		WBR	124	0.13	33	2.8	A				
	Hainesville Road	NBL	8	-	-	-	-	55	D		
		NBT	4	0.21	38	55	D				
		NBR	5	-	-	-	-				
	Hainesville Road	SBL	318	1.23	#490	175	F	91.2	F		
		SBT	22	0.69	112	13.4	B				
		SBR	320	-	-	-	-				

Notes:
1. The # symbol in the 95th percentile queue indicates that the volume modeled exceeds capacity for that movement.
2. The m symbol in the 95th percentile queue indicates that the volume is metered by an upstream signal.

Intersection Name (Control Type)	Link Name	Movement	Volume	v/c Ratio	95th Queue Length (ft)	Delay (sec)	LOS	Approach Delay (sec)	Approach LOS	Intersection Delay (sec)	Intersection LOS
School Access/ Misty Hi Lane & IL 120 (Two-Way Stop Control)	IL 120	EBL	2	0.003	0	9.9	A	0	-	12.0	-
		EBT	1024	-	-	-	-				
		EBR	110	-	-	-	-				
	IL 120	WBL	81	0.162	15	13	B	1.5	-		
		WBT	608	-	-	-	-				
		WBR	8	-	-	-	-				
	Misty Hi Lane	NBL	43	1.21	120	368.5	F	159.5	F		
		NBT	2	0.321	32	27.1	D				
		NBR	71	-	-	-	-				
	School Access	SBL	14	0.602	45	276.4	F	172.9	F		
		SBT	2	-	-	-	-				
		SBR	8	-	-	-	-				
IL 120 & Deer Point Road (Two-Way Stop Control)	IL 120	EBL	17	0.022	2	9.5	A	0.1	-	6.5	-
		EBT	1092	-	-	-	-				
	IL 120	WBT	669	-	-	-	-	0	-		
		WBR	28	-	-	-	-				
	Deer Point Road	SBL	65	0.934	120	182.7	F	132.1	F		
		SBR	28	-	-	-	-				
Alleghany Road & IL 120 (Signalized)	IL 120	EBL	1	0	2	4	A	7.6	A	11.1	B
		EBT	643	0.54	460	11.7	B				
		EBR	451	0.38	43	1.8	A				
	IL 120	WBL	84	0.17	34	3.6	A	6.5	A		
		WBT	529	0.4	318	6.9	A				
		WBR	1	-	-	-	-				
	Alleghany Road	NBL	131	0.7	150	68	E	40.9	D		
		NBT	0	0.18	0	0.8	A				
		NBR	88	-	-	-	-				
	Alleghany Road	SBL	2	0.02	9	44	D	36.9	D		
		SBT	1	0.05	15	34.5	C				
		SBR	5	-	-	-	-				

Notes:
1. The # symbol in the 95th percentile queue indicates that the volume modeled exceeds capacity for that movement.
2. The m symbol in the 95th percentile queue indicates that the volume is metered by an upstream signal.

Intersection Name (Control Type)	Link Name	Movement	Volume	v/c Ratio	95th Queue Length (ft)	Delay (sec)	LOS	Approach Delay (sec)	Approach LOS	Intersection Delay (sec)	Intersection LOS
Lake Street & IL 120 (Signalized)	IL 120	EBL	228	0.6	106	13.2	B	14.6	B	21.1	C
		EBT	513	0.54	384	15.9	B				
		EBR	25	0.03	0	0	A				
	IL 120	WBL	18	0.04	13	7.3	A	21.2	C		
		WBT	431	0.63	420	21.7	C				
		WBR	97	-	-	-	-				
	Lake Street	NBL	21	0.09	31	29.7	C	48.8	D		
		NBT	87	0.63	143	52	D				
		NBR	39	-	-	-	-				
	Lake Street	SBL	71	0.31	79	33.9	C	23.6	C		
		SBT	68	0.28	91	42.9	D				
		SBR	160	0.49	53	10.8	B				
Sommerset Drive & IL 120 (Two-Way Stop Control)	IL 120	EBT	650	-	-	-	-	0	-	0.4	-
		EBR	5	-	-	-	-				
	IL 120	WBL	32	0.039	2	9.2	A	0.5	-		
		WBT	507	-	-	-	-				
	Sommerset Drive	NBL	0	0.045	2	13.5	B	13.5	B		
		NBR	19	-	-	-	-				
Lincoln Avenue & IL 120 (Two-Way Stop Control)	IL 120	EBT	667	-	-	-	-	0	-	0.5	-
		EBR	2	-	-	-	-				
	IL 120	WBL	5	0.007	0	9.5	A	0.1	-		
		WBT	536	-	-	-	-				
		NBL	3	0.113	10	15.4	C	15.4	C		
		NBR	38	-	-	-	-				

Notes:
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2. The m symbol in the 95th percentile queue indicates that the volume is metered by an upstream signal.

Intersection Name (Control Type)	Link Name	Movement	Volume	v/c Ratio	95th Queue Length (ft)	Delay (sec)	LOS	Approach Delay (sec)	Approach LOS	Intersection Delay (sec)	Intersection LOS
Garfield Boulevard & IL 120 (Two-Way Stop Control)	IL 120	EBT	702	-	-	-	-	0	-	0.9	-
		EBR	3	-	-	-	-				
	IL 120	WBL	18	0.025	2	9.6	A	0.3	-		
		WBT	536	-	-	-	-				
	Garfield Boulevard	NBL	5	0.176	15	17.5	C	17.5	C		
		NBR	51	-	-	0	-				
IL 83 & IL 120 (Signalized)	IL 120	EBL	20	0.06	19	11.9	B	33.3	C	37.3	D
		EBT	584	0.87	718	33.8	C				
		EBR	209	-	-	-	-				
	IL 120	WBL	13	0.13	m5	10.2	B	17.8	B		
		WBT	423	0.53	184	18	B				
		WBR	58	-	-	-	-				
	IL 83	NBL	111	0.53	m124	51.4	D	54.4	D		
		NBT	277	0.41	m150	55.6	E				
		NBR	15	-	-	-	-				
	IL 83	SBL	107	0.34	109	31.2	C	46.7	D		
		SBT	528	0.73	290	49.7	D				
		SBR	15	-	-	-	-				
Ivanhoe Road & IL 120 (Two-Way Stop Control)	IL 120	EBT	669	-	-	-	-	0	-	3.7	-
		EBR	37	-	-	-	-				
	IL 120	WBL	180	0.228	22	10.5	B	3	-		
		WBT	461	-	-	-	-				
	Ivanhoe Road	NBL	33	0.39	40	68.6	F	32.4	D		
		NBR	72	0.186	18	15.8	C				

Notes:
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Intersection Name (Control Type)	Link Name	Movement	Volume	v/c Ratio	95th Queue Length (ft)	Delay (sec)	LOS	Approach Delay (sec)	Approach LOS	Intersection Delay (sec)	Intersection LOS
Atkinson Road & IL 120 (Signalized)	IL 120	EBL	119	0.21	m34	3.3	A	10.5	B	23.5	C
		EBT	611	0.58	m540	11.9	B				
		EBR	11	-	-	-	-				
	IL 120	WBL	40	0.09	m5	2.7	A	8.2	A		
		WBT	490	0.48	372	9.9	A				
		WBR	83	0.09	m17	0.8	A				
	Atkinson Road	NBL	19	0.1	m32	36.4	D	41.8	D		
		NBT	62	0.38	m91	56.7	E				
		NBR	20	0.09	m0	0.8	A				
	Atkinson Road	SBL	210	0.78	#225	61.3	E	53.8	D		
		SBT	225	0.82	#328	72.1	E				
		SBR	132	0.38	58	10.8	B				
Ashford Lane/ Grayslake Chevrolet & IL 120 (Two-Way Stop Control)	IL 120	EBL	0	-	-	-	-	0	-	1.2	-
		EBT	827	-	-	-	-				
		EBR	14	-	-	-	-				
	IL 120	WBL	7	0.011	0	10.5	B	0.1	-		
		WBT	591	-	-	-	-				
		WBR	4	-	-	-	-				
	Grayslake Chevrolet	NBL	18	0.301	30	34.2	D	34.2	D		
		NBT	0	-	-	-	-				
		NBR	32	-	-	-	-				
	Ashford Lane	SBL	0	-	-	-	-	12.4	B		
		SBT	0	-	-	-	-				
		SBR	4	-	-	-	-				

Notes:
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2. The m symbol in the 95th percentile queue indicates that the volume is metered by an upstream signal.

Intersection Name (Control Type)	Link Name	Movement	Volume	v/c Ratio	95th Queue Length (ft)	Delay (sec)	LOS	Approach Delay (sec)	Approach LOS	Intersection Delay (sec)	Intersection LOS
Kerry Way & IL 120 (Two-Way Stop Control)	IL 120	EBL	9	0.011	0	9.1	A	0.1	-	0.5	-
		EBT	833	-	-	-	-				
		EBR	17	-	-	-	-				
	IL 120	WBL	7	0.01	0	9.9	A	0.1	-		
		WBT	595	-	-	-	-				
		WBR	12	-	-	-	-				
	Kerry Way	NBL	4	0.059	5	56.7	F	26.4	D		
		NBT	1	0.057	5	18.3	C				
		NBR	14	-	-	-	-				
	Kerry Way	SBL	2	0.027	2	51.3	F	28.7	D		
		SBT	0	-	-	-	-				
		SBR	3	-	-	-	-				
Harris Road/ Bobolink Drive & IL 120 (Two-Way Stop Control)	IL 120	EBL	15	0.024	2	10.5	B	0.2	-	2.5	-
		EBT	769	-	-	-	-				
		EBR	65	-	-	-	-				
	IL 120	WBL	41	0.056	5	9.9	A	0.6	-		
		WBT	584	-	-	-	-				
		WBR	13	-	-	-	-				
	Bobolink Drive	NBL	15	0.28	28	43.4	E	43.4	E		
		NBT	1	-	-	-	-				
		NBR	18	-	-	-	-				
	Harris Road	SBL	22	0.308	28	72.2	F	48.6	E		
		SBT	0	-	-	-	-				
		SBR	15	-	-	-	-				
Hospital Entrance & IL 120 (Two-Way Stop Control)	IL 120	EBT	790	-	-	-	-	0	-	1.4	-
		EBR	19	-	-	-	-				
	IL 120	WBL	133	0.167	15	10.3	B	1.8	-		
		WBT	630	-	-	-	-				
	Hospital Entrance	NBL	8	0.1	8	53.7	F	22.6	C		
		NBR	34	0.09	8	15.3	C				

Notes:
1. The # symbol in the 95th percentile queue indicates that the volume modeled exceeds capacity for that movement.
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Intersection Name (Control Type)	Link Name	Movement	Volume	v/c Ratio	95th Queue Length (ft)	Delay (sec)	LOS	Approach Delay (sec)	Approach LOS	Intersection Delay (sec)	Intersection LOS
US 45 & IL 120 (Signalized)	IL 120	EBL	79	0.27	m42	13.5	B	20.6	C	98.1	F
		EBT	593	0.48	241	25.6	C				
		EBR	152	0.22	m23	4.7	A				
	IL 120	WBL	344	1.12	#410	109.3	F	55.6	E		
		WBT	535	0.52	273	27	C				
		WBR	111	-	-	-	-				
	US 45	NBL	127	0.6	89	64.5	E	83.1	F		
		NBT	613	1.1	#476	112.3	F				
		NBR	251	0.5	179	21.4	C				
	US 45	SBL	291	0.7	164	56.9	E	178.8	F		
		SBT	1103	1.41	#791	226.2	F				
		SBR	101	0.19	60	12.4	B				
IL 120 & Sears Boulevard (Two-Way Stop Control)	IL 120	EBL	4	0.008	0	11.4	B	0	-	2.1	-
		EBT	1138	-	-	-	-				
	IL 120	WBT	953	-	-	-	-	0	-		
		WBR	5	-	-	-	-				
	Sears Boulevard	SBL	17	-	-	-	-	107.9	F		
		SBR	24	-	-	-	-				
Gravel Road/ John Mogg Road & IL 120 (Two-Way Stop Control)	IL 120	EBL	1	0.002	0	10.6	B	0	-	3.0	-
		EBT	1154	-	-	-	-				
		EBR	0	-	-	-	-				
	IL 120	WBL	0	-	-	-	-	0	-		
		WBT	953	-	-	-	-				
		WBR	6	-	-	-	-				
	John Mogg Road	NBL	1	0.104	8	367.4	F	367.4	F		
		NBT	0	-	-	-	-				
		NBR	0	-	-	-	-				
	Gravel Road	SBL	15	-	-	-	-	319.8	F		
		SBT	0	-	-	-	-				
		SBR	4	-	-	-	-				

Notes:
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Intersection Name (Control Type)	Link Name	Movement	Volume	v/c Ratio	95th Queue Length (ft)	Delay (sec)	LOS	Approach Delay (sec)	Approach LOS	Intersection Delay (sec)	Intersection LOS
IL 120 & Battershall Road (Two-Way Stop Control)	IL 120	EBL	2	0.003	0	10.5	B	0	-	0.6	-
		EBT	1167	-	-	-	-				
	IL 120	WBT	928	-	-	-	-	0	-		
		WBR	4	-	-	-	-				
	Battershall Road	SBL	4	-	-	-	-	36.4	E		
		SBR	31	-	-	-	-				
IL 120 & Mill Road (Signalized)	IL 120	EBL	36	0.14	14	4.4	A	45.4	D	39.8	D
		EBT	1135	1.02	#1199	46.7	D				
	IL 120	WBT	845	0.83	-	22.5	C	22.3	C		
		WBR	12	0.01	-	4.5	A				
	Mill Road	SBL	133	0.91	#835	77.8	E	77.8	E		
		SBR	87	-	8	-	-				
Almond Road & IL 120 (Two-Way Stop Control)	IL 120	EBT	1232	-	-	-	-	0	-	1.5	-
		EBR	36	-	-	-	-				
	IL 120	WBL	89	0.202	18	14.3	B	1.3	-		
		WBT	855	-	-	-	-				
	Almond Road	NBL	2	0.352	38	24.6	C	24.6	C		
		NBR	88	-	-	-	-				

Notes:
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Eastbound IL 120								
Segment		Flow Speed (mph)	Running Time (Sec)	Signal Delay (sec)	Travel Time (sec)	Distance (miles)	Arterial Speed (mph)	Arterial LOS
Begin	End							
West of IL 60	IL 60	55	20.1	5.2	25.3	0.21	29.5	B
IL 60	Fish Lake Road	48	34.4	10	44.4	0.4	32.5	B
Fish Lake Road	Wilson Road	47	89.8	18.4	108.2	1.17	38.8	A
Wilson Road	Fairfield Road	50	46	67.6	113.6	0.64	20.3	D
Fairfield Road	Cedar Lake Road	50	57.1	23	80.1	0.79	35.6	A
Cedar Lake Road	Centre Drive/ IL 134	43	121.9	42.8	164.7	1.46	31.9	B
Centre Drive/ IL 134	Hainesville Road	40	13.9	9.1	23	0.12	19	D
Hainesville Road	Alleghany Road	40	71.6	11.7	83.3	0.8	34.4	B
Alleghany Road	Lake Street	37	52.3	15.9	68.2	0.54	28.5	B
Lake Street	IL 83	35	63.2	33.8	97	0.62	22.8	C
IL 83	Atkinson Road	35	42.6	11.9	54.5	0.41	26.8	C
Atkinson Road	US 45	35	103.4	25.6	129	1.01	28.1	B
US 45	Mill Road	35	107.4	46.7	154.1	1.04	24.4	C
West of IL 60	East of Almond Road		823.7	321.7	1145.4	9.19	28.9	B

Westbound IL 120								
Segment		Flow Speed (mph)	Running Time (Sec)	Signal Delay (sec)	Travel Time (sec)	Distance (miles)	Arterial Speed (mph)	Arterial LOS
Begin	End							
East of Almond Road	Mill Road	35	56.6	22.5	79.1	0.55	25	C
Mill Road	US 45	35	107.4	27	134.4	1.04	28	C
US 45	Atkinson Road	35	103.4	9.9	113.3	1.01	32	B
Atkinson Road	IL 83	35	42.6	18	60.6	0.41	24.1	C
IL 83	Lake Street	35	63.2	21.7	84.9	0.62	26.1	C
Lake Street	Alleghany Road	39	50.1	6.9	57	0.54	34.1	B
Alleghany Road	Hainesville Road	40	71.6	17.9	89.5	0.8	32	B
Hainesville Road	Centre Drive/ IL 134	40	13.9	26.4	40.3	0.12	10.8	F
Centre Drive/ IL 134	Cedar Lake Road	46	114.2	30.3	144.5	1.46	36.3	A
Cedar Lake Road	Fairfield Road	50	57.1	41.8	98.9	0.79	28.8	B
Fairfield Road	Wilson Road	50	46	10.2	56.2	0.64	40.9	A
Wilson Road	Fish Lake Road	45	93.2	13.2	106.4	1.17	39.4	A
Fish Lake Road	IL 60	48	34.4	3.7	38.1	0.4	37.8	A
West of IL 60	East of Almond Road		853.7	249.5	1103.2	9.53	31.1	B

Illinois Department of Transportation

ILRX STUDY

IL60 to Almond Road

Appendix D. Synchro Reports

Existing PM

Intersection Name (Control Type)	Link Name	Movement	Volume	v/c Ratio	95th Queue Length (ft)	Delay (sec)	LOS	Approach Delay (sec)	Approach LOS	Intersection Delay (sec)	Intersection LOS
IL 60 & IL 120 (Signalized)	IL 120	EBT	845	0.38	-	9.8	A	8	A	20.7	C
		EBR	231	0.21	248	1.5	A				
	IL 120	WBL	4	0.05	32	56	E	8.9	A		
		WBT	758	0.33	m7	8.7	A				
	IL 60	NBL	453	0.87	195	70.7	E	70.7	E		
		NBR	0	-	-	-	-				
Fish Lake Road & IL 120 (Signalized)	IL 120	EBL	112	0.24	6	1.8	A	5.6	A	15.7	B
		EBT	693	0.58	251	6.5	A				
		EBR	40	0.04	0	0.1	A				
	IL 120	WBL	33	0.07	m18	5.7	A	20.1	C		
		WBT	674	0.58	726	21	C				
		WBR	8	0.01	m0	0	A				
	Fish Lake Road	NBL	23	0.13	45	50.2	D	43.9	D		
		NBT	82	0.42	133	63.7	E				
		NBR	44	0.19	9	3.6	A				
	Fish Lake Road	SBL	6	0.03	17	47.5	D	29	C		
		SBT	26	0.2	55	64	E				
		SBR	65	0.35	36	13.4	B				
Wilson Road & IL 120 (Signalized)	IL 120	EBL	84	0.25	56	15	B	35.9	D	56.0	E
		EBT	657	0.68	823	38.6	D				
		EBR	2	-	-	-	-				
	IL 120	WBL	5	0.02	m2	5.8	A	13.2	B		
		WBT	584	0.67	m161	15.6	B				
		WBR	155	0.19	m12	4.6	A				
	Wilson Road	NBL	7	0.06	20	37.6	D	188.5	F		
		NBT	305	1.27	#636	191.7	F				
		NBR	32	-	-	-	-				
	Wilson Road	SBL	119	0.71	#160	60.8	E	58.5	E		
		SBT	173	0.76	#494	57.6	E				
		SBR	124	-	-	-	-				

Notes:
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2. The m symbol in the 95th percentile queue indicates that the volume is metered by an upstream signal.

Intersection Name (Control Type)	Link Name	Movement	Volume	v/c Ratio	95th Queue Length (ft)	Delay (sec)	LOS	Approach Delay (sec)	Approach LOS	Intersection Delay (sec)	Intersection LOS
Fairfield Road & IL 120 (Signalized)	IL 120	EBL	183	0.96	m#272	80.9	F	69.5	E	67.3	E
		EBT	583	0.92	m#836	66.1	E				
		EBR	19	-	-	-	-				
	IL 120	WBL	105	0.55	92	29.9	C	63.2	E		
		WBT	559	0.96	#852	69	E				
		WBR	40	-	-	-	-				
	Fairfield Road	NBL	87	0.27	81	24.2	C	83.5	F		
		NBT	460	1.05	#878	91.9	F				
		NBR	159	-	-	-	-				
	Fairfield Road	SBL	40	0.31	43	27.3	C	37.9	D		
		SBT	192	0.56	318	39.3	D				
		SBR	117	-	-	-	-				
Cedar Lake Road & IL 120 (Signalized)	IL 120	EBL	151	0.41	95	12.7	B	26.9	C	30.7	C
		EBT	595	0.75	#728	30.3	C				
		EBR	32	-	-	-	-				
	IL 120	WBL	66	0.21	47	11.3	B	29.8	C		
		WBT	561	0.73	651	31.9	C				
		WBR	16	-	-	-	-				
	Cedar Lake Road	NBL	54	0.2	68	32.2	C	43.6	D		
		NBT	322	0.65	238	45.1	D				
		NBR	103	-	-	-	-				
	Cedar Lake Road	SBL	31	0.14	44	31.4	C	22.9	C		
		SBT	135	0.46	102	22	C				
		SBR	161	-	-	-	-				

Notes:
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Intersection Name (Control Type)	Link Name	Movement	Volume	v/c Ratio	95th Queue Length (ft)	Delay (sec)	LOS	Approach Delay (sec)	Approach LOS	Intersection Delay (sec)	Intersection LOS
Wildspring Road & IL 120 (Two-Way Stop Control)	IL 120	EBL	11	0.015	0	9.9	A	0.2	-	4.1	-
		EBT	684	-	-	-	-				
		EBR	34	-	-	-	-				
	IL 120	WBL	155	0.187	18	10.1	B	2	-		
		WBT	624	-	-	-	-				
		WBR	37	-	-	-	-				
	Wildspring Road	NBL	12	0.212	18	81.7	F	22.8	C		
		NBT	0	0.3	30	17	C				
		NBR	123	-	-	-	-				
	Wildspring Road	SBL	13	0.347	30	140.2	F	95.6	F		
		SBT	0	-	-	-	-				
		SBR	7	-	-	-	-				
Curan Road & IL 120 (Two-Way Stop Control)	IL 120	EBT	797	-	-	-	-	0	-	1.0	-
		EBR	23	-	-	-	-				
	IL 120	WBL	56	0.077	5	10.1	B	0.7	-		
		WBT	806	-	-	-	-				
	Curan Road	NBL	10	0.05	5	23	C	17.9	C		
		NBR	50	0.148	12	16.9	C				
IL 120 & Porter Drive (Two-Way Stop Control)	IL 120	EBL	55	0.085	8	10.8	B	0.7	-	1.6	-
		EBT	792	-	-	-	-				
	IL 120	WBT	827	-	-	-	-	0	-		
		WBR	13	-	-	-	-				
	Porter Drive	SBL	12	-	-	-	-	45.9	E		
		SBR	35	-	-	-	-				

Notes:
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2. The m symbol in the 95th percentile queue indicates that the volume is metered by an upstream signal.

Intersection Name (Control Type)	Link Name	Movement	Volume	v/c Ratio	95th Queue Length (ft)	Delay (sec)	LOS	Approach Delay (sec)	Approach LOS	Intersection Delay (sec)	Intersection LOS
Centre Drive/IL 134 & IL 120 (Signalized)	IL 120	EBL	35	0.11	22	6.5	A	16.4	B	29.0	C
		EBT	774	0.65	746	16.8	B				
		EBR	11	-	-	-	-				
	IL 120	WBL	11	0.03	m2	4.7	A	12.5	B		
		WBT	813	0.7	m698	12.6	B				
		WBR	0	-	-	-	-				
	Centre Drive	NBL	6	-	-	-	-	51.5	D		
		NBT	5	0.23	43	51.5	D				
		NBR	10	-	-	-	-				
	IL 134	SBL	199	-	-	-	-	135.4	F		
		SBT	7	1.07	#433	145.1	F				
		SBR	15	0.06	0	0.5	A				
Hainesville Road & IL 120 (Signalized)	IL 120	EBL	371	0.87	m258	38	D	17.5	B	31.7	C
		EBT	608	0.47	m153	5.1	A				
		EBR	4	-	-	-	-				
	IL 120	WBL	5	0.01	3	5	A	21	C		
		WBT	787	0.74	848	26.8	C				
		WBR	234	0.23	36	2	A				
	Hainesville Road	NBL	7	-	-	-	-	115.9	F		
		NBT	12	0.59	#73	115.9	F				
		NBR	3	-	-	-	-				
	Hainesville Road	SBL	176	0.97	#353	123.2	F	69.6	E		
		SBT	4	0.95	#351	47.9	D				
		SBR	430	-	-	-	-				

Notes:
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2. The m symbol in the 95th percentile queue indicates that the volume is metered by an upstream signal.

Intersection Name (Control Type)	Link Name	Movement	Volume	v/c Ratio	95th Queue Length (ft)	Delay (sec)	LOS	Approach Delay (sec)	Approach LOS	Intersection Delay (sec)	Intersection LOS
School Access/ Misty Hi Lane & IL 120 (Two-Way Stop Control)	IL 120	EBL	9	0.02	2	12.8	B	0.1	-	0.9	-
		EBT	767	-	-	-	-				
		EBR	11	-	-	-	-				
	IL 120	WBL	7	0.01	0	9.8	A	0.1	-		
		WBT	1012	-	-	-	-				
		WBR	38	-	-	-	-				
	Misty Hi Lane	NBL	8	0.239	20	108.5	F	73.6	F		
		NBT	2	0.019	2	15.5	C				
		NBR	6	-	-	-	-				
	School Access	SBL	3	0.072	5	91.1	F	43	E		
		SBT	0	-	-	-	-				
		SBR	6	-	-	-	-				
IL 120 & Deer Point Road (Two-Way Stop Control)	IL 120	EBL	12	0.023	2	11.6	B	0.2	-	1.5	-
		EBT	764	-	-	-	-				
	IL 120	WBT	1045	-	-	-	-	0	-		
		WBR	58	-	-	-	-				
	Deer Point Road	SBL	27	0.41	40	88.4	F	67.7	F		
		SBR	12	-	-	-	-				
Alleghany Road & IL 120 (Signalized)	IL 120	EBL	0	-	-	-	-	19.7	B	28.0	C
		EBT	544	0.59	572	26.5	C				
		EBR	224	0.25	49	3.2	A				
	IL 120	WBL	99	0.26	74	12.3	B	19.5	B		
		WBT	658	0.62	633	20.6	C				
		WBR	3	-	-	-	-				
	Alleghany Road	NBL	420	0.9	451	68.9	E	50.2	D		
		NBT	0	0.24	0	0.8	A				
		NBR	158	-	-	-	-				
	Alleghany Road	SBL	3	0.03	8	46	D	23	C		
		SBT	0	0.01	0	0	A				
		SBR	3	-	-	-	-				

Notes:
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2. The m symbol in the 95th percentile queue indicates that the volume is metered by an upstream signal.

Intersection Name (Control Type)	Link Name	Movement	Volume	v/c Ratio	95th Queue Length (ft)	Delay (sec)	LOS	Approach Delay (sec)	Approach LOS	Intersection Delay (sec)	Intersection LOS
Lake Street & IL 120 (Signalized)	IL 120	EBL	216	0.9	#234	51.1	D	26.2	C	29.1	C
		EBT	502	0.52	381	16	B				
		EBR	9	0.01	0	0	A				
	IL 120	WBL	64	0.14	33	6.4	A	29.9	C		
		WBT	689	0.87	#883	31.8	C				
		WBR	96	-	-	-	-				
	Lake Street	NBL	20	0.1	33	35.6	D	49.9	D		
		NBT	62	0.53	110	53.2	D				
		NBR	24	-	-	-	-				
	Lake Street	SBL	49	0.23	65	38.1	D	26.4	C		
		SBT	68	0.34	99	51.1	D				
		SBR	168	0.56	58	13	B				
Sommerset Drive & IL 120 (Two-Way Stop Control)	IL 120	EBT	644	-	-	-	-	0	-	0.5	-
		EBR	13	-	-	-	-				
	IL 120	WBL	32	0.039	2	9.3	A	0.4	-		
		WBT	761	-	-	-	-				
	Sommerset Drive	NBL	6	0.09	8	20.9	C	20.9	C		
		NBR	15	-	-	-	-				
Lincoln Avenue & IL 120 (Two-Way Stop Control)	IL 120	EBT	653	-	-	-	-	0	-	0.4	-
		EBR	6	-	-	-	-				
	IL 120	WBL	14	0.019	2	9.5	A	0.2	-		
		WBT	790	-	-	-	-				
		NBL	3	0.076	5	17	C	17	C		
		NBR	20	-	-	-	-				

Notes:
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Intersection Name (Control Type)	Link Name	Movement	Volume	v/c Ratio	95th Queue Length (ft)	Delay (sec)	LOS	Approach Delay (sec)	Approach LOS	Intersection Delay (sec)	Intersection LOS
Garfield Boulevard & IL 120 (Two-Way Stop Control)	IL 120	EBT	667	-	-	-	-	0	-	0.6	-
		EBR	6	-	-	-	-				
	IL 120	WBL	33	0.044	2	9.6	A	0.4	-		
		WBT	802	-	-	-	-				
	Garfield Boulevard	NBL	2	0.109	10	16.4	C	16.4	C		
		NBR	33	-	-	0	-				
IL 83 & IL 120 (Signalized)	IL 120	EBL	29	0.21	39	23.8	C	43.9	D	44.3	D
		EBT	571	0.88	770	44.7	D				
		EBR	138	-	-	-	-				
	IL 120	WBL	24	0.29	m13	21	C	33.8	C		
		WBT	551	0.83	696	34.2	C				
		WBR	96	-	-	-	-				
	IL 83	NBL	234	0.72	m219	47.5	D	51.1	D		
		NBT	552	0.56	m273	52.5	D				
		NBR	16	-	-	-	-				
	IL 83	SBL	106	0.39	106	30.1	C	47.4	D		
		SBT	471	0.63	318	50.9	D				
		SBR	54	-	-	-	-				
Ivanhoe Road & IL 120 (Two-Way Stop Control)	IL 120	EBT	674	-	-	-	-	0	-	4.8	-
		EBR	19	-	-	-	-				
	IL 120	WBL	133	0.166	15	10.1	B	1.8	-		
		WBT	624	-	-	-	-				
	Ivanhoe Road	NBL	47	0.568	65	89.8	F	37.8	E		
		NBR	121	0.311	32	17.6	C				

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Intersection Name (Control Type)	Link Name	Movement	Volume	v/c Ratio	95th Queue Length (ft)	Delay (sec)	LOS	Approach Delay (sec)	Approach LOS	Intersection Delay (sec)	Intersection LOS
Atkinson Road & IL 120 (Signalized)	IL 120	EBL	195	0.41	m123	8.9	A	20.2	C	27.3	C
		EBT	581	0.61	m661	23.8	C				
		EBR	19	-	-	-	-				
	IL 120	WBL	114	0.27	57	9.1	A	18.4	B		
		WBT	562	0.59	496	23.3	C				
		WBR	133	0.15	51	5.7	A				
	Atkinson Road	NBL	59	0.2	m79	41	D	58.4	E		
		NBT	180	0.74	249	75.7	E				
		NBR	36	0.12	m0	0.8	A				
	Atkinson Road	SBL	111	0.49	137	47.9	D	38.3	D		
		SBT	132	0.46	186	58.6	E				
		SBR	136	0.37	61	10.7	B				
Ashford Lane/ Grayslake Chevrolet & IL 120 (Two-Way Stop Control)	IL 120	EBL	0	-	-	-	-	0	-	0.6	-
		EBT	709	-	-	-	-				
		EBR	15	-	-	-	-				
	IL 120	WBL	17	0.024	2	10	A	0.2	-		
		WBT	794	-	-	-	-				
		WBR	7	-	-	-	-				
	Grayslake Chevrolet	NBL	8	0.15	12	33.8	D	33.8	D		
		NBT	1	-	-	-	-				
		NBR	12	-	-	-	-				
	Ashford Lane	SBL	0	-	-	-	-	15	C		
		SBT	0	-	-	-	-				
		SBR	7	-	-	-	-				

Notes:
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2. The m symbol in the 95th percentile queue indicates that the volume is metered by an upstream signal.

Intersection Name (Control Type)	Link Name	Movement	Volume	v/c Ratio	95th Queue Length (ft)	Delay (sec)	LOS	Approach Delay (sec)	Approach LOS	Intersection Delay (sec)	Intersection LOS
Kerry Way & IL 120 (Two-Way Stop Control)	IL 120	EBL	11	0.016	0	9.9	A	0.2	-	2.5	-
		EBT	696	-	-	-	-				
		EBR	14	-	-	-	-				
	IL 120	WBL	11	0.014	0	9.3	A	0.1	-		
		WBT	777	-	-	-	-				
		WBR	10	-	-	-	-				
	Kerry Way	NBL	25	0.431	42	99.9	F	65.7	F		
		NBT	2	0.066	5	18.1	C				
		NBR	16	-	-	-	-				
	Kerry Way	SBL	11	0.166	15	64.7	F	36.4	E		
		SBT	0	-	-	-	-				
		SBR	16	-	-	-	-				
Harris Road/ Bobolink Drive & IL 120 (Two-Way Stop Control)	IL 120	EBL	10	0.019	2	11.6	B	0.2	-	7.9	-
		EBT	688	-	-	-	-				
		EBR	25	-	-	-	-				
	IL 120	WBL	41	0.051	5	9.4	A	0.5	-		
		WBT	738	-	-	-	-				
		WBR	24	-	-	-	-				
	Bobolink Drive	NBL	47	0.883	130	131.8	F	131.8	F		
		NBT	5	-	-	-	-				
		NBR	36	-	-	-	-				
	Harris Road	SBL	7	0.116	10	68.5	F	34.6	D		
		SBT	0	-	-	-	-				
		SBR	13	-	-	-	-				
Hospital Entrance & IL 120 (Two-Way Stop Control)	IL 120	EBT	716	-	-	-	-	0	-	2.0	-
		EBR	15	-	-	-	-				
	IL 120	WBL	64	0.075	5	9.5	A	0.7	-		
		WBT	783	-	-	-	-				
	Hospital Entrance	NBL	20	0.204	18	50	F	21.7	C		
		NBR	107	0.257	25	16.4	C				

Notes:
1. The # symbol in the 95th percentile queue indicates that the volume modeled exceeds capacity for that movement.
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Intersection Name (Control Type)	Link Name	Movement	Volume	v/c Ratio	95th Queue Length (ft)	Delay (sec)	LOS	Approach Delay (sec)	Approach LOS	Intersection Delay (sec)	Intersection LOS
US 45 & IL 120 (Signalized)	IL 120	EBL	150	0.74	#150	37.7	D	31.1	C	76.9	E
		EBT	577	0.56	292	34.4	C				
		EBR	96	0.16	0	0.9	A				
	IL 120	WBL	224	0.63	149	22.2	C	29.3	C		
		WBT	640	0.74	391	31	C				
		WBR	266	-	-	-	-				
	US 45	NBL	118	0.49	80	57.8	E	149.9	F		
		NBT	1044	1.36	#741	205.5	F				
		NBR	375	0.59	265	24.2	C				
	US 45	SBL	173	0.78	#128	74.8	E	54.3	D		
		SBT	660	0.87	#411	55.9	E				
		SBR	89	0.16	16	2.4	A				
IL 120 & Sears Boulevard (Two-Way Stop Control)	IL 120	EBL	14	0.034	2	12.9	B	0.2	-	1.1	-
		EBT	1088	-	-	-	-				
	IL 120	WBT	1124	-	-	-	-	0	-		
		WBR	21	-	-	-	-				
	Sears Boulevard	SBL	7	-	-	-	-	78	F		
		SBR	21	-	-	-	-				
Gravel Road/ John Mogg Road & IL 120 (Two-Way Stop Control)	IL 120	EBL	3	0.006	0	11.8	B	0	-	0.9	-
		EBT	1088	-	-	-	-				
		EBR	4	-	-	-	-				
	IL 120	WBL	0	-	-	-	-	0	-		
		WBT	1139	-	-	-	-				
		WBR	9	-	-	-	-				
	John Mogg Road	NBL	1	0.157	12	196.9	F	196.9	F		
		NBT	0	-	-	-	-				
		NBR	2	-	-	-	-				
	Gravel Road	SBL	4	-	-	-	-	151.8	F		
		SBT	0	-	-	-	-				
		SBR	5	-	-	-	-				

Notes:
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Intersection Name (Control Type)	Link Name	Movement	Volume	v/c Ratio	95th Queue Length (ft)	Delay (sec)	LOS	Approach Delay (sec)	Approach LOS	Intersection Delay (sec)	Intersection LOS
IL 120 & Battershall Road (Two-Way Stop Control)	IL 120	EBL	2	0.004	0	11.8	B	0	-	0.4	-
		EBT	1092	-	-	-	-				
	IL 120	WBT	1135	-	-	-	-	0	-		
		WBR	8	-	-	-	-				
	Battershall Road	SBL	3	-	-	-	-	52.4	F		
		SBR	13	-	-	-	-				
IL 120 & Mill Road (Signalized)	IL 120	EBL	68	0.39	26	9.3	A	15.2	B	27.4	C
		EBT	1027	0.84	#878	15.6	B				
	IL 120	WBT	1080	0.99	-	39.9	D	37.7	D		
		WBR	69	0.07	-	3.1	A				
	Mill Road	SBL	43	0.62	#1261	42.5	D	42.5	D		
		SBR	63	-	23	-	-				
Almond Road & IL 120 (Two-Way Stop Control)	IL 120	EBT	1051	-	-	-	-	0	-	17.1	-
		EBR	19	-	-	-	-				
	IL 120	WBL	112	0.21	20	12.8	B	1.1	-		
		WBT	1131	-	-	-	-				
	Almond Road	NBL	18	1.424	258	317.8	F	317.8	F		
		NBR	109	-	-	-	-				

Notes:
1. The # symbol in the 95th percentile queue indicates that the volume modeled exceeds capacity for that movement.
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Eastbound IL 120								
Segment		Flow Speed (mph)	Running Time (Sec)	Signal Delay (sec)	Travel Time (sec)	Distance (miles)	Arterial Speed (mph)	Arterial LOS
Begin	End							
West of IL 60	IL 60	55	20.1	9.8	29.9	0.21	24.9	C
IL 60	Fish Lake Road	48	34.4	6.5	40.9	0.4	35.3	A
Fish Lake Road	Wilson Road	47	89.8	38.6	128.4	1.17	32.7	B
Wilson Road	Fairfield Road	50	46	66.1	112.1	0.64	20.5	D
Fairfield Road	Cedar Lake Road	50	57.1	30.3	87.4	0.79	32.6	B
Cedar Lake Road	Centre Drive/ IL 134	43	121.9	16.8	138.7	1.46	37.8	A
Centre Drive/ IL 134	Hainesville Road	40	13.9	4.7	18.6	0.12	23.5	C
Hainesville Road	Alleghany Road	40	71.6	26.5	98.1	0.8	29.2	B
Alleghany Road	Lake Street	37	52.3	16	68.3	0.54	28.4	B
Lake Street	IL 83	35	63.2	44.7	107.9	0.62	20.5	D
IL 83	Atkinson Road	35	42.6	23.8	66.4	0.41	22	C
Atkinson Road	US 45	34	105.9	34.4	140.3	1.01	25.8	C
US 45	Mill Road	35	107.4	15.6	123	1.04	30.5	B
West of IL 60	East of Almond Road		826.2	333.8	1160	9.19	28.5	B

Westbound IL 120								
Segment		Flow Speed (mph)	Running Time (Sec)	Signal Delay (sec)	Travel Time (sec)	Distance (miles)	Arterial Speed (mph)	Arterial LOS
Begin	End							
East of Almond Road	Mill Road	35	56.6	39.9	96.5	0.55	20.5	D
Mill Road	US 45	35	107.4	31	138.4	1.04	27.1	C
US 45	Atkinson Road	34	105.1	23.3	128.4	1.01	28.2	B
Atkinson Road	IL 83	35	42.6	34.2	76.8	0.41	19	D
IL 83	Lake Street	35	63.2	31.8	95	0.62	23.3	C
Lake Street	Alleghany Road	37	52.3	20.6	72.9	0.54	26.6	C
Alleghany Road	Hainesville Road	40	71.6	26.4	98	0.8	29.2	B
Hainesville Road	Centre Drive/ IL 134	40	13.9	11.6	25.5	0.12	17.1	D
Centre Drive/ IL 134	Cedar Lake Road	46	114.2	31.9	146.1	1.46	35.9	A
Cedar Lake Road	Fairfield Road	50	57.1	69	126.1	0.79	22.6	C
Fairfield Road	Wilson Road	50	46	15.6	61.6	0.64	37.4	A
Wilson Road	Fish Lake Road	45	93.2	21	114.2	1.17	36.7	A
Fish Lake Road	IL 60	55	32.8	8.7	41.5	0.4	34.7	B
West of IL 60	East of Almond Road		856	365	1221	9.53	28.1	B

Illinois Department of Transportation

ILRX STUDY

IL60 to Almond Road

Appendix D. Synchro Reports

2050 No Build AM

Intersection Name (Control Type)	Link Name	Movement	Volume	v/c Ratio	95th Queue Length (ft)	Delay (sec)	LOS	Approach Delay (sec)	Approach LOS	Intersection Delay (sec)	Intersection LOS
IL 60 & IL 120 (Signalized)	IL 120	EBT	815	0.34	-	5.9	A	4.2	A	10.0	A
		EBR	592	0.47	175	1.7	A				
	IL 120	WBL	1	0.01	35	55	D	5.5	A		
		WBT	818	0.33	m1	5.4	A				
	IL 60	NBL	234	0.67	173	60.7	E	60.5	E		
		NBR	2	0.01	-	32.5	C				
Fish Lake Road & IL 120 (Signalized)	IL 120	EBL	55	0.13	12	3.9	A	9.8	A	14.8	B
		EBT	736	0.63	237	10.5	B				
		EBR	26	0.03	0	0	A				
	IL 120	WBL	21	0.05	12	4.6	A	14	B		
		WBT	686	0.59	491	14.3	B				
		WBR	3	0	0	0	A				
	Fish Lake Road	NBL	28	0.14	45	42.5	D	27.6	C		
		NBT	43	0.19	71	49	D				
		NBR	62	0.23	22	6.1	A				
	Fish Lake Road	SBL	5	0.02	15	39.2	D	32	C		
		SBT	66	0.4	99	59	E				
		SBR	105	0.44	55	14.9	B				
Wilson Road & IL 120 (Signalized)	IL 120	EBL	116	0.41	76	15.6	B	28.9	C	36.2	D
		EBT	669	0.78	780	31.2	C				
		EBR	18	-	-	-	-				
	IL 120	WBL	15	0.09	m3	6.5	A	14.6	B		
		WBT	589	0.71	m622	18	B				
		WBR	138	0.17	m0	0.6	A				
	Wilson Road	NBL	20	0.2	35	36.6	D	75	E		
		NBT	213	0.86	#408	77.9	E				
		NBR	50	-	-	-	-				
	Wilson Road	SBL	164	0.67	189	48.3	D	57.1	E		
		SBT	255	0.82	#517	61.2	E				
		SBR	101	-	-	-	-				

Notes:
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2. The m symbol in the 95th percentile queue indicates that the volume is metered by an upstream signal.

Intersection Name (Control Type)	Link Name	Movement	Volume	v/c Ratio	95th Queue Length (ft)	Delay (sec)	LOS	Approach Delay (sec)	Approach LOS	Intersection Delay (sec)	Intersection LOS
Fairfield Road & IL 120 (Signalized)	IL 120	EBL	133	0.6	m73	23	C	67.9	E	78.9	E
		EBT	635	1.04	#534	75.9	E				
		EBR	115	-	-	-	-				
	IL 120	WBL	176	1.08	#299	122.4	F	60.7	E		
		WBT	589	0.8	#737	42.8	D				
		WBR	18	-	-	-	-				
	Fairfield Road	NBL	23	0.2	32	28.3	C	37	D		
		NBT	170	0.43	242	37.9	D				
		NBR	61	-	-	-	-				
	Fairfield Road	SBL	49	0.15	56	26.4	C	127.7	F		
		SBT	528	1.17	#994	135.3	F				
		SBR	130	-	-	-	-				
Cedar Lake Road & IL 120 (Signalized)	IL 120	EBL	166	0.46	91	11.9	B	22.6	C	29.6	C
		EBT	517	0.72	545	25.7	C				
		EBR	62	-	-	-	-				
	IL 120	WBL	87	0.25	52	9.8	A	29.7	C		
		WBT	551	0.79	649	32.5	C				
		WBR	63	-	-	-	-				
	Cedar Lake Road	NBL	33	0.19	54	37	D	37.4	D		
		NBT	207	0.4	162	37.4	D				
		NBR	68	-	-	-	-				
	Cedar Lake Road	SBL	15	0.06	31	35.1	D	35.7	D		
		SBT	248	0.65	225	35.7	D				
		SBR	199	-	-	-	-				

Notes:
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2. The m symbol in the 95th percentile queue indicates that the volume is metered by an upstream signal.

Intersection Name (Control Type)	Link Name	Movement	Volume	v/c Ratio	95th Queue Length (ft)	Delay (sec)	LOS	Approach Delay (sec)	Approach LOS	Intersection Delay (sec)	Intersection LOS
Wildspring Road & IL 120 (Two-Way Stop Control)	IL 120	EBL	2	0.003	0	10	B	0	-	4.9	-
		EBT	580	-	-	-	-				
		EBR	18	-	-	-	-				
	IL 120	WBL	93	0.102	8	9.2	A	1.1	-		
		WBT	658	-	-	-	-				
		WBR	10	-	-	-	-				
	Wildspring Road	NBL	32	0.37	38	66.8	F	25.6	D		
		NBT	3	0.33	35	16.6	C				
		NBR	143	-	-	-	-				
	Wildspring Road	SBL	20	0.359	32	98.4	F	68.2	F		
		SBT	0	-	-	-	-				
		SBR	11	-	-	-	-				
Curan Road & IL 120 (Two-Way Stop Control)	IL 120	EBT	738	-	-	-	-	0	-	1.2	-
		EBR	5	-	-	-	-				
	IL 120	WBL	22	0.028	2	9.5	A	0.3	-		
		WBT	743	-	-	-	-				
	Curan Road	NBL	18	0.075	5	20.4	C	17.5	C		
		NBR	78	0.213	20	16.8	C				
IL 120 & Porter Drive (Two-Way Stop Control)	IL 120	EBL	44	0.061	5	10.1	B	0.5	-	1.4	-
		EBT	772	-	-	-	-				
	IL 120	WBT	711	-	-	-	-	0	-		
		WBR	16	-	-	-	-				
	Porter Drive	SBL	10	-	-	-	-	28	D		
		SBR	54	-	-	-	-				

Notes:
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2. The m symbol in the 95th percentile queue indicates that the volume is metered by an upstream signal.

Intersection Name (Control Type)	Link Name	Movement	Volume	v/c Ratio	95th Queue Length (ft)	Delay (sec)	LOS	Approach Delay (sec)	Approach LOS	Intersection Delay (sec)	Intersection LOS
Centre Drive/IL 134 & IL 120 (Signalized)	IL 120	EBL	14	0.07	17	14.4	B	56.9	E	66.7	E
		EBT	735	0.95	#1012	57.7	E				
		EBR	30	-	-	-	-				
	IL 120	WBL	47	0.37	m24	23.8	C	31.6	C		
		WBT	688	0.8	#862	32.1	C				
		WBR	0	-	-	-	-				
	Centre Drive	NBL	22	-	-	-	-	156.6	F		
		NBT	23	1.04	#206	156.6	F				
		NBR	55	-	-	-	-				
	IL 134	SBL	408	-	-	-	-	119.9	F		
		SBT	34	0.98	#658	124.2	F				
		SBR	16	0.03	0	0.1	A				
Hainesville Road & IL 120 (Signalized)	IL 120	EBL	293	0.67	m100	12	B	21.9	C	33.7	C
		EBT	887	0.79	m692	25.1	C				
		EBR	18	-	-	-	-				
	IL 120	WBL	3	0.02	4	8.3	A	21.2	C		
		WBT	598	0.62	612	25.5	C				
		WBR	140	0.15	37	3.1	A				
	Hainesville Road	NBL	9	-	-	-	-	54.4	D		
		NBT	5	0.28	44	54.4	D				
		NBR	7	-	-	-	-				
	Hainesville Road	SBL	340	1.09	#510	124.8	F	66.6	E		
		SBT	23	0.64	111	11.2	B				
		SBR	334	-	-	-	-				

Notes:
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Intersection Name (Control Type)	Link Name	Movement	Volume	v/c Ratio	95th Queue Length (ft)	Delay (sec)	LOS	Approach Delay (sec)	Approach LOS	Intersection Delay (sec)	Intersection LOS
School Access/ Misty Hi Lane & IL 120 (Two-Way Stop Control)	IL 120	EBL	2	0.003	0	10.3	B	0	-	37.5	-
		EBT	1110	-	-	-	-				
		EBR	122	-	-	-	-				
	IL 120	WBL	90	0.197	18	14.1	B	1.6	-		
		WBT	682	-	-	-	-				
		WBR	9	-	-	-	-				
	Misty Hi Lane	NBL	50	2.943	185	1296.4	F	574.9	F		
		NBT	2	0.353	38	31.2	D				
		NBR	69	-	-	-	-				
	School Access	SBL	15	1.008	62	551.3	F	290.6	F		
		SBT	13	-	-	-	-				
		SBR	9	-	-	-	-				
IL 120 & Deer Point Road (Two-Way Stop Control)	IL 120	EBL	19	0.027	2	9.9	A	0.2	-	11.1	-
		EBT	1175	-	-	-	-				
	IL 120	WBT	747	-	-	-	-	0	-		
		WBR	31	-	-	-	-				
	Deer Point Road	SBL	68	1.269	158	328.1	F	224.1	F		
		SBR	34	-	-	-	-				
Alleghany Road & IL 120 (Signalized)	IL 120	EBL	1	0	2	4	A	8.9	A	11.6	B
		EBT	744	0.63	567	13.5	B				
		EBR	493	0.42	42	1.8	A				
	IL 120	WBL	97	0.23	38	4.3	A	6.9	A		
		WBT	604	0.46	362	7.3	A				
		WBR	1	-	-	-	-				
	Alleghany Road	NBL	134	0.69	154	66.1	E	38.2	D		
		NBT	0	0.28	0	1.8	A				
		NBR	103	-	-	-	-				
	Alleghany Road	SBL	3	0.04	10	46.3	D	36.4	D		
		SBT	1	0.07	17	32.6	C				
		SBR	7	-	-	-	-				

Notes:
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Intersection Name (Control Type)	Link Name	Movement	Volume	v/c Ratio	95th Queue Length (ft)	Delay (sec)	LOS	Approach Delay (sec)	Approach LOS	Intersection Delay (sec)	Intersection LOS
Lake Street & IL 120 (Signalized)	IL 120	EBL	252	0.71	117	17.9	B	16.1	B	24.4	C
		EBT	569	0.6	409	16.1	B				
		EBR	29	0.03	0	0.1	A				
	IL 120	WBL	20	0.05	13	7	A	27.5	C		
		WBT	474	0.75	522	28.2	C				
		WBR	105	-	-	-	-				
	Lake Street	NBL	24	0.11	36	31.9	C	52.1	D		
		NBT	101	0.69	164	55.4	E				
		NBR	45	-	-	-	-				
	Lake Street	SBL	95	0.48	104	40.9	D	25.6	C		
		SBT	86	0.33	111	44.3	D				
		SBR	204	0.55	60	10.6	B				
Sommerset Drive & IL 120 (Two-Way Stop Control)	IL 120	EBT	707	-	-	-	-	0	-	0.5	-
		EBR	5	-	-	-	-				
	IL 120	WBL	35	0.045	2	9.5	A	0.6	-		
		WBT	551	-	-	-	-				
	Sommerset Drive	NBL	0	0.052	5	14.2	B	14.2	B		
		NBR	20	-	-	-	-				
Lincoln Avenue & IL 120 (Two-Way Stop Control)	IL 120	EBT	725	-	-	-	-	0	-	0.6	-
		EBR	2	-	-	-	-				
	IL 120	WBL	5	0.007	0	9.8	A	0.1	-		
		WBT	583	-	-	-	-				
		NBL	3	0.132	12	16.6	C	16.6	C		
		NBR	41	-	-	-	-				

Notes:
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Intersection Name (Control Type)	Link Name	Movement	Volume	v/c Ratio	95th Queue Length (ft)	Delay (sec)	LOS	Approach Delay (sec)	Approach LOS	Intersection Delay (sec)	Intersection LOS
Garfield Boulevard & IL 120 (Two-Way Stop Control)	IL 120	EBT	763	-	-	-	-	0	-	0.9	-
		EBR	3	-	-	-	-				
	IL 120	WBL	19	0.028	2	9.9	A	0.3	-		
		WBT	583	-	-	-	-				
	Garfield Boulevard	NBL	5	0.205	20	19.3	C	19.3	C		
		NBR	54	-	-	0	-				
IL 83 & IL 120 (Signalized)	IL 120	EBL	21	0.1	26	19.2	B	84.3	F	66.0	E
		EBT	618	1.08	#1010	86	F				
		EBR	221	-	-	-	-				
	IL 120	WBL	15	0.35	m14	32.3	C	21.8	C		
		WBT	481	0.71	541	21.5	C				
		WBR	66	-	-	-	-				
	IL 83	NBL	188	1	m154	82.8	F	79.5	E		
		NBT	474	0.58	m205	78.3	E				
		NBR	24	-	-	-	-				
	IL 83	SBL	187	0.58	152	29.2	C	65.7	E		
		SBT	958	1.01	#579	72.7	E				
		SBR	26	-	-	-	-				
Ivanhoe Road & IL 120 (Two-Way Stop Control)	IL 120	EBT	779	-	-	-	-	0	-	5.6	-
		EBR	50	-	-	-	-				
	IL 120	WBL	203	0.288	30	11.7	B	3.3	-		
		WBT	525	-	-	-	-				
	Ivanhoe Road	NBL	37	0.667	70	145.8	F	57.4	F		
		NBR	85	0.259	25	18.9	C				

Notes:
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Intersection Name (Control Type)	Link Name	Movement	Volume	v/c Ratio	95th Queue Length (ft)	Delay (sec)	LOS	Approach Delay (sec)	Approach LOS	Intersection Delay (sec)	Intersection LOS
Atkinson Road & IL 120 (Signalized)	IL 120	EBL	135	0.34	m32	5.6	A	18.4	B	23.7	C
		EBT	717	0.78	m527	20.8	C				
		EBR	12	-	-	-	-				
	IL 120	WBL	47	0.17	m9	5.3	A	13.2	B		
		WBT	571	0.64	m177	15.9	B				
		WBR	97	0.12	m1	1.1	A				
	Atkinson Road	NBL	22	0.1	18	17.1	B	29.6	C		
		NBT	114	0.52	88	39	D				
		NBR	28	0.1	0	0.7	A				
	Atkinson Road	SBL	237	0.66	231	43.8	D	40.8	D		
		SBT	280	0.71	#319	54.1	D				
		SBR	135	0.3	53	8.1	A				
Ashford Lane/ Grayslake Chevrolet & IL 120 (Two-Way Stop Control)	IL 120	EBL	0	-	-	-	-	0	-	2.1	-
		EBT	966	-	-	-	-				
		EBR	16	-	-	-	-				
	IL 120	WBL	8	0.015	0	11.3	B	0.1	-		
		WBT	689	-	-	-	-				
		WBR	5	-	-	-	-				
	Grayslake Chevrolet	NBL	21	0.492	57	59.4	F	59.4	F		
		NBT	0	-	-	-	-				
		NBR	37	-	-	-	-				
	Ashford Lane	SBL	0	-	-	-	-	13.5	B		
		SBT	0	-	-	-	-				
		SBR	5	-	-	-	-				

Notes:
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2. The m symbol in the 95th percentile queue indicates that the volume is metered by an upstream signal.

Intersection Name (Control Type)	Link Name	Movement	Volume	v/c Ratio	95th Queue Length (ft)	Delay (sec)	LOS	Approach Delay (sec)	Approach LOS	Intersection Delay (sec)	Intersection LOS
Kerry Way & IL 120 (Two-Way Stop Control)	IL 120	EBL	10	0.013	0	9.5	A	0.1	-	0.7	-
		EBT	973	-	-	-	-				
		EBR	20	-	-	-	-				
	IL 120	WBL	8	0.013	0	10.6	B	0.1	-		
		WBT	694	-	-	-	-				
		WBR	14	-	-	-	-				
	Kerry Way	NBL	5	0.113	10	89.4	F	34.4	D		
		NBT	1	0.101	8	21.9	C				
		NBR	21	-	-	-	-				
	Kerry Way	SBL	2	0.044	2	81.9	F	41.8	E		
		SBT	0	-	-	-	-				
		SBR	3	-	-	-	-				
Harris Road/ Bobolink Drive & IL 120 (Two-Way Stop Control)	IL 120	EBL	17	0.03	2	11.2	B	0.2	-	4.5	-
		EBT	904	-	-	-	-				
		EBR	75	-	-	-	-				
	IL 120	WBL	46	0.072	5	10.8	B	0.7	-		
		WBT	682	-	-	-	-				
		WBR	13	-	-	-	-				
	Bobolink Drive	NBL	17	0.481	50	82.5	F	82.5	F		
		NBT	1	-	-	-	-				
		NBR	20	-	-	-	-				
	Harris Road	SBL	26	0.589	55	158.9	F	102.2	F		
		SBT	0	-	-	-	-				
		SBR	17	-	-	-	-				
Hospital Entrance & IL 120 (Two-Way Stop Control)	IL 120	EBT	928	-	-	-	-	0	-	1.7	-
		EBR	22	-	-	-	-				
	IL 120	WBL	149	0.211	20	11.3	B	1.9	-		
		WBT	732	-	-	-	-				
	Hospital Entrance	NBL	9	0.173	15	86.7	F	30.8	D		
		NBR	39	0.125	10	17.9	C				

Notes:
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Intersection Name (Control Type)	Link Name	Movement	Volume	v/c Ratio	95th Queue Length (ft)	Delay (sec)	LOS	Approach Delay (sec)	Approach LOS	Intersection Delay (sec)	Intersection LOS
US 45 & IL 120 (Signalized)	IL 120	EBL	95	0.49	m66	24.6	C	63.9	E	91.1	F
		EBT	687	1.04	#452	83.3	F				
		EBR	185	0.42	m84	12.2	B				
	IL 120	WBL	368	1.29	#542	181.5	F	88.2	F		
		WBT	590	0.74	345	39.6	D				
		WBR	117	-	-	-	-				
	US 45	NBL	145	1.14	#143	168.8	F	56.9	E		
		NBT	785	0.89	#421	52.5	D				
		NBR	302	0.41	177	14.6	B				
	US 45	SBL	372	0.93	#253	79.8	E	126.8	F		
		SBT	1487	1.25	#953	150.4	F				
		SBR	146	0.21	58	7	A				
IL 120 & Sears Boulevard (Two-Way Stop Control)	IL 120	EBL	4	0.009	0	12	B	0	-	5.0	-
		EBT	1202	-	-	-	-				
	IL 120	WBT	1043	-	-	-	-	0	-		
		WBR	7	-	-	-	-				
	Sears Boulevard	SBL	22	-	-	-	-	219.8	F		
		SBR	31	-	-	-	-				
Gravel Road/ John Mogg Road & IL 120 (Two-Way Stop Control)	IL 120	EBL	1	0.002	0	11.2	B	0	-	6.6	-
		EBT	1223	-	-	-	-				
		EBR	0	-	-	-	-				
	IL 120	WBL	0	-	-	-	-	0	-		
		WBT	1044	-	-	-	-				
		WBR	9	-	-	-	-				
	John Mogg Road	NBL	1	0.144	10	519.7	F	519.7	F		
		NBT	0	-	-	-	-				
		NBR	0	-	-	-	-				
	Gravel Road	SBL	19	-	-	-	-	615.3	F		
		SBT	0	-	-	-	-				
		SBR	5	-	-	-	-				

Notes:
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Intersection Name (Control Type)	Link Name	Movement	Volume	v/c Ratio	95th Queue Length (ft)	Delay (sec)	LOS	Approach Delay (sec)	Approach LOS	Intersection Delay (sec)	Intersection LOS
IL 120 & Battershall Road (Two-Way Stop Control)	IL 120	EBL	2	0.004	0	11	B	0	-	0.9	-
		EBT	1240	-	-	-	-				
	IL 120	WBT	1015	-	-	-	-	0	-		
		WBR	6	-	-	-	-				
	Battershall Road	SBL	5	-	-	-	-	50.9	F		
		SBR	38	-	-	-	-				
IL 120 & Mill Road (Signalized)	IL 120	EBL	42	0.2	18	5.7	A	54.7	D	52.5	D
		EBT	1203	1.04	#1662	56.4	E				
	IL 120	WBT	920	0.87	-	26.2	C	25.8	C		
		WBR	15	0.02	-	4.1	A				
	Mill Road	SBL	162	1.1	988	137.4	F	137.4	F		
		SBR	101	-	10	-	-				
Almond Road & IL 120 (Two-Way Stop Control)	IL 120	EBT	1326	-	-	-	-	0	-	3.2	-
		EBR	39	-	-	-	-				
	IL 120	WBL	99	0.247	25	15.8	C	1.5	-		
		WBT	932	-	-	-	-				
	Almond Road	NBL	3	0.669	108	45.4	E	45.4	E		
		NBR	145	-	-	-	-				

Notes:
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Eastbound IL 120								
Segment		Flow Speed (mph)	Running Time (Sec)	Signal Delay (sec)	Travel Time (sec)	Distance (miles)	Arterial Speed (mph)	Arterial LOS
Begin	End							
West of IL 60	IL 60	55	20.1	5.9	26	0.21	28.7	B
IL 60	Fish Lake Road	48	34.4	10.5	44.9	0.4	32.1	B
Fish Lake Road	Wilson Road	47	89.8	31.2	121	1.17	34.7	B
Wilson Road	Fairfield Road	50	46	75.9	121.9	0.64	18.9	D
Fairfield Road	Cedar Lake Road	50	57.1	25.7	82.8	0.79	34.4	B
Cedar Lake Road	Centre Drive/ IL 134	43	121.9	55.6	177.5	1.46	29.6	B
Centre Drive/ IL 134	Hainesville Road	40	13.9	19.2	33.1	0.12	13.2	E
Hainesville Road	Alleghany Road	40	71.6	13.5	85.1	0.8	33.7	B
Alleghany Road	Lake Street	37	52.3	16.1	68.4	0.54	28.4	B
Lake Street	IL 83	35	63.2	86	149.2	0.62	14.8	E
IL 83	Atkinson Road	35	42.6	20.8	63.4	0.41	23	C
Atkinson Road	US 45	35	103.4	83.3	186.7	1.01	19.4	D
US 45	Mill Road	35	107.4	56.4	163.8	1.04	22.9	C
West of IL 60	East of Almond Road		823.7	500.1	1323.8	9.19	25	C

Westbound IL 120								
Segment		Flow Speed (mph)	Running Time (Sec)	Signal Delay (sec)	Travel Time (sec)	Distance (miles)	Arterial Speed (mph)	Arterial LOS
Begin	End							
East of Almond Road	Mill Road	35	56.6	26.2	82.8	0.55	23.9	C
Mill Road	US 45	35	107.4	39.6	147	1.04	25.6	C
US 45	Atkinson Road	35	103.4	15.9	119.3	1.01	30.4	B
Atkinson Road	IL 83	35	42.6	21.5	64.1	0.41	22.8	C
IL 83	Lake Street	35	63.2	28.2	91.4	0.62	24.2	C
Lake Street	Alleghany Road	39	50.1	7.3	57.4	0.54	33.8	B
Alleghany Road	Hainesville Road	40	71.6	25	96.6	0.8	29.7	B
Hainesville Road	Centre Drive/ IL 134	40	13.9	30.1	44	0.12	9.9	F
Centre Drive/ IL 134	Cedar Lake Road	46	114.2	32.5	146.7	1.46	35.8	A
Cedar Lake Road	Fairfield Road	50	57.1	42.8	99.9	0.79	28.5	B
Fairfield Road	Wilson Road	50	46	18	64	0.64	36	A
Wilson Road	Fish Lake Road	45	93.2	14.3	107.5	1.17	39	A
Fish Lake Road	IL 60	48	34.4	5.4	39.8	0.4	36.2	A
West of IL 60	East of Almond Road		853.7	306.8	1160.5	9.53	29.6	B

Illinois Department of Transportation

ILL20 STUDY

IL60 to Almond Road

Appendix D. Synchro Reports

2050 No Build PM

Intersection Name (Control Type)	Link Name	Movement	Volume	v/c Ratio	95th Queue Length (ft)	Delay (sec)	LOS	Approach Delay (sec)	Approach LOS	Intersection Delay (sec)	Intersection LOS
IL 60 & IL 120 (Signalized)	IL 120	EBT	936	0.5	-	19.5	B	15.3	B	23.5	C
		EBR	314	0.32	402	2.6	A				
	IL 120	WBL	5	0.06	51	78	E	10.1	B		
		WBT	890	0.47	m9	9.8	A				
	IL 60	NBL	703	0.85	206	55.2	E	55.2	E		
		NBR	0	-	-	-	-				
Fish Lake Road & IL 120 (Signalized)	IL 120	EBL	132	0.33	58	9.6	A	19.6	B	22.4	C
		EBT	754	0.62	432	22.6	C				
		EBR	50	0.05	3	0.3	A				
	IL 120	WBL	42	0.1	m19	4.4	A	15.9	B		
		WBT	768	0.66	m858	16.8	B				
		WBR	13	0.01	m0	0	A				
	Fish Lake Road	NBL	35	0.2	61	52.9	D	51.3	D		
		NBT	142	0.67	206	73.5	E				
		NBR	68	0.25	16	4.8	A				
	Fish Lake Road	SBL	8	0.06	22	48.8	D	28.3	C		
		SBT	39	0.25	71	61.9	E				
		SBR	92	0.4	43	12.5	B				
Wilson Road & IL 120 (Signalized)	IL 120	EBL	103	0.71	#100	43	D	46.2	D	49.9	D
		EBT	724	0.91	#1043	46.7	D				
		EBR	3	-	-	-	-				
	IL 120	WBL	6	0.06	m2	9	A	21.2	C		
		WBT	656	0.89	m605	26.6	C				
		WBR	180	0.25	m9	2.3	A				
	Wilson Road	NBL	11	0.08	21	27.4	C	99.6	F		
		NBT	460	1.05	#779	101.2	F				
		NBR	38	-	-	-	-				
	Wilson Road	SBL	135	0.93	#225	86.3	F	53.8	D		
		SBT	218	0.66	440	42	D				
		SBR	156	-	-	-	-				

Notes:
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2. The m symbol in the 95th percentile queue indicates that the volume is metered by an upstream signal.

Intersection Name (Control Type)	Link Name	Movement	Volume	v/c Ratio	95th Queue Length (ft)	Delay (sec)	LOS	Approach Delay (sec)	Approach LOS	Intersection Delay (sec)	Intersection LOS
Fairfield Road & IL 120 (Signalized)	IL 120	EBL	216	1.09	m#218	94.3	F	58.4	E	77.7	E
		EBT	653	0.93	m#785	47	D				
		EBR	28	-	-	-	-				
	IL 120	WBL	127	0.74	#143	43.2	D	74.4	E		
		WBT	628	1.02	#948	80.3	F				
		WBR	49	-	-	-	-				
	Fairfield Road	NBL	91	0.34	94	29.5	C	119.3	F		
		NBT	502	1.17	#1007	131.5	F				
		NBR	173	-	-	-	-				
	Fairfield Road	SBL	44	0.55	#60	52.8	D	45.9	D		
		SBT	210	0.65	366	45	D				
		SBR	123	-	-	-	-				
Cedar Lake Road & IL 120 (Signalized)	IL 120	EBL	170	0.54	102	16.3	B	30.2	C	36.6	D
		EBT	665	0.82	771	33.5	C				
		EBR	35	-	-	-	-				
	IL 120	WBL	69	0.28	46	13.1	B	35.5	D		
		WBT	615	0.82	721	38	D				
		WBR	18	-	-	-	-				
	Cedar Lake Road	NBL	70	0.25	97	38.8	D	50	D		
		NBT	419	0.74	347	51.4	D				
		NBR	134	-	-	-	-				
	Cedar Lake Road	SBL	38	0.25	60	39	D	30.1	C		
		SBT	167	0.37	131	28.9	C				
		SBR	119	-	-	-	-				

Notes:
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Intersection Name (Control Type)	Link Name	Movement	Volume	v/c Ratio	95th Queue Length (ft)	Delay (sec)	LOS	Approach Delay (sec)	Approach LOS	Intersection Delay (sec)	Intersection LOS
Wildspring Road & IL 120 (Two-Way Stop Control)	IL 120	EBL	12	0.018	2	10.2	B	0.2	-	6.3	-
		EBT	786	-	-	-	-				
		EBR	39	-	-	-	-				
	IL 120	WBL	176	0.233	22	10.9	B	2.2	-		
		WBT	681	-	-	-	-				
		WBR	39	-	-	-	-				
	Wildspring Road	NBL	13	0.339	28	135.5	F	30.6	D		
		NBT	0	0.385	45	20.6	C				
		NBR	137	-	-	-	-				
	Wildspring Road	SBL	15	0.679	50	319.7	F	213.2	F		
		SBT	0	-	-	-	-				
		SBR	8	-	-	-	-				
Curan Road & IL 120 (Two-Way Stop Control)	IL 120	EBT	906	-	-	-	-	0	-	1.0	-
		EBR	32	-	-	-	-				
	IL 120	WBL	61	0.093	8	10.8	B	0.7	-		
		WBT	886	-	-	-	-				
	Curan Road	NBL	10	0.058	5	26.2	D	20.4	C		
		NBR	49	0.17	15	19.2	C				
IL 120 & Porter Drive (Two-Way Stop Control)	IL 120	EBL	68	0.114	10	11.5	B	0.8	-	2.7	-
		EBT	887	-	-	-	-				
	IL 120	WBT	908	-	-	-	-	0	-		
		WBR	14	-	-	-	-				
	Porter Drive	SBL	14	-	-	-	-	85	F		
		SBR	39	-	-	-	-				

Notes:
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Intersection Name (Control Type)	Link Name	Movement	Volume	v/c Ratio	95th Queue Length (ft)	Delay (sec)	LOS	Approach Delay (sec)	Approach LOS	Intersection Delay (sec)	Intersection LOS
Centre Drive/IL 134 & IL 120 (Signalized)	IL 120	EBL	38	0.17	26	9	A	21.8	C	26.2	C
		EBT	861	0.75	950	22.3	C				
		EBR	12	-	-	-	-				
	IL 120	WBL	12	0.05	m2	5.3	A	15.9	B		
		WBT	890	0.78	m582	16	B				
		WBR	0	-	-	-	-				
	Centre Drive	NBL	6	-	-	-	-	61.2	E		
		NBT	5	0.35	45	61.2	E				
		NBR	11	-	-	-	-				
	IL 134	SBL	206	-	-	-	-	81.1	F		
		SBT	7	0.82	#344	86.7	F				
		SBR	15	0.05	0	0.3	A				
Hainesville Road & IL 120 (Signalized)	IL 120	EBL	397	1.02	#631	88.9	F	37.8	D	49.6	D
		EBT	677	0.53	325	8	A				
		EBR	4	-	-	-	-				
	IL 120	WBL	6	0.02	5	7.2	A	46.2	D		
		WBT	876	0.95	#1253	59.1	E				
		WBR	260	0.28	60	3.7	A				
	Hainesville Road	NBL	8	-	-	-	-	127.5	F		
		NBT	14	0.66	#84	127.5	F				
		NBR	3	-	-	-	-				
	Hainesville Road	SBL	197	1.01	#390	129.4	F	71.9	E		
		SBT	4	0.95	#365	46.9	D				
		SBR	449	-	-	-	-				

Notes:
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Intersection Name (Control Type)	Link Name	Movement	Volume	v/c Ratio	95th Queue Length (ft)	Delay (sec)	LOS	Approach Delay (sec)	Approach LOS	Intersection Delay (sec)	Intersection LOS
School Access/ Misty Hi Lane & IL 120 (Two-Way Stop Control)	IL 120	EBL	10	0.026	2	13.9	B	0.2	-	1.3	-
		EBT	855	-	-	-	-				
		EBR	12	-	-	-	-				
	IL 120	WBL	8	0.012	0	10.2	B	0.1	-		
		WBT	1128	-	-	-	-				
		WBR	42	-	-	-	-				
	Misty Hi Lane	NBL	8	0.347	28	173.5	F	114.8	F		
		NBT	2	0.021	2	17	C				
		NBR	6	-	-	-	-				
	School Access	SBL	3	0.108	8	139	F	60.7	F		
		SBT	0	-	-	-	-				
		SBR	6	-	-	-	-				
IL 120 & Deer Point Road (Two-Way Stop Control)	IL 120	EBL	13	0.028	2	12.5	B	0.2	-	2.0	-
		EBT	851	-	-	-	-				
	IL 120	WBT	1166	-	-	-	-	0	-		
		WBR	65	-	-	-	-				
	Deer Point Road	SBL	27	0.563	55	143.3	F	106.7	F		
		SBR	12	-	-	-	-				
Alleghany Road & IL 120 (Signalized)	IL 120	EBL	0	-	-	-	-	16.9	B	32.8	C
		EBT	607	0.61	591	22.8	C				
		EBR	250	0.26	45	2.5	A				
	IL 120	WBL	114	0.32	77	11.6	B	19.6	B		
		WBT	757	0.69	744	20.7	C				
		WBR	3	-	-	-	-				
	Alleghany Road	NBL	445	1.04	#531	101.2	F	73.9	E		
		NBT	0	0.3	0	1.3	A				
		NBR	167	-	-	-	-				
	Alleghany Road	SBL	4	0.06	11	49.8	D	24.9	C		
		SBT	0	0.01	0	0	A				
		SBR	4	-	-	-	-				

Notes:
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Intersection Name (Control Type)	Link Name	Movement	Volume	v/c Ratio	95th Queue Length (ft)	Delay (sec)	LOS	Approach Delay (sec)	Approach LOS	Intersection Delay (sec)	Intersection LOS
Lake Street & IL 120 (Signalized)	IL 120	EBL	238	1.21	#251	148.5	F	54.9	D	39.1	D
		EBT	556	0.57	412	15.9	B				
		EBR	10	0.01	0	0	A				
	IL 120	WBL	70	0.16	34	6.1	A	28.1	C		
		WBT	734	0.88	#927	29.9	C				
		WBR	104	-	-	-	-				
	Lake Street	NBL	23	0.12	38	37	D	50.9	D		
		NBT	72	0.57	125	54.1	D				
		NBR	28	-	-	-	-				
	Lake Street	SBL	62	0.32	79	41.3	D	27.3	C		
		SBT	86	0.42	118	52.7	D				
		SBR	213	0.62	62	12.9	B				
Sommerset Drive & IL 120 (Two-Way Stop Control)	IL 120	EBT	704	-	-	-	-	0	-	0.5	-
		EBR	14	-	-	-	-				
	IL 120	WBL	35	0.045	2	9.5	A	0.4	-		
		WBT	837	-	-	-	-				
	Sommerset Drive	NBL	6	0.106	8	24.1	C	24.1	C		
		NBR	15	-	-	-	-				
Lincoln Avenue & IL 120 (Two-Way Stop Control)	IL 120	EBT	712	-	-	-	-	0	-	0.4	-
		EBR	7	-	-	-	-				
	IL 120	WBL	15	0.021	2	9.8	A	0.2	-		
		WBT	869	-	-	-	-				
		NBL	3	0.088	8	19	C	19	C		
		NBR	20	-	-	-	-				

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Intersection Name (Control Type)	Link Name	Movement	Volume	v/c Ratio	95th Queue Length (ft)	Delay (sec)	LOS	Approach Delay (sec)	Approach LOS	Intersection Delay (sec)	Intersection LOS
Garfield Boulevard & IL 120 (Two-Way Stop Control)	IL 120	EBT	725	-	-	-	-	0	-	0.6	-
		EBR	7	-	-	-	-				
	IL 120	WBL	36	0.051	5	9.9	A	0.4	-		
		WBT	882	-	-	-	-				
	Garfield Boulevard	NBL	2	0.123	10	18.2	C	18.2	C		
		NBR	33	-	-	0	-				
IL 83 & IL 120 (Signalized)	IL 120	EBL	31	0.69	#92	98.4	F	94	F	84.3	F
		EBT	606	1.07	#1049	93.8	F				
		EBR	146	-	-	-	-				
	IL 120	WBL	27	0.7	m#53	91.4	F	86.8	F		
		WBT	627	1.08	#1021	86.7	F				
		WBR	109	-	-	-	-				
	IL 83	NBL	375	1.09	m265	110.1	F	70.3	E		
		NBT	884	0.83	m214	54	D				
		NBR	26	-	-	-	-				
	IL 83	SBL	186	0.78	#198	48.3	D	91.8	F		
		SBT	825	1.08	#651	100.6	F				
		SBR	95	-	-	-	-				
Ivanhoe Road & IL 120 (Two-Way Stop Control)	IL 120	EBT	796	-	-	-	-	0	-	7.7	-
		EBR	22	-	-	-	-				
	IL 120	WBL	150	0.211	20	11	B	1.9	-		
		WBT	714	-	-	-	-				
	Ivanhoe Road	NBL	49	0.899	102	204.4	F	73.2	F		
		NBR	125	0.383	45	21.7	C				

Notes:
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Intersection Name (Control Type)	Link Name	Movement	Volume	v/c Ratio	95th Queue Length (ft)	Delay (sec)	LOS	Approach Delay (sec)	Approach LOS	Intersection Delay (sec)	Intersection LOS
Atkinson Road & IL 120 (Signalized)	IL 120	EBL	209	0.54	m132	14	B	28.3	C	29.2	C
		EBT	691	0.73	m671	32.5	C				
		EBR	21	-	-	-	-				
	IL 120	WBL	133	0.41	69	11.8	B	22.1	C		
		WBT	657	0.7	639	28	C				
		WBR	153	0.18	55	5.5	A				
	Atkinson Road	NBL	68	0.25	m56	27.1	C	42.9	D		
		NBT	207	0.75	m252	56.4	E				
		NBR	43	0.13	m14	3	A				
	Atkinson Road	SBL	129	0.59	153	51.6	D	36.8	D		
		SBT	135	0.38	177	51.5	D				
		SBR	139	0.33	58	8.9	A				
Ashford Lane/ Grayslake Chevrolet & IL 120 (Two-Way Stop Control)	IL 120	EBL	5	0.007	0	10.1	B	0.1	-	0.9	-
		EBT	841	-	-	-	-				
		EBR	17	-	-	-	-				
	IL 120	WBL	20	0.032	2	10.7	B	0.2	-		
		WBT	927	-	-	-	-				
		WBR	8	-	-	-	-				
	Grayslake Chevrolet	NBL	8	0.243	22	50.4	F	50.4	F		
		NBT	1	-	-	-	-				
		NBR	15	-	-	-	-				
	Ashford Lane	SBL	0	-	-	-	-	17.1	C		
		SBT	0	-	-	-	-				
		SBR	8	-	-	-	-				

Notes:
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2. The m symbol in the 95th percentile queue indicates that the volume is metered by an upstream signal.

Intersection Name (Control Type)	Link Name	Movement	Volume	v/c Ratio	95th Queue Length (ft)	Delay (sec)	LOS	Approach Delay (sec)	Approach LOS	Intersection Delay (sec)	Intersection LOS
Kerry Way & IL 120 (Two-Way Stop Control)	IL 120	EBL	16	0.027	2	10.6	B	0.2	-	4.8	-
		EBT	823	-	-	-	-				
		EBR	17	-	-	-	-				
	IL 120	WBL	13	0.019	2	9.9	A	0.1	-		
		WBT	912	-	-	-	-				
		WBR	12	-	-	-	-				
	Kerry Way	NBL	25	0.734	65	231.6	F	131.1	F		
		NBT	2	0.105	8	21.8	C				
		NBR	21	-	-	-	-				
	Kerry Way	SBL	15	0.398	35	141.9	F	75.4	F		
		SBT	0	-	-	-	-				
		SBR	18	-	-	-	-				
Harris Road/ Bobolink Drive & IL 120 (Two-Way Stop Control)	IL 120	EBL	13	0.028	2	12.6	B	0.2	-	29.0	-
		EBT	816	-	-	-	-				
		EBR	30	-	-	-	-				
	IL 120	WBL	46	0.064	5	10	B	0.5	-		
		WBT	863	-	-	-	-				
		WBR	26	-	-	-	-				
	Bobolink Drive	NBL	59	1.773	255	511.5	F	511.5	F		
		NBT	6	-	-	-	-				
		NBR	40	-	-	-	-				
	Harris Road	SBL	8	0.23	18	129.3	F	57.4	F		
		SBT	0	-	-	-	-				
		SBR	15	-	-	-	-				
Hospital Entrance & IL 120 (Two-Way Stop Control)	IL 120	EBT	842	-	-	-	-	0	-	2.5	-
		EBR	22	-	-	-	-				
	IL 120	WBL	74	0.097	8	10.1	B	0.8	-		
		WBT	911	-	-	-	-				
	Hospital Entrance	NBL	24	0.371	35	88.7	F	32.1	D		
		NBR	107	0.304	32	19.4	C				

Notes:
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Intersection Name (Control Type)	Link Name	Movement	Volume	v/c Ratio	95th Queue Length (ft)	Delay (sec)	LOS	Approach Delay (sec)	Approach LOS	Intersection Delay (sec)	Intersection LOS
US 45 & IL 120 (Signalized)	IL 120	EBL	173	1.08	#258	118.3	F	68.3	E	79.1	E
		EBT	665	0.95	#404	65.8	E				
		EBR	111	0.26	34	5.6	A				
	IL 120	WBL	237	0.98	#317	81	F	91.1	F		
		WBT	697	1.09	#601	93.5	F				
		WBR	281	-	-	-	-				
	US 45	NBL	158	0.73	#114	71.7	E	90.7	F		
		NBT	1337	1.17	#836	118.8	F				
		NBR	480	0.61	333	18.6	B				
	US 45	SBL	233	1.17	#205	159.6	F	57.6	E		
		SBT	890	0.78	427	38.3	D				
		SBR	130	0.19	49	6.3	A				
IL 120 & Sears Boulevard (Two-Way Stop Control)	IL 120	EBL	15	0.04	2	13.8	B	0.2	-	1.4	-
		EBT	1155	-	-	-	-				
	IL 120	WBT	1213	-	-	-	-	0	-		
		WBR	26	-	-	-	-				
	Sears Boulevard	SBL	7	-	-	-	-	112.1	F		
		SBR	21	-	-	-	-				
Gravel Road/ John Mogg Road & IL 120 (Two-Way Stop Control)	IL 120	EBL	3	0.007	0	12.6	B	0	-	2.0	-
		EBT	1154	-	-	-	-				
		EBR	5	-	-	-	-				
	IL 120	WBL	0	-	-	-	-	0	-		
		WBT	1233	-	-	-	-				
		WBR	18	-	-	-	-				
	John Mogg Road	NBL	1	0.209	15	207.6	F	207.6	F		
		NBT	0	-	-	-	-				
		NBR	3	-	-	-	-				
	Gravel Road	SBL	7	-	-	-	-	337.2	F		
		SBT	0	-	-	-	-				
		SBR	5	-	-	-	-				

Notes:
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Intersection Name (Control Type)	Link Name	Movement	Volume	v/c Ratio	95th Queue Length (ft)	Delay (sec)	LOS	Approach Delay (sec)	Approach LOS	Intersection Delay (sec)	Intersection LOS
IL 120 & Battershall Road (Two-Way Stop Control)	IL 120	EBL	0	-	-	-	-	0	-	0.5	-
		EBT	1164	-	-	-	-				
	IL 120	WBT	1238	-	-	-	-	0	-		
		WBR	12	-	-	-	-				
	Battershall Road	SBL	3	-	-	-	-	69	F		
		SBR	13	-	-	-	-				
IL 120 & Mill Road (Signalized)	IL 120	EBL	72	0.49	29	14.2	B	13.1	B	32.6	C
		EBT	1095	0.85	715	13	B				
	IL 120	WBT	1173	1	-	40.4	D	37.8	D		
		WBR	84	0.08	-	1.6	A				
	Mill Road	SBL	57	1.1	#1568	153.7	F	153.7	F		
		SBR	77	-	18	-	-				
Almond Road & IL 120 (Two-Way Stop Control)	IL 120	EBT	1132	-	-	-	-	0	-	87.7	-
		EBR	20	-	-	-	-				
	IL 120	WBL	124	0.251	25	13.9	B	1.3	-		
		WBT	1227	-	-	-	-				
	Almond Road	NBL	30	3.235	588	1130.1	F	1130.1	F		
		NBR	179	-	-	-	-				

Notes:
1. The # symbol in the 95th percentile queue indicates that the volume modeled exceeds capacity for that movement.
2. The m symbol in the 95th percentile queue indicates that the volume is metered by an upstream signal.

Eastbound IL 120								
Segment		Flow Speed (mph)	Running Time (Sec)	Signal Delay (sec)	Travel Time (sec)	Distance (miles)	Arterial Speed (mph)	Arterial LOS
Begin	End							
West of IL 60	IL 60	55	20.1	19.5	39.6	0.21	18.8	D
IL 60	Fish Lake Road	48	34.4	22.6	57	0.4	25.3	C
Fish Lake Road	Wilson Road	47	89.8	46.7	136.5	1.17	30.7	B
Wilson Road	Fairfield Road	50	46	47	93	0.64	24.7	C
Fairfield Road	Cedar Lake Road	50	57.1	33.5	90.6	0.79	31.5	B
Cedar Lake Road	Centre Drive/ IL 134	43	121.9	22.3	144.2	1.46	36.4	A
Centre Drive/ IL 134	Hainesville Road	40	13.9	7.3	21.2	0.12	20.6	D
Hainesville Road	Alleghany Road	40	71.6	22.8	94.4	0.8	30.3	B
Alleghany Road	Lake Street	37	52.3	15.9	68.2	0.54	28.5	B
Lake Street	IL 83	35	63.2	93.8	157	0.62	14.1	E
IL 83	Atkinson Road	35	42.6	32.5	75.1	0.41	19.5	D
Atkinson Road	US 45	34	106	65.8	171.8	1.01	21.1	D
US 45	Mill Road	35	107.4	13	120.4	1.04	31.2	B
West of IL 60	East of Almond Road		826.3	442.7	1269	9.19	26.1	C

Westbound IL 120								
Segment		Flow Speed (mph)	Running Time (Sec)	Signal Delay (sec)	Travel Time (sec)	Distance (miles)	Arterial Speed (mph)	Arterial LOS
Begin	End							
East of Almond Road	Mill Road	35	56.6	40.4	97	0.55	20.4	D
Mill Road	US 45	35	107.4	93.5	200.9	1.04	18.7	D
US 45	Atkinson Road	34	105	28	133	1.01	27.2	C
Atkinson Road	IL 83	35	42.6	86.7	129.3	0.41	11.3	F
IL 83	Lake Street	35	63.2	29.9	93.1	0.62	23.8	C
Lake Street	Alleghany Road	37	52.3	20.7	73	0.54	26.6	C
Alleghany Road	Hainesville Road	40	71.6	52.2	123.8	0.8	23.1	C
Hainesville Road	Centre Drive/ IL 134	40	13.9	13.3	27.2	0.12	16	E
Centre Drive/ IL 134	Cedar Lake Road	46	114.2	38	152.2	1.46	34.5	B
Cedar Lake Road	Fairfield Road	50	57.1	80.3	137.4	0.79	20.8	D
Fairfield Road	Wilson Road	50	46	26.6	72.6	0.64	31.7	B
Wilson Road	Fish Lake Road	45	93.2	16.8	110	1.17	38.1	A
Fish Lake Road	IL 60	55	32.8	9.8	42.6	0.4	33.9	B
West of IL 60	East of Almond Road		855.9	536.2	1392.1	9.53	24.6	C

Appendix E. Public Comments and CAG input

Illinois Department of Transportation

IL 120 STUDY

IL60 to Almond Road

Date: May 9, 2024
Time: 1:00 PM – 3:00 PM
Location: Microsoft Teams

Topic: IL 120 PEL Study
Community Advisory Group Meeting #1

ATTENDEES

NAME	ORGANIZATION
Corey Smith	IDOT
Kyle Bochte	IDOT
Brenda Alicea	IDOT
Steve Schilke	IDOT
Jelena Crudele	Resident
Elmer Fallos	Warren Township
Gail Hagen	Resident
Sarah Surroz	Openlands
Brian Frank	Lake County Stormwater Management Commission
Brandy Schroff	Village of Round Lake
Diane Stark	Resident
Tom Rasmussen	Resident
Don Mobley	Bicycle Club of Lake County
Douglas Ower	Resident
Ron Lanz	Lake County Partners
Pat Carey	Resident
Tom Baba	Illinois Driver Education Teacher Endorsement Program
Lawrence Todryk	Resident
Bill Morris	Resident
David Carlson	Resident
Brian Brubaker	Village of Round Lake
Rachael Rezek	Resident
Matthew Zakula	Resident

Illinois Department of Transportation

IL 120 STUDY

IL60 to Almond Road

NAME	ORGANIZATION
Lori Bell	Resident
Barbara Klipp	Midwest Sustainability Group
Matthew Emde	Lake County Division of Transportation
Susan Zingle	Resident
Mark Petersen	Resident
Craig Wrobel	Resident
Scott Firnbach	Village of Round Lake Park
Chris Wildman	Community Consolidated School District 46
John Wasik	Lake County Board
Karen Gill	Resident
Jason Dhaliwal	Business Owner
Rick Strauss	Wauconda School District 118
Peter Manhard	Resident
Scott Manning	HDR
Jeff Young	HDR
Eric Neubauer	HDR
Ryan Pater	HDR
Kelly Sims	HDR
Andrea Cline	HDR

TOPICS & DISCUSSIONS

ITEM	TOPIC/DISCUSSION
1	A copy of the meeting's PowerPoint presentation is attached to this meeting summary.
2	A copy of breakout session whiteboard comments is attached to this meeting summary.
3	Scott Manning (HDR) discussed the purpose of the Community Advisory Group Meeting and welcomed the group.
4	Scott (HDR) discussed the role of CAG members.
5	Jeff Young (HDR) provided an overview of the IL 120 Study, noting that it is an Illinois Department of Transportation (Department) led Planning and Environmental Linkages (PEL) Study examining transportation safety and mobility on Illinois 120 from Illinois 60 to Almond Road in Lake County. Jeff presented preliminary data and the goals and objectives of the study.
6	Scott (HDR) introduced the format and guidelines for Breakout Session #1

Illinois Department of Transportation

IL 120 STUDY

IL60 to Almond Road

ITEM	TOPIC/DISCUSSION
7	Four groups participated in a 30-minute Breakout Session #1. Moderators sought feedback from the CAG members on the following questions. • What key factors impact transportation mobility and safety along IL 120? • What infrastructure improvements could enhance transportation mobility and safety for IL 120 users? • How does transportation infrastructure impact community development and economic activity along IL 120? • What are the primary environmental considerations associated with transportation along IL 120? • How can they be addressed? • How can equitable mobility be ensured for all IL 120 users, including those in underserved communities? • How should biking, walking, and public transit be considered in the study?
8	**The following feedback was noted from Breakout Room 1:** • IL 120 project not finishing through Wildwood subdivsion • Utilize existing roadway, add turn lanes and railroad underpass in the Hainesville area • Traffic backups at railroad crossing are a concern, four lanes and underpass are needed • Shoulders are deteriorating, lack of walkways/pathways • Need for bike/ped crossings at major intersections • Better access to schools and Metra station would encourage non-motorized use • Turn lanes at Ivanhoe Road • Intersection improvements needed • Access control is needed • Consider smaller projects that can be done quicker with good benefit • Connect to commercial district east of IL 83 • Reduce congestion to make businesses more accessible • Avoid impacts to Almond Marsh, Nippersink Forest Preserve, wetlands and oak trees near Hainesville Road areas • Stop and go traffic contributes to idling. Better traffic flow would reduce environmental impacts

Illinois Department of Transportation

IL120 STUDY

IL60 to Almond Road

ITEM	TOPIC/DISCUSSION
8	• No bypass or roads through Almond Marsh or any wetlands • Bike friendly shoulders, safe bike/ped crossings, continue Grayslake path from IL 83
9	**The following feedback was noted from Breakout Room #2:** • Mobility issues at IL 83 • Crossing IL 120 to reach the library a concern • Traffic cuts through neighborhoods • Potential for roundabouts at Hainesville Road and Alleghany Road • Grade separations and train impacts • School District 118 impacted by railroad tracks and heavy vehicles sticking out into intersection • Potential reconfiguration at IL 120/IL 134 and railroad crossing • School District 118 roundabouts allow buses to turn around without disrupting traffic • No sidewalk in Grayslake • Trains often stopped impacing access to hospital • Sidewalks and bike lanes needed • Lack of turn lanes causes traffic to use shoulders • IL 120 and US 45 – vehicles try to beat traffic light during peak hours • Bridges for railroads over IL 120 • Drainage • Focus on quality of life • Safer transportation benefits residents and promotes development • Impacts of bypass on environment and property values • Aesthetics • Traffic avoids IL 120 and US 45 • Traffic looks for alternatives to going through downtown due to trains • Verify drainage is not impeded through the corridor • Keep environmental corridors open
10	**The following feedback was noted from Breakout Room #3:** • Sidewalks

ITEM	TOPIC/DISCUSSION
10	• Bike paths • Reconfigure IL 120 and Wildspring Road so it lines up correctly • Paved multi-use paths are much safer than shoulders • Widen the road and add turn lanes • Pedestrian walkway overpass at IL 120 and IL 83 • Safety concerns where the corridor is narrow • Consider bypass for safety and traffic flow • Increased visibility for local businesses • Excess traffic causes people to seek alternate routes decreasing traffic to local businesses • Ease of access and connection to I-94 and major N/S routes important for future business growth • Underpass needed at IL 83 railroad crossing • Interconnectivity and accessibility are critical to site selection decisions • New businesses at IL 120 and Il 83 will increase traffic • Favorable curb cuts for businesses • Access from housing to work • Yes to overpass or underpass at railroad crossing • Signalized intersections and turn lanes • Need to consider transit accessibility • Not significant communication in the project • Need proper drainage • Noise control/abatement • Minimize environmental impact by staying on alignment, no bypass • Salt spray • Concern for wetlands • Runoff • Close gaps in sidewalks and paths • Involve PACE • Biking, walking, and wheelchairs important considerations • Traffic volume and speed makes for unsafe conditions bike/ped

ITEM	TOPIC/DISCUSSION
10	• Safety concerns at tight areas of corridor • Promote and extend Millenium Trail to the east • Connect to existing walking trails • Bus stop pads and shelters are needed
11	**The following feedback was noted from Breakout Room #4:** • Pedestrian safety at IL 120 and US 45, currently dangerous crossing and bus stops • Need sidewalks • Left turns are dangerous during morning and evening rush • Bike/ped and more storage for turn lanes • Impacts to homes for right-of-way • Train crossings and traffic impacts • Center turn lane needed • Truck traffic in residential areas • Salt drains into lake near Grayslake • Wetlands, rookery in Wildwood subdivision area, wetland protection in Grayslake and Hainesville • Lack of underpasses at Railroad crossings • Traffic idling at train crossings
12	Kelly Sims (HDR) presented on the Working Purpose and Need Statement noting that it is the “why” for the project. Kelly explained the working purpose as identifying projects that improve safety and mobility, provide bike/ped connectivity and consider future local transportation improvements. Kelly shared the need is to address crashes, existing and future mobility, gaps in the bike/ped network, support local plans for mobility in Lake County. Kelly noted that the working purpose and need will be refined based on feedback gathered at this CAG meeting.
13	Scott (HDR) introduced the format and guidelines for Breakout Session #2.
14	Four groups participated in a 30-minute Breakout Session #2. Moderators sought feedback from the CAG members on the following questions. • What safety concerns do you think need to be addressed on the IL 120 corridor? • In what ways do you believe the current operations of the IL 120 corridor could be improved?

Illinois Department of Transportation

IL 120 STUDY

IL60 to Almond Road

ITEM	TOPIC/DISCUSSION
14	• How would enhancing non-motorized transportation options in the IL 120 corridor benefit the community? • What specific improvements would you like to see implemented? • What other considerations or features should be included in the study to maximize benefits to the community? • Are there additional environmental considerations association with transportation along IL 120? • How can they be addressed? • What challenges or obstacles do you forsee in achieving the goals of this study and how might they be overcome? • Are there any potential trade-off or conflicts between different goals of the project and how should they be addressed?
15	**The following feedback was noted from Breakout Room #1.** • Widening can lead to safety concerns, focus on community versus 4-lane highway • Traffic flow between Grayslake and Hainesville • CN railroad double track here or somewhere else? • Butterfield Road as an example design promotes slower speeds even though it is 4 lanes • Washington Street design with trees • Expansion to 4 lanes at Grayslake very difficult, but less so elsewhere • Underpass at IL 120 and IL 83 absolutely necessary • Mass transit needs to be improved • Crossing and safety at Prairie Elementary School • Widening would increase environmental impact, reduce safety by encouraging high speeds • Need to address stormwater drainage • Prioritize multi-use paths • Stop the gridlock to reduce carbon footprint • Planting more trees • Area bookended by Forest Preserves, decrease pollution and salt runoff • Design for intense rainfall • Want well maintained

ITEM	TOPIC/DISCUSSION
15	• Need to do construction on IL 120 without complete closures • Need to address cut through traffic • Shorter trains • Use CAG to help determine the weighting of priorities • Grayslake has 5 at-grade crossings, only 1 underpass • IL 83 grade separation would be valuable
16	**The following feedback was noted from Breakout Room #2.** • Need railroad grade separation • Less curb cuts, left turns are an issues • Compare to other roadways • Bike/ped crashes and bike/ped access • No separation between parking lots and IL 120 • Lack of traffic signals and crosswalks • Crash where a vehicle ended up in the lake • Wider right of way for IL 120 and designated bike paths • Bridges or underpasses for bike/ped crossing IL 120 • Traffic caused by trains • Traffic flow issues at Almond Road • Traffic demand management, large employers on the corridor • Roundabout IL 60 and IL 120?, 4 lanes from IL 60 to Peterson? • Reduce traffic makes the experience more comfortable • Address equity • PACE, need bus shelters and pads • Multi-use trails to connect forest preserves • Lighting/light pollution • Aesthetics, curb and gutter • Noise pollution, more truck traffic • Quality of life and equity • Minimize impacts to St. Gilberts Church and School • Don’t want to see bypass, impacts to Almond Marsh

ITEM	TOPIC/DISCUSSION
16	• Salt spray • Mass transit vs. road widening, air quality, impacts to children • Local mitigation • Consider induced demand in alternatives • Independent study of truck traffic • Headwaters to Bulls Brook subwatershed • Small business owner representation • Money is a challenge • Reduce traffic/improve flow in Grayslake • Good planning needed to minimize impacts • Include public, invite them to watch • Balancing safety with hesitation toward roadway expansion
17	**The following feedback was noted from Breakout Room #3.** • Railroad underpass needed • Limited visibility at certain intersections west of Cedar Lake Road • Put bike/walking paths further from the road • Add designated turn lanes • Concern for bike/ped safety with widening to four lanes, vehicles driving faster • Bike paths not on the highway • Bypass could keep truck traffic off existing corridor, safer for bike/ped • Widening could increase flow, but lead to higher speeds and more truck traffic • More roadways openings lead to more potential conflicts • How can we add lanes but slow down traffic? • Bike/ped paths decrease car dependency • Economic development bring more traffic, more accidents • Restrict curb cuts, limit turn lanes and signals, create frontage road for businesses • Challenging to add more bike/ped with increasing truck traffic • Residents losing property will be upset
18	**The following feedback was noted from Breakout Room #4.** • Drivers using shoulders and middle area to get around cars

ITEM	TOPIC/DISCUSSION
18	• No place to take accidents off road • Consider more roundabouts • Add multi-use trails • Need crossings at more locations • Bike/ped access to neighborhoods • Hainesville Road at Washington – multi-use, access to Metra station • Crash study map reflects problem intersections • Hard to get to shops in Hainesville Road area • Bike/ped crossings with buttons • Center turn lane • Widen IL 60 to meet widened Peterson, give alternative options for traffic • Cost considerations, bypass too expensive • Wildlife crossings • Curb and drainage near Grayslake to carry water away from lake • Almond Marsh, Nippersink, other potential wetlands, salt impacts • Recent flooding • Tough exit from Nippersink to IL 120 • Not room to widen in Grayslake • Explore other corridors with better connectivity • Funding for near-term plan, commitment to solving problems • Study after study with little investment • Continuous baby steps for improvement • Some properties would need to be purchased • Right of way needs, St. Gilberts Church and School close to highway, Madrona area • Identify alternative routes • Roundabouts, public education, use Hunt Club Road example • Right of way a challenge to add bike/ped facilities • Village of Grayslake and 4 other communities support the Belvidere Road Corridor • Capacity Study • Washington Street east of IL 83 example, didn’t finish walking path to campusW • Big plan to be played out through baby steps

Illinois Department of Transportation

IL120 STUDY

IL60 to Almond Road

ITEM	TOPIC/DISCUSSION
19	The format of future CAG meetings was discussed. A poll was offered to determine members' preference for virtual, in-person, or hybrid meetings. Hybrid meetings received the most support between poll votes and comments in the meeting chat.
20	Scott (HDR) previewed the next CAG meeting anticipated for Summer 2024 and noted that the refined purpose and need will be presented, and alternatives development will also be discussed. Scott noted the next public information meeting is anticipated in Fall 2024.
21	Scott (HDR) noted that Public Information Meeting #1 materials are available on the project website at www.il120study.com and that CAG meeting materials will be added to the website soon. Scott noted the project email address is connect@il120study.com. Scott thanked the CAG members for their time and participation and noted the study team looks forward to continued engagement with the CAG moving forward.