

Project Development



A typical highway improvement project is developed in three (3) distinct phases as follows:

- Phase I Preliminary Engineering and Environmental Studies (Current Phase)
- Phase II Contract Plan Preparation and Land Acquisition
- Phase III Construction

**This improvement is not currently included in IDOT's FY 2013-2018 Proposed Multi-Modal Transportation Improvement Program. However, this project will be included in the priorities for future funding considerations among similar improvement needs throughout the region.*

Phase I Study Schedule

PROJECT MILESTONES



- Public Meeting #1 (June 2011)**
- Overview of study process
 - Solicit issues and concerns
 - Present public involvement opportunities

- Public Meeting #2 (November 2012)**
- Present the project Purpose & Need
 - Review the alternative evaluation process
 - Display the alternatives to be carried forward
 - Solicit public input

- Public Hearing (Spring 2014)**
- Present the preferred alternative
 - Present draft environmental report
 - Solicit public input

- We Are Here**
- CAG Meeting Schedule**
- NEPA Meeting Schedule**



We Want to Hear From You

Written questions and comments or requests for materials may be submitted during this Public Meeting, mailed to the Illinois Department of Transportation at the address indicated below, or sent to the project email address at: info@ILRoute31.com. Comments must be received by December 6, 2012 to become part of the official meeting record.

Illinois Department of Transportation
201 W. Center Court
Schaumburg, Illinois 60196-1096

Attn: Bureau of Programming,
Scott Czaplicki, (847) 705-4074
RE: IL Route 31

For your information...
Many of the materials on display at the Public Meeting will soon be available for downloading on the project website: www.ILRoute31.com



Illinois Route 31
ROUTE 176 TO ROUTE 120
www.ILRoute31.com



Public Meeting #2

McHenry County College Shah Center
4100 W. Shamrock Lane
McHenry, IL 60050
November 15, 2012 | 4:00 PM-7:00 PM

Welcome

The Illinois Department of Transportation (IDOT) welcomes you to the second open house Public Meeting concerning the improvement of Illinois Route 31 from IL Route 176 to Route 120. Today's meeting is an opportunity for the IDOT study team to share information about the status of the project.

We invite you to watch an audio-visual presentation, browse the project exhibits on display and visit with personnel from IDOT and the project team in attendance at today's meeting. Your comments and opinions are an important part of this meeting and you are encouraged to provide them in writing or discuss them with staff in attendance.

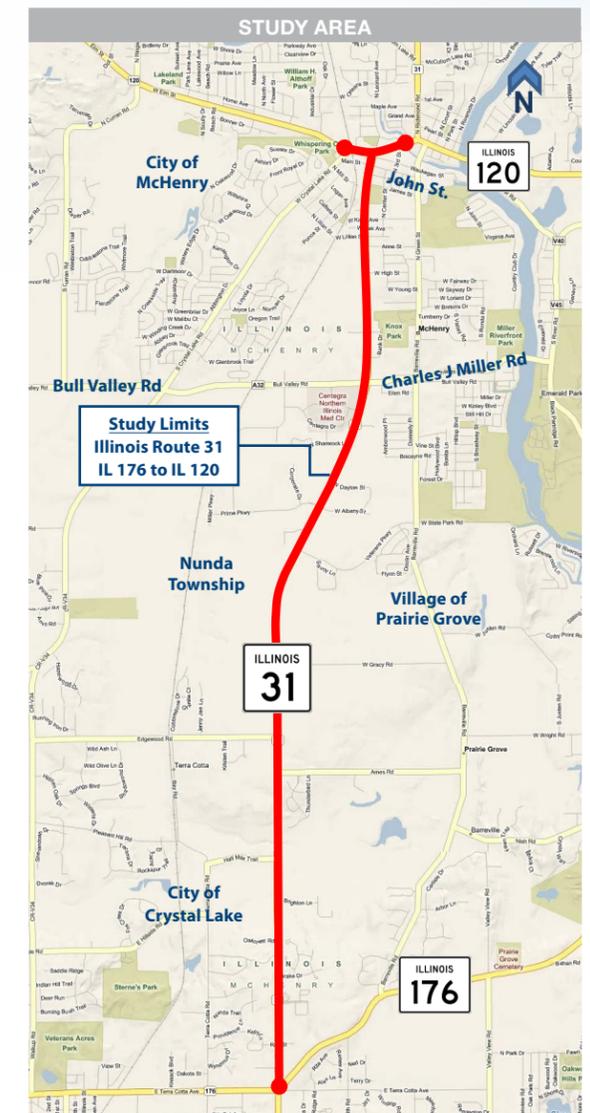
Purpose of the Meeting

- Present the project Purpose and Need
- Review the alternative evaluation process
- Display the alternatives to be carried forward
- Solicit public input

Study Overview

The study area extends 6.8 miles along IL Route 31 from IL Route 176 north, to IL Route 120. The study limits traverse several local municipalities and includes a mixture of adjacent land uses (residential, commercial, agricultural, and industrial). Natural resources found along the corridor include creeks, wetlands, and floodplains.

IL Route 31 is a major north-south corridor in northern Illinois that extends through several counties and connects major east-west routes such as I-90, US Route 14, IL Route 176 and IL Route 120. IL Route 31 is a Strategic Regional Arterial, also known as an SRA Route. SRA Routes carry a significant portion of long distance, high volume automobile and commercial vehicle traffic in the region.



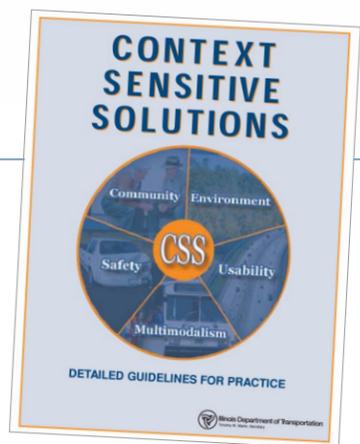
Today's Meeting

The alternatives presented at this meeting have been developed based on analysis of existing and future conditions, and input from the Community Advisory Group (CAG). Each of the alternatives are presented on large scale exhibits. IDOT representatives are on hand to answer any questions you may have regarding environmental concerns, traffic data, crash data, and the proposed alternatives. Comment forms are available and we encourage you to provide feedback on the options and alternatives presented. The information presented in this brochure and the audio-visual presentation will help you understand what has been completed since the last Public Meeting and how we got where we are today.



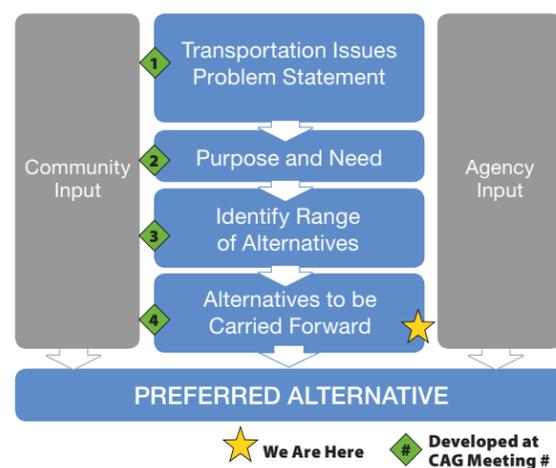
Context Sensitive Solutions (CSS)

This study has been following the principle of IDOT's Context Sensitive Solutions (CSS) project development process. CSS is a collaborative, interdisciplinary project development approach that involves stakeholders throughout the study development process and at key milestone decision points to ensure that the social, economic, and environmental concerns of the surrounding community are considered as part of the proposed transportation improvement.



Project Development through CSS

Since the previous public meeting (held on June 9th of 2011), a CAG was formed with interested stakeholders and community leaders who wished to participate in the development of this project. The CAG consists of municipal and county representatives, bicycle and environmental advocacy groups, residents and business owners. The CAG members met on four separate occasions in the past year to present and solicit stakeholder input on critical aspects of the project. The project problem statement was developed in the first meeting by the CAG members. The project Purpose and Need was developed in the second meeting. The information needed to develop the full range of alternatives was developed in the third meeting. The fourth meeting helped to further define the alternatives to be carried forward which are now displayed for your review and comment at this meeting.



Problem Statement & Purpose and Need

IL Route 31 Project Problem Statement

“The transportation problems to be solved by this project are: congestion (existing and future), safety for multi-modal users, accessibility for all users, and existing design deficiencies; in addition, minimize overall environmental impacts (e.g. storm water runoff and water quality).”

IL Route 31 Project – Purpose

The purpose of the proposed project is to improve safety, address roadway capacity and mobility, correct existing geometric deficiencies and encourage multi-modal transportation along IL Route 31 from the intersection of IL Route 176 to the intersection of IL Route 120, in eastern McHenry County.

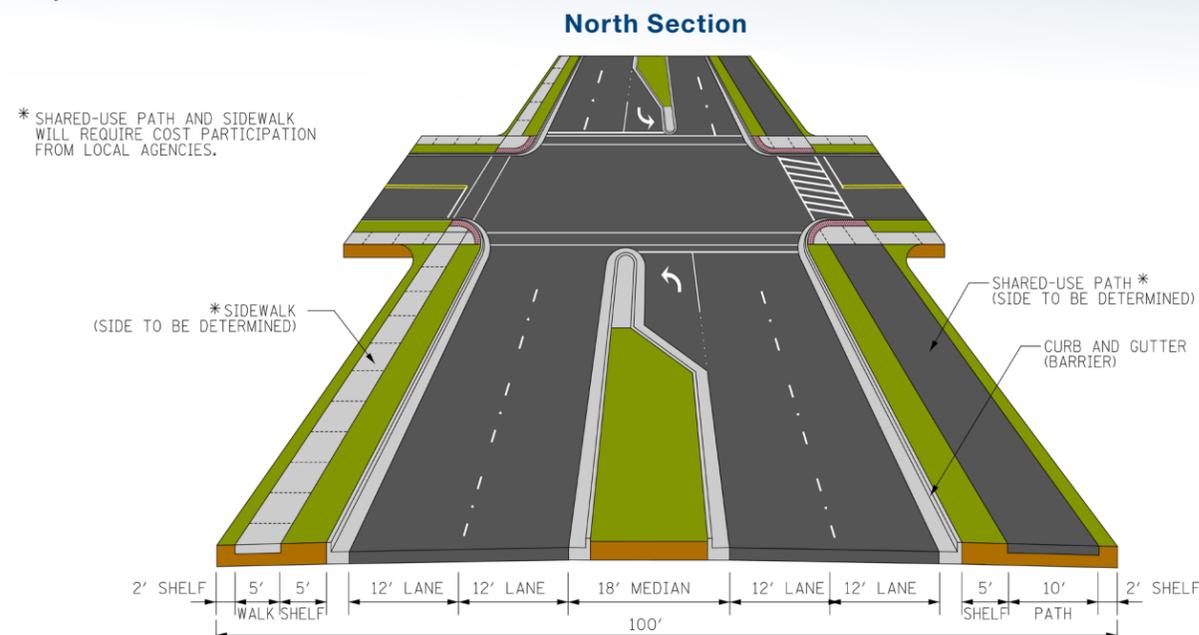
IL Route 31 Project – Needs

- Improve Roadway Safety
- Expand Roadway Capacity and Address Traffic Issues
- Correct Existing Roadway Design Deficiencies
- Improve Opportunities for Multi-Modal Connectivity

NORTH SECTION

North of Bull Valley/Charles J. Miller Road to John Street

The North section build option improves IL Route 31 to include 2 lanes in each direction separated by an 18 foot raised curb median from North of Bull Valley/Charles J. Miller Road to John Street.

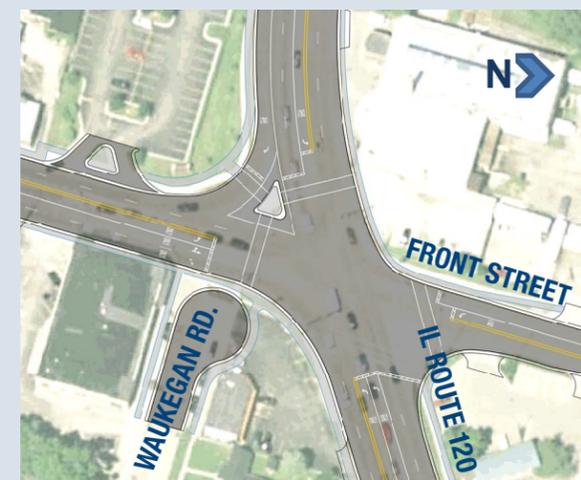


IL ROUTE 120 INTERSECTION

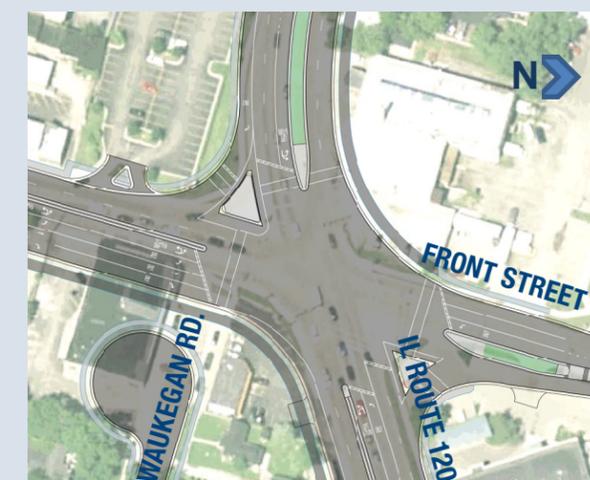
Due to potential building impacts beyond John Street, two build alternatives were developed to improve IL Route 31 leading into the intersection at IL Route 120, and the intersection itself. Option 1 is to restripe the intersection approaches to include additional but narrower lanes, and does not involve building impacts.

Option 2 involves a transition into a 30' median to accommodate dual left turn lanes, and includes potential building impacts. Both options remove on-street parking on IL Route 31 and include a dual left turn lane on IL Route 120 for westbound to southbound traffic.

IL Route 120 Intersection Option 1 (Minimum Build)



IL Route 120 Intersection Option 2 (Full Build)



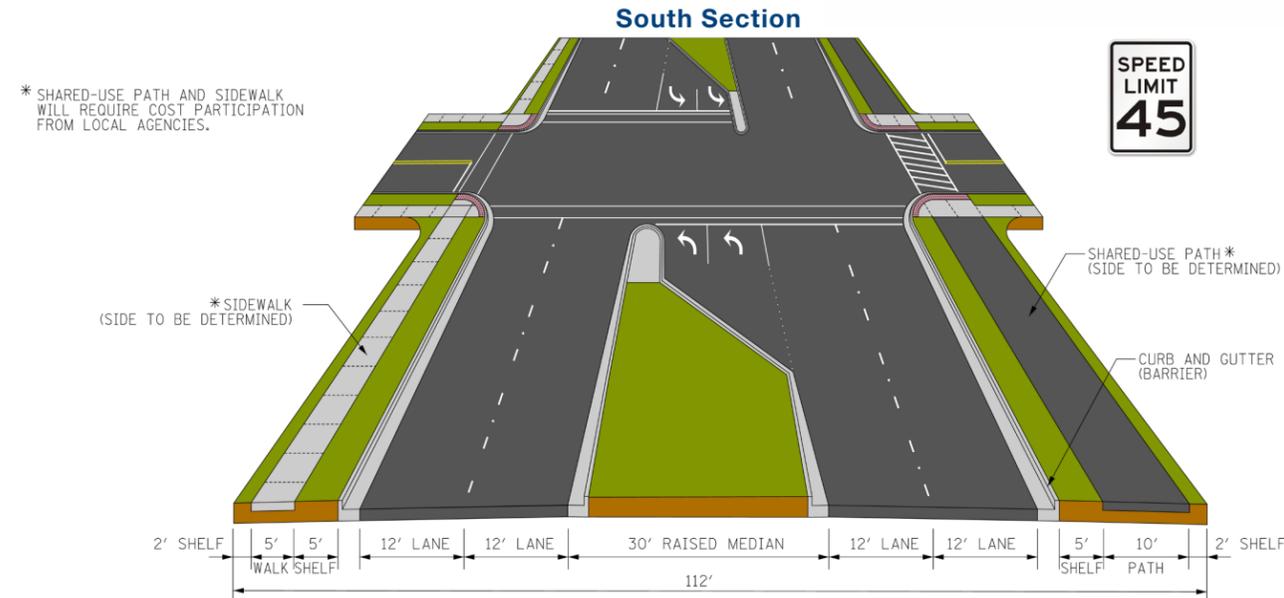
* IL Route 120 Intersection options can be reviewed in detail on the large scale exhibits presented at this meeting

Alternatives to be Carried Forward

SOUTH SECTION

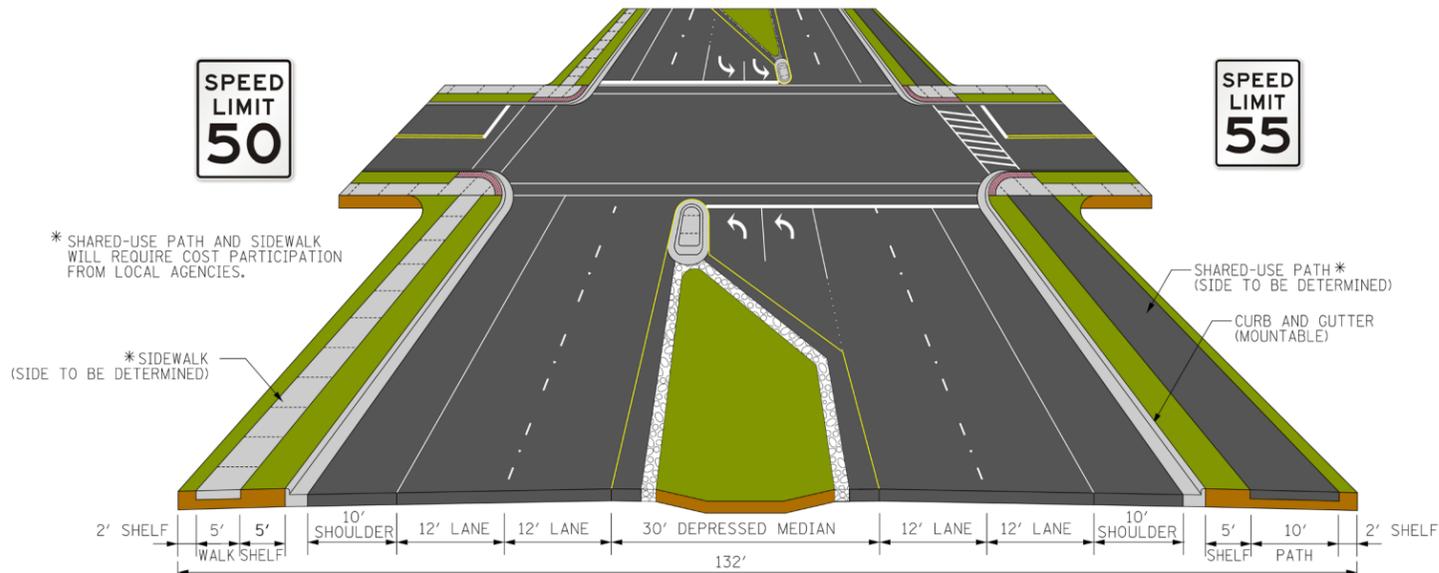
IL Route 176 to South of Bull Valley/Charles J. Miller Road

The South Section build option improves IL Route 31 to include 2 lanes in each direction separated by a 30 foot raised curb median from IL Route 176 to South of Bull Valley/Charles J. Miller Road. This section will match the proposed improvements at the IL Route 31 and IL Route 176 intersection, as well as the improvements planned as a part of the Bull Valley / Charles J. Miller Road project (led by the McHenry County Division of Transportation). The proposed option includes sidewalk and a shared-use path. This option would have a maximum posted speed limit of 45 MPH throughout the south section.



An Alternative Build Option has been selected to be carried forward for the South Section between Drake Drive and Veterans Parkway. This option provides a 30 foot depressed median with 10 foot paved shoulders and allows for posted speed limits higher than 45 MPH to remain in place. It provides additional water quality benefits but requires a larger footprint to construct.

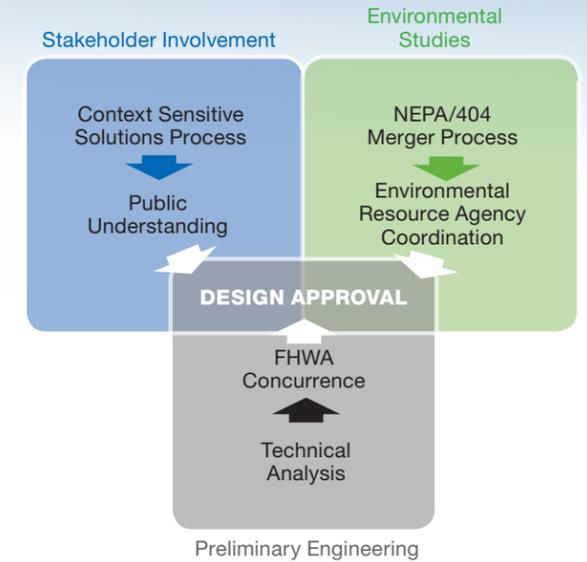
South Section: Alternative Option (Drake Drive to Veterans Parkway)



Developing the Range of Alternatives

After the Problem Statement and the Purpose and Need were defined, collaboration began on developing a full range of alternatives to be considered and analyzed for the IL Route 31 roadway.

The generation of alternatives considered environmental, social and cultural resources. The review also consisted of knowing the kinds of engineering tools that can be utilized to improve the roadway. This collection of engineering tools became known to the group as the "Engineering Toolbox." Using these tools, a full range of alternatives were developed.



Engineering Toolbox

In the design and engineering of any project, it is important to have an understanding of the types and kinds of tools the project and engineers has access to. The "Engineering Toolbox" is the terminology designated to represent the collection of these tools for which may be incorporated into the design of the project. The Engineering Toolbox is further separated into three categories: Pedestrian Safety Improvement, Roadway Safety Improvement, and Capacity Improvement.

Pedestrian Safety Improvement Tools

- Sidewalks / Bike Lanes / Shared-use Paths
- Crosswalks / Crosswalk Signals



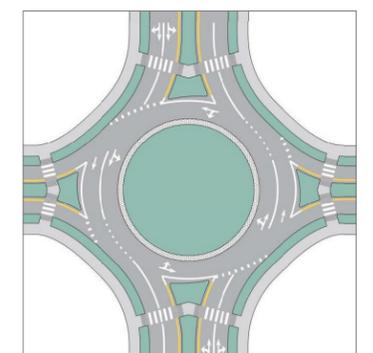
Roadway Safety Improvement Tools

- Raised Medians
- Left Turn Lanes
- Access Management
- Improved Sight Distance
- Geometric Realignment
- Traffic Signal Installation / Modernization
- Roadway Lighting



Capacity Improvement Tools

- Add through Lanes
- Add Turn Lanes at Intersections
- Modify Turn Lane Storage Lengths and Tapers
- Roundabouts



Identified Range of Alternatives

While developing the range of alternatives with the “Engineering Toolbox”, it was quickly understood that the use of any design tool had to take existing roadway characteristics, adjacent land use, and available right-of-way into consideration. These considerations were made easier to categorize by separating the alternatives into two groups, a “North Section” and a “South Section.” The transition from the “South Section” to “North Section” occurs at the Intersection

at Bull Valley Road. The Intersection of IL Route 31 and Bull Valley Road is being studied by the McHenry County Division of Transportation (MCDOT) as part of their Bull Valley/ Miller Road improvement project. The MCDOT improvements extend along IL Route 31 between Medical Center Drive and Bank Drive. South of these limits is the “South Section” for this project, while anything north of the Bull Valley Road intersection is the “North Section”. The “North Section” has generally lower traffic

volumes, lower traffic speeds, and limited right-of-way. In contrast, the “South Section” has comparatively higher traffic volumes, higher traffic speeds, and wider right-of-way.

Based on the project need to improve opportunities for multimodal connectivity, all build options for the South and North sections include shared-use paths and sidewalks for bicyclists and pedestrians. These accommodations will require cost participation from local agencies.

RANGE OF ALTERNATIVES

South Section (IL Route 176 to South of Bull Valley/ Charles J. Miller Road)

- 6-lane with 30' & 50' Depressed Median and 10' Outside Shoulders
- 6-lane with 18'-22' Raised Median
- 4-lane with 18'-22' Raised Median
- 4-lane with 18'-22' Raised Median and 10' Outside Shoulders
- 5-lane with Bi-directional TWLTL*
- 4-lane with 30' Raised Median
- 4-lane with 30' Depressed Median and 10' Outside Shoulders
- No-Build Alternative

North Section (North of Bull Valley/Charles J. Miller Road to John Street)

- 4-lane with 6' Landscaped/Planter Median

- 4-lane with 18' Raised Median
- 4-lane with 30' Raised Median
- 5-lane with Bi-directional TWLTL
- Roundabout Intersection at Lillian St./Grove Ave.
- One-way Arterial Pair (Regional Improvement)
- No-Build Alternative

IL Route 120 Intersection

- Re-stripe Alternative, No Median with 10' lanes
- 18' Raised Median (Single Left) for South Leg
- 30' Raised Median (Dual Left) for South Leg
- Traditional signalized intersection with 3 legs (cul-de-sac north leg of intersection)
- Roundabout with 4 legs
- Roundabout with 3 legs (cul-de-sac north leg of intersection)
- Various Alternatives with Free Flow Right Turn Lane for South Leg
- No-build Alternative

*TWLTL: Two Way Left Turn Lane

Evaluation Process and Screening

Once the full range of alternatives were developed, a screening process was initiated to narrow the range into a smaller list of the alternatives that will best meet the purpose and needs of the project.

Fatal Flaw Screening

The screening process began by looking at each alternative and determining if the alternative contained a “Fatal Flaw”. A Fatal Flaw analysis was conducted and could be described as a high level, low detail review investigating alternatives that would be either not feasible or contrary to the goals of the project. An alternative that involved severe impacts to social, cultural, historical, and/or environmental resources may have also been a Fatal Flaw for an alternative. All alternatives presented in the full range of alternatives passed the Fatal Flaw Analysis.

Purpose and Need Screening

The range of alternatives was then investigated with more detail as each alternative was evaluated against the Purpose and Need of the project. In summary, the alternatives that pass this screening should improve roadway safety, increase roadway capacity, correct design deficiencies, and improve multimodal connectivity. Alternatives involving an 18'-22' median in the South Section were eliminated due to not

meeting anticipated turning movements at intersections (cannot accommodate dual left turn lanes). A 30' median in the North Section was not necessary throughout most of the section, while a narrow 6'-8' planter median would decrease safety and capacity. These two alternatives were eliminated as a result. Any alternative involving 6 travel lanes will meet the Purpose and Need but has considerably greater costs and impacts to construct them. The final screened alternative was the One-way Arterial Pair alternative. The changes in traffic flow, reconstruction of Green Street, and distance between the parallel streets has eliminated this alternative.



Detailed Evaluation Screening

Detailed evaluation of the remaining alternatives focused on more in-depth capacity analysis and



included the latest innovations in safety analysis as outlined in the Highway Safety Manual (HSM). The safety analysis compared alternatives with a Two Way Left Turn Lane (TWLTL) against a divided median (Raised Curb or Depressed), as well as the impact of on-street parking along IL Route 31, near IL Route 120, on crash rates. The anticipated crash rate for median options is 48% lower than non-median or TWLTL options; and the elimination of on-street parking along IL Route 31 may reduce crashed by approximately

26%. Based on the HSM evaluation results it was determined that any options involving the use of a TWLTL median or on-street parking along IL Route 31 should be eliminated. The roundabout alternatives were further analyzed and it was concluded that they operate at failing levels of service under anticipated projected traffic volumes, as a result of high volumes, especially for opposing turning movements. Roundabouts were eliminated from further evaluation.

