

# WELCOME



**OKLAHOMA**  
Transportation

## Virtual Public Open House

**SH-11 Improvements West of Kaw City  
Kay County**

Welcome to the virtual public open house for the SH-11 project west of Kaw City in Kay County.

# Purpose of the Open House



1. Present the Need for the Project
2. Describe the Alternatives Developed
3. Present and Compare the Alternatives Under Consideration
4. Obtain Public Input
5. Discuss Next Steps



The purpose of this virtual open house is to present the need for the project, describe the alternatives developed, compare the alternatives that are still under consideration for the project, and obtain public input. We will also discuss the next steps for the project. The map on this slide shows the general location of SH-11 west of Kaw City.

# Purpose of the Open House



- 1. Present the Need for the Project**
- 2. Describe the Alternatives Developed**
- 3. Present and Compare the Alternatives Under Consideration**
- 4. Obtain Public Input**
- 5. Discuss Next Steps**



This map shows the extents of the SH-11 project which are shown in pink. The project begins just west of Rocky Ridge Road and extends east approximately 3.9 miles to Grandview Drive in Kaw City.

# Stakeholder Meeting

## Key Stakeholder Input

- **ODOT met with key project stakeholders on August 8, 2022**
  - City of Kaw City
  - Kay County
  - US Army Corps of Engineers (Kaw Lake)
  - Kaw Nation
- **Stakeholder comments included**
  - Agreement with the safety need for the project
  - Kay County would prefer as little roadway as possible transferred to County maintenance
  - Kaw Nation prefers the alternative that has the smallest impact to the tribe's property

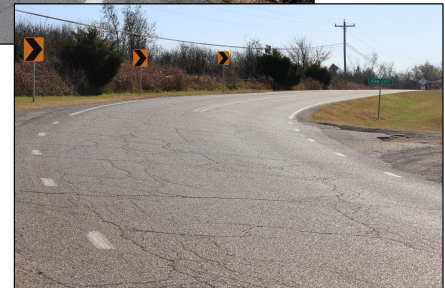
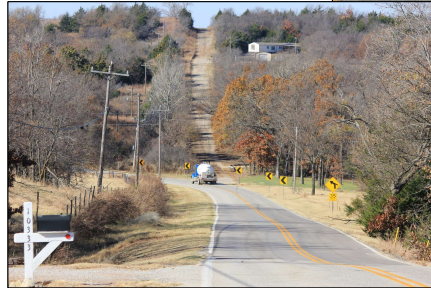


ODOT held a meeting with key stakeholders on August 8, 2022, including the City of Kaw City, Kay County, the US Army Corps of Engineers, and the Kaw Nation. The same information that we are presenting at this meeting was presented to the stakeholders. Feedback from stakeholders included overall agreement with the need to improve safety, and comments to minimize the amount of roadway transferred to the County and to minimize impacts to tribal property.

# Purpose of the Project

## Improve Safety on SH-11

- Existing Roadway
  - Two lanes with no shoulders
  - Curvature of the roadway limits sight distance
  - 55 mph speed limit

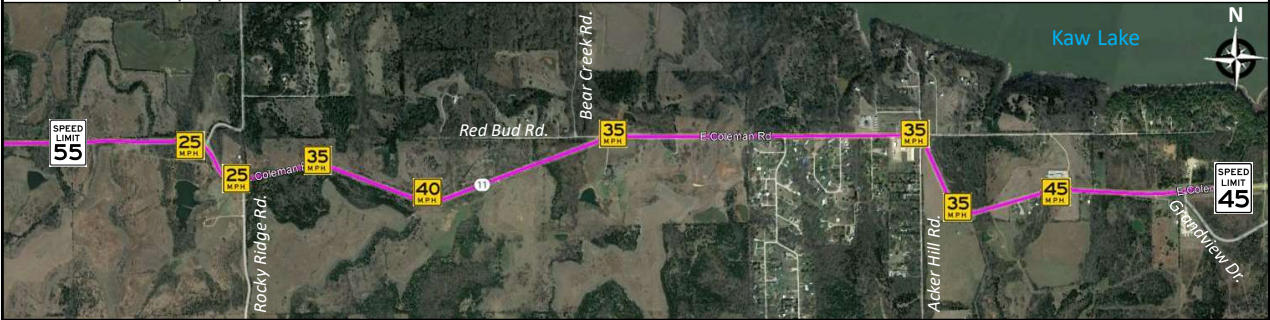


The first step in the study process is to determine the purpose of the project which is to improve safety on SH-11. Then we start assessing the existing conditions to determine what needs to be improved. The existing roadway has two lanes with no shoulders and some steep slopes adjacent to the pavement. There are several vertical curves (or curves that change the slope of the road) that limit sight distance and make it difficult to see turning or slower traffic as shown in the top picture. Several horizontal curves (or curves that change the alignment or direction of the road) have yellow chevron signs and advisory speeds to warn traffic to slow down as shown in the two bottom pictures. Sight distance is limited around horizontal curves as well.

# Purpose of the Project

## Improve Safety on SH-11

- Existing Roadway
  - Two lanes with no shoulders
  - Curvature of the roadway limits sight distance
  - 55 mph speed limit



The existing roadway has a posted speed limit of 55 MPH for most of the corridor and slows down to 45 MPH as you enter Kaw City. On this graphic, you can see all the horizontal curves have advisory speeds posted. The back-to-back curves at Rocky Ridge Road have the lowest advisory speed at 25 MPH.

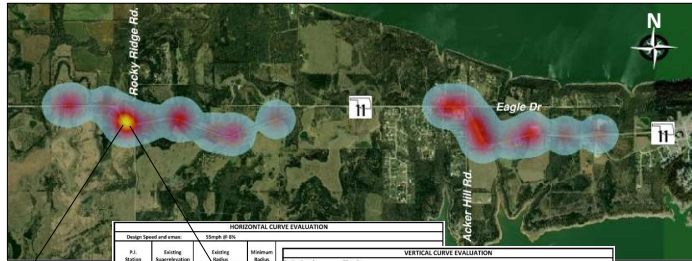


# Purpose of the Project

## Improve Safety on SH-11

- Collision History
  - 35 crashes between 2010-2019
  - 63% of crashes were injury-related or fatal
  - The collision rate on SH-11 is 38% higher than the statewide average

	Project Corridor Rates	Statewide Rates
Total Collisions	130.46	94.30
Fatal Collisions	3.73	2.4



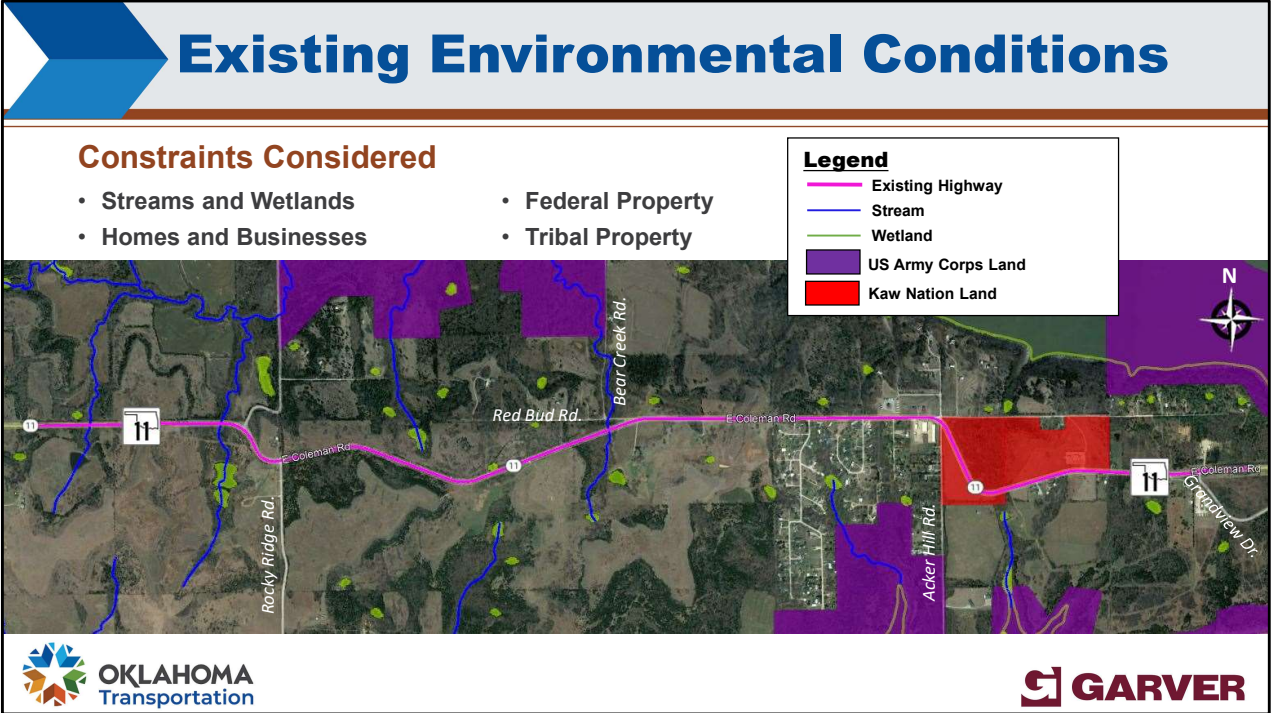
Design Speed and Grades				Strength of PC			
P.A. Station	Existing Superelevation	Existing Grade	Minimum Grade	P.A. Station	G1	G2	Length (ft)
130+00.00	0.0	0.0000	0.0000	130+00.00	0.00	0.00	100
130+05.00	0.0	0.0000	0.0000	130+05.00	0.00	0.00	100
130+10.00	0.0	0.0000	0.0000	130+10.00	0.00	0.00	100
130+15.00	0.0	0.0000	0.0000	130+15.00	0.00	0.00	100
130+20.00	0.0	0.0000	0.0000	130+20.00	0.00	0.00	100
130+25.00	0.0	0.0000	0.0000	130+25.00	0.00	0.00	100
130+30.00	0.0	0.0000	0.0000	130+30.00	0.00	0.00	100
130+35.00	0.0	0.0000	0.0000	130+35.00	0.00	0.00	100
130+40.00	0.0	0.0000	0.0000	130+40.00	0.00	0.00	100
130+45.00	0.0	0.0000	0.0000	130+45.00	0.00	0.00	100
130+50.00	0.0	0.0000	0.0000	130+50.00	0.00	0.00	100
130+55.00	0.0	0.0000	0.0000	130+55.00	0.00	0.00	100
130+60.00	0.0	0.0000	0.0000	130+60.00	0.00	0.00	100
130+65.00	0.0	0.0000	0.0000	130+65.00	0.00	0.00	100
130+70.00	0.0	0.0000	0.0000	130+70.00	0.00	0.00	100
130+75.00	0.0	0.0000	0.0000	130+75.00	0.00	0.00	100
130+80.00	0.0	0.0000	0.0000	130+80.00	0.00	0.00	100
130+85.00	0.0	0.0000	0.0000	130+85.00	0.00	0.00	100
130+90.00	0.0	0.0000	0.0000	130+90.00	0.00	0.00	100
130+95.00	0.0	0.0000	0.0000	130+95.00	0.00	0.00	100
131+00.00	0.0	0.0000	0.0000	131+00.00	0.00	0.00	100

VERTICAL CURVE EVALUATION										
Design Speed	30 mph	35 mph	40 mph	45 mph	50 mph	55 mph	60 mph	65 mph	70 mph	
P.A. Station	G1	G2	Length (ft)	Classification	Computed L	Desired L	Difference	Required Length (ft)	MC Criteria	MC Criteria
130+00.00	0.00	0.00	100	Sup	100.00	100.00	0.00	100	Yes	Yes
130+05.00	0.00	0.00	100	Sup	100.00	100.00	0.00	100	Yes	Yes
130+10.00	0.00	0.00	100	Sup	100.00	100.00	0.00	100	Yes	Yes
130+15.00	0.00	0.00	100	Sup	100.00	100.00	0.00	100	Yes	Yes
130+20.00	0.00	0.00	100	Sup	100.00	100.00	0.00	100	Yes	Yes
130+25.00	0.00	0.00	100	Sup	100.00	100.00	0.00	100	Yes	Yes
130+30.00	0.00	0.00	100	Sup	100.00	100.00	0.00	100	Yes	Yes
130+35.00	0.00	0.00	100	Sup	100.00	100.00	0.00	100	Yes	Yes
130+40.00	0.00	0.00	100	Sup	100.00	100.00	0.00	100	Yes	Yes
130+45.00	0.00	0.00	100	Sup	100.00	100.00	0.00	100	Yes	Yes
130+50.00	0.00	0.00	100	Sup	100.00	100.00	0.00	100	Yes	Yes
130+55.00	0.00	0.00	100	Sup	100.00	100.00	0.00	100	Yes	Yes
130+60.00	0.00	0.00	100	Sup	100.00	100.00	0.00	100	Yes	Yes
130+65.00	0.00	0.00	100	Sup	100.00	100.00	0.00	100	Yes	Yes
130+70.00	0.00	0.00	100	Sup	100.00	100.00	0.00	100	Yes	Yes
130+75.00	0.00	0.00	100	Sup	100.00	100.00	0.00	100	Yes	Yes
130+80.00	0.00	0.00	100	Sup	100.00	100.00	0.00	100	Yes	Yes
130+85.00	0.00	0.00	100	Sup	100.00	100.00	0.00	100	Yes	Yes
130+90.00	0.00	0.00	100	Sup	100.00	100.00	0.00	100	Yes	Yes
130+95.00	0.00	0.00	100	Sup	100.00	100.00	0.00	100	Yes	Yes
131+00.00	0.00	0.00	100	Sup	100.00	100.00	0.00	100	Yes	Yes



Next, we look at the collision history of the roadway for the last 10 years. The map in the upper right-hand corner is a heat map that shows the locations of the collisions along SH-11. The red-hot spots correlate with the curves that have advisory speed signs and the yellow spot indicates the highest frequency of collisions at the back-to-back curves near Rocky Ridge Road. In total there were 35 crashes in the study area during this time period with 63% of those collisions having injuries or fatalities. The collision rate for SH-11 is 38% higher than the statewide average for similar highways. The two tables show the analysis of both the existing horizontal and vertical curves with the pink boxes indicating where the curves do not meet current highway standards.

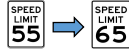


We also looked at the environmental conditions in the project area. This was based on high level, desktop research and will be confirmed by more detailed field studies later in the project. The slide shows mapped streams and wetlands in blue and green, U.S. Army Corps of Engineers land in purple, and Kaw Nation land in red. You can also see the location of homes and neighborhoods.

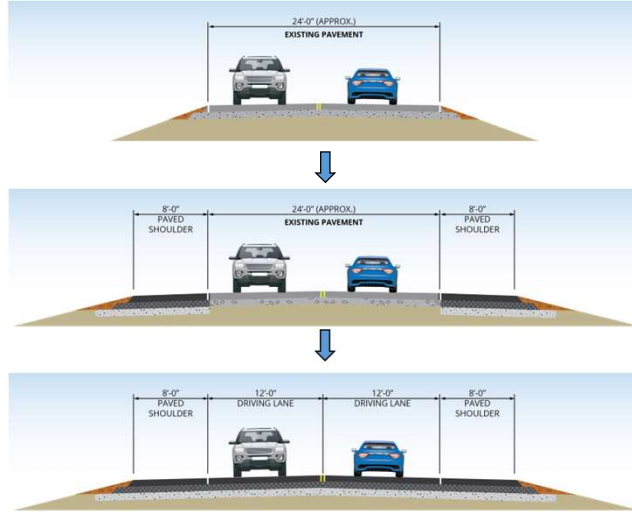


# Development of Alternatives

## Design Criteria



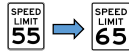
- Improve roadway curvature to meet 65 mph design speed
- Add shoulders and flatten side slopes
- Maintain 2-way traffic along SH-11 during all construction phases



Next, we move to developing alternatives which starts with setting up the design criteria. We determined the proposed design speed to be 65 mph which establishes the maximum curve rates and slopes to meet national standards. The top graphic shows the existing condition with no shoulder. Modern highway standards include shoulders and flatter slopes adjacent to the pavement. This gives drivers a chance to correct their course if they veer off the road and get back to the driving lane safely. First, we looked at adding shoulders to the existing pavement with the flatter slopes as shown in the middle graphic. However, since we must correct so many curves, we end up replacing most of the pavement which led to the full pavement replacement option.

# Development of Alternatives

## Design Criteria



- Improve roadway curvature to meet 65 mph design speed
- Add shoulders and flatten side slopes
- Maintain 2-way traffic along SH-11 during all construction phases

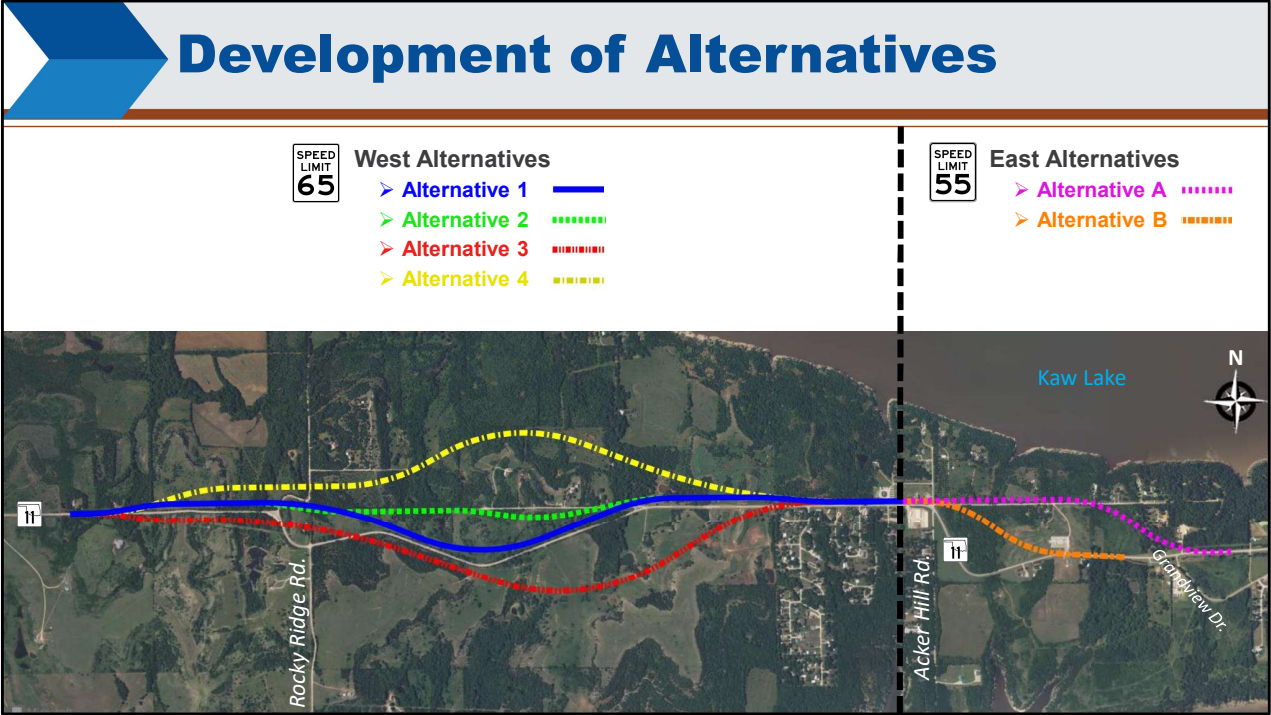


VARIABLE WORKZONE

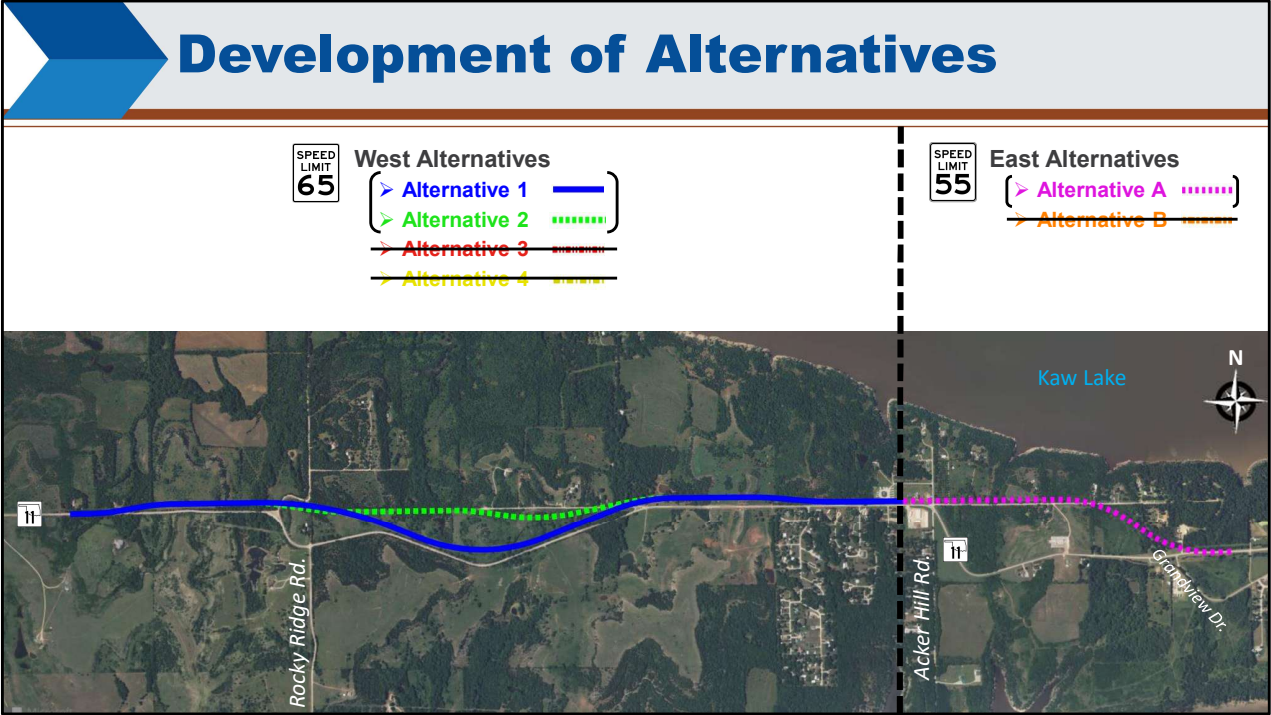
APPROX. 10' 0" WORKZONE CLEARANCE



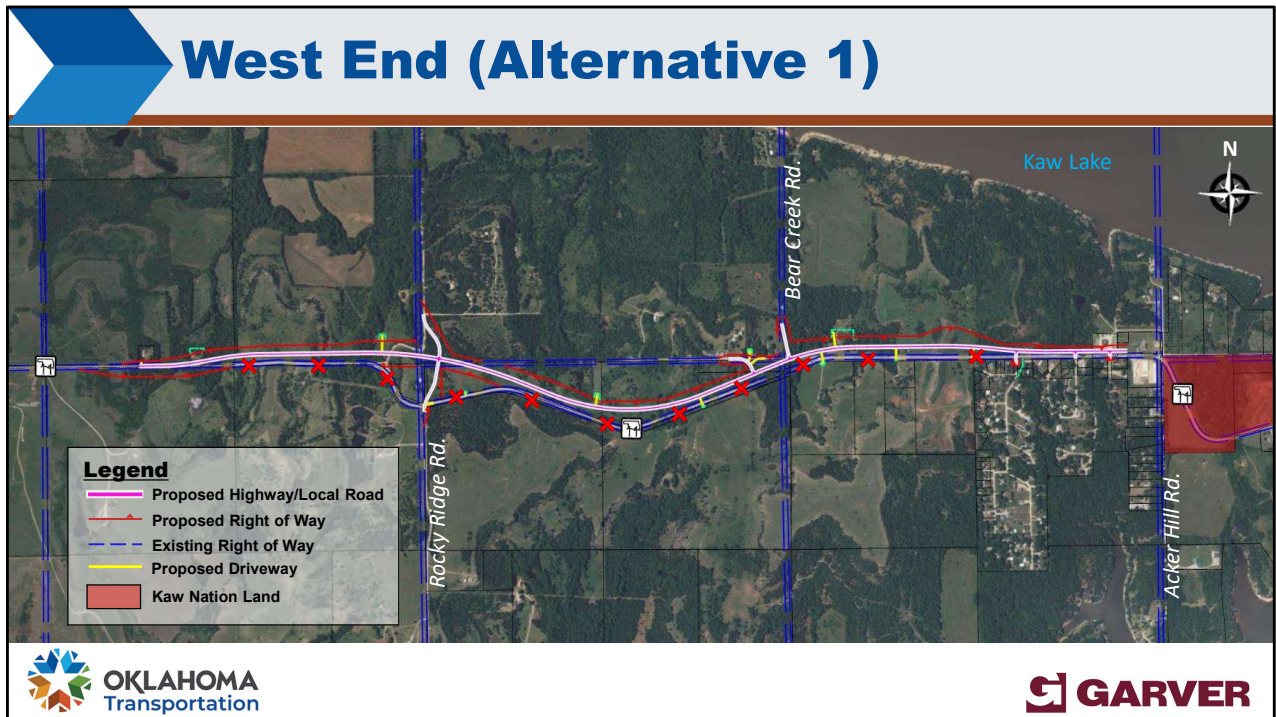
Next, we looked at construction options and if we could close the road temporarily while the new highway is built. However, this results in a 56-mile detour with no local road connection options. Because of this ODOT decided to maintain two-way traffic during construction. The new pavement will have to be built offset from the existing highway in order to maintain traffic during construction.



Once we establish our design parameters, we start laying out alignment options. We split the corridor into two parts with the west part designed to 65 MPH and the east part designed to 55 mph since it is approaching Kaw City where the speed is reduced. The dividing line is just west of Acker Hill Rd. Initially, the west part included 4 alternatives, designated with numbers, and the east part included two alternatives shown as A and B.

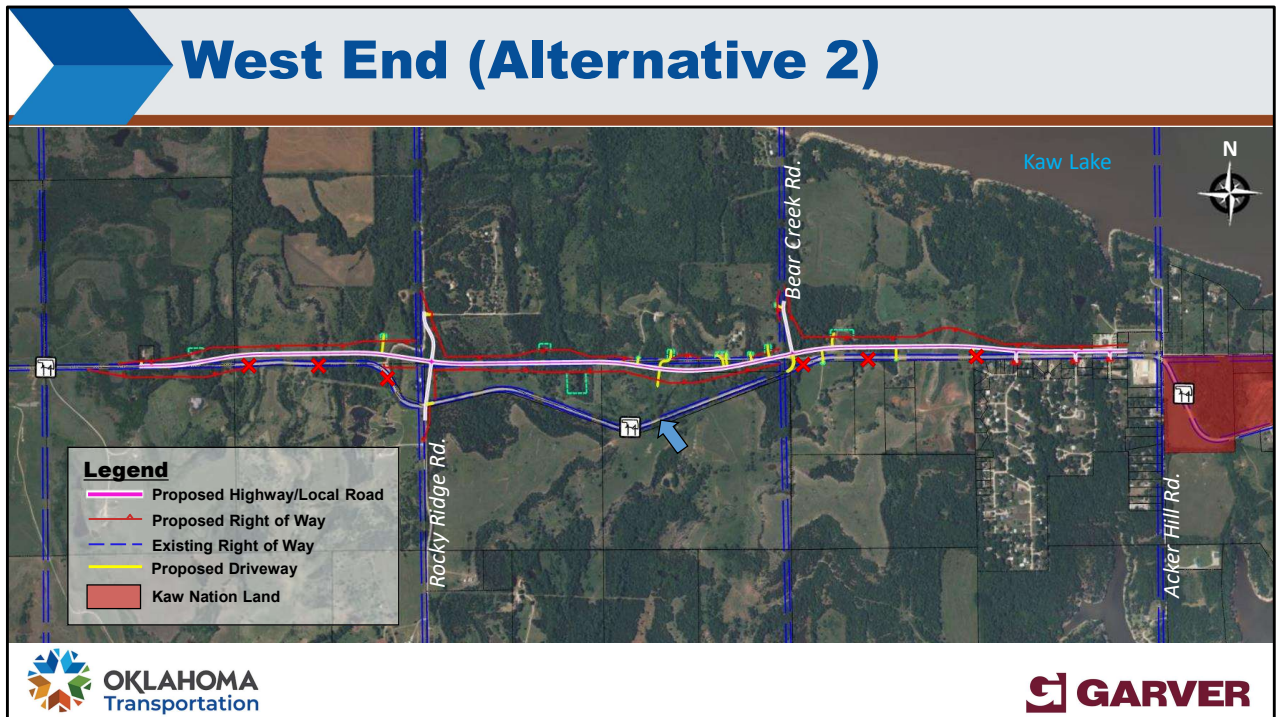


After preliminary meetings with ODOT and stakeholders Alternatives 3 and 4 on the west side were eliminated due to higher costs and property impacts. Alternative B for the east side was also eliminated due to future development plans for the Kaw Nation property around the travel plaza.

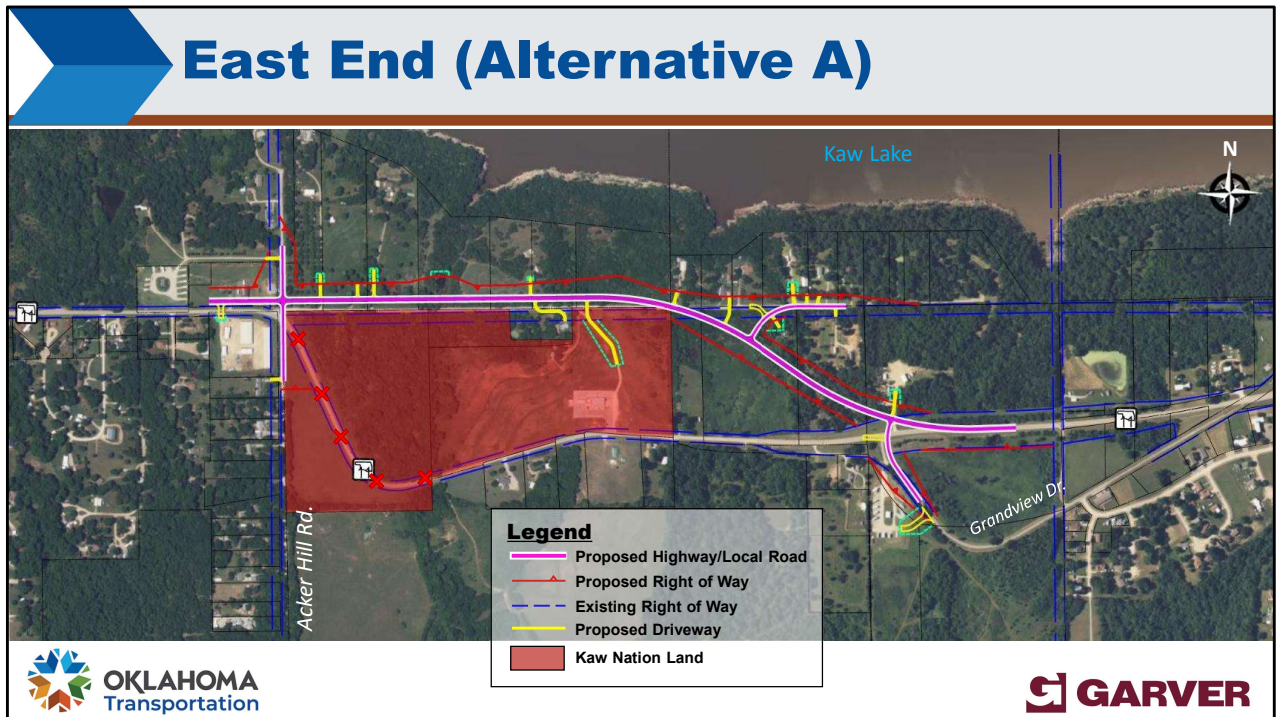


Now we will take a closer look at the remaining alternatives. The design for the all the alternatives is based on preliminary information and will be further refined once an alternative is selected and field surveys are completed. Here we are showing Alternative 1 which is as close to the existing highway as we can get and still maintain traffic while correcting all the curves. The pavement for the existing highway will be removed, as shown with the red X's, and adjacent properties to the highway will have driveways with direct access. Some of these drives are shown in yellow.





The design for Alternative 2 is similar to Alternative 1 except for the area between Rocky Ridge Road and Bear Creek Rd. The highway has been realigned to closely follow the section line through this area to try to utilize some of the statutory right of way and to improve safety by reducing the number of curves. For this alternative, a portion of the existing highway will remain in place as a local road to provide access to properties on the south side of the old highway.

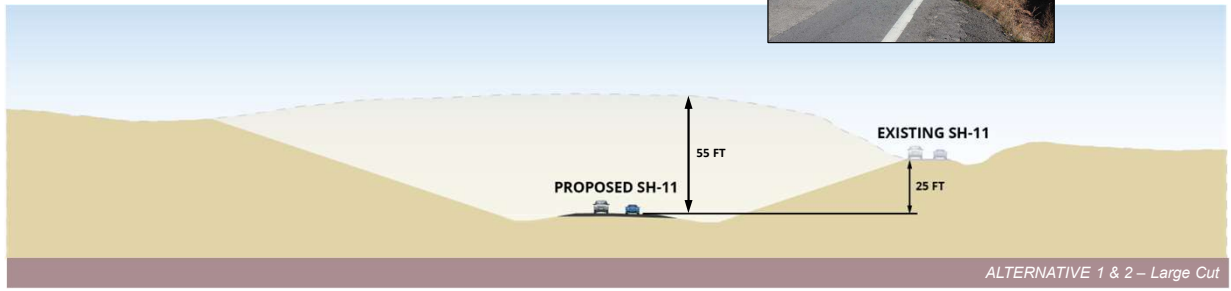


Finally, we will look at Alternative A on the east end, which is the only remaining alternative and can be combined with either of the west alternatives. Here you can see that the highway has been realigned to the north of the Kaw Nation land before continuing southeast to connect to existing SH-11. A portion of the existing highway will remain to provide local access to property owners.

# Comparison of Alternatives

## Both Alternatives Improve Safety and Have Similar Impacts

- Similarities
  - Large Cuts and Fills
  - Offset to Maintain Traffic on Existing Highway



ALTERNATIVE 1 & 2 – Large Cut

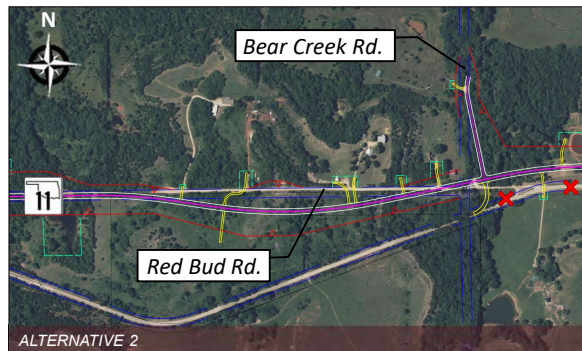
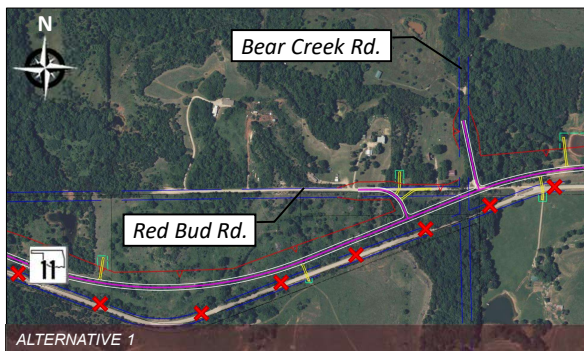


Now that we have shown you the alternatives under consideration, we will present a comparison. Both alternatives will improve safety over the existing roadway, and they have similar impacts to environmental resources. Both alternatives will require some large cuts and fills of the existing terrain. The image on the slide shows a worst-case scenario, where the hill next to the roadway would need to be cut by over 50 feet. This will be minimized as much as possible based on the results of our testing of the surrounding soils and rock. The reason these cuts and fills are necessary is because the new roadway will be built next to the existing roadway in order to maintain traffic during construction.

## Comparison of Alternatives

### All Alternatives Improve Safety and Have Similar Impacts

➤ Alt 2 has more direct drive connections to SH-11 (more potential for conflicts)



This slide shows the main difference between Alternatives 1 and 2. Alternative 1 remains closer to the existing highway. Homes on Redbud Road would access the new highway with a new roadway connection just west of Bear Creek Road. Alternative 2 would be moved further north, closer to Redbud Road. In this alternative, homes on Redbud Road would have direct access to the new highway. A portion of the existing highway would remain in place to provide access to properties to the south. Because there are more direct connections to the new highway under Alternative 2, this alternative has more potential for conflicts between through and turning traffic.

# Comparison of Alternatives

JP No. 33351(04), SH-11 Kaw City, Project Summary Matrix										
Alternative	Total Cost	Construction Cost	Right-of-Way Cost	Utility Relocation Cost	Potential Residential Relocations	Potential Commercial Relocations	Wetlands (ac)	Streams (ft)	Federal Property (ac)	Tribal Land (ac)
1	\$31,480,053	\$22,624,000	\$7,593,000	\$1,263,053	3	1	0.90	942	-	-
2	\$33,191,097	\$24,130,000	\$7,833,000	\$1,228,097	3	1	1.84	1773	-	-

\*costs and impacts of Alternative A (east project) are included in both Alternative 1 and Alternative 2



This table shows the different costs and impacts of the two alternatives. The costs and impacts of Alternative A are included in both Alternative 1 and Alternative 2. Alternative 2 is approximately \$1.7 million dollars more expensive than Alternative 1. Alternative 2 also has slightly larger impacts to wetlands and streams. Both alternatives will require potential residential and commercial relocations. Once a preferred alternative is selected, ODOT will refine the design and attempt to minimize relocations as much as possible.





This timeline shows the next steps for the project. We do ask that you submit your comments by DATE so that we may incorporate your input and identify the preferred alternative and begin more detailed design and environmental studies. Design and environmental approvals are anticipated by 2024, at which point right-of-way acquisition would begin. Construction is currently programmed in 2028. However, this is subject to change and is based on funding availability.

## Comments?

**Please submit your comments by  
December 20, 2022**

By email: [Environment@odot.org](mailto:Environment@odot.org)

By mail: Environmental Programs Division  
200 NE 21<sup>st</sup> Street  
Oklahoma City, OK  
73105

On the web: [www.odot.org/SH11KawCity](http://www.odot.org/SH11KawCity)

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 **GARVER**

This slide shows how you can submit comments on the project. You can go to the Submit a Comment page on this website and submit your comment directly, you can download the comment form and return it by mail to the address shown on the slide, or you can send your comments by email. Please submit your comments by DATE.

# THANK YOU!



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## Questions?

Thank you for attending this virtual open house. If you have questions, please go to our [Frequently Asked Questions](#) page, or submit your question on the [Submit a Comment](#) page.