Hello and thank you for joining the joint Oklahoma Department of Transportation and Oklahoma Turnpike Authority’s Public Meeting for the proposed project to connect SH-51 with the Muskogee Turnpike in the vicinity of Broken Arrow and Coweta Oklahoma.
The purpose of this meeting is to present the findings of the preliminary alternative evaluation to connect SH-51 with the Muskogee Turnpike.
The purpose and need for this project is to connect the Muskogee Turnpike (SH-351) to SH-51 in the Broken Arrow and Coweta area. We want to ensure that we are consistent with long range plans for the area; that we provide an interchange that best serves the needs of the traveling public while minimizing impacts; and that we provide capacity for connecting local road network.

Having said that we want to turn now to discussing the existing local road network.
The study area includes roadways governed by the Oklahoma Turnpike Authority, Oklahoma Department of Transportation, the City of Coweta, and Wagoner County. The traffic study analyzed the existing intersections shown on this slide as well as the roadway segments between them, and the proposed interchanges. These locations were anticipated to be affected by traffic re-routing for the new interchange.
Traffic counts were collected by ODOT in August 2020 and were adjusted by the Strategic Asset & Performance Management Division to reflect the design traffic volumes. The average daily traffic volumes are presented here as vehicles per day.
Level of service is a qualitative measure of capacity and operating conditions. For intersections, level of service is determined based on the vehicle delay in seconds per vehicle. The existing roadway system currently experiences traffic conditions that represent LOS C or better. This means that traffic has stable flow with good to fair signal progression. Delays range from no delay to moderate delay at intersections. Drivers typically don’t experience significant congestion or queuing along intersection approaches. The analysis of existing traffic shows the study area is currently operating below capacity.
We obtained data from ODOT’s Safe-T collision database for the most recent 10 full years which showed 260 collisions in the study area. Of these, 4 collisions included a fatality and 9 collisions included at least one suspected serious injury. Based on the collision data and predictive analysis that was performed, some general safety improvements were recommended such as new or improved lighting, refreshed pavement markings, and updated traffic signs.
I would like to now talk you through the design options being considered.

Alternative 1, Midway, has a turnpike interchange located at Midway with ramps that accomplish all four directional movements to and from the turnpike. This also includes improvements on Midway to provide a 4-lane divided connection from SH-51 to the Muskogee Turnpike.

Alternative 2, which is S. 273rd E. Option 1, consists of a turnpike interchange located at S. 273rd. This includes a new bridge located in line with the section line. As with the first alternative, the interchange has ramps that accomplish all four directional movements to and from...
the turnpike. This also includes improvements on Midway and E. 101st to provide the 4-lane divided connection from SH-51 to the Muskogee Turnpike.

Lastly, we have Alternative 3, which is S. 273rd E. Option 2, which consists of a turnpike interchange located at S. 273rd. This includes a new bridge located in approximately the current location of the SW. 273rd bridge. As with the other alternatives, the interchange has ramps that accomplish all four directional movements to and from the turnpike. This includes a new connection on virgin alignment to provide the 4-lane divided connection from SH-51 to the Muskogee Turnpike.
This map provides you with a context of the 3 Alternatives that we are talking about. North is located to the top of the slide. Alternative 1 is indicated in blue, Alternative 2 is depicted in yellow and Alternative 3 is shown in purple. This map provides with an overview and comparison of the locations under consideration.
This map of Alternative 1 located at Midway shows the improvements in more detail. In this map, north is to your right. Blue indicates the connection from SH-51 to the turnpike and ramps that will serve traffic demands. As noted, this will be a 4-lane divided roadway. Red indicates the right-of-way lines for the property necessary to construct. This will include reconstructing the bridge over the turnpike immediately adjacent to the current location.
This map of Alternative 2 located at S. 273rd, Option 1 shows the improvements in more detail. In this map, north is to the top of the page. This option includes construction of a new bridge along the section line, so it is off-set significantly from the existing bridge. Yellow indicates the connection from SH-51 to the turnpike along Midway as well as E. 101st in order to provide that 4-lane divided facility as well as ramps that will serve traffic demands. Red indicates the right-of-way lines for the property necessary to construct.
This map of Alternative 3 located at S. 273rd, Option 2 shows the improvements in more detail. In this map, north is again to the top of the page. This option includes construction of a new bridge essentially in approximately the same location as the existing bridge over the turnpike. Purple indicates the new connection from SH-51 to the turnpike along a virgin alignment to provide that 4-lane divided facility as well as ramps that will serve traffic demands. Red indicates the right-of-way lines for the property necessary to construct.
This slide is the typical 4-lane divided connector that we used to provide the strong connection between SH-51 and the turnpike that ODOT and OTA are seeking. It includes 4-12’ lanes with 10’ shoulders on the outside and 4’ shoulders on the inside.
We want to detail for you in the next set of slides the considerations to be discussed for our evaluation. These include:

- Traffic Safety and Operations
- Constructability
- Construction Time
- Right-of-Way Impacts
- Utility Impacts
- Environmental Constraints
- Compatibility with Community Development Plans
- Construction Cost
We performed an operational analysis on each of the proposed alternatives, as well as a No Build scenario, just like we did for the existing roadway network. We found that all alternatives were predicted to operate with similar levels of service. The need for capacity increasing improvements were predicted at the SH-51 traffic signals at Midway Road and E 111th Street. And other intersection and roadway improvements were shown to be needed for various alternatives as well. But the study area is predicted to operate at LOS D or better after implementation of the recommended improvements.
As shown in the previous slide, all proposed alternatives are predicted to operate at similar levels of service and accommodate the future traffic volumes forecasted for the Year 2045.
Access management is important for maintaining mobility and improving safety. As access along a roadway increases, mobility often decreases. When implementing access management, you typically evaluate the spacing between driveways and roadways, the need for turn lanes to provide space for vehicles to decelerate, the need for two way left turn lanes or raised medians to regulate access, available sight distance, and whether you need to preserve right of way for future widenings.
No access changes have been recommended for any of the local roadways at this time. There are some general access management recommendations we have that would apply to any of the proposed interchange locations. New driveways or roadways should be prohibited in the vicinity of new interchange ramps. Left-turn lanes to all turnpike entrance ramps and left-turn or right-turn lanes on exit ramps are recommended. Additionally, we recommend that access management guidelines be developed for this area to deal with new development as it goes in. This is particularly important in the area of 101st Street and 273rd. At a minimum, the guidelines should specify minimum access spacing and prohibit driveways in the functional area of intersections.
At Poe, we looked at constructability. We have on staff, Mr. Phil Loafman who retired from ODOT. Phil was responsible for reviewing the sequence of construction and setting contract timelines on ODOT’s major projects for the last 20 plus years. The reviews are upon his evaluation. As information, each design alternative has a bridge for the local access facility going over the turnpike, so these are referred to as “turnpike under”. Each alternative also has all 4 ramp movements to and from the turnpike included. Specifically, we move to each alternative now.
Highlights of Alternative 1 at Midway includes construction of the Midway bridge over the turnpike adjacent to the existing bridge. Site constraints include the proximity of developed neighborhoods resulting in relocations and noise impacts. This will also require limitations on road closures and preferred work hours. The complete closure of Midway would all for a quicker construction time. Turnpike closure will be necessary for bridge demolition and temporary closures or rolling roadblocks will also need to occur on for bridge construction for things such as hanging beams.
Highlights of Alternative 2 at S. 273<sup>rd</sup> E. option 1 include a new bridge constructed on new alignment in line with the section line, so essentially straight north-south rather than the current alignment. This is more easily constructed while able to maintain traffic on the existing bridge because of the off-set. Turnpike closure will be necessary for bridge demolition and temporary closures or rolling roadblocks will also need to occur on for bridge construction for things such as hanging beams.
Highlights of Alternative 2 at S. 273rd E. option 2 include a new bridge constructed in very close proximity to the existing 273rd bridge alignment. This will require closure of 273rd during construction unless phased construction of half of the bridge at a time is used. This would allow only a single lane of traffic. Turnpike closure will be necessary for bridge demolition and temporary closures or rolling roadblocks will also need to occur on for bridge construction for things such as hanging beams.
On Construction time, again Phil Loafman provided estimates on the construction durations for each alternative and those are projected to be for Alternative 1 at Midway 375 calendar days with bridge constructed half at a time; Alternative 2 at 273rd, Option 1 is anticipated to take 465 calendar days; Alternative 3 at 273rd, Option 2, is anticipated to take 340 calendar days to construct.
In regards to Right-of-Way Impacts, this information is obviously still being developed and numbers are approximate since these are by no means final plans.

Alternative 1 at Midway will require approximately 135 parcels of right-of-way to be acquired, with two being Muscogee (Creek) Nation properties and includes 1 wetland. This will likely result in 69 relocations and will be at a significantly high cost.

Alternative 2, located at S. 273rd, Option 1 will require approximately 80 parcels of right-of-way to be acquired with 1 potential wetland. This will likely result in 37 relocations.
Alternative 3, located at S. 273rd, Option 2 will require approximately 26 parcels of right-of-way to be acquired with 1 potential wetland. This will likely result in 6 relocations.
Moving to Utility Impacts, this information is still preliminary since no design started, but we have identified potential conflicts and provided information to ODOT Utilities Branch.

For Alternative 1 at Midway, we have identified substantial impacts on both sides of the roadway and ODOT estimated that relocations would cost $4.7 million.

For Alternative 2 at S. 273rd, Option 1, we have identified substantial impacts on parts of both Midway and 101st and ODOT estimated that relocations would cost $2.6 million.
For Alternative 3 at S. 273rd, Option 2, we have identified that this option avoids the large transmission line poles, and has relatively minor utility impacts on crossings with no parallel utility impacts identified. ODOT estimated that relocations would cost $300,000.
Known environmental constraints were gathered using available “desktop” data from Local, State and Federal Agencies. No site visits were completed. Once a preferred alignment is selected, detailed environmental studies, including site visits, will be completed and the appropriate regulatory agencies will be contacted.
Traffic noise is an important environmental consideration when adding new interchanges and/or roadways. So, each alternative was evaluated based on a noise screening. Once a preferred alternative is selected, a detailed noise study will be completed. The land surrounding the Alternative 1 project action area is mainly composed of high-density residential subdivisions. Alternative 1 potential noise-impact area includes an estimated ninety-two (92) single-family homes; therefore, it is likely to result in the greatest impacts on noise sensitive properties.
The land surrounding the Alternative 2 project action area is mainly composed of rangeland and woodland with residential properties interspersed. The Alternative 2 potential noise impact area includes an estimated four (4) single-family homes; therefore, it is likely to result in the least impacts on noise-sensitive properties.
The land surrounding the Alternative 3 project action area is mainly composed of rangeland and woodland with residential properties interspersed and commercial properties and places of worship. The Alternative 3 potential noise-impact area includes an estimated ten (10) single-family homes. The increased impacts are due to the length of the connector road.
Regarding cultural resources, all 3 Alternatives have no eligible National Register of Historic Places structures or properties. No previously listed National Register of Historic Places properties. No known archaeological sites and no known cemeteries.
Regarding hazardous waste and petroleum storage tank facilities, there are no above ground storage tank, underground storage tank, or leaking underground storage tank sites within any of the alternative locations. There is one oil well located near Turnpike Authority right-of-way and one permitted AIRS facility site located within ¼ mile of the project area. As seen on the graphic on this slide, there are no sites of concern with the limits of the alternatives. Alternative 1 has the least potential impacts, while alternative 2 and 3 have similar potential impacts.
There are 10 listed threatened and endangered species for Wagoner County including the American Burying Beetle (recently delisted), Interior Least Turn, Piping Plover, Red Knot, Gray Bat, Northern Long-Eared Bat, Whooping Crane, Neosho Mucket, Rabbitsfoot, and Arkansas River Shiner. Alternative 3 would disturb a significantly greater amount of potential habitat than Alternatives 1 & 2 as most of the land surrounding the Alternative 1 project action area has already been disturbed by residential subdivisions and the existing transportation corridors and is therefore less likely to impact species of concern. Mitigation is likely for the Northern long-eared bat.
Impacts to Waters and Wetlands will be coordinated with the US Army Corps of Engineers once there are preliminary plans. The appropriate Clean Water Act Section 404 permit will be obtained for the project. The blue line stream impact is similar for Alternatives 2 and 3: approximately 2,164 linear feet of Coal Creek transects the project action area. Alternative 1 would impact one unnamed blue line stream, of which approximately 137 linear feet transect the project action area.
Regarding all 3 Alternatives, the site is not located within a regulatory floodway. There are no parks, recreational areas, refuges, or wildlife management areas within any of the 3 Alternatives.
In regards to the Compatibility with Community Development plans, we pulled the available planning documents and long-range plans for entities in the area and reviewed those to see how compatible each alternative was with those plans.

Wagoner County is in the beginning stages of plan updates and their prior plan is very outdated, so this is not applicable.

City of Broken Arrow produced the Broken Arrow Next Comprehensive Plan which was approved in 2019. This contains a new interchange with the turnpike just east of
the National Guard facility and another at Oneta. If an interchange is placed at Midway, as with Alternative 1, which is west of the National Guard facility it will preclude any future placement of an interchange at Oneta due to the proximity to Midway. However, the location to the east of the National Guard Facility is in close proximity to Alternatives 2 and 3 located at S. 273rd. As such Alternatives 2 and 3 are compatible with the plan.

City of Coweta produced the Coweta 2020-2030 Comprehensive Plan which was approved in 2020. This contains an interchange eat S. 273rd, so Alternatives 2 and 3 are similar to that shown. However, the plan also has the arterial connection shown for Alternative 3, so Alternative 3 has an advantage over Alternative 2 in that regard.

The Indian Nation Council of Governments’ Connected 2045 Regional Transportation Plan of 2017 was reviewed and discussed with INCOG staff. The plan contains an interchange at S. 273rd, so Alternatives 2 and 3 are compatible with this plan.
For Construction cost, Phil Loafman was once again used to review and provide anticipated construction costs. Those were found to be as follows.

For Alternative 1 at Midway, the anticipated cost is nearly $22 million of which approximately $16.9 million is attributed to the interchange.

For Alternative 2 which is S. 273rd Option 1, the anticipated cost is nearly $39 million of which approximately $21.1 million is attributed to the interchange.
For Alternative 3 which is S. 273rd Option 2, the anticipated cost is nearly $3 million of which approximately $18 million is attributed to the interchange.

Just so that everyone is aware, the noted costs do not include right-of-way, utility, noise wall or tolling costs.
This brings us to our Overall Alternative Comparison. Each of the preceding items that we discussed for evaluation was given an ordinal ranking of 1, for best, through 3, for worst, in order to place values in the matrix presented on this slide. Summing the rankings for the items reveals that Alternative 3 is the highest rated and Alternative 1 is the lowest rated alternative.
Moving forward from here we believe that due to the significant impacts of Alternatives 1 and 2, we recommend that these alternatives receive no further consideration. We cannot, in good conscience, see expending any additional efforts or monies from ODOT and OTA when the impacts of Alternatives 1 and 2 are so substantial. Those impacts include the utility and right-of-way costs, potential relocations, noise impacts and the community disruption that would occur from Alternates 1 and 2. Therefore, Alternative 3 becomes the preferred alternative.
What we have done since reaching that conclusion was to look closer at Alternative 3. As noted, we shifted this to the northwest in order to further minimize impacts. Sliding the interchange to the northwest provides additional distance between 101<sup>st</sup> and the ramps on the north side of the turnpike, resulting in a safer configuration. This refined alternate seen on the slide saves right-of-way acquisition on the east side of S. 273<sup>rd</sup> on the north side of the turnpike. This has reduced the anticipated right-of-way parcel count to 19 parcels instead of the 26 noted earlier. The refinement has also reduced the number of relocations to 4 instead of the 6 earlier noted. This alternative also minimizes the impacts to the blue line stream by spanning over the stream and placing the ram termini to the south of the stream.
With that all presented, what are the next steps? We will accept input from this virtual public meeting and evaluate that information and address any needed adjustments. We will then produce an Alignment Study Report with recommendations. The project will then proceed into the design phase with Poe & Associates completing designs on the local connectors as a component of our contract with ODOT and OTA soliciting and selecting a designer for the interchange portion of the project.

For your information, OTA has set aside $7.5 million for the interchange project.
Thank you for your participation in this virtual meeting. For more information, please visit the other pages on this website. These include the Interactive Map to view the designs, the Right-of-Way page for information on right-of-way acquisition and relocation, and our Frequently Asked Questions page for answers to commonly asked questions about the project.

If you have any comments that you would like to provide, please use the Submit a Comment page on this site or send via email to environment@odot.org.

Once again, thank you for your attention and interest in this important project.