

Randall Road at IL Route 72 Phase I Study

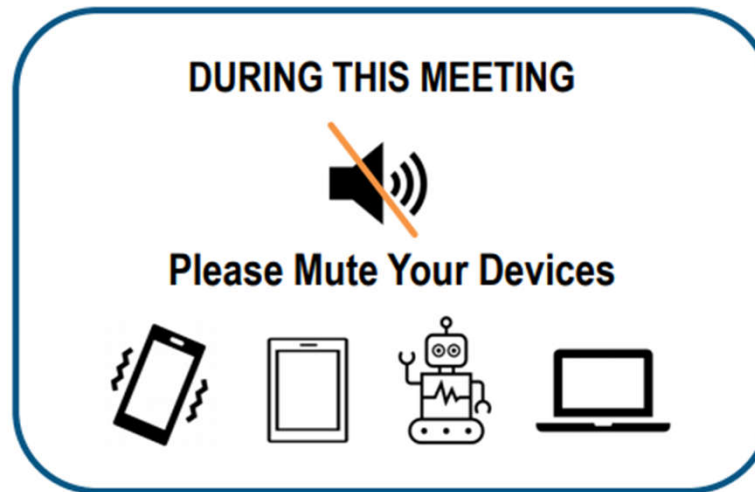
VIRTUAL PUBLIC INFORMATION MEETING
OCTOBER 14, 2021



WELCOME AND AGENDA

- Where is this Project and why is this intersection being studied?
Study Location, Existing Conditions, Other Area Studies, Delays, Queues, Safety, Purpose and Need Statement
Q & A Session
- How is an improvement determined?
Traffic Patterns and Volumes, Crash Data, Environmental, Community, Stakeholder and Property Owner, Utilities, Local Plans and Regulations
Q & A Session
- What is the proposed improvement?
Geometry and Key Features, Typical Sections, Environmental Resources, Drainage, Noise, Land Acquisition
Q & A Session
- What happens after this meeting?
Project Schedule, Public Comment
- Final Comments and Q & A Session

RULES OF ENGAGEMENT



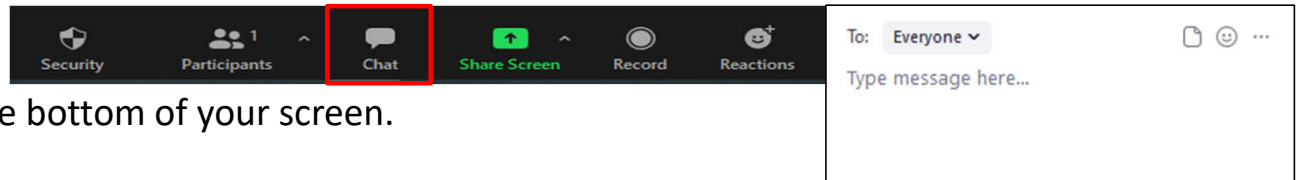
**This meeting will be recorded and
available on the project website
following the meeting**

ASKING QUESTIONS

VIA ZOOM

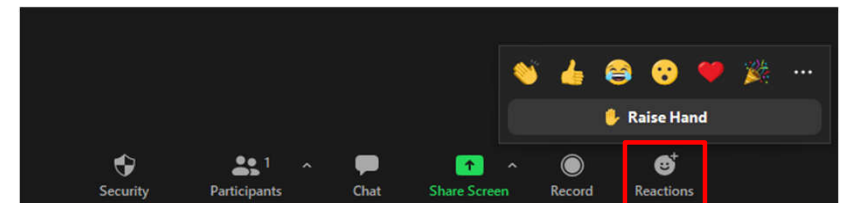
Typing in the Chat Box

- Click on the Chat icon located at the bottom of your screen.
- A Chat box should appear.
- At the bottom of the chat box, type your question in the message box.
- Chat Box questions can be asked at any time.



Verbally via Raise Hand

- Click on the Reactions icon at the bottom of your screen.
- Click on the Raise Hand command.
- The host will be notified that you have raised your hand.
- Verbal questions will be taken during Q&A sessions.



VIA TELEPHONE

- dial star 9 to raise your hand to ask questions

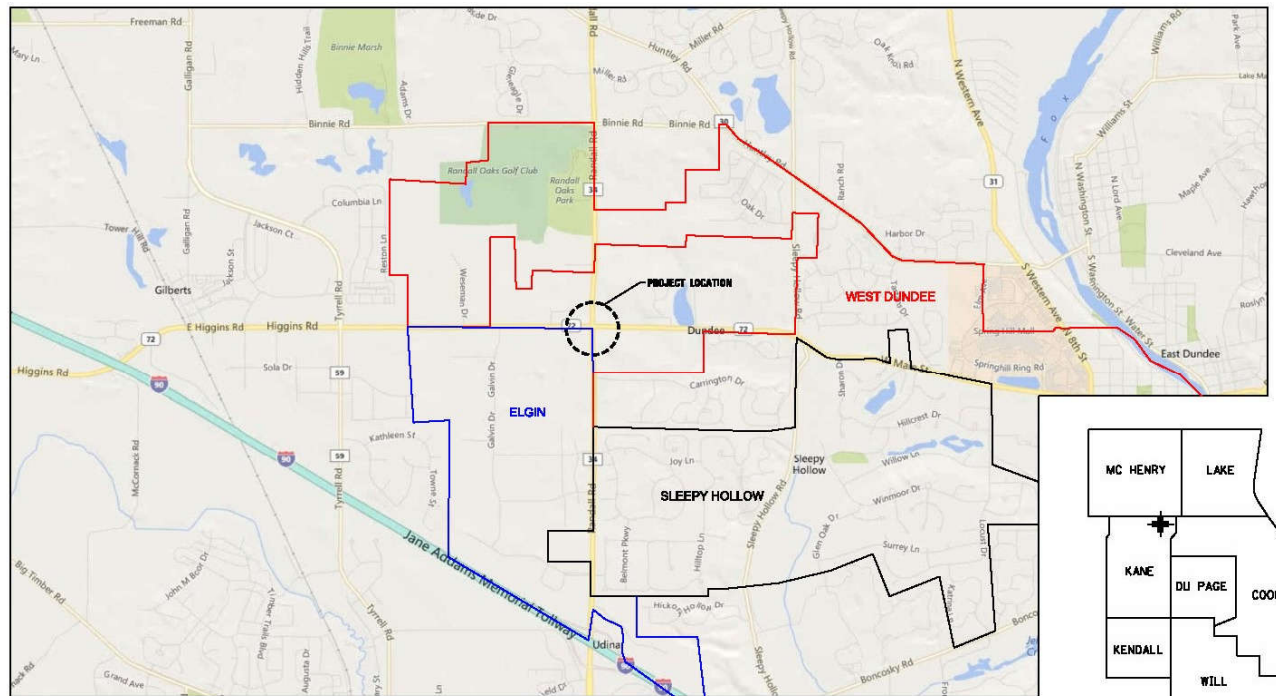
WHERE IS THIS PROJECT AND WHY IS THIS INTERSECTION BEING STUDIED?

LOCATION

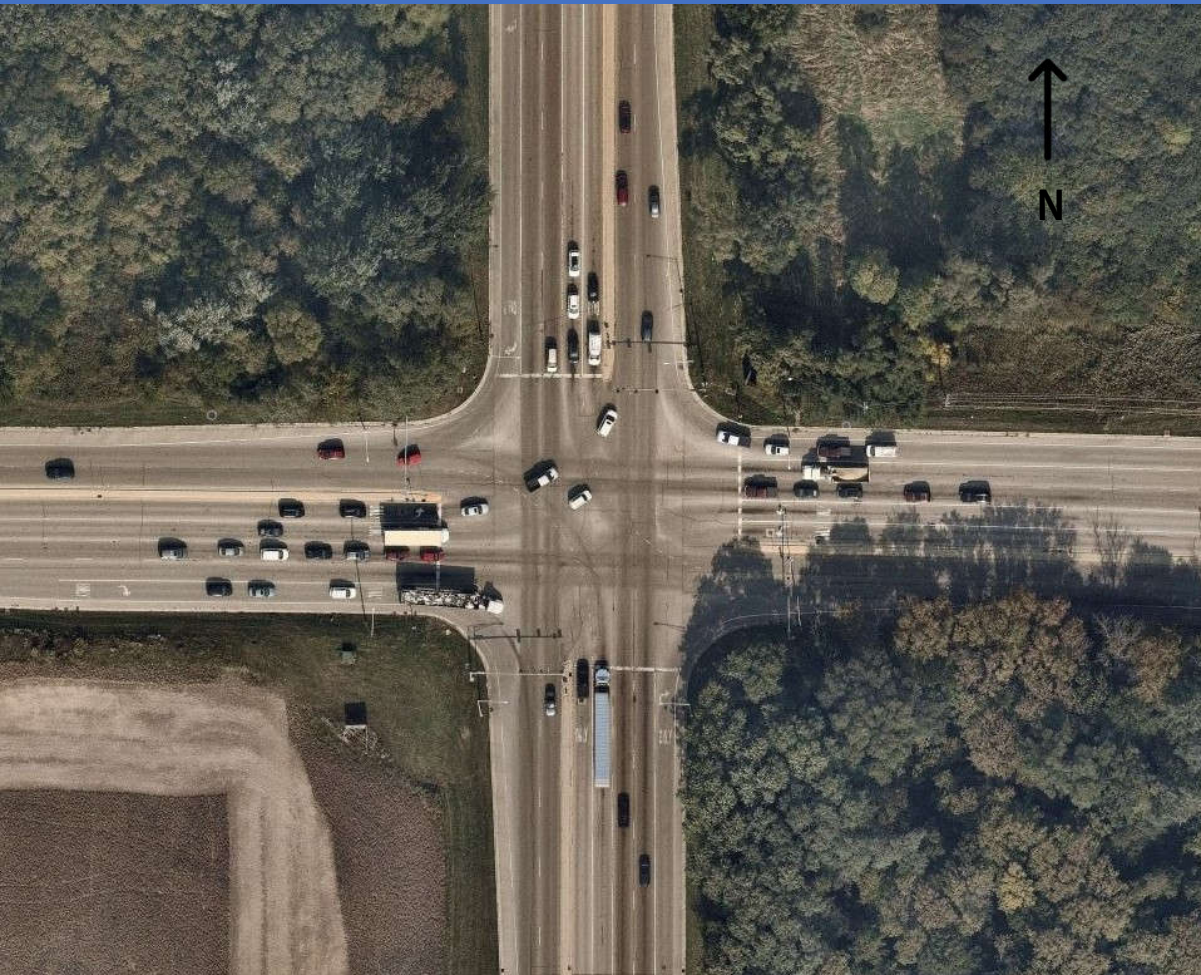
The signalized intersection of **Randall Road at IL Route 72** is located in Elgin and Unincorporated Kane County

Randall Road, 1.5 miles north of I-90, is designed to

- Supplement the freeway system
- Carry significant volumes long distances across a region



EXISTING CONDITIONS



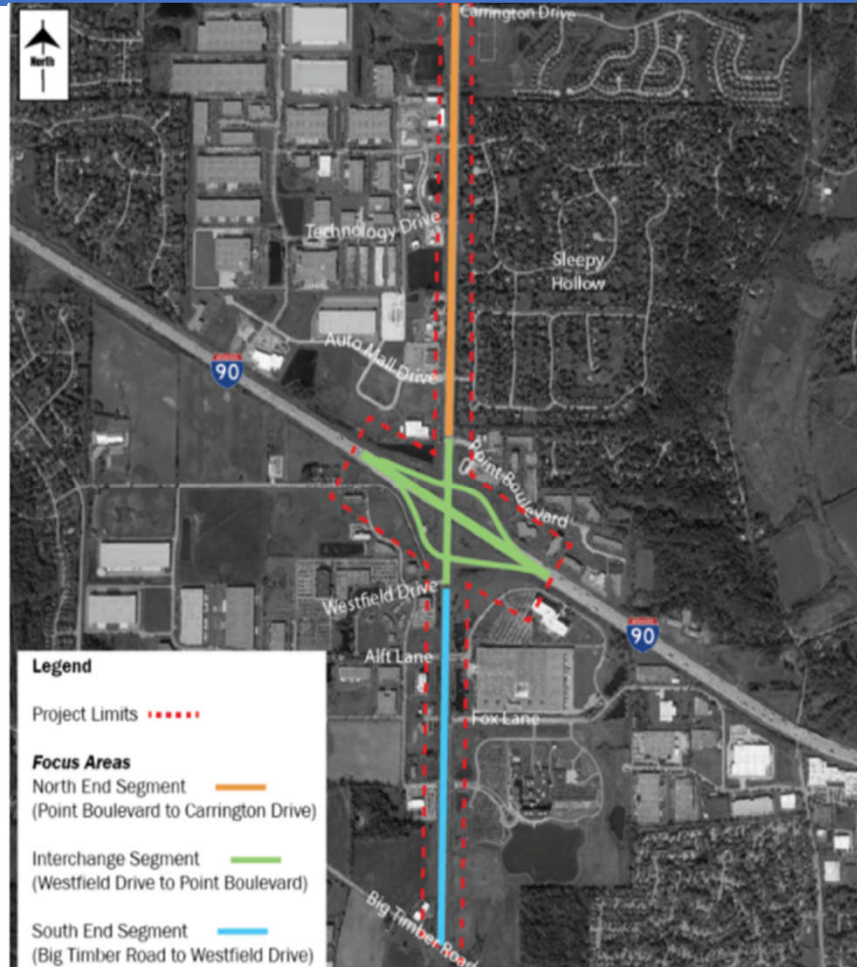
- Two through lanes
- Two left-turn lanes
- One right-turn lane
- Shoulder plus curb and gutter

- No dedicated pedestrian or bicycle facilities
- Traffic signal interconnect along Randall Road

OTHER AREA STUDIES

Randall Road at Big Timber Road

Increase capacity and improve safety at the intersection

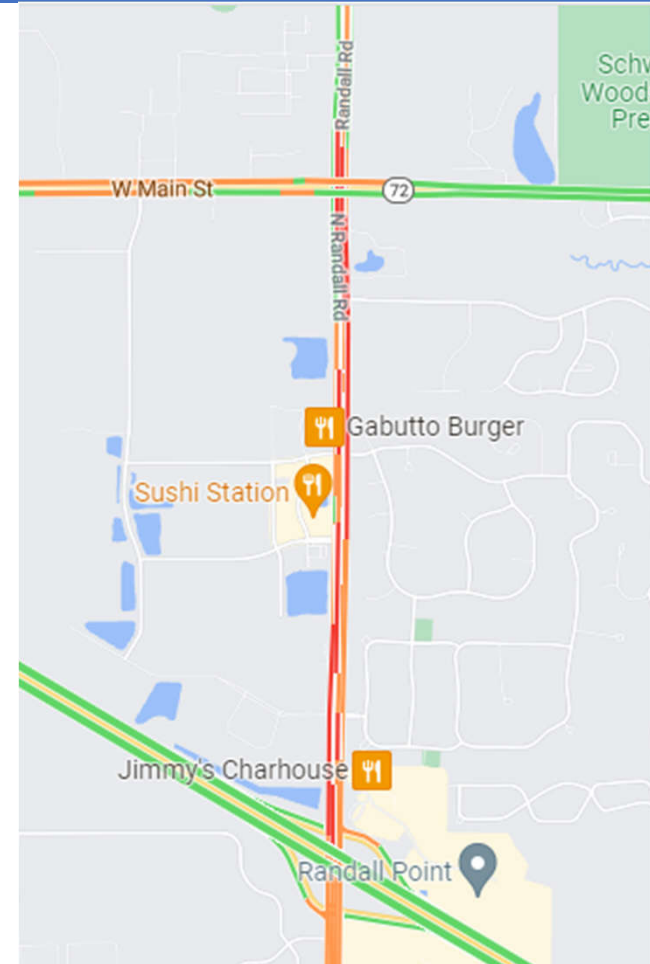


Randall Over 90 PEL

Enhance mobility, improve safety, increase capacity, address economic and quality of life impacts through the corridor

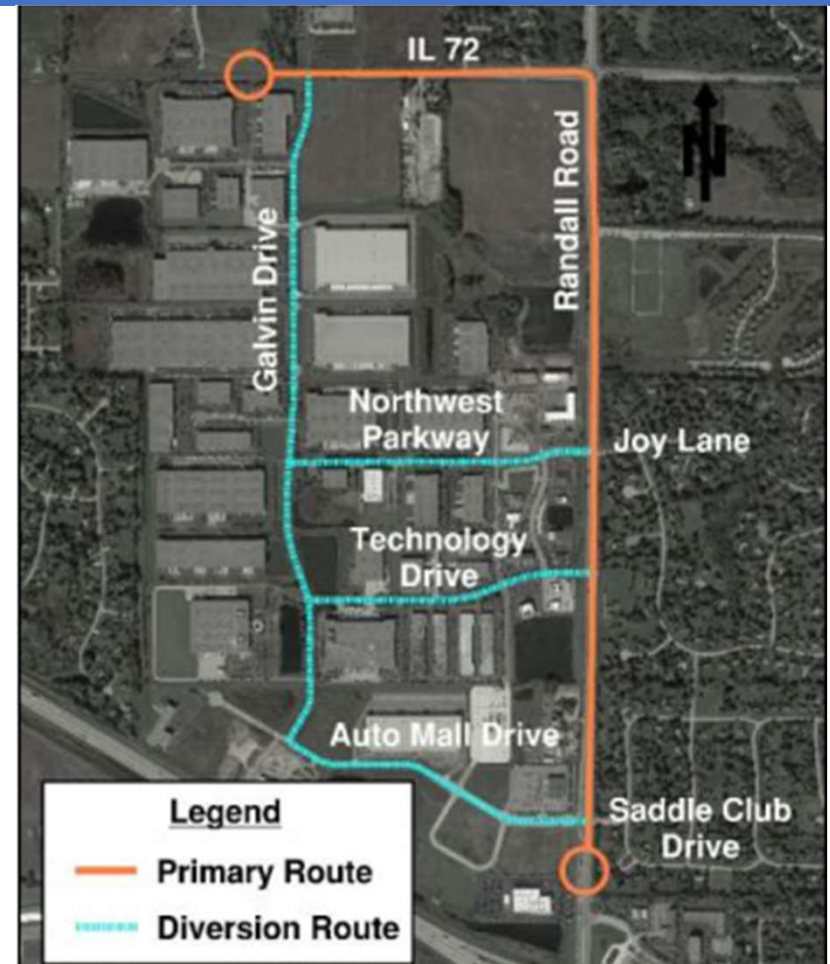
WHY IS THIS INTERSECTION BEING STUDIED?

Existing intersection is at capacity with **long queues** and **delays**.



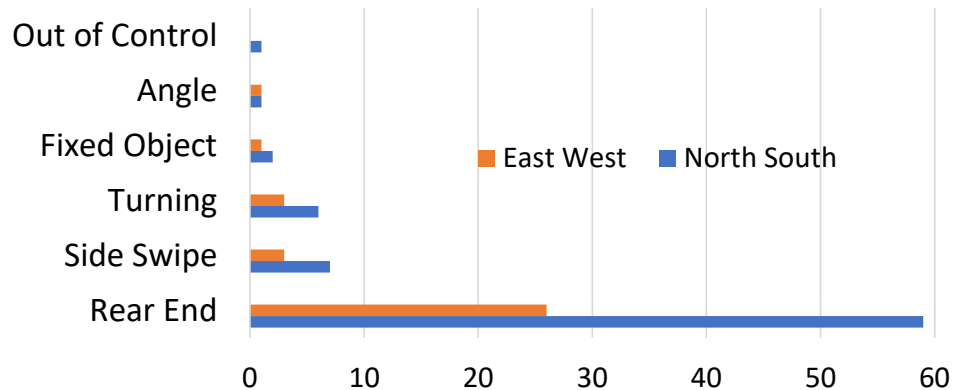
WHY IS THIS INTERSECTION BEING STUDIED?

Motorists currently use other routes to **bypass the intersection** because of existing congestion.

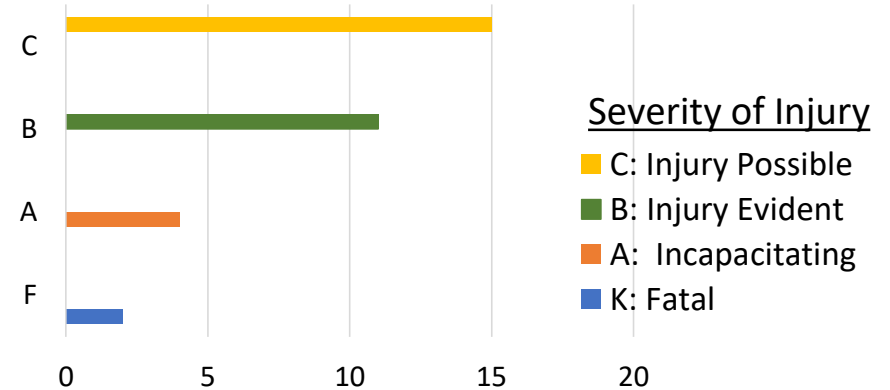


WHY IS THIS INTERSECTION BEING STUDIED?

The number of **crashes** that occur are **greater than average**.



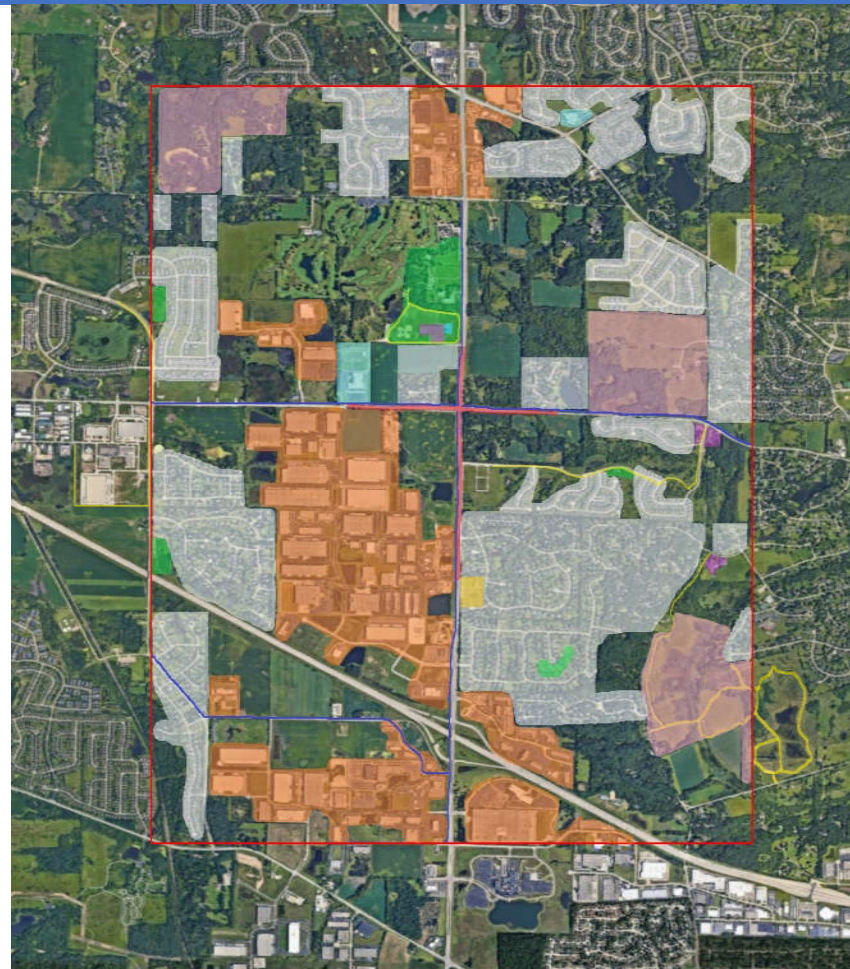
77% were Rear End which reflects a deficiency in *capacity*



110 TOTAL CRASHES, 2013 – 2017
32 TOTAL INJURIES
INCLUDING 2 FATALITIES

WHY IS THIS INTERSECTION BEING STUDIED?

No dedicated **pedestrian accommodations** are at or near the intersection; however, there are numerous generators.



- LEGEND**
- RESIDENTIAL AREA
 - FOREST PRESERVE
 - PARKS
 - EMPLOYMENT CENTERS
 - SCHOOLS
 - CHURCHES
 - GOVERNMENT BUILDING
 - LIBRARY
 - EXISTING BIKE PATH
 - PROPOSED BIKE PATH
 - 1.2 MILE BOUNDARY
 - PROJECT LIMITS

PURPOSE AND NEED STATEMENT

Purpose:

To identify a feasible alternative that reduces delay and queues on Randall Road and improves safety for motorists, pedestrians and bicyclists.

Need:

The *2050 peak hour intersection operations* are projected to be an overall *LOS E or worse* and peak hour *queues* routinely *exceed one-quarter mile*, extending beyond the preceding intersections. These significant queues result in *crashes*. The current *lack of dedicated pedestrian and bicycle accommodations* do not provide a comfort level for all users, discouraging versus encouraging non-motorized usage in the project area.

QUESTIONS?

HOW IS AN IMPROVEMENT DETERMINED?

HOW IS AN IMPROVEMENT DETERMINED?

- **Traffic Data**
- Crash Data
- Environmental Resources
- Drainage
- Utilities
- Community Needs
- Stakeholder and Property Owner Input

TRAFFIC DATA

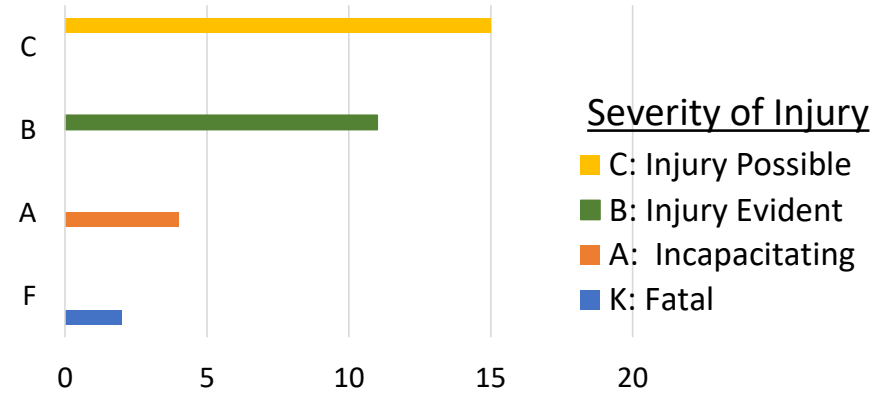
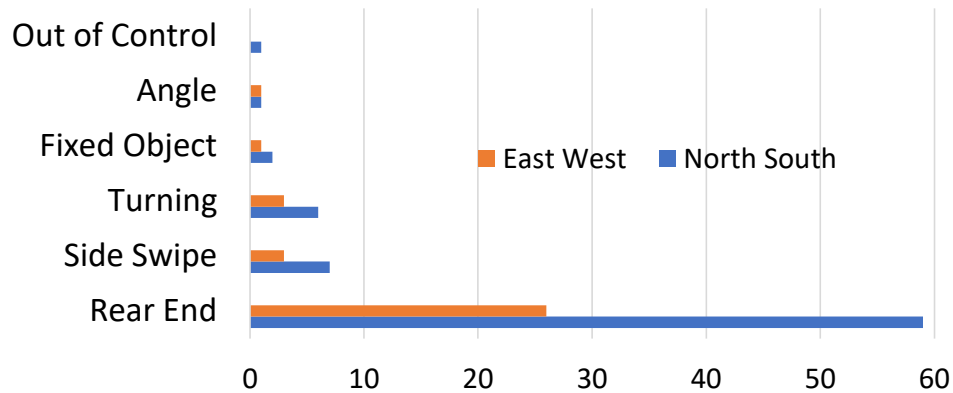
ROUTE	DAILY TRAFFIC		PEAK HOUR TRAFFIC	
	2019	2050	2019	2050
Randall Road	47,800	69,400	3,200*	5,400
IL Route 72	18,700	25,500	1,400	2,400

* Warrants Three Lanes in Each Direction

HOW IS AN IMPROVEMENT DETERMINED?

- Traffic Data
- **Crash Data**
- Environmental Resources
- Drainage
- Utilities
- Community Needs
- Stakeholder and Property Owner Input

CRASH DATA



77% were Rear End

15% Multi-Vehicle Crashes

110 TOTAL CRASHES, 2013 – 2017

32 TOTAL INJURIES

INCLUDING 2 FATALITIES

HOW IS AN IMPROVEMENT DETERMINED?

- Traffic Data
- Crash Data
- **Environmental Resources**
- Drainage
- Utilities
- Community Needs
- Stakeholder and Property Owner Input

ENVIRONMENTAL RESOURCES



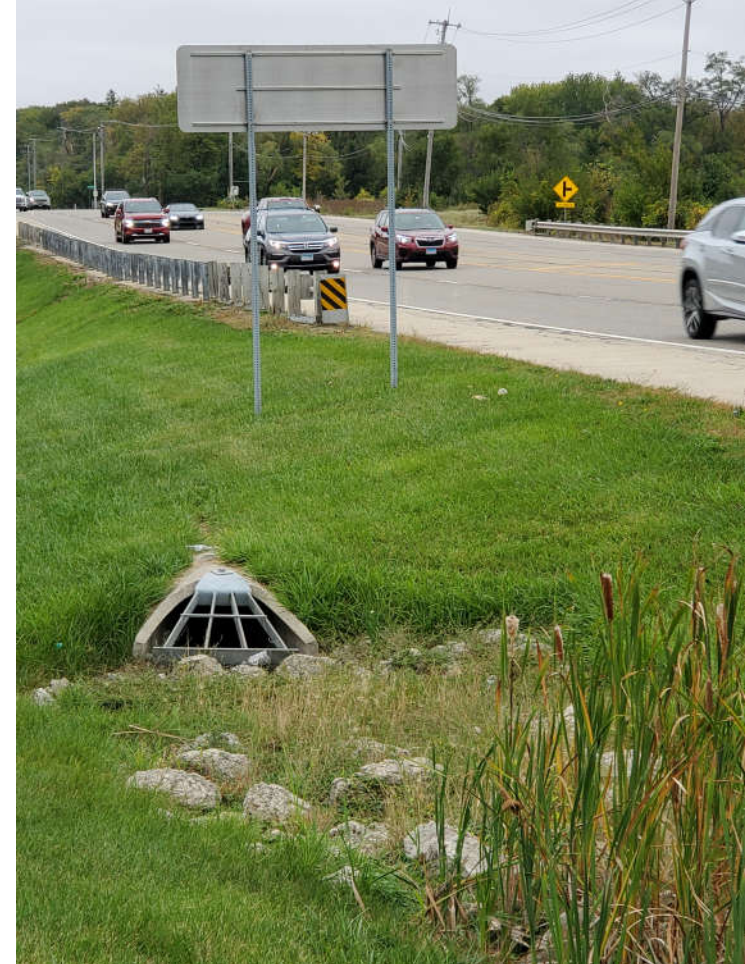
- Wetlands
- Historic Structures
- Recreational Uses

- Residential Properties
- Development opportunities



HOW IS AN IMPROVEMENT DETERMINED?

- Traffic Data
- Crash Data
- Environmental Resources
- **Drainage**
- Utilities
- Community Needs
- Stakeholder and Property Owner Input



HOW IS AN IMPROVEMENT DETERMINED?

- Traffic Data
- Crash Data
- Environmental Resources
- Drainage
- **Utilities**
- Community Needs
- Stakeholder and Property Owner Input



HOW IS AN IMPROVEMENT DETERMINED?

- Traffic Data
- Crash Data
- Environmental Resources
- Drainage
- Utilities
- **Community Needs**
- **Stakeholder and Property Owner Input**



WHAT ALTERNATIVES WERE EVALUATED?



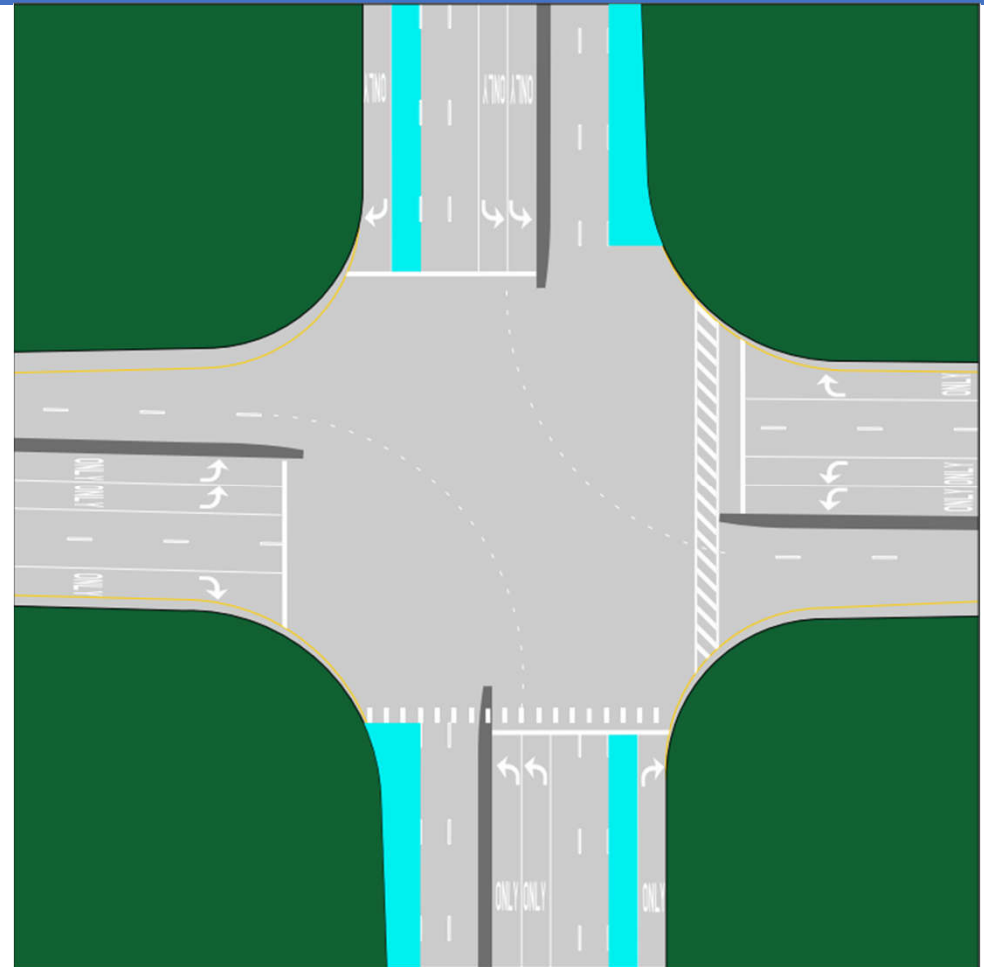
Four Alternatives Evaluated

- Operating level of service
- Delays
- Queues
- Impacts
- Cost

ALTERNATIVES EVALUATED?

Alternative 1

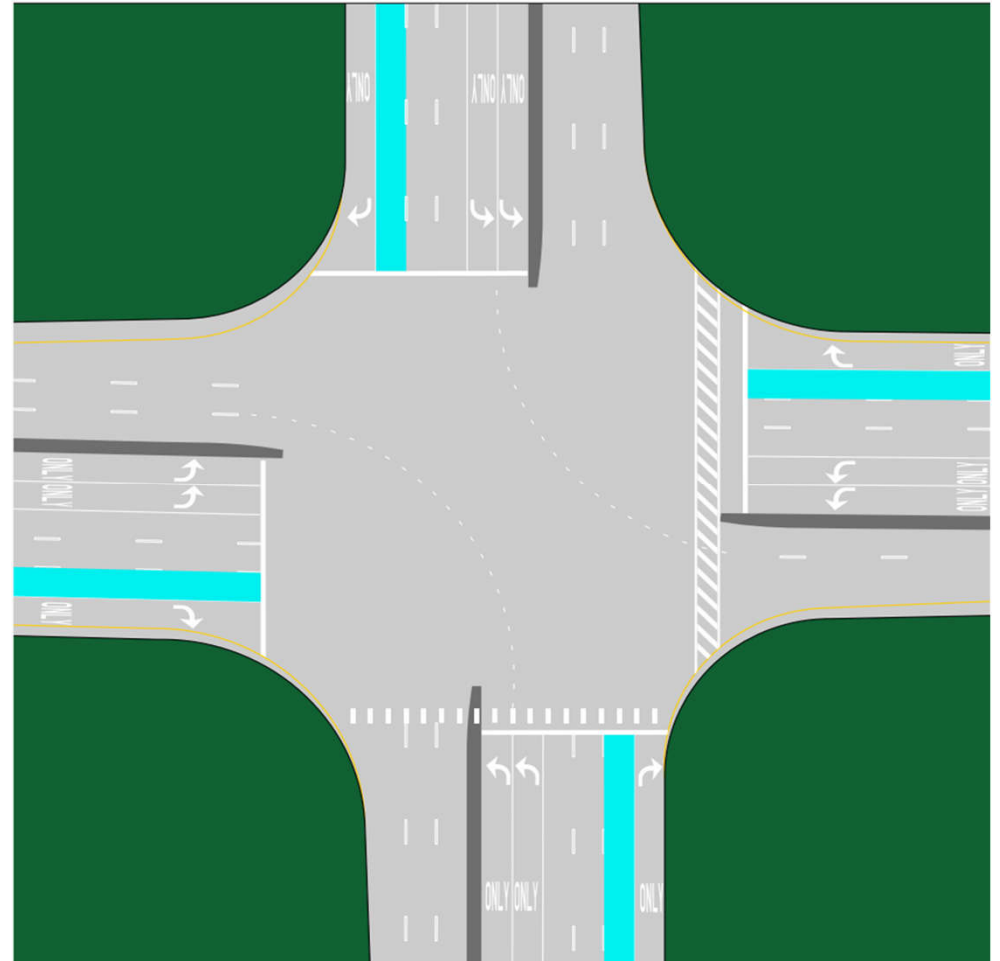
Three through lanes on Randall Road



ALTERNATIVES EVALUATED?

Alternative 2

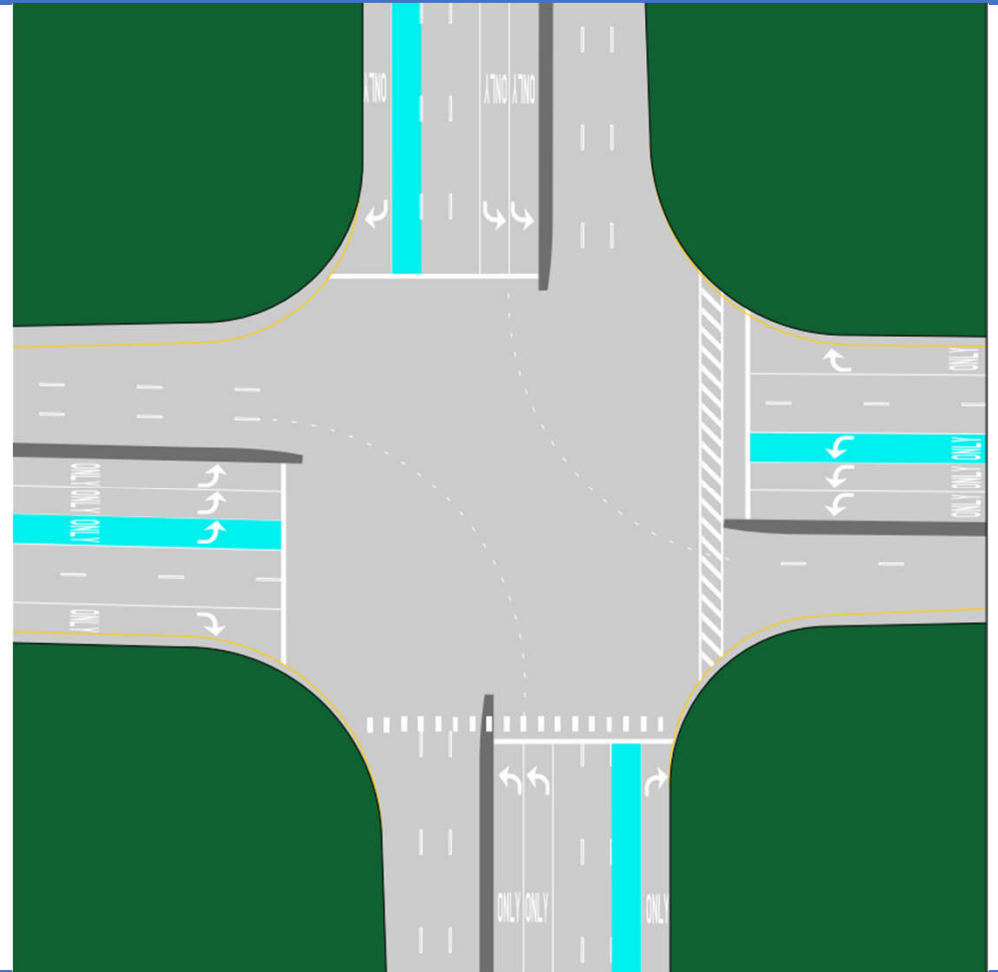
Three through lanes on Randall Road
Three through lanes on IL Route 72



ALTERNATIVES EVALUATED?

Alternative 3

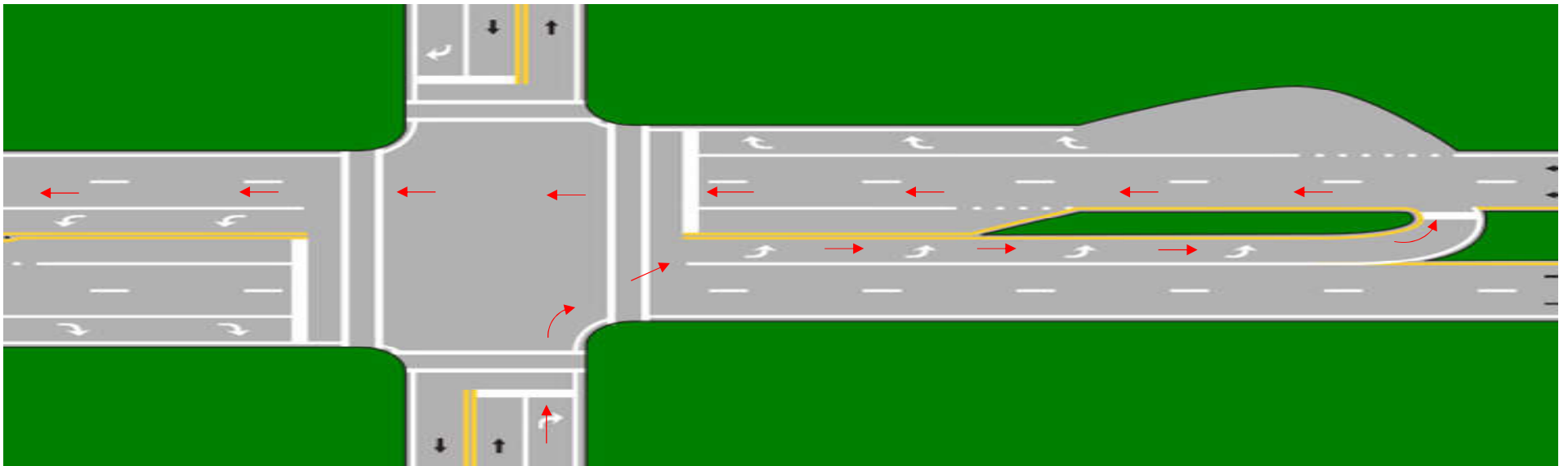
Three through lanes on Randall Road
Three left turn lanes on IL Route 72



ALTERNATIVES EVALUATED?

Alternative 4

Three through lanes on Randall Road
Median U-turn left turns from Randall Road



ALTERNATIVES CONSIDERED

ALTERNATIVE	OVERALL LOS		DELAY		QUEUE	
	AM	PM	AM	PM	AM (SB)	PM (NB)
Alternative 1	C	D	35.4	52.5	716	975
Alternative 2	C	D	33.3	45.2	713	1,052
Alternative 3	C	D	33.9	41.6	738	1,026
Alternative 4	D	D	35.7	47.2	739	1,230

Alternatives 2, 3, and 4 do not result in significant benefit over Alternative 1; yet result in higher construction cost, land acquisition needs, and environment impacts. **Alternative 1 is the Proposed Improvement.**

QUESTIONS?

WHAT IS THE PROPOSED IMPROVEMENT?

OVERALL IMPROVEMENT

Randall Road

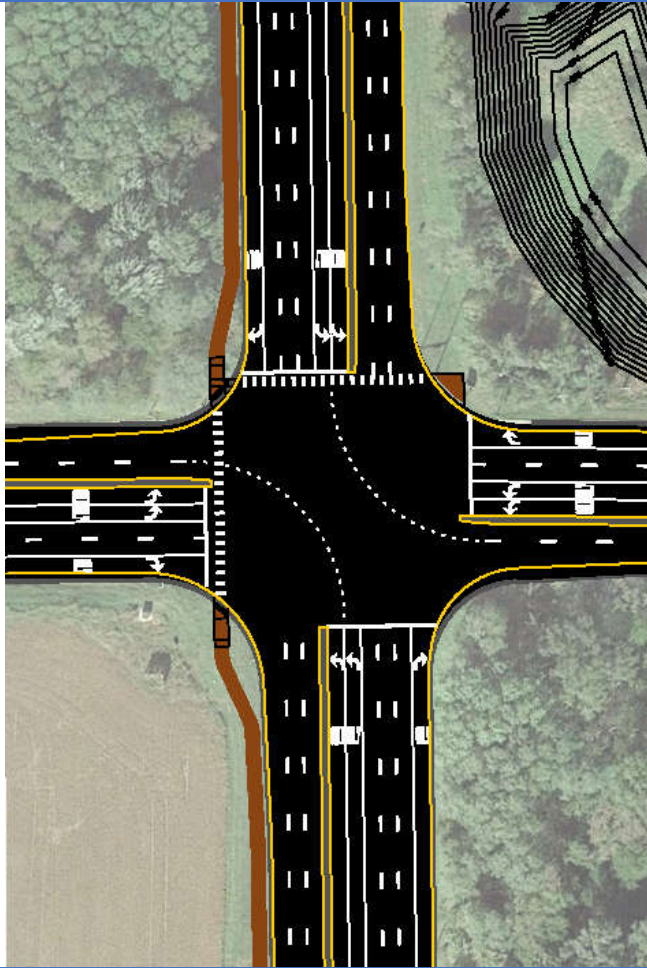
- Three through lanes in each direction
- Accommodations for multi-use path
- Pedestrian crossing signal and cross walks

Higgins Road

- Extend westbound right turn lane
- Extend eastbound right turn lane
- Extend eastbound dual left turn lanes

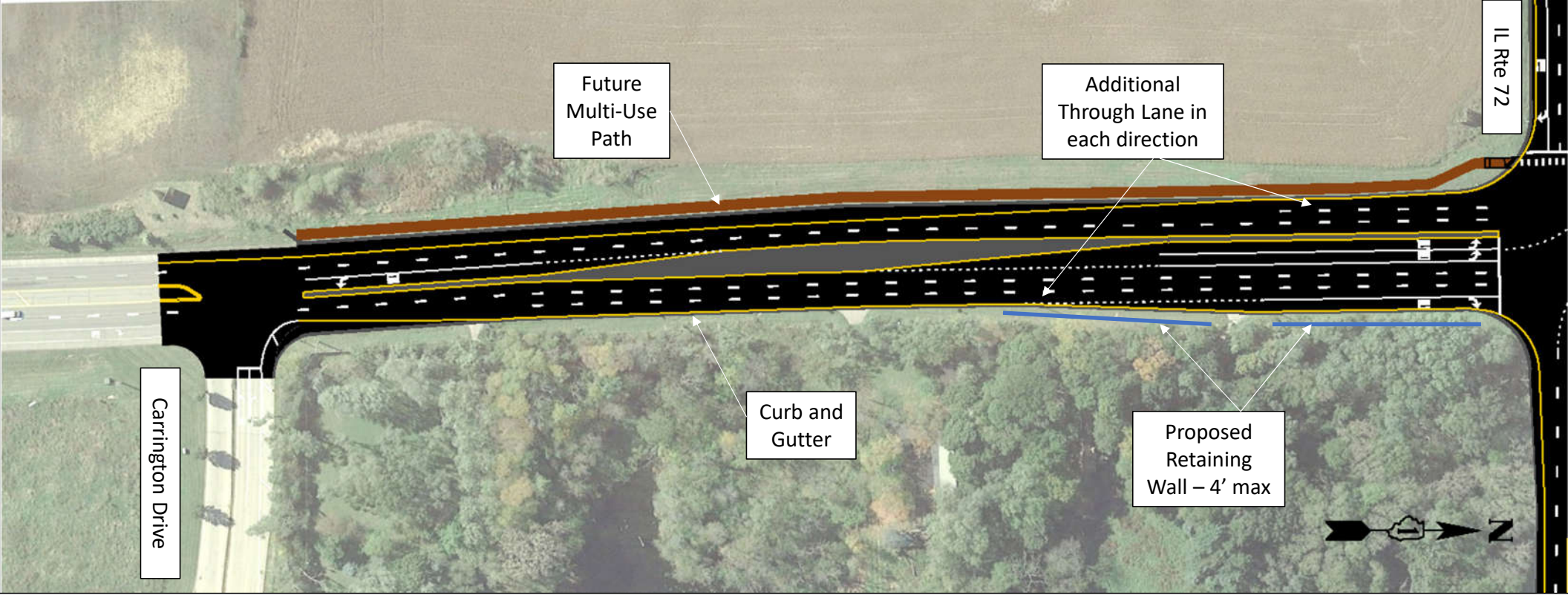
Miscellaneous

- Traffic signal upgrades
- Roadway lighting upgrades
- Resurface all pavement

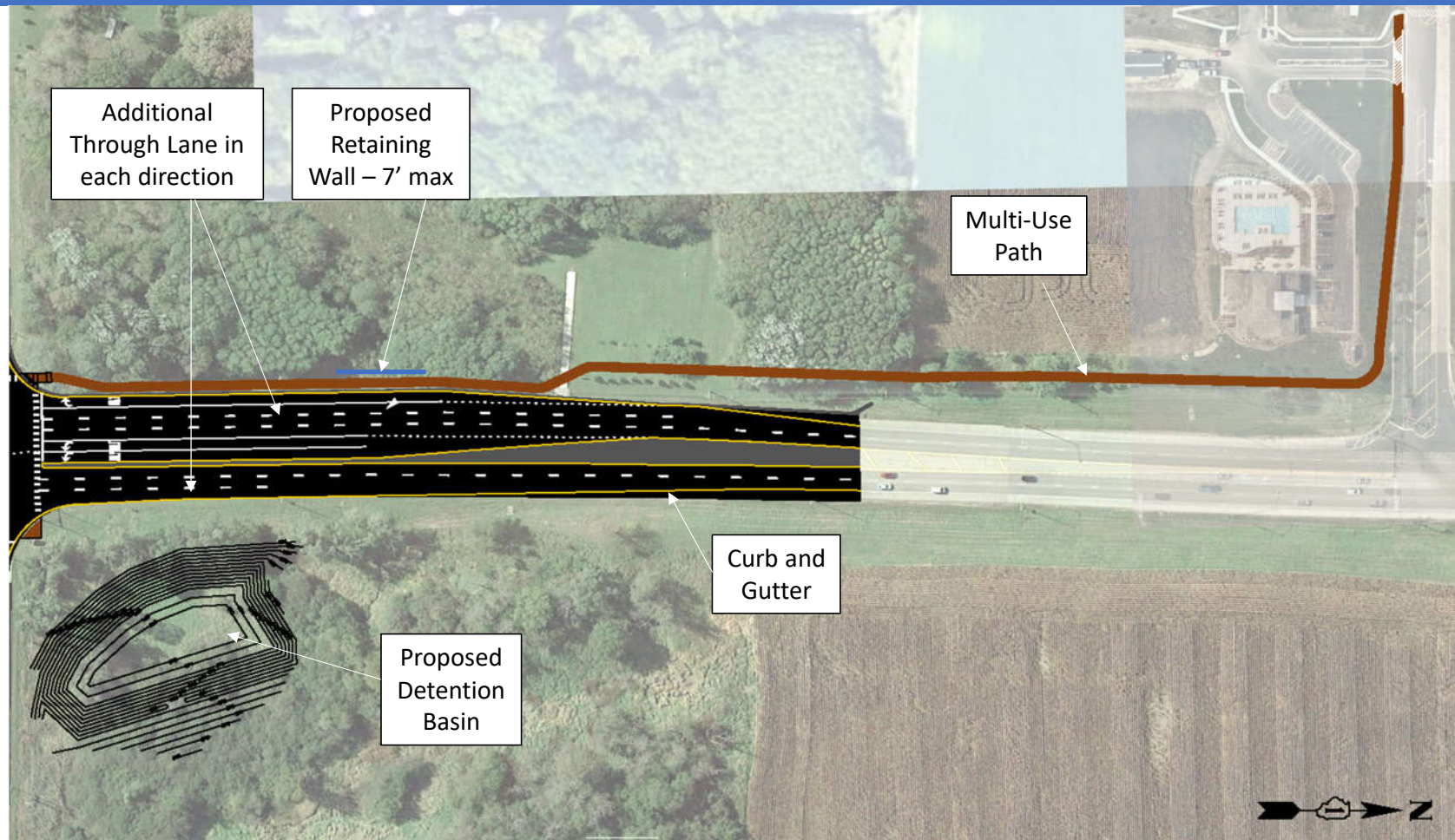


These elements will *increase capacity* and are expected to *reduce queues and delay* and *improve the safety* of the intersection.

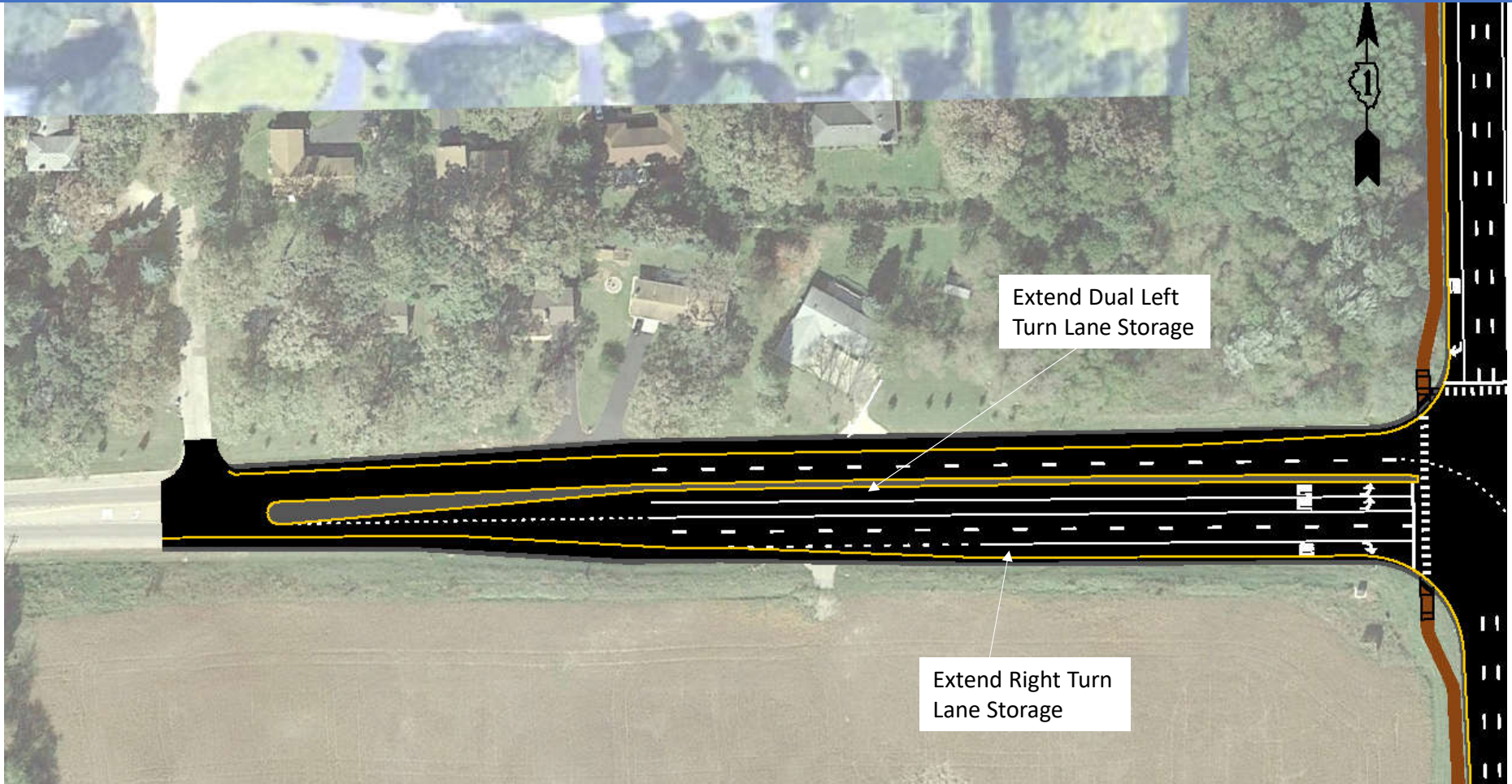
SOUTH LEG OF RANDALL ROAD



NORTH LEG OF RANDALL ROAD

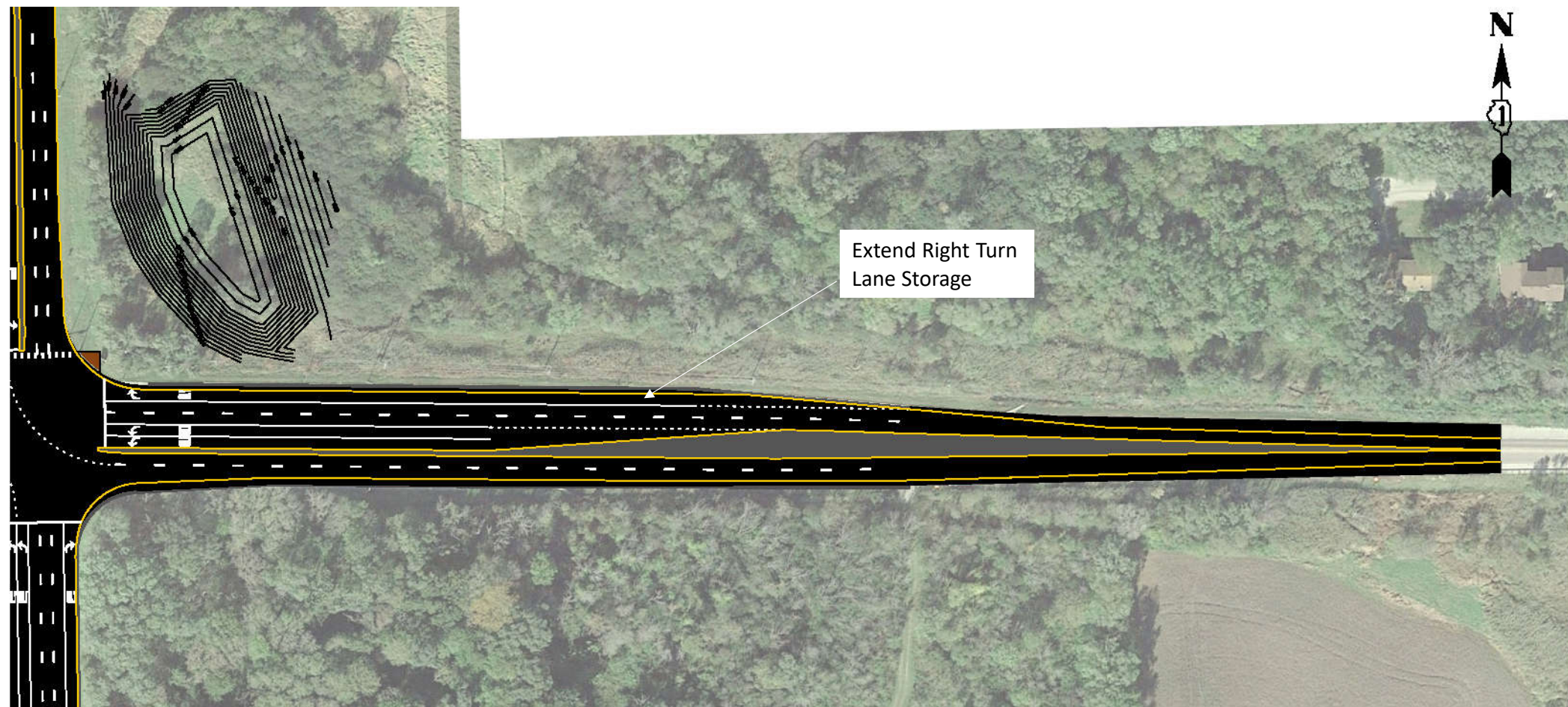


WEST LEG OF IL ROUTE 72



RANDALL ROAD AT IL ROUTE 72 – PHASE I STUDY

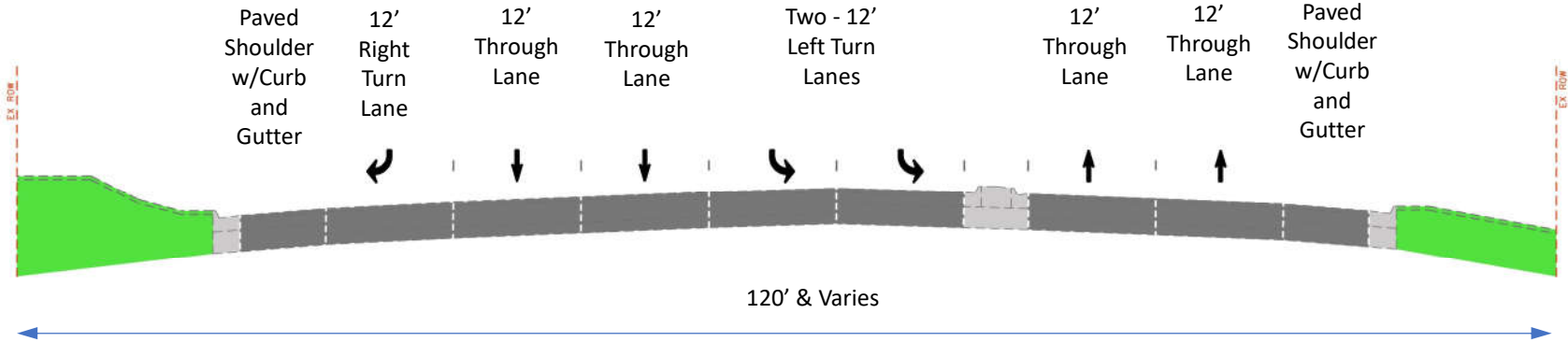
EAST LEG OF IL ROUTE 72



RANDALL ROAD AT IL ROUTE 72 – PHASE I STUDY

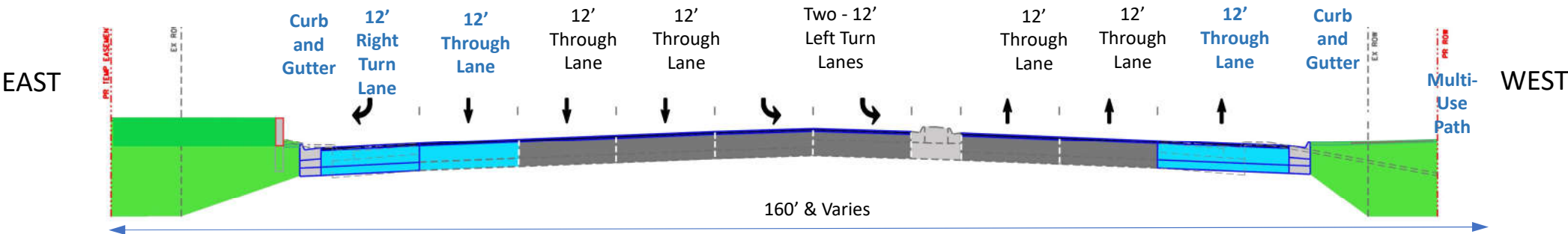
TYPICAL SECTION

EXISTING



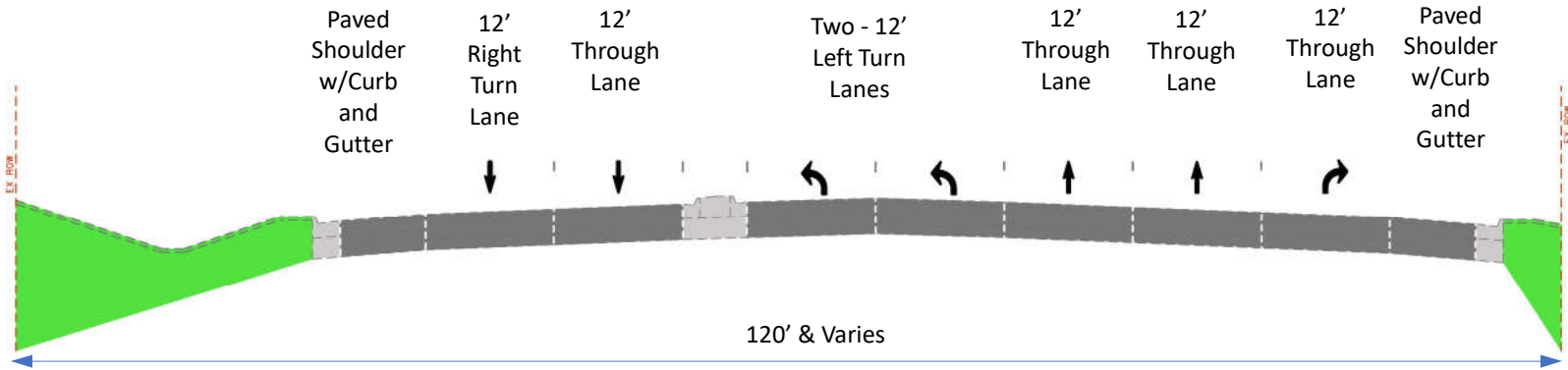
RANDALL ROAD – SOUTH LEG – LOOKING SOUTH

PROPOSED



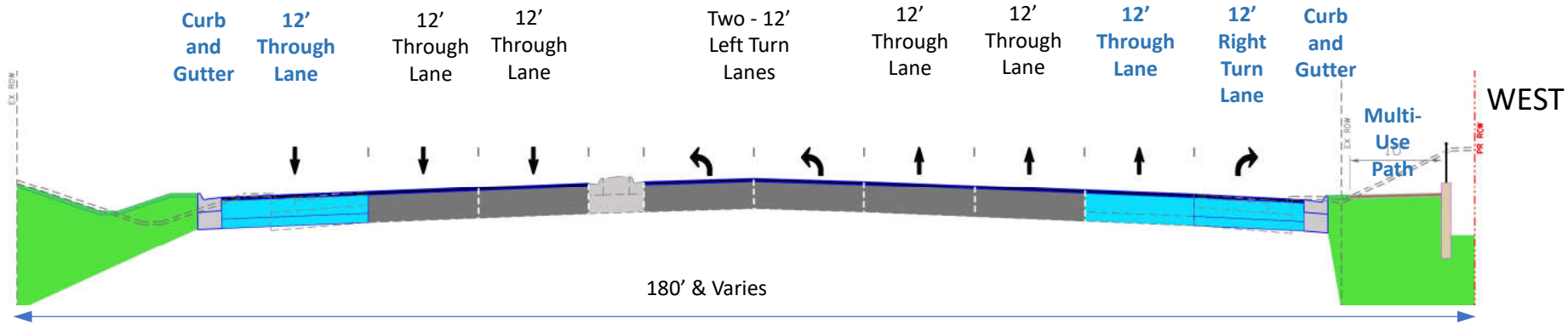
TYPICAL SECTION

EXISTING



RANDALL ROAD – NORTH LEG – LOOKING SOUTH

PROPOSED



PURPOSE AND NEED STATEMENT VERIFICATION

“reduces delay and queues”

	AM PEAK HOUR	PM PEAK HOUR
Overall Intersection Operations	C – 35.4	D – 52.5

	AM PEAK HOUR	PM PEAK HOUR
NB THROUGH QUEUE	289'	975'
SB THROUGH QUEUE	716'	387'

1,235 ft. to Carrington Drive
1,494 ft. to Recreation Drive

“improves safety for motorists, pedestrians and bicyclists”

1. Predicted annual *crash reduction* of **68%**
2. Dedicated *pedestrian/bicycle facility* with *pedestrian signals and crosswalks*

NATURAL AND BUILT ENVIRONMENT

Wetlands

- Impact 2 wetlands of 16 total identified
- Impact 0.24 acres of total 2.61 acres
- Wetland Bank 0.36 acres (1.5 : 1.0 ratio)



Trees

- 73 Remove and Replace (1:1 ratio)
- Detailed landscaping plans in Phase II during contract plan development

Cultural Resources

- No Historic Properties Affected

NOISE ASSESSMENT

Highway Noise is dependent upon:

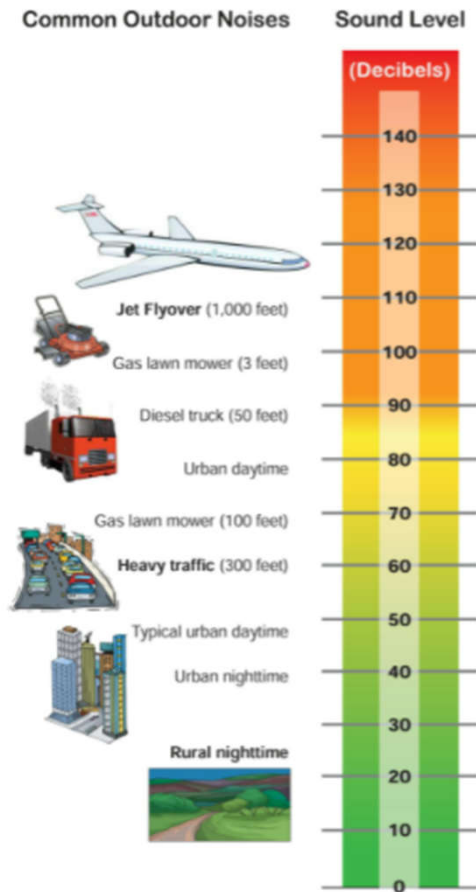
- Traffic volumes
- Traffic vehicle composition
- Traffic speeds
- Receptor distance/elevation
- Hard vs soft surface

Project Noise Receptors:

- Recreational
- Single family homes
- Multi family homes

Noise Assessment Results:

- **Existing** noise levels → 57 to 67 dB(A)
- **No Build** noise levels → 58 to 69 dB(A)
- **Build** noise levels → 58 to 69 dB(A)



Note: Sound is perceived differently by every individual

Changes in noise levels **less than 3 dB(A)** are **not** typically **perceived** by a human listener with average hearing.

Noise Abatement is *not reasonable* and is ineffective when breaks in the wall are needed to accommodate side streets and driveways and a beneficial noise reduction is not achieved.

Noise Abatement is *not feasible* if two or more receptors are not benefited.

DRAINAGE

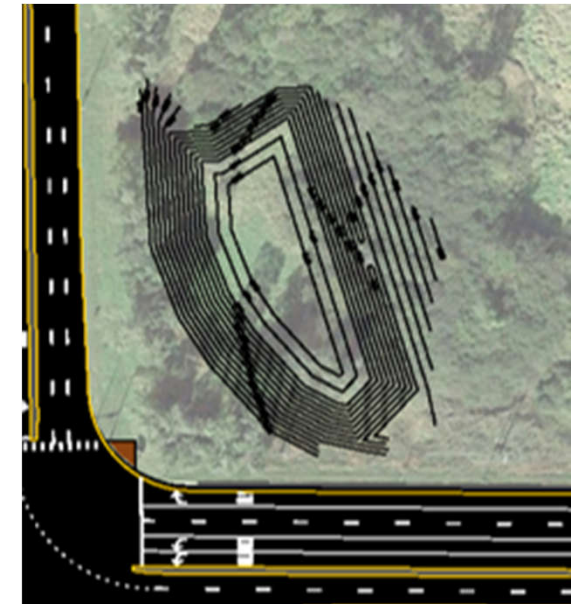


Existing Drainage System

- In-pipe detention for 10-year Storm along IL Route 72
- Roadside ditches along Randall Road
- Cross road culverts discharge to various outlets, ultimately to Jelkes Creek

Proposed Drainage System

- Maintain existing drainage patterns
- New curb & gutter along Randall Rd to collect runoff
- Maintain/replace roadside ditches for offsite flow
- New reinforced concrete storm sewer system
- New detention pond with storage for entire intersection, the multi-use path, and to replace pipe detention on IL Route 72



LAND ACQUISITION

Types of Land Acquisition

Fee Simple – 1.47 Acres

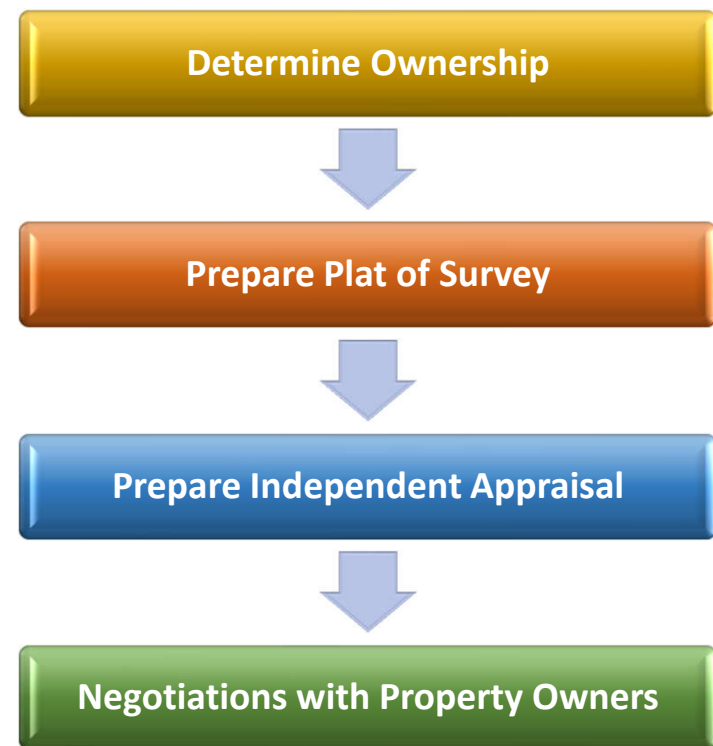
- Acquisition of all rights and interest
- Multi-use path and drainage improvements

Temporary Easement – 0.02 Acres

- Ownership retained by property owner
- Temporary use for a specified term for the completion of construction
- Driveway replacement

TOTAL RIGHT OF WAY NEEDED = 1.49 ACRES

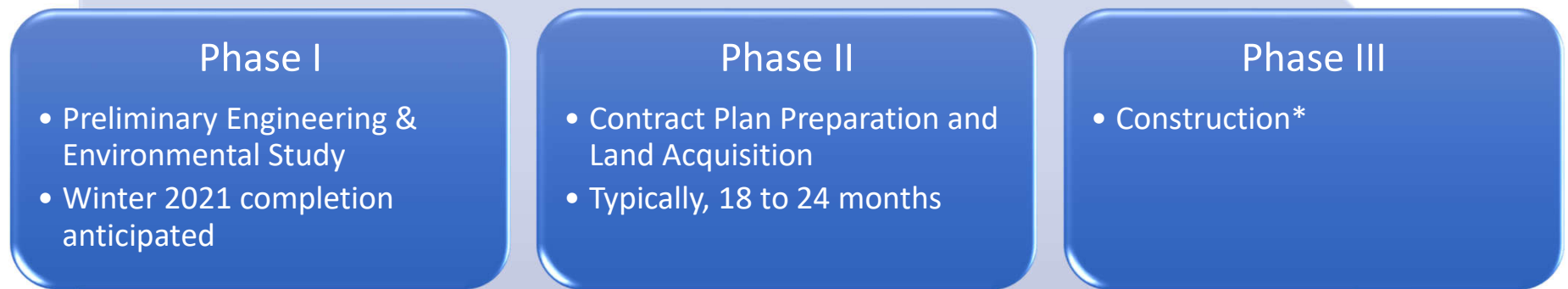
Land Acquisition Process



QUESTIONS?

WHAT HAPPENS AFTER THIS MEETING?

PROJECT TIMELINE



 We are here

**Contingent upon plan readiness, land acquisition, and funding availability*

COMMENTS AND QUESTIONS

SUBMIT written comments - multiple ways to submit

1. During the Meeting

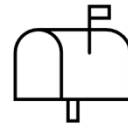
Type your comment/question into the chat box now.

2. Mail Comment Form

The comment form can be obtained from the Randall Oaks Recreation Center or download from the project website and mail to the Project Manager

3. Email or Call the Project Manager

*Comments must be received by **November 5, 2021**, to be included in the public record.*



VISIT the project website

<http://kdot.countyofkane.org/Pages/Projects/Randall-IL72/Randall-IL72.aspx>

CONTACT the Project Manager

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