

# **County Road E (Lake Johanna Boulevard) and Old Snelling Avenue Intersection**

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March 21, 2022

## So, where are we now?

- An Intersection Control Evaluation (ICE) was completed that recommended a small urban roundabout as the optimal intersection solution
- A roundabout concept was developed
- We had initial meetings with Lindey's, Bethel and MVSD
- A Public Open House was held to share information, answer questions, and solicit input
- We are here tonight to share this feedback

## Open House Summary

- A virtual open house was held February 2, 2022 from 7:00 to 8:00 p.m.
- A total 53 participants joined the event.
- Following the presentation, a question-and-answer session was held.
- Interested parties were also invited to provide feedback on the project through an online survey.
- A total of 46 survey responses were received in a two-week period.
- *The following are responses to the primary questions asked...*

## Q1: Why is this project needed?

- Traffic volumes at the intersection currently warrant a traffic signal or roundabout (consistent with 2018 study)
- Five crashes have been reported in the past 5 years
- Lack of adequate ped/bike accommodations
- Users often experience congestion, delays and crosswalk challenges
- Pavement is in poor condition
- Some public utilities are old and undersized and in need of repair or replacement



## Q2: What options were considered?



All-Way-Stop

Traffic Signal

Roundabout



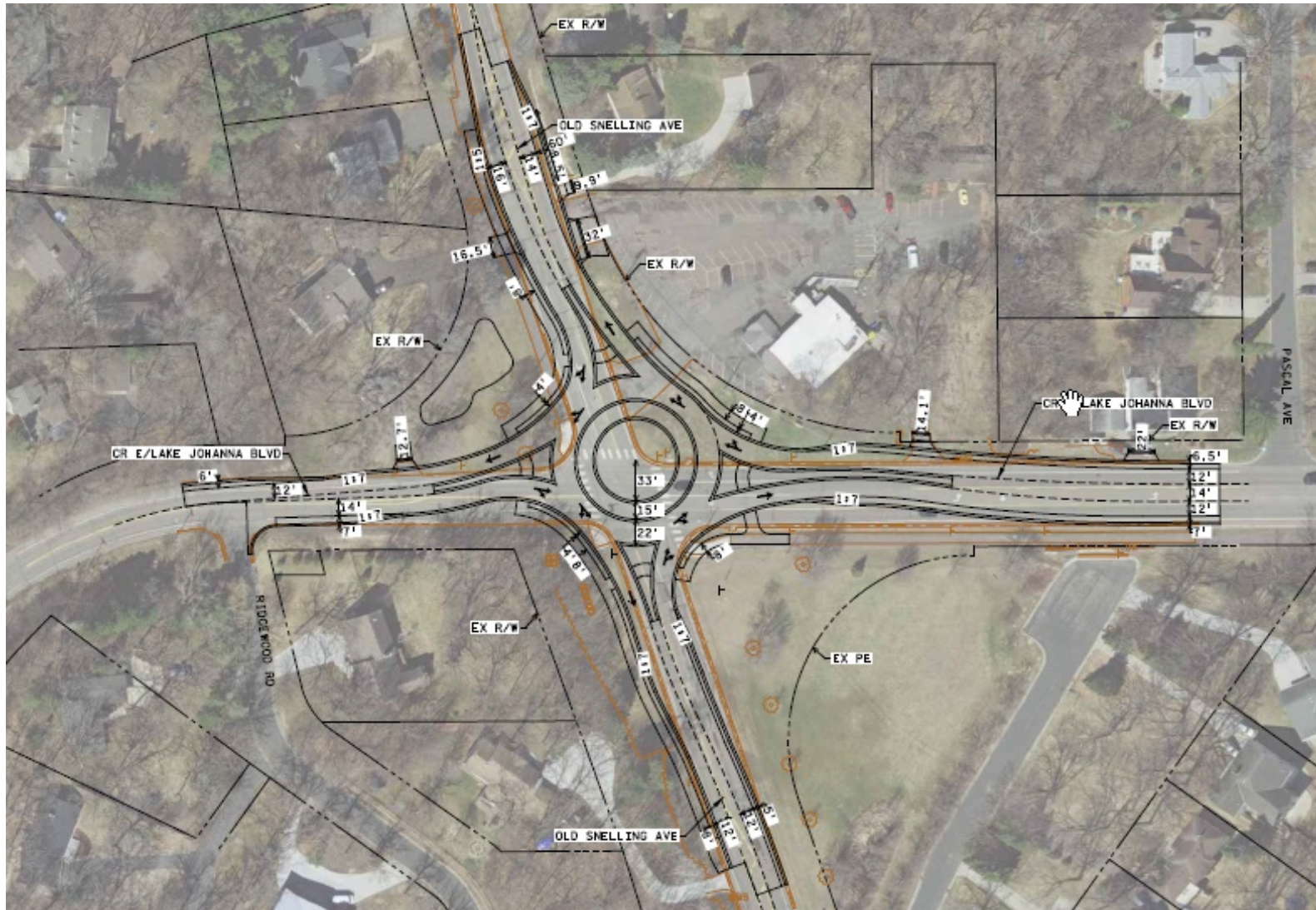


## Q3: Why is a **Roundabout** being recommended at this location?

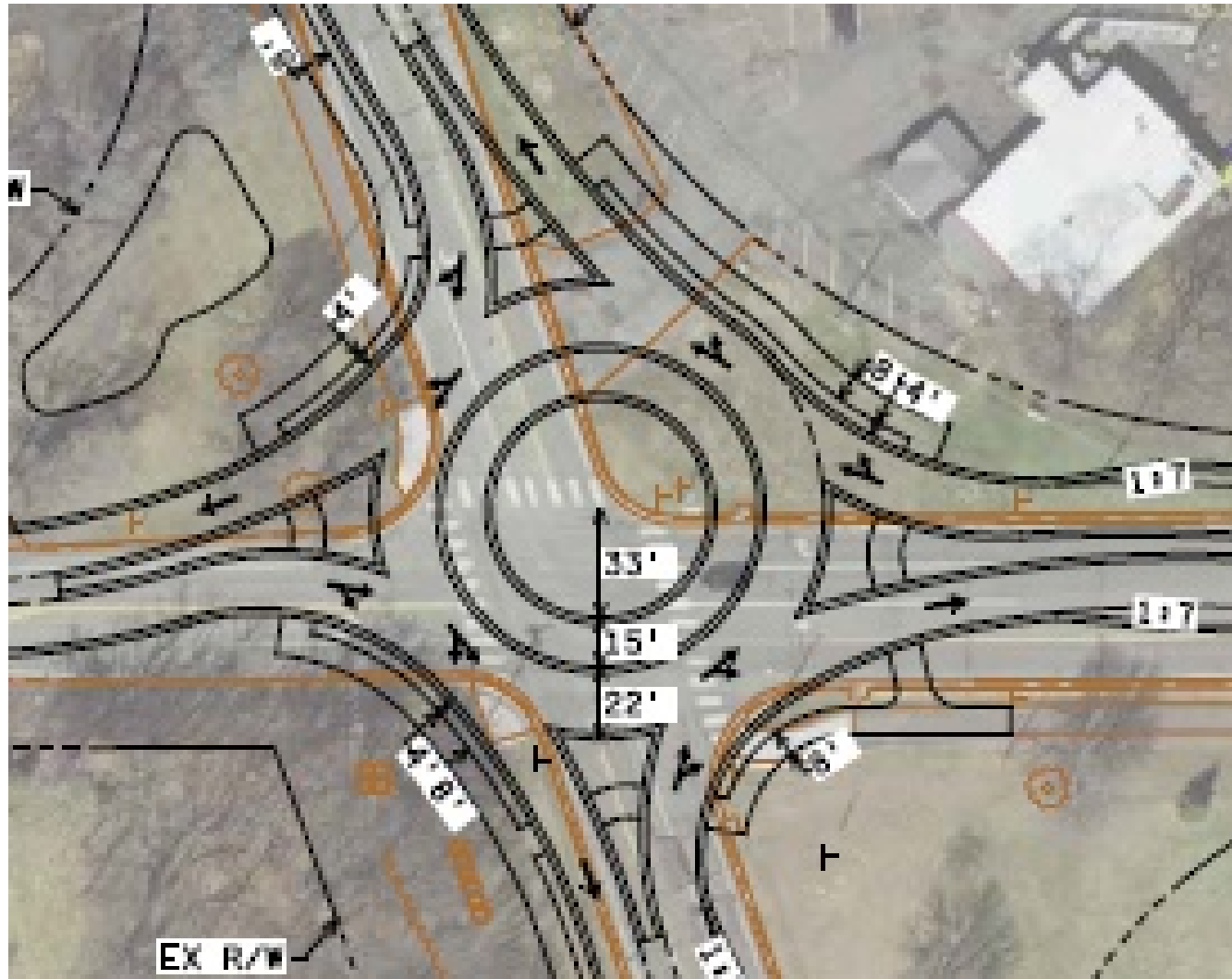
- A small urban roundabout would be the best option to provide long-term congestion relief and improved safety
- All approaches have similar traffic volumes
- The roundabout provides the best flexibility in minimizing delays under low (no waiting for red lights or stop sign) and high-volume conditions
- Fits well within available ROW



## Roundabout Concept (Zoom Out)



## Roundabout Concept (Zoom in)





## Q4: How does a Roundabout compare to the **All-Way-Stop (AWS)** at this location?

- An AWS is an appropriate device under certain conditions, but provides the least amount of capacity and operational flexibility
- With small fluctuations in peak hour traffic, the AWS can operate at an acceptable level (LOS B/C), but a roundabout will operate at a higher level (LOS A/B)
- A roundabout provides better performance than an AWS by providing approximately 33% more capacity
- AWS release traffic at uniform intervals typically too small for vehicles to get into the traffic stream, while roundabouts allow a slower free flow creating more opportunities for downstream driveways and streets

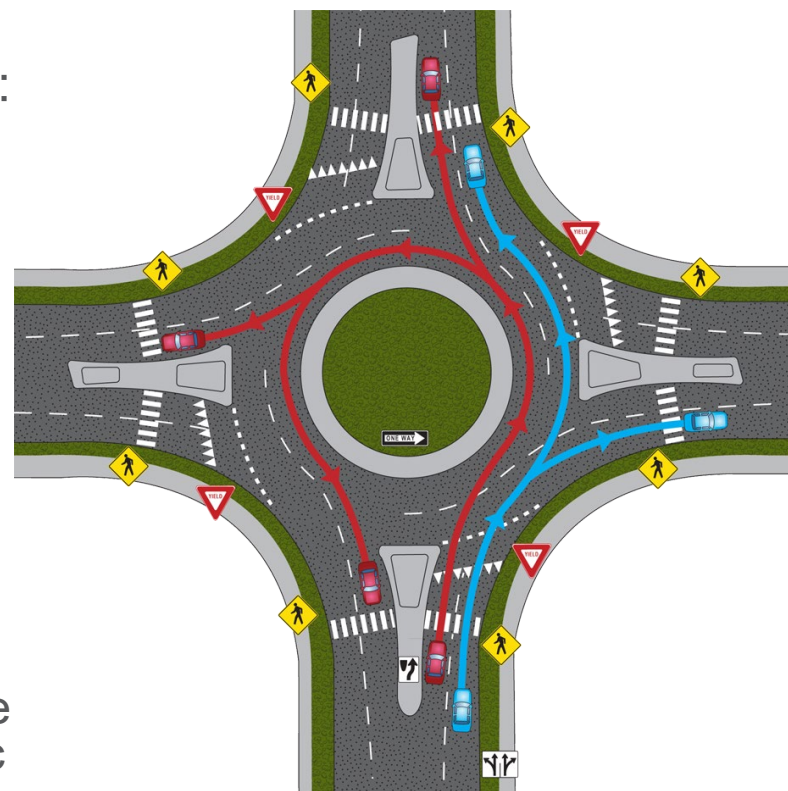


## **Q5: How does a Roundabout compare to a Traffic Signal at this location?**

- Under the volumes at the intersection, the roundabout outperforms the traffic signal under peak hour and off-peak conditions, as drivers/peds would have to wait for red lights
- Roundabouts have several advantages over both traffic signals and stop signs, including:
  - The entry curves slow traffic so entering and exiting are easier and more efficient
  - Fewer injury crashes and fatalities (no “t-bone” or head-on crashes)
  - Improved pedestrian safety (low speeds, fewer lanes to cross, minimal delays, traffic from only one direction)
  - Less vehicle delay and pollution (no waiting at red lights, complete stops are not usually necessary)

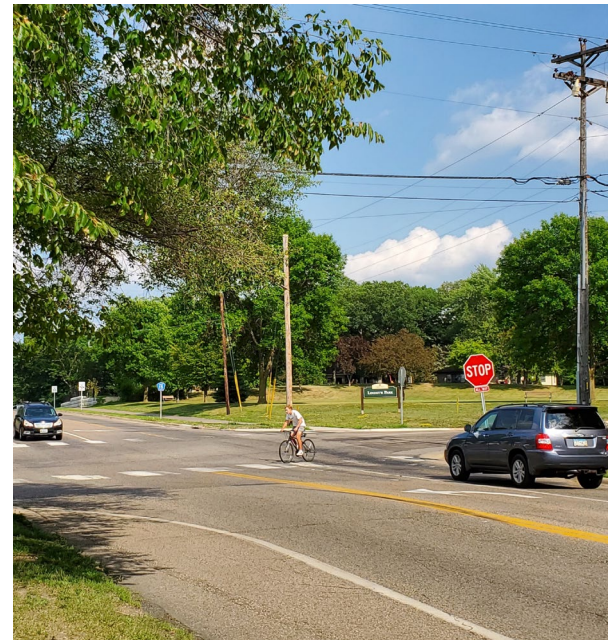
## Q6: Tell me more about how **pedestrians** use a Roundabout?

- Compared to traditional intersections, roundabouts typically offer the following safety benefits and features for pedestrians:
  - Lower motor vehicle speeds and increased yielding behavior
  - Fewer conflict points
  - Higher visibility of pedestrians in the crosswalk
  - Shorter wait time for pedestrians to cross than at signalized intersections
  - Lower exposure to motor vehicles because of the shortened crossing distance
  - Simpler crossing due to the splitter islands, which provide mid-crossing refuge and allow the pedestrian to focus on traffic from one direction at a time



## Q7: How does a Roundabout compare to the other options in terms of **cost**?

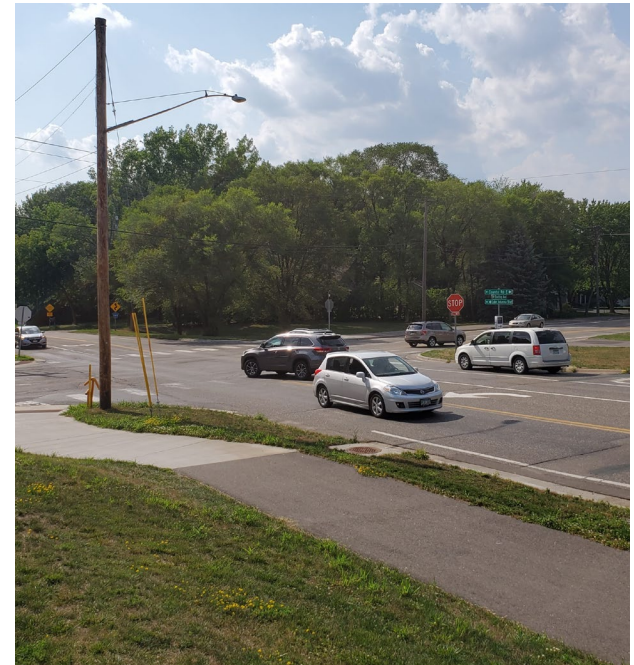
- Initial construction costs are typically higher for a roundabout over a traffic signal
- However, a roundabout has lower long-term maintenance and electricity costs over a traffic signal
- This particular roundabout would have minimal impact to private property which helps keep project costs down





## Q8: What happens if we do nothing?

- Missed opportunity to improve this intersection for all users
- The all-way-stop would remain in-place indefinitely
- If traffic congestion increases, as expected, the intersection will operate poorly
- This will also result in longer traffic backups that cause delay, frustration, and block driveways



## Many Roundabout educational resources are available on-line

<https://www.co.washington.mn.us/490/Roundabout-U>

<https://www.dot.state.mn.us/roundabouts/index.html>

<http://www.mikeontraffic.com/4-way-stop-vs-roundabout/>

<https://safety.fhwa.dot.gov/intersection/roundabouts/>

<https://tinyurl.com/25ndut3r>