

RANDALL OVER 90 PUBLIC INFORMATION MEETINGS

The Kane County Division of Transportation

May 15 and May 16, 2023





What is Randall Over 90?

The purpose of the Randall Road/I-90 study is to evaluate possible improvements to Randall Road between Big Timber Road on the south and IL 72 on the north, with particular focus on its interchange with I-90 (the Jane Addams Memorial Tollway).





PROJECT DEVELOPMENT

WHERE WE'VE BEEN WHERE WE'RE GOING



Planning & Environmental Linkage (PEL)

Using preliminary studies and concept-level designs, KDOT selected a slate of Alternatives to be Carried Forward from each of the three corridor focus areas.

Phase I

Schematic Design & Environmental Review

KDOT developed the alternatives in greater detail and selected the five best as defined by the Purpose and Need Statement. The next task is to pick one Preferred Alternative, and to secure IDOT and FHWA approval.

Phase II

Final Design & Construction

2024 and beyond



PROJECT PURPOSE & NEED STATEMENT



What is the **Purpose and Need Statement?**

- Required by FHWA.
- Written after the data collection and first public input phase but before any design work is undertaken, it is a summary of what is known about the project and an explanation
- A well-written Purpose and Need Statement is an honest, thorough, and detailed description of what is wrong and what the owning agency will try to do about it

Why is it so important?

The Purpose and Need Statement is the "vision statement" for the project. It guides the design process, discourages the introduction of personal preferences or divergent ideas into the project, and demonstrates the design team's dedication to solving the most important problems in the corridor.

All Alternatives Under Consideration meet the project's Purpose and Need Statement

PROJECT PURPOSE & NEED STATEMENT



The **purpose** of this project is to develop one or more infrastructure concepts which enhance mobility, improve safety, support current and future travel demand, and address economic and quality-of-life impacts throughout the corridor.

The **needs** for this project are:

- Relieve congestion, improve travel times, and provide for expected traffic growth
- Provide capacity improvements which mitigate very poor levels of service
- Improve safety performance by reducing impediments to smooth traffic flow
- Address deficiencies in existing roadway, bridge, and multimodal infrastructure

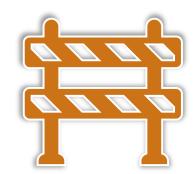
View the full Purpose and Need Statement at Randallover90.com.

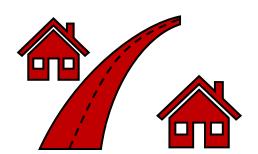
NOTABLE UPDATES SINCE THE PEL STUDY



INCORPORATING INPUT FROM THE PUBLIC AND STAKEHOLDERS









Removed I-90 Flyover concepts from design consideration; based on Tollway input The PEL study inspired the City of Elgin to begin improvements to Alft Lane at Randall Road – which is under construction right now

Centerline of proposed improvements shifted west away from the Sleepy Hollow subdivision

Revised the jughandle concept to include a left turn lane into Sanfilippo plant





TRAFFIC ANALYSIS

- Built on traffic evaluations performed as part of the PEL phase and projected future traffic conditions
- Incorporated planned improvements north and south of the study area
- Studied roadway improvements aimed at reducing traffic queueing, enhancing critical travel routes, and reducing congestion
- Found that the existing roadway does not accommodate current traffic conditions or future growth

EACH OF THE ALTERNATIVES UNDER CONSIDERATION GREATLY IMPROVES TRAFFIC OPERATIONS.



SAFETY ANALYSIS

- Confirmed rear end crashes are still the leading crash type (over 60%) for the Randall Road corridor
- Found that majority of crashes occur from I-90 to Auto Mall Drive
- During the pandemic, crash frequency did not drastically change despite reduced traffic volumes
- Improvements aimed at congestion relief will equal safety benefits

ALTERNATIVES UNDER CONSIDERATION WILL STRIVE TO MAINTAIN A BALANCE BETWEEN PROVIDING ADEQUATE ACCESS AND REDUCING CONGESTION.

PROJECT UPDATES – TRAFFIC NOISE ANALYSIS



Barrier design investigation continuing

Traffic noise analysis was conducted in accordance with IDOT guidelines, also approved by FHWA. IDOT requires noise barriers to meet the following feasibility and reasonableness criteria in order to be built:

FEASIBILITY

Acoustical Criteria

 5 dBA or greater reduction of sound for at least two impacted receptors

Engineering Consideration

- Topography and drainage
- · Access, safety and maintenance

REASONABLENESS

Noise reduction design goal is 8 dBA for at least one benefited receptor

- Cost per benefited receptor does not exceed the applicable allowable noise abatement cost
- \$30,000 per benefited receptor
- A <u>benefited receptor</u> is any sensitive receptor that receives at least a 5 dBA traffic noise reduction as a result of a noise barrier
- Feedback will be solicited from property owners and residents that are adjacent to the proposed noise wall.
 Majority of the responses must be in favor of barrier construction



IDOT guidance is to model one receptor per balcony

Barrier is easily cost-effective per benefited receptor
 *Pending feedback from property owners and residents

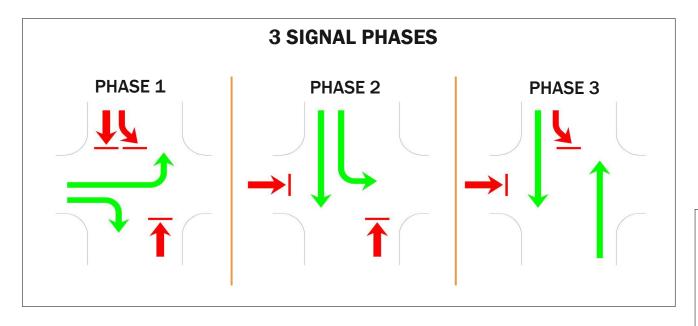
• 80+ receptors at varying elevations

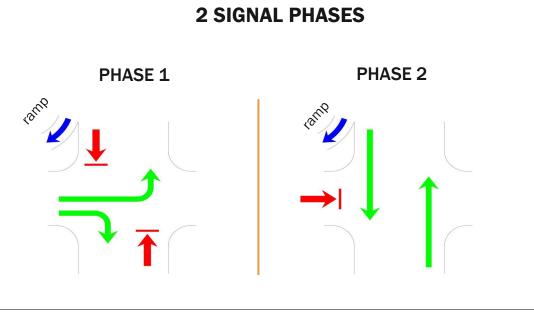
ALTERNATIVES UNDER CONSIDERATION

ALTERNATIVES UNDER CONSIDERATION – SIGNAL PHASING



Signal phasing is the sequencing of how traffic flows through an intersection. The more phases means the less time drivers have with green lights and being able to drive through an intersection.









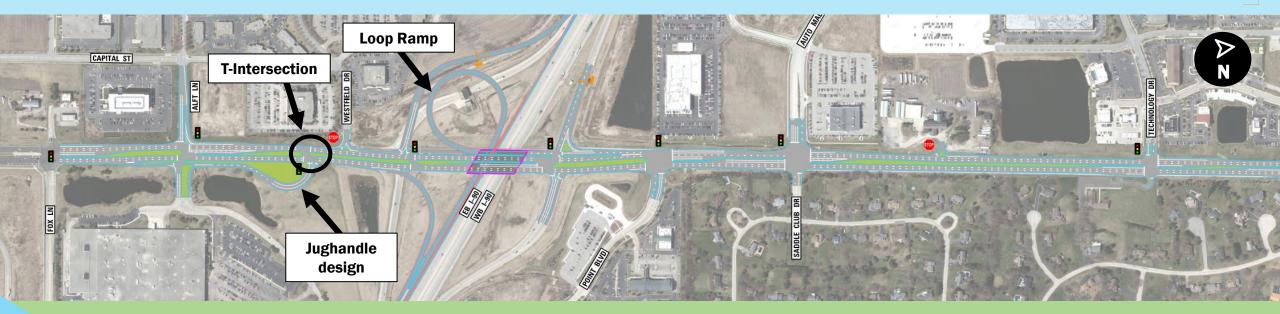
Geometric and traffic features of Alternative 1:

- Improves capacity to southbound Randall Road traffic to eastbound I-90 using a loop ramp
- Southbound Randall Road traffic traveling to I-90 is separated from through traffic just south of Point Boulevard
- Widens Randall Road from 4 lanes to 6 lanes north and south of the I-90 interchange



ADVANTAGES	LIMITATIONS
Improves travel times by directly addressing one of the highest volume turning movements within the corridor (eastbound I-90 ramp)	Only minor improvements to traffic performance at the westbound I-90 ramp intersection
No changes to Alft Lane access	Requires reconstruction of the entire I-90 interchange
Improves traffic operations at the eastbound I-90 ramp intersection which provides congestion relief and safety benefits	Requires Right-of-Way acquisition for Parclo interchange





Geometric and traffic features of Alternative 2:

- Improves capacity to southbound Randall Road traffic to eastbound I-90 using a loop ramp
- Southbound Randall Road traffic traveling to I-90 is separated from through traffic just south of Point Boulevard
- South of I-90 at the Alft Lane and Randall Road intersection, left turning traffic from northbound Randall Road and traffic from the east leg of the intersection will be routed to a separate intersection with Randall Road using a "Jughandle" design



ADVANTAGES	LIMITATIONS
Improves travel times by directly addressing one of the highest volume turning movements within the corridor (eastbound I-90 ramp)	Minor improvements to traffic performance at the westbound I-90 ramp intersection
Increases the capacity of the left turn movement from eastbound Alft Lane on Randall Road	Requires reconstruction of the entire I-90 interchange and adds an additional signal to Randall Road
Improves access to and from the Elgin business/industrial park area	Affects access out of the Sanfilippo plant
Improves traffic operations at the eastbound I-90 ramp intersection by eliminating high volume left turn movement	Requires a large amount of pavement reconstruction





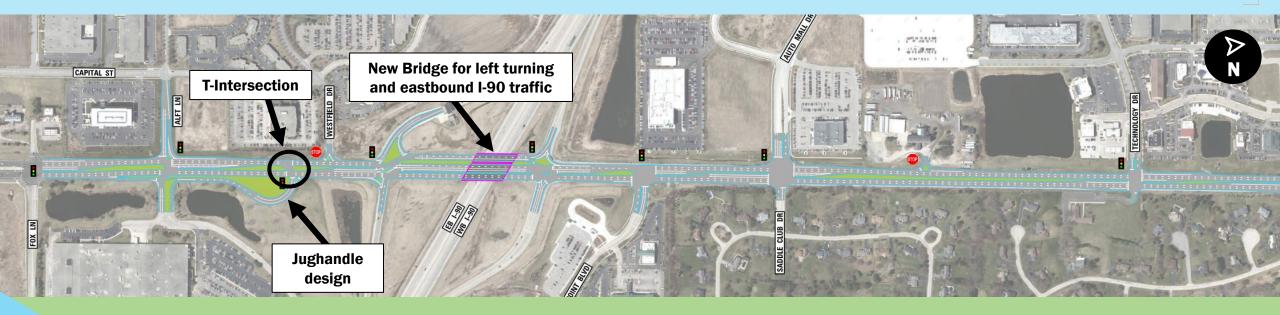
Geometric and traffic features of Alternative 3:

- Left turning traffic from northbound Randall Road and eastbound I-90 are shifted onto a new bridge next to existing Randall Road
- Widens Randall Road from 4 lanes to 6 lanes north and south of the I-90 interchange



ADVANTAGES	LIMITATIONS
Improves travel times by crossing over northbound Randall Road left turning traffic at the eastbound I-90 ramp intersection and converting this intersection to a two-phase signal instead of a three-phase signal	The crossover movement from the displaced left bridge back onto northbound Randall Road requires the westbound I-90 ramp intersection to remain a three-phase signal
The displaced left bridge can be built ahead of replacing the existing Randall Road bridge over I-90	Southbound left turn onto eastbound I-90 continues to interfere with northbound through traffic
Least expensive Alternative Under Consideration. Improvements minimally impact existing tollway ramps and toll infrastructure	Unconventional intersection geometry





Geometric and traffic features of Alternative 4:

- Left turning traffic from northbound Randall Road and eastbound I-90 are shifted onto a new bridge next to existing Randall Road
- South of I-90 at the Alft Lane and Randall Road intersection, left turning traffic from northbound Randall Road and traffic from the east leg of the intersection will be routed to a separate intersection with Randall Road using a "Jughandle" design
- ✓ Widens Randall Road from 4 to 6 lanes north of I-90 interchange



ADVANTAGES	LIMITATIONS
Improves travel times by crossing over northbound Randall Road left turning traffic at the eastbound I-90 ramp intersection and converting this intersection to a two-phase signal instead of a three-phase signal	The crossover movement from the displaced left bridge back onto northbound Randall Road requires the westbound I-90 ramp intersection to remain a three-phase signal
The displaced left bridge can be built ahead of replacing the existing Randall Road bridge over I-90	Southbound left turn onto eastbound I-90 continues to interfere with northbound through traffic
Increases the capacity of the left turn movement from eastbound Alft Lane onto Randall Road	Affects access out of the Sanfilippo plant
Improves access to and from the Elgin business/industrial park area	Unconventional intersection geometry



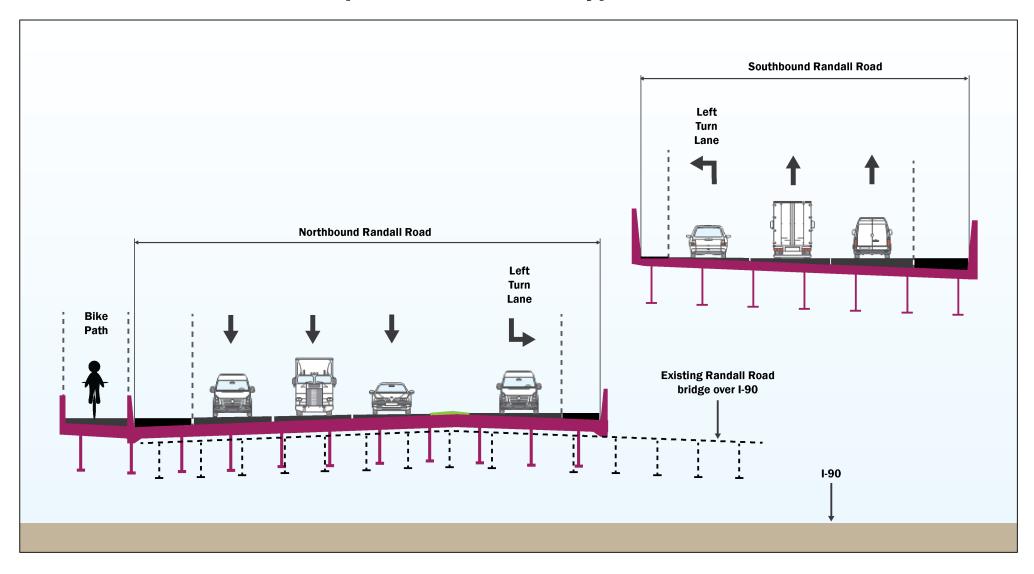


Geometric and traffic features of Alternative 5:

- Southbound Randall Road will be grade separated from south of Auto Mall Drive to north of Alft Lane, while access to and from northbound Randall Road will remain at-grade
- Point Blvd traffic to and from southbound Randall Road will be grade-separated over northbound Randall Road. A roundabout will distribute traffic to Point Boulevard and to the PACE bus station
- South of I-90 at the Alft Lane and Randall Road intersection, left turning traffic from northbound Randall Road and traffic from the east leg of the intersection will be routed to a separate intersection with Randall Road using a "Jughandle" design. The new intersection will be raised on structure to match into vertical alignment of the I-90 Echelon

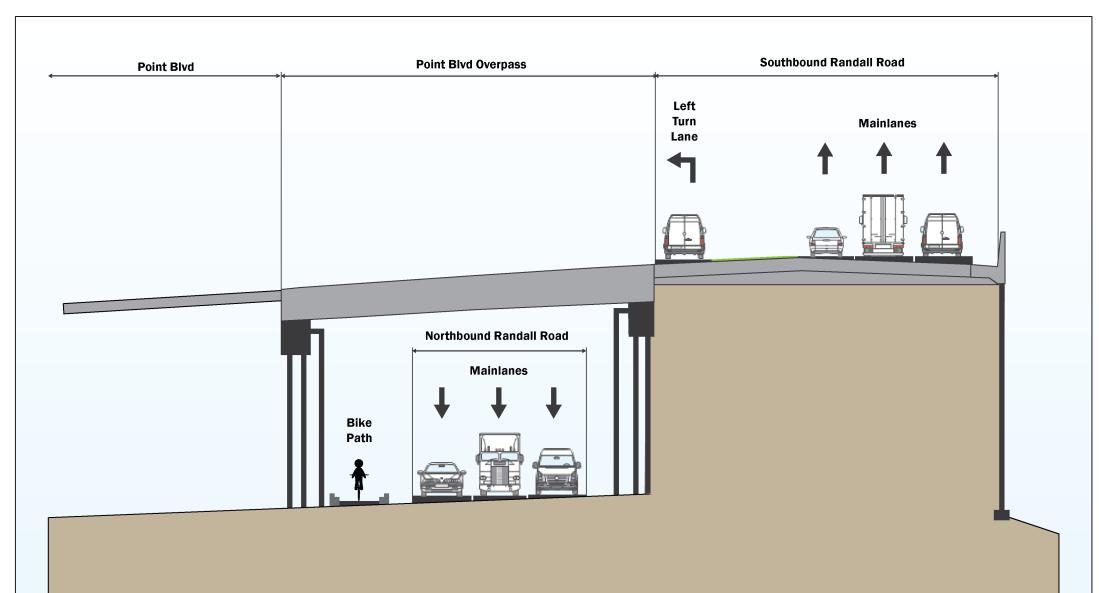


Proposed I-90 Echelon Typical Section





Proposed Typical Section at Point Blvd

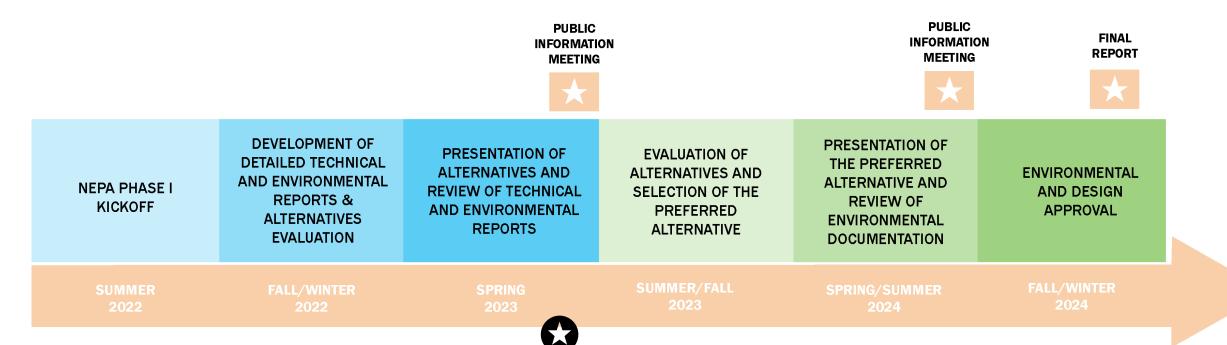




ADVANTAGES	LIMITATIONS
Improves travel times throughout Randall Road by eliminating conflicts between left turning and through traffic at the I-90 interchange	Requires multiple complicated structures and retaining walls and will require complex staging during construction
Improves traffic operations and backups at both the eastbound and westbound I-90 ramp intersections with two-phase instead of three-phase signals	Requires reconstruction of the entire I-90 interchange
Highest performing alternative in terms of Traffic Operations and capacity	Affects access out of the Sanfilippo plant
Less queueing which reduces the likelihood of rear end crashes	Most expensive Alternative Under Consideration

PROJECT TIMELINE AND NEXT STEPS





SCHEDULE SUBJECT TO CHANGE

WE ARE HERE



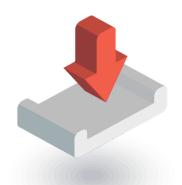
PROVIDE INPUT



Online Survey
Complete the project
survey online at
www.randallover90.com



Scan Me
Scan the QR code to
go directly to the
project survey



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COMMENTS MUST BE SUBMITTED BY FRIDAY, JUNE 16, 2023

For questions or comments about the project, please contact the Randall Over 90 project team at Randallover90@gmail.com.

