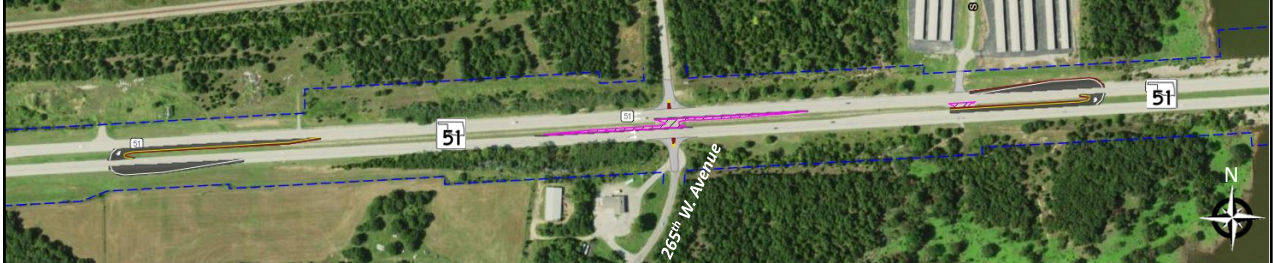


# WELCOME



**OKLAHOMA**  
Transportation

## Virtual Public Open House

SH-51/265<sup>th</sup> W. Avenue Intersection Modification  
Tulsa County

March 3 - 17, 2021

Welcome to the Virtual Public Open House the SH-51 and 265<sup>th</sup> W. Avenue intersection project east of Mannford in Tulsa County.

# Purpose of the Meeting

1. Present the Plans for the SH-51 and 265<sup>th</sup> W. Avenue Intersection Project to the Public and Obtain Input
2. Describe the Benefits of Restricted Crossing U-Turns and How they Work
3. Outline the Next Steps and Schedule for the Project



The purpose of this meeting is to present the plan for the SH-51 and 265<sup>th</sup> W. Avenue intersection project and obtain public input. ODOT proposes to construct a Median U-Turn, or MUT intersection at this location. We will describe the benefits of median U-turn intersections and how they work. We will also explain how to ask questions or make comments on the project. This map shows the project location east of Mannford.

# Purpose of the Meeting

1. Present the Plans for the SH-51 and 265<sup>th</sup> W. Avenue Intersection Project to the Public and Obtain Input
2. Describe the Benefits of Median U-Turns and How they Work
3. Outline the Next Steps and Schedule for the Project



This map includes a more zoomed-in view of the project location, showing the intersection of SH-51 and 265<sup>th</sup> W. Avenue.

# Purpose of the Project

## Improve Safety at the SH-51 and 265<sup>th</sup> W. Avenue Intersection

High volumes of traffic on SH-51 (11,600 vehicles per day), combined with high turn volumes and limited sight distance at the 265<sup>th</sup> W. Avenue intersection have contributed to an elevated collision rate.

- 34 documented collisions between 2009 and 2018
- All except 4 collisions involved injury with one fatality
- Over 90% of the collisions involved turning vehicles



SH-51 and 265<sup>th</sup> W. Avenue Intersection (looking west)



The purpose of the project is to improve safety and traffic flow at the existing SH-51 and 265<sup>th</sup> W. Avenue intersection. High volumes of traffic on SH-51, 11,600 vehicles per day, combined with high turn volumes and limited sight distance have contributed to an elevated collision rate at the intersection. There were 34 documented collisions at the intersection between 2009 and 2018. All but 4 of these collisions involved injury, with one fatality. Over 90% of the collisions involved turning vehicles. These types of collisions tend to be more severe, especially on a high-speed facility such as SH-51.

# Purpose of the Project

## Improve Traffic Flow at the SH-51 and 265<sup>th</sup> W. Avenue Intersection

Vehicles on 265<sup>th</sup> W. Avenue wanting to turn on to or cross SH-51 must wait for gaps in traffic. Cars will often use the median to cross one direction of traffic and wait for a gap in the other direction.

Longer vehicles, such as buses and trucks, must wait for gaps in both directions on SH-51.

- **Current Traffic:**
  - 11,600 Vehicles/Day on SH-51
  - 2,300 Vehicles/Day on 265<sup>th</sup> W. Avenue
- **Projected Traffic (2040):**
  - 16,240 Vehicles/Day on SH-51
  - 3,220 Vehicles/Day on 265<sup>th</sup> W. Avenue
- **Posted speed limit of 65 mph**



SH-51 and 265<sup>th</sup> W. Avenue Intersection (looking west)



Vehicles on 265<sup>th</sup> W. Avenue wanting to turn onto or cross SH-51 must wait for gaps in traffic. Cars will often use the median to cross one direction of traffic and wait for a gap in the other direction. Longer vehicles, such as buses and trucks, are too big for the median and must wait for gaps in both directions on SH-51. This can lead to back-ups on 265<sup>th</sup> W. Avenue and affects mobility on SH-51 as through traffic must slow down for turning vehicles. Current traffic volumes on SH-51 are 11,600 vehicles per day. This is expected to grow to 16,240 vehicles per day by 2040. Traffic on 265<sup>th</sup> W. Avenue is currently over 2,000 vehicles per day and is expected to grow to over 3,000 vehicles per day by 2040.

# Purpose of the Project

## Improve Traffic Flow at the SH-51 and 265<sup>th</sup> W. Avenue Intersection

ODOT estimates that approximately 1,720 vehicles turn left at the SH-51/265<sup>th</sup> W. Avenue intersection every day.

- **Existing Turning Volumes:**

- 800 vehicles per day turn left on SH-51 from 265th W. Avenue.
- 920 vehicles per day turn left on to 265th W. Avenue from SH-51.

- **Future Turning Volumes (2040):**

- 1,120 vehicles per day will turn left on SH-51 from 265th W. Avenue.
- 1,120 vehicles per day will turn left on to 265th W. Avenue from SH-51.



SH-51 and 265<sup>th</sup> W. Avenue Intersection (looking west)

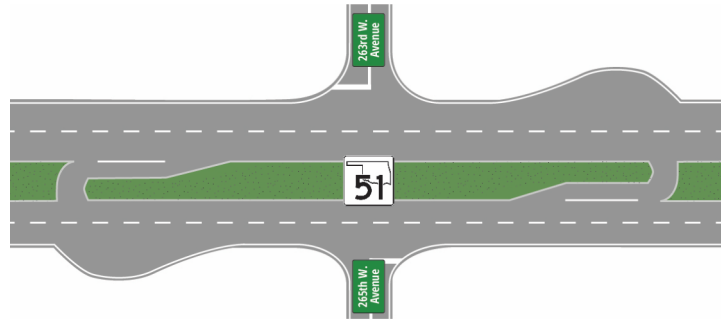


ODOT estimates that 1,720 vehicles make left turns at the SH-51/265<sup>th</sup> W. Avenue intersection every day. This is expected to grow to 2,240 left turns by 2040. Every left turn presents an increased risk for a collision. The proposed project will eliminate this risk by removing the left turns from the intersection.

# Intersection Improvements

## Conversion to Median U-Turn (MUT) Intersection

- Used primarily on 4-lane divided highways
- Re-routing of left turn and through vehicles from the side road
- All traffic makes right turn and then makes a U-turn at a designated median opening
- If needed, extra pavement is provided to make the turn



General Operations of a MUT Intersection

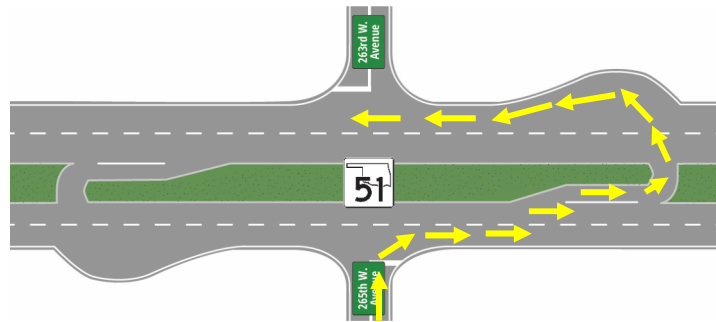


ODOT proposes to construct a Median U-Turn, or MUT, intersection at this location. This innovative intersection type is often used on 4-lane divided highways to provide a safer way for cross-street traffic to turn on to or cross the highway. MUT intersections have been shown to reduce the number and severity of collisions.

# Intersection Improvements

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General Operations of a MUT Intersection



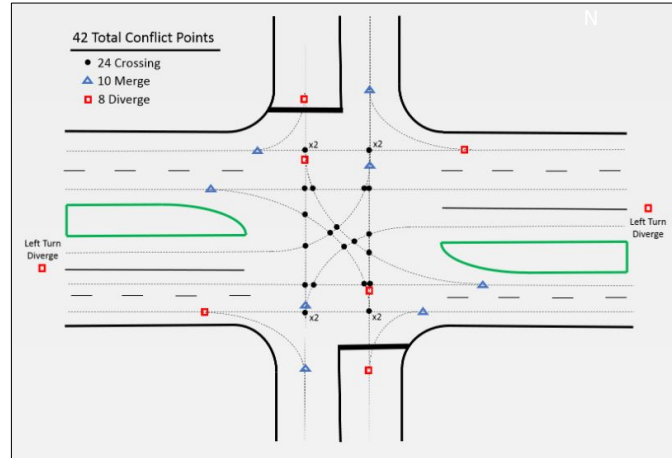
The basic MUT restricts the incoming and outgoing side street traffic to right turn movements only. Vehicles that want to turn left, or cross the highway, must do so indirectly by first turning right onto the mainline, weaving across to the left most lane to complete a U-turn, and then traveling back to the intersection to complete their desired movement. If needed, additional pavement is provided on the outside of the highway to accommodate turning vehicles. The MUT intersection proposed for SH-51 and 265<sup>th</sup> W. Avenue also relocates the mainline left turns, directing those movements beyond the intersection to the U-turn location.



# Intersection Improvements

## Benefits of MUT Intersections

- Reduces conflict points from 42 to 18, thereby reducing the potential for collisions
- Reduces number of and severity of collisions
- Improves traffic flow since side street traffic does not have to wait for gap in all 4 lanes
- Lower construction and maintenance costs than a signal



42 Conflict Points at the Existing Intersection

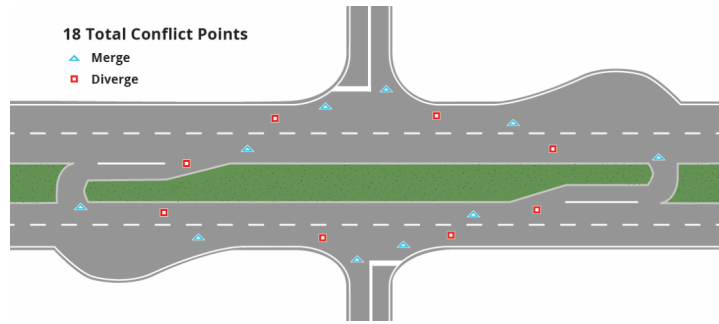


The primary benefit of an MUT intersection is improved safety. A conventional two-way stop intersection at a 4-lane divided highway, like there is today at SH-51 and 265<sup>th</sup> W. Avenue, has 42 total conflict points. A conflict point is a location where traffic is either merging or diverging or crossing, creating the potential for a collision.

# Intersection Improvements

## Benefits of MUT Intersections

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- Reduces number of and severity of collisions
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- Lower construction and maintenance costs than a signal



18 Conflict Points at the MUT Intersection



An MUT intersection reduces the number of conflict points. The type of MUT proposed for SH-51 and 265<sup>th</sup> W. Avenue reduces the number of conflict points from 42 to 18, and eliminates the crossing conflict points, where traffic traveling in different directions crosses each other. These crossing movements tend to result in more severe collisions, resulting in injury or even death. Many of the collisions that occur today at the SH-51 and 265<sup>th</sup> W. Avenue intersection are the result of crossing traffic.

An MUT intersection also improves traffic flow, because traffic on 265<sup>th</sup> W. Avenue will not have to wait for gaps in both directions of traffic to turn. These intersections are also lower cost to construct and to maintain than a traffic signal, and do not require traffic on SH-51 to stop.



## Intersection Improvements

### MUT at SH-51/265<sup>th</sup> W. Avenue

- Median openings at 265<sup>th</sup> W. Avenue and at 51 West Storage facility will be removed
- Left turns and through movements no longer allowed
- SH-51 mainline left turns no longer allowed
- Traffic wanting to go left will use the U-Turn to change direction



The proposed design for the SH-51 and 265<sup>th</sup> W. Avenue intersection includes closing the existing median opening at 265<sup>th</sup> W. Avenue and constructing two U-Turns: one approximately 2,000 feet west of 265<sup>th</sup> W. Avenue and one approximately 1,500 feet east of 265<sup>th</sup> W. Avenue. The locations of the U-turns were designed to provide sufficient merge lengths and sight distance.

# Intersection Improvements

## MUT at SH-51/265<sup>th</sup> W. Avenue

- Additional pavement added at U-Turn locations to accommodate larger vehicles



Additional pavement will be added to the outside of the highway at the U-turn locations to accommodate large vehicles such as trucks and buses. The existing median opening at the 51 West Storage driveway will also be closed. Eastbound traffic entering or exiting the storage facility will use the MUT intersection to access SH-51. The next few slides will demonstrate how traffic will use the new intersection. The website also has a page with more information on these intersection types.

# MUT Intersection Movements

## MUT Intersection

- Traffic wanting to turn left on SH-51 from 265<sup>th</sup> W. Avenue will turn right first, then merge into the left turn lane, and use the U-turn to change direction



For traffic on 265<sup>th</sup> wanting to turn left on to SH-51, you will first turn right. Then, you will merge into the left turn lane, where you will then make a U-turn. Additional pavement is provided on the outside of SH-51 for larger vehicles. You may then proceed in your desired direction on SH-51.

# MUT Intersection Movements

## MUT Intersection

- Traffic wanting to cross SH-51 on 265<sup>th</sup> W. Avenue will follow the same movement, and then make a right turn on 263<sup>rd</sup> W. Avenue on the opposite side of the highway.



Traffic wanting to cross SH-51 will follow the same movement, and then turn right on to 263<sup>rd</sup> W. Avenue on the opposite side of the highway.

# MUT Intersection Movements

## MUT Intersection

- Similarly, traffic on SH-51 wanting to turn left on 263<sup>rd</sup> W. Avenue will continue past the former median opening, and use the U-turn to change direction.
- Then, a right turn on 263<sup>rd</sup> W. Avenue can be made.



Similarly, traffic on SH-51 wanting to turn left on 263<sup>rd</sup> W. Avenue would follow the same path, driving past the existing intersection to the U-turn, changing direction, then making a right turn. All of the same movements can be made from the other side of SH-51, utilizing the U-Turn to the west.



This slide shows an example Median U-Turn intersection in Ohio. You can see both U-turn locations with the additional pavement provided. While this example is not exactly like the one proposed on SH-51, it shows the general appearance and operation.



# Roadway Improvements

- Remove pavement in existing median and grade to drain
- Other drainage improvements
- Reconstruct street and driveway returns within state right-of-way
- No right-of-way acquisition is anticipated



The project will remove the pavement in the SH-51 median at 265 W. Avenue and at the 51 West Storage driveway and regrade the median to drain. Other drainage improvements will also be made to pipes under 265<sup>th</sup> W. Avenue and the 51 West Storage driveway, and the pavement in these locations will be reconstructed within ODOT right-of-way. No additional right-of-way is anticipated to be needed for the project.



## Construction

- SH-51 and 265<sup>th</sup> W. Avenue will remain open during construction
- Phased construction will be used to maintain traffic
- The median openings at 265<sup>th</sup> W. Avenue and the 51 West Storage driveway will remain open until the U-turns are completed



Both SH-51 and 265<sup>th</sup> W. Avenue will remain open during construction. Phased construction will be used to maintain traffic, and some lane closures may be required. However, disruption to traffic will be minimal. The median opening at 265<sup>th</sup> W. Avenue will remain open until the new U-turns are constructed.

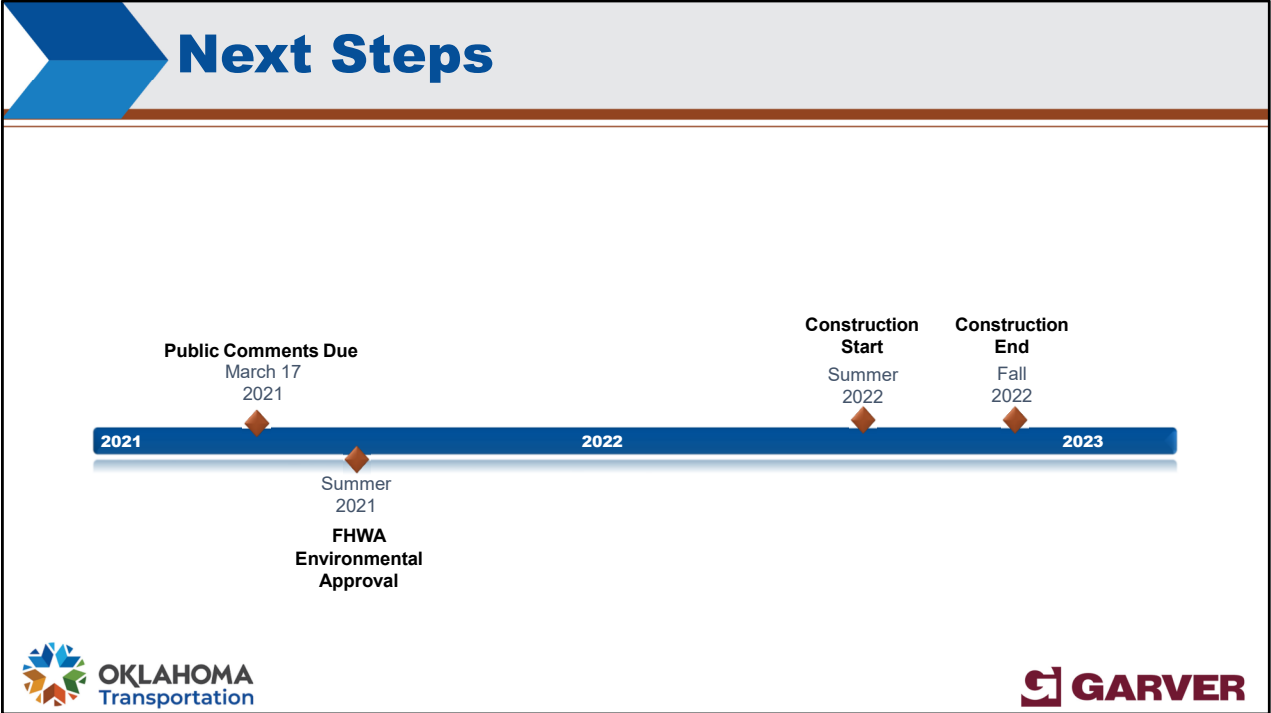
# Environmental Studies

## Environmental Studies

- **ODOT has completed studies of:**
  - Waters and Wetlands
  - Threatened and Endangered Species
  - Cultural Resources (Historic and Archeological)
  - Neighborhoods and Businesses
  - Hazardous Materials
- **No significant impacts are anticipated**
- **Studies will be compiled in a Categorical Exclusion document for Federal Highway Administration approval**



ODOT has completed detailed environmental studies of the proposed project. Studies of waters and wetlands, threatened and endangered species, cultural resources, neighborhoods and businesses, and hazardous materials were completed. No significant impacts to any of these resources are expected. Additional commitments to avoid and/or minimize impacts to the environment will be added to the project. The Federal Highway Administration must approve the environmental document before the project can proceed.



This slide shows the next steps for the project. We ask that you submit your comments by March 17 so that we may incorporate your feedback and finalize the design plans. Currently construction of the project is programmed to begin in the summer of 2022. Construction is anticipated to last approximately 4 months.



## Thank You!

### Thank you for participating in our Virtual Public Open House!

Please visit the other areas of the website for more information

- **Sign-in and Handout** - please sign in to let us know you were here!
- **Interactive Map** – view the design on an aerial photograph, zoom in and out, find your property, etc.
- **MUT Information** – more information on the benefits of median U-turns and how they work
- **Submit a Comment** – submit your comment or questions on this page or send by email or mail



Thank you for participating! Please visit the other areas of this website for more information. This concludes the meeting presentation.