FY 2023-2024 Railroad Crossing Elimination Program

OKLAHOMA Transportation

# Mannford Railroad Crossing Planning Project to Improve Basin Road Connection

## Oklahoma Department of Transportation
## September 23, 2024




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# I. Cover Page

**Project Title**: Mannford Railroad Crossing Planning Project to Improve Basin Road Connection
**Applicant Name**: Oklahoma Department of Transportation

| FUNDING | |
|---|---|
| Amount RCE Program Funding Requested | $1,200,000 |
| Amount of Proposed Non-Federal Match | $300,000 |
| Does some or all of the proposed Non-Federal Match for the total project cost consist of Preliminary Engineering costs incurred before project selection (but after November 15, 2021)? | No |
| Other Sources of Federal funding, if applicable | N/A |
| Sources of Proposed Non-Federal Match | State funding |
| If applicable, are set-aside funds requested? Is the project eligible for a funding set-aside in Section B.1? | Yes. Both B.1.a., Planning Projects, and b. Rural or Tribal set-aside |
| If Yes, amount of set-aside funds requested: | $1,200,000 |
| Total Project Cost | $1,500,000 |
| **PREVIOUS FEDERAL GRANTS** | |
| Was a Federal Grant Application Previously Submitted for this Project? | No |
| **LOCATION** | |
| City, County, State Where Project is Located | City of Mannford, Creek County, State of Oklahoma |
| Is the Project located in a Rural Area or on Tribal Lands? | Yes – Federally Recognized Muscogee (Creek) Nation Reservation<br>Yes- Rural |
| If the Project is located in a Rural Area or on Tribal Land, is the Project located in a county with 20 or fewer residents per square mile, according to the most recent decennial census? | No |

| | |
|---|---|
| Congressional District where the project is located | Oklahoma 3rd Congressional District |
| **APPLICATION TRACKS/PROJECT LIFECYCLE STAGES** | |
| Application Track proposed to be funded<br><br>Lifecycle Stage proposed to be funded<br><br>Current Lifecycle State and anticipated completion of current Lifecycle Stage | Track 1 – Planning<br><br>Project Planning<br><br>Current Lifecycle Stage is Systems Planning, and Project Identification is complete |
| **RAIL LINE INFORMATION** | |
| Is the Project located on real property owned by someone other than the applicant?<br><br>Host Railroad/Infrastructure Owner(s) of Project Assets;<br>Other impacted Railroad(s)<br>Tenant Railroad(s), if applicable<br><br>If applicable, is a 49 U.S.C. 22905-compliant Railroad Agreement executed or pending? | Temporary easements may be needed for surveying and ultimately construction. Any acquisitions would conform to state and federal requirements.<br><br>Burlington Northern and Santa Fe Railroad (BNSF)<br><br>N/A<br><br>N/A |
| **PLANNING CONSIDERATIONS** | |
| Is the Project currently programmed in ANY medium- or long-range planning document: *For example, State rail plan, or interregional intercity passenger rail systems planning study, State Freight Plan, TIP, STIP, MPO Long Range Transportation Plan, State Long Range Transportation Plan, etc.*?<br><br>Is the project located on a potential corridor selected for the Corridor Identification and Development Program? | Oklahoma State 2023-2030 Freight Transportation Plan, Oklahoma State 2020-2045 Long Range Transportation Plan<br><br>No |

# PROJECT NARRATIVE

## II. Project Summary

The Oklahoma Department of Transportation (ODOT) requests Federal Railroad Administration (FRA) Railroad Crossing Elimination (RCE) grant funding in the amount of $1,200,000 for project administration and management, public and stakeholder engagement, and preliminary engineering to consider grade separated alternatives for an existing at-grade crossing of the BNSF Railway on Basin Rd., in Mannford, OK. Currently, when RR Crossing 67651V is in use by a train and blocks Basin Rd., half of Mannford and visitors to Lake Keystone are stuck on the peninsula and have no way of evacuating except by boat; a detour route by land does not exist. In addition, there is a side track at this location, and whenever two trains heading in opposite directions need to pass, the railroad crossing can be blocked for extended periods of time. This has caused safety issues because first responders can neither access the peninsula, nor leave the peninsula if a train is blocking Basin Rd. The blocked road has caused economic hardship for residents when a train has caused them to be late to work, and all access to major destinations such as schools, grocery stores, jobs, and a major state highway are also inaccessible. Measurable benefits of the Project will include improved emergency vehicle response times, reduced blocked crossing times, and average daily minutes of delay.

*Figure 1 Railroad Crossing 673651V, Basin Rd., Mannford, OK.*

## III. Grant Funds, Sources and Uses of Project Funds

The estimated cost of the planning project for the Mannford Railroad Crossing Planning Project to Improve Basin Road Connection (Project) is $1,500,000. A 20% match ($300,000) will come from ODOT state funds. Once a Notice to Proceed has been provided by FRA, the project is expected to take 13 months **(see Table 3).** The future eligible cost does not include any previously incurred expenses. ODOT has not applied for any other federal grants for this project.

*Table 1 Project Funding Components*

| Task No. | Task name project component | Cost | Percentage of total cost | Federal Contribution | Non-Federal State Contribution |
|---|---|---|---|---|---|
| 1 | Project Administration and Management | $ 150,000 | 10% | $ 120,000 | $ 30,000 |
| 2 | Public and Stakeholder Engagement | $ 350,000 | 23% | $ 280,000 | $ 70,000 |
| 3 | Preliminary Engineering Study | $1,000,000 | 67% | $ 800,000 | $ 200,000 |
| **Total Project Cost** | | **$1,500,000** | **100%** | **$ 1,200,000** | **$ 300,000** |

*Table 2 Project Funding Sources*

| FUNDING SOURCES | | |
|---|---|---|
| **Federal Funding Requested in this Application (RCE Program Request)** | $ 1,200,000 | 80% |
| **Total Non-Federal Match** | $ 300,000 | 20% |
| Other Committed Federal Funding (*e.g.,* Federal Highway Administration, congressionally directed/earmark, other FRA grant program funds—including previous RCE grants, etc.) | $ - | |
| Other Pending Federal Funding Requests | $ - | |
| Amount (if any) of funding request eligible for set-aside funds as described in section B(1) (Planning, Rural/Tribal set-aside, or Highway-Rail Grade Crossing safety information and education programs) | $ 1,200,000 | 80% |
| Portion of Total Project Costs Spent in a Rural Area, if applicable | $ 1,500,000 | 100% |
| Does some or all the proposed Non-Federal Match for the total project cost consist of Preliminary Engineering costs incurred before project selection (but after November 15, 2021)? [14] | n/a | |

# IV. Applicant Eligibility Criteria

ODOT is a state agency and is an eligible applicant for the project as defined in Section C(1)(a) of the Railroad Crossing Elimination NOFO. As the applicant, ODOT will serve as the fiduciary recipient and grant administrator for FRA funds.

# V. Project Eligibility Criteria

This Project is eligible to apply for RCE set-aside funds under the Notice of Funding Opportunity, Sections C(3)(a)(vi). Per Section C(3)(c), ODOT is applying for Track 1, Project Planning to study and determine the feasibility of alternatives for a grade separated crossing at an at-grade location (67651V) located in Creek County, Oklahoma. ODOT will also consider technological solutions to make the crossing safer and reduce construction and maintenance costs and to reduce greenhouse gas emissions.

# VI. Detailed Project Description

## Challenges

*"Multiple times a year while responding to fire calls or wrecks we have had to wait for the train to move, and as you are probably aware they don't move until "they" are ready." Bob Evans, Mannford Fire Chief*

The Town of Mannford is divided in two by SH-51 and the BNSF Avard subdivision rail line. The northern half of Mannford is north of both the highway and the BNSF rail line. It is a peninsula with the Cimarron River on the west and Keystone Lake on the east. Keystone Lake is a popular recreational destination for water sports, fishing, and camping. There is only one road, Basin Rd., to enter or exit the peninsula. Basin Rd. connects the northern part of Mannford to the southern half of Mannford and to SH-51. Basin Rd. is a two-lane road classified as a rural major collector. 2023 average annual daily traffic (AADT) on Basin Rd. is 4,600 vehicles per day (vpd). Since 2013, AADT has increased 29.5% on Basin Rd. north of the railroad crossing.[1] Growth continues due to the recreational amenities Lake Keystone has to offer residents and visitors. ODOT has implemented traffic lights at the intersection of SH-51 and Basin Rd., allowing for the safe movement of vehicles and people across the highway. Unfortunately, there is not a way for residents and recreational visitors of north Mannford to access south Mannford nor SH-51 when rolling stock is blocking at-grade crossing 673651V or the side track. South of the railroad

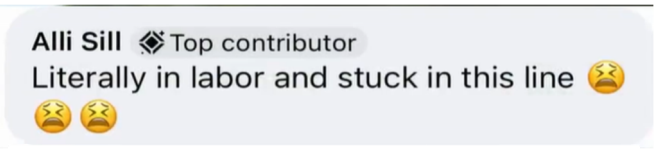



*Figure 2 Facebook Post from Mannford Resident, Fox 23 News, September 4, 2024,* Mannford residents frustrated with long waits at railroad crossings | News | fox23.com

[1] ODOT AADT Traffic Counts

*"Recently, we had tow medical emergencies that we were not able to respond o tina timely manner due to this [RR crossing is blocked] issue." Shane Cox, Director Mannford Ambulance Service*

track is the location of Mannford Public Schools, Police Department, Fire Department, Public Library, and the grocery store.

Safety is the main concern of the Project. There have been incidents of ambulances unable to transport patients to hospitals when immediate medical care is critical. On September 3, 1994, Shane Bradshaw went into cardiac arrest. The ambulance arrived on the scene, but then was stuck on Basin Rd. for over 43 minutes due to a train blocking the crossing. Shane's father and medics did all they could to keep him alive, but it was too late. His family believes if a train did not delay the ambulance, Shane would be alive today.[2] On September 4, 2024, a resident of Mannford was in labor while waiting for the cars to clear the crossing. Train delays on top of an already 35-minute trip to medical facilities can have dire consequences.

Natural disasters have become more common, and when an evacuation order is given, there is not a reliable evacuation route for the peninsula. In 2012 there were evacuation orders due to the unpredictability of a wildfire[3], and in 2019, there was record flooding of the Cimarron River, and the inundation of water caused high water levels in the lake and flood properties.[4] The crossing is such a critical route that even first responders of Mannford are aware when a train blocks Basin Rd. The Mannford Police Department has posted the status of the crossing on their Facebook page if it is blocked for an extended period of time in order to notify the public of the situation.

*"It gives you a sick feeling when you are sitting at the tracks in a police, fire, or EMS vehicle waiting for a train to move so you can get help to the people in need." Jerry Ridley, Mannford Police Chief*

Other challenges caused by the at-grade crossing on Basin Rd. is an increase in greenhouse gas emissions and ground-level ozone caused by idling cars. According to Synchro Traffic modeling software, traffic congestion caused by the blocking of the railroad crossing causes yearly emissions of 367 pounds of hydrocarbons (HC), 8,313 pounds of carbon monoxide emissions (CO), and 681 pounds of nitrogen oxides ($NO_2$) to be released into the atmosphere. These gases not only decrease air quality and contribute to the formation of ground-level ozone and smog but are also related to negative health impacts like asthma and other respiratory diseases.[5] There is no detour route, so unlike most train crossings, people are truly stuck on the peninsula until the train clears. In addition, residents have been late to work, causing them to lose wages.[6] Both Census tracts 207.06 in Creek County and 9572 in

[2] *Tulsa's News on 6*. Mannford Residents Frustrated by Ongoing Train Delays
[3] https://www.publicradiotulsa.org/local-regional/2012-08-04/evacuations-ordered-in-mannford-ahead-of-wildfire
[4] *2 News Oklahoma*. You're just at their mercy: Mannford train delays drivers
[5] Note: This assumes a 27-minute event that begins with a 20-minute train blocking the crossing. This allows time for the queue to dissipate. 27 minutes is the average time for the Basin Rd. crossing to be blocked.
[6] *Tulsa's News on 6*. Mannford Residents Frustrated by Ongoing Train Delays

Pawnee County are affected by the crossing. The median household income in Census Tract 207.06 is $64,705 and $63,906 in Census Tract 9572. This is below the National household median income of $75,149.[7] The week of September 2, 2024, Danita Estez was stopped by the train, twice for over 45 minutes that caused her to be late to her job and cost her $100 of income each time[8]. Losing income that families rely upon for basic needs is an economic hardship.

The blocked crossing also causes the movement of freight on SH-51 to back up and delay the transportation of goods. Using the AADT volume of 4,600 vpd on Basin Rd., traffic modeling using Synchro also shows typical weekday traffic volumes during AM and PM periods on Basin Road between SH-51 and the BNSF rail line backing up ½ mile and onto SH-51 with just a 20-minute delay. This increases to a mile when a train is stopped for 40 minutes and cause delays on SH-51 east and west bound because of the queuing and the fact that there is a stop light at this intersection. Vehicles stopped in the turn lanes means there is only one lane of thru traffic that can move in either direction.


*Figure 3 People are late to work and school buses are delayed by the train, Fox 23 News Story*

In addition, children have been late to school when school buses are delayed by the train **(Figure 3).** Kelly Spradlin, superintendent for Mannford Public Schools, states the school system operates five bus routes that utilize Basin Rd. Each bus transports approximately 50 students to school (K. Spradlin, letter of support, 9/17/2024). Research shows attendance is an important factor in student achievement, and missing any school can lead to lower achievement in reading, math, and general knowledge.[9]


*Figure 4 Vehicles lined up waiting to cross the railroad track, September 2024*

Cimarron Transit, the rural public transit provider for Creek and Pawnee Counties, frequently has had scheduling issues as well as missed riders' pickup times causing the riders to be late to medical

[7] S1701: Poverty Status in the Past ... - Census Bureau Table
[8] *Tulsa's News on 6*. Mannford Residents Frustrated by Ongoing Train Delays
[9] https://nces.ed.gov/pubs2009/attendancedata/chapter1a.asp#:~:text=A%20recent%20study%20looking%20at,3

appointments and other essential activities. The at-grade crossing not only causes problems for drivers and riders of Cimarron Transit north of Basin Rd., but it causes a domino effect throughout the day because drivers in surrounding communities are rerouted, asked to drive longer distances to pick up Mannford residents south of Basin Rd., causing rides in other communities to be delayed. Cimarron Transit has drivers living north of the at-grade crossing, often causing them to be late to work. (J. Shelby, personal communication, 9/11/2024) Evaluating alternatives for a grade-separated crossing and implementing the plan through the RCE program would alleviate all of the above-described challenges.

## Summary of Current Railroad Operations

BNSF operates and maintains the railroad line in the Town of Mannford as part of the Avard Subdivision, a track that starts at RR milepost 425.2 in Tulsa, OK and ends in Avard, OK at RR milepost 602, where it meets the BNSF Panhandle Subdivision. The crossing on Basin Rd. in Mannford is at RR milepost 445.851. Per BNSF, in 2024, "This segment of the Avard Subdivision sees about 15 trains per day." (K. Carollo, personal correspondence, September 12, 2024) Per USDOT's Crossing Inventory Form[10], the typical speed range at the crossing is between 1 to 70 mph. Warning devices at the crossing include a quad gate configuration, a bell, and 8 pairs of flashing LED mast mounted lights. Currently, there are neither current nor proposed railroad projects in the area.

BNSF's freight trains are frequently the cause of traffic delays at the railroad crossings. What exacerbates the problem is the fact that a side track also crosses Basin Rd., and the waiting train on the side track can cause up to 45-minute delays. BNSF states, "We try to position trains west of Basin Road, however that isn't always possible."[11] Sometimes unforeseen mechanical issues occur with the tracks that cause a train to stop and block the crossing for extended periods of time **(Figure 5)**.

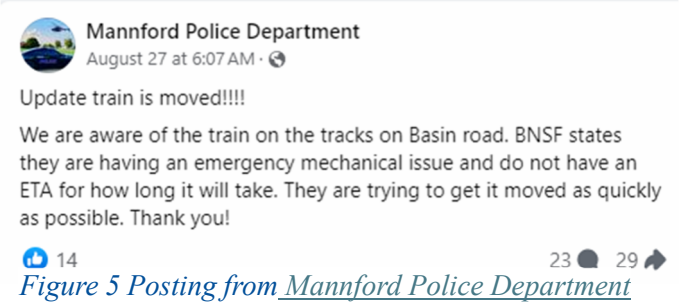



*Figure 5 Posting from Mannford Police Department Facebook Page*

## Project Components

Specific project components for the Project will be completed with funding from the RCE grant and include project administration and management, public and stakeholder engagement, and preliminary engineering study. **Table 3** shows the project schedule.

### Project Administration and Management

Tasks included under administration and management include financial management, project planning and implementation, compliance and reporting, monitoring and evaluating, communicating and coordinating, and risk management.

[10] fragis.fra.dot.gov/GISFRASafety/

[11] BNSF Communications. (2024, September 3). Mannford Residents Frustrated by Ongoing Train Delays. *Tulsa's News on 6.*https://www.newson6.com/story/66d7cdee8f6b40a12d45e4e6/mannford-residents-frustrated-by-ongoing-train-delays

| ODOT RCE SCHEDULE | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Month 1 | Month 2 | Month 3 | Month 4 | Month 5 | Month 6 | Month 7 | Month 8 | Month 9 | Month 10 | Month 11 | Month 12 | Month 13 |
| NTP | | | | | | | | | | | | | |
| Data Collection and Alternative Analysis | | | | | | | | | | | | | |
| Stakeholder Reviews | | | | | | | | | | | | | |
| Updates | | | | | | | | | | | | | |
| Public Involvement | | | | | | | | | | | | | |
| Final Study Development | | | | | | | | | | | | | |
| | Preliminary Engineering | | | | | | | | | | | | |
| | Public Involvement | | | | | | | | | | | | |

*Table 3 Project Schedule*

## Public Involvement

Throughout the study, stakeholders such as BNSF, the City of Mannford, Muscogee Nation, and Cimarron Transit will be involved to confirm that the developed alternatives meet their needs. There will be up to three opportunities for public comment that could be both in-person and virtual. The meetings will be held to engage the public for comments, input, and inform them of the study findings and outcomes.

## Preliminary Engineering Study

The Preliminary Engineering Study includes several components. There will be surveys and data collection to establish a solid foundation for evaluating potential grade-separated crossings. LIDAR data may be used to generate existing ground surface models. Ground and rail elevation survey shots will be taken at key locations within the project area to verify LIDAR data accuracy. Additionally, boundary surveys will be conducted to delineate rights-of-way, parcel boundaries, and easements, which will be compiled into a detailed basemap and will assist in identifying project impacts to rights-of-way.

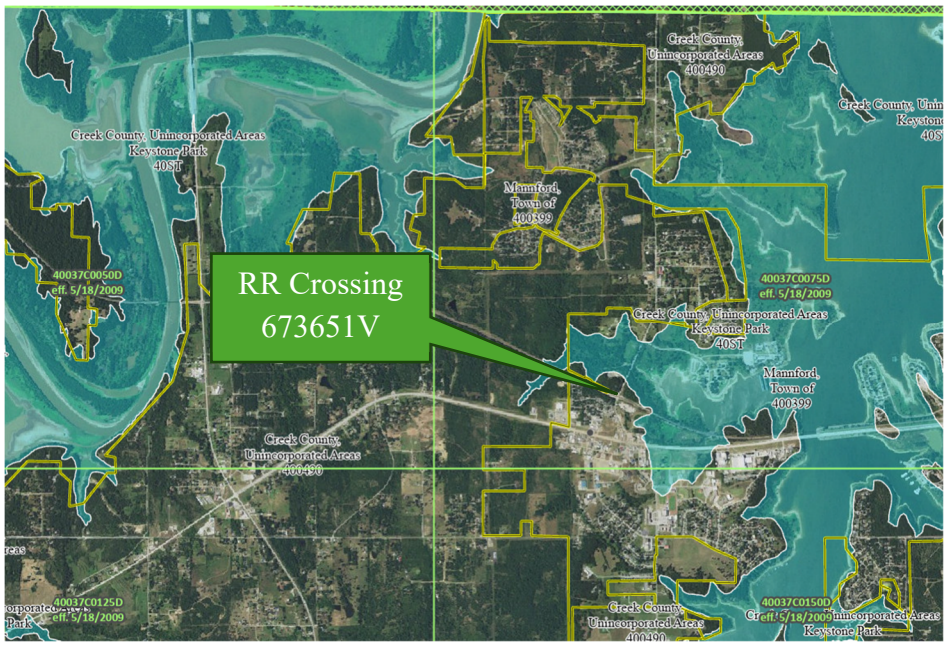
The project will engage a geotechnical subconsultant to conduct pavement and shoulder borings, providing crucial data on existing pavement and subsoil conditions. These findings, along with laboratory testing, will be compiled into a comprehensive geotechnical report. The report will include pavement recommendations based on traffic analysis for each possible alternative roadway for a grade separated crossing. Additional studies, such as embankment stability analysis, will be conducted during the detailed design phase.

A drainage analysis will need to be performed. A grade separated crossing would likely involve work within the FEMA flood zone (**see Map 1**). The project will study the potential impacts to the floodplain of each alternative and come up with solutions that meet FEMA's requirements for development Zone A. The effort will include a hydrology and hydraulics study including FEMA hydraulic model data collection, hydraulic modeling, alternatives analysis, and documentation.

The study will develop proposed grade separated alternatives for the current at-grade crossing. Alternatives may have different roadway design speeds, or other varying criteria. The study will look at roadway impacts, bridge and/or retaining wall needs, traffic impacts, environmental

impacts, right-of-way impacts, utility impacts, and local drainage impacts. Input from stakeholders and the public will also be a key consideration in alternatives evaluation.

## Expected Outcomes




*Map 1 FEMA's National Flood Hazard Layer*

The Project (Track 1) is the first step to achieving the ultimate outcome, to eliminate an at-grade crossing that currently causes delays, is a safety concern, negatively affects the local economy, and causes potential delay for residents or visitors needing to leave the peninsula if there is a mandatory evacuation. A feasible grade separated crossing alternative is the expected outcome of Track 1. After Track 1, it is expected ODOT, with the support of its partners, will apply for another RCE grant for the Track 2, Project Development, of the Lifecycle Stages. During Track 2, ODOT intends to draft an agreement with BNSF under 49 USC 22905, a mandatory component to proceed with the Project. **Table 4** lists performance measures of the Project to full completion of the Lifecycle Stages.

*Table 4 Project Performance Measures*

| Rail Measures | Unit Measure | Temporal | Primary Administration Goal | Secondary Administration Goal | Description |
|---|---|---|---|---|---|
| Reduced blocked crossing times | Count | Annual | Economic Strength | Safety | Average amount of time trains blocks the grade crossings addressed by the project. Comparison of actual performance versus baseline and expected post-project performance. |

| | | | | | |
|---|---|---|---|---|---|
| Improved emergency vehicle response times due to reduced blocked crossings | Time/ Trip | Annual | Safety | Equity and Barriers to Opportunity | Measures how improvements impact emergency service vehicle response operations. Comparison of actual performance versus baseline and expected post-performance. |
| Average Daily Minutes of Delay | Average daily minutes of delay experience by vehicles | Minutes/ Day | Economic Strength | Equity and Barriers to Opportunity | Traffic analysis can be performed to determine the average daily minutes of delay experienced by vehicles compared to baseline and expected post-project performance. |

## VII. Highway-Rail Grade Crossing Safety Information and Education Programs

This section is not applicable.

## VIII. Project Location

The Project is located in Oklahoma Congressional District 3 and within the Town limits of Mannford, Creek County, OK (**Map 2.)** Railroad crossing 673651V is at milepost 0445.851; 36.13096 latitude and -96.35570 longitude. BNSF is the railroad and Avard is the subdivision.

The at-grade crossing 673651V is located in Creek County, but it also affects a portion of Pawnee County. The northern half of the peninsula is in Pawnee County, and the southern half is in Creek County. The Town of Mannford is the only town on the peninsula. Mannford is located 25 miles west of the City of Tulsa, the closest metro area where medical facilities and most jobs are located. The crossing of the BNSF rail line and Basin Rd. itself is at the intersection of Census Tract 207.06, and the northern part of the peninsula is in Census Tract 9572.

Railroad crossing 673651V, in Census Tract 40037020706 is identified as a Historically Disadvantaged Community and rural as well as Census Tract 40117957200 in Pawnee County that is included in the northern half of the peninsula. The Town of Mannford, when adjusting for low income, is above the nationwide 50$^{th}$ percentile at 62$^{nd}$ percentile of adjusted low income for all Census Tracts in the nation, per the Climate and Economic Justice Screening Tool (CEJST). In addition, both Census Tracts are above the 90$^{th}$ percentile for expected population loss resulting from natural hazards each year, and Census Tract 40037020706 is above the 90$^{th}$ percentile for


*Map 2 Project Location*

projected risk to properties from wildfires.[12] Creek County overall is ranked at 77th percentile as experiencing transportation insecurity as defined by USDOT's Equitable Transportation Community Explorer (ETC), meaning residents, "are unable to get to where they need to get to meet the needs of their daily life regularly, reliably, and safely."[13] In the part of Pawnee County on the peninsula, transportation insecurity is higher at 85%. All residents of both Census Tracts living north of the at-grade crossing on Basin Rd. do not have a regular, reliable, nor safe transportation route to leave the peninsula.

# IX. Grade Crossing Information

Crossing 673651V crosses Basin Rd. in the Town of Mannford, OK, Creek County.

*Table 5 Grade Crossing Location*

| US DOT Grace Crossing Inventory # | Proposed Improvement | Rail Operator(s) | Railroad Owner | Latitude Coordinates (at least five decimal places of precision) | Longitude coordinates (at least five decimal places of precision) |
|---|---|---|---|---|---|
| 673651V | Grade Separated Crossing Plan | BNSF | BNSF | 36.13096 | -96.35570 |

# X. Safety Benefit

Like the Federal Railroad Administration, enhancing safety for all forms of transportation is ODOT's primary objective. The proposed project aligns with both ODOT's 2023-2030 Freight

[12] Explore the map - Climate & Economic Justice Screening Tool (geoplatform.gov)
[13] Transportation Insecurity | US Department of Transportation

Transportation Plan[14] and 2020-2045 Long Range Transportation Plan[15] safety goals. Both plans include the improvement of safety and efficiency of freight movement and its interaction with other vehicles and to ensure the ability of urban and rural highways to safely accommodate growth in freight traffic. These goals also fall under the National Freight goals listed under IIJA,[16] to improve safety, security, efficiency, and resilience in both the urban and rural environments. In addition, ODOT's Highway-Rail Grade Crossing State Action Plan's goal is to, "Achieve a significant reduction in traffic fatalities and serious injuries at all public highway-rail grade crossings in Oklahoma."[17] Data sets evaluated by ODOT include traffic volumes, number of trains per day, number of tracks, maximum railroad timetable speed, number of motor vehicle collisions at each crossing during the previous 5-year period, and roadway geometry. Rural Crossings, in particular, have been identified as one of the key areas of need.

ODOT also invests state funds into rail investment programs that increase safety at rail crossings and align with the goals of the above-mentioned plans. The programs include the Grade Crossing Safety Program that assists railroads with signal maintenance costs, the Primary Highway-Railroad Grade Crossing Surface Repair Program to assist with surface improvements at highway-rail crossings on the primary road system, and the Highway-Railroad Grade Crossing Surface Repair Program to assist cities, counties, and railroads with surface improvements at highway-rail crossings. These state funded programs show how serious railroad and railroad crossing safety is for ODOT.

FRA's Accident/Incident Report shows the last crash to occur at the Basin Rd. crossing was in 1997 and involved two passengers in a vehicle. [18] Fortunately, no one was injured. Even though there is not a regular history of crashes at crossing 673651V, this does not mean the crossing does not pose serious safety concerns in the future.

**Table 6** shows there has been a decreasing trend in total rail incidents in the State of Oklahoma from 2011 – 2020. This is due to the efforts the state has taken to focus on railroad crossing safety. The Project proposed in this application is being proactive by studying alternatives to an at-grade crossing before tragedy occurs. According to the Oklahoma Freight Transportation Plan, "Class I railroads are running longer trains, both for unit trains and merchandise freight,"[19] and the U.S. Government Accountability Office IGAO) raised concerns in 2019 that, "Freight trains have been getting longer- nearly 3 miles in some cases. This has raised concerns that trains may block traffic more often at road-crossings, impeding emergency responders and prompting unsafe pedestrian behavior (such as climbing through stopped trains)."[20] As previously mentioned, BNSF stated it isn't always possible for them to position the longer trains to prevent blocking Basin Rd. while using the side track. As delays for vehicles on Basin Rd. become longer, the greater the possibility

[14] 2023-2030 ODOT Freight Transportation Plan
[15] 2020-2045 Long Range Transportation Plan
[16] https://www.fhwa.dot.gov/bipartisan-infrastructure-law/nhfp.cfm. p. 4-23
[17] Oklahoma Highway-Rail Grade Crossing State Action Plan, ODOT, January 2022, p. 1
[18] fragis.fra.dot.gov/GISFRASafety/
[19] https://oklahoma.gov/content/dam/ok/en/odot/federal-grants/raise/2023/multimodal-connections-on-i-35-over-the-oklahoma-river/reports-and-technical-info/Oklahoma%20Freight%20Plan%202023-2030.pdf
[20] Rail Safety: Freight Trains Are Getting Longer, and Additional Information Is Needed to Assess Their Impact | U.S. GAO

an injury or death will occur due to increased frustration, and people believing they can "beat the train."

*Table 6 Total Rail Accidents and Incidents in Oklahoma (2011-2020), Oklahoma State Rail Plan, 2021*

| Rail Injury Type | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|
| Total Incidents | 168 | 176 | 186 | 131 | 143 | 147 | 157 | 162 | 141 | 124 |
| Deaths | 12 | 11 | 18 | 19 | 10 | 23 | 20 | 20 | 23 | 12 |
| Injuries | 85 | 77 | 80 | 78 | 76 | 71 | 76 | 73 | 54 | 72 |

*Source: FRA Office of Safety Analysis*

According to Synchro traffic modeling, the daily cumulative hourly delay for all vehicles at all train events each day is 256 hours. This assumes 15 trains/day (per BNSF) with a train blocking the tracks for 20 minutes (average time a train blocks the track), and a 27-minute queueing event to allow time for cars to dissipate. Anecdotal evidence from recent news reports shows the growing frustration by Mannford residence. A grade separated crossing would prevent human behavior from attempts to beat the train or other such dangerous actions.

# XI. Evaluation and Selection Criteria

## Project Readiness

The Project demonstrates strong project readiness to proceed as outlined in the NOFO under Section C(3)(a)(i) for planning of grade separation, and Section C(3)(c) for **Lifecycle Track 1-Planning**. The Systems Planning stage has been completed, and the Project for the subsequent stages has been identified. ODOT has the capacity and personnel to manage the Project and is able to begin the tasks listed in the budget in a timely manner as shown in the project schedule (**Table 3**).

DOT has a history of successfully completing projects using federal funds, and specifically FRA funds. Examples include the Kiamichi Tri-State Rail Project. This project replaces approximately 23 miles of rail and 15 turnouts, reinforces 31 bridges, resurfaces 17 curves, restores 13 miles of track, and upgrades nearly three dozen road crossings across four subdivisions and the SH-37 BNSF Grade Separation. Another project is the Multimodal Improvements: Moore, Oklahoma grant to facilitate grade separation. These projects were funded using both federal and state funds. ODOT follows the State of Oklahoma Competitive Bidding Act of 1974. This act refers to the regulations governing the procurement process for public contracts. ODOT oversees the construction of all projects build with state funds and ensures these projects meet applicable state and federal requirements. The Project will provide the basis for future National Environmental Policy Act (NEPA) documentation to be completed under Track 2. This would include evaluation of impacts to cultural resources, natural resources, and the human environment. Depending on the alternative selected, anticipated permits needed could include a Section 404 Clean Water Act permit from the US Army Corps of Engineers, a Floodplain Development permit from the Oklahoma Water Resources Board, and an Oklahoma General Construction Permit for Stormwater (OKR10) from the Oklahoma Department of Environmental Quality. It is understood that an agreement required under 49 USC 22905(c)(1) is mandatory to proceed with future Lifecycle

Stages under the RCE program. BNSF and ODOT have cooperatively worked on RFA projects together, and OCOT does not foresee any delays in obtaining the required agreement for future RCE Tracks.

Letters of support have been received from BNSF, U.S. Senator Lankford, State Representative Kyle Hilbert, Creek County Commissioners, Mannford Town Administrator, Mannford Chief of Police, Mannford Fire Department, Mannford Public Schools, and the Indian Nations Council of Governments (INCOG), the Metropolitan Planning Organization for the Tulsa region. **See Appendix A.** A letter of funding commitment from ODOT can be found in **Appendix B**.

## Technical Merit

ODOT believes the project budget and estimated project schedule are appropriate for the Project. Article 4, the Statement of Work, explains the steps and tasks for the planning project under Track 1 of the Lifecycle Stages. This includes acknowledgment that ODOT will prepare a Project Management Plan that will describe how the Project will be implemented and monitored to ensure effective, efficient, and safe delivery of the Project on time and within budget. Article 4 also includes a Purpose & Need Statement and Stakeholder Coordination Plan that will ultimately determine the final alternative for a separated grade railroad crossing. ODOT does not foresee any barriers that would likely prevent project delivery in any way.

Key Personnel who will effectively lead the Project to completion are Trapper Parks, PE and Jared Schwensen, PE of ODOT.

**Trapper Parks, PE** is the District 8 Engineer for the Oklahoma Department of Transportation (ODOT). He earned his bachelor's degree in civil engineering from Oklahoma State University in 2006 and was licensed as a Professional Engineer in 2010. As District Engineer, Mr. Parks manages transportation planning and operations in Craig, Creek, Delaware, Mayes, Nowata, Osage, Ottawa, Pawnee, Rogers, Tulsa, and Washington Counties in northeastern Oklahoma, including the Tulsa metro area. He began his career with ODOT in 2004 as a co-op student on the OSU Design Squad, hiring on full time in 2006 after graduation. In 2007 Trapper joined the Roadway Design Division and by 2010 had progressed into the position of Project Engineer. In 2011 Trapper made his way into the field as an Area Maintenance Engineer for District 8, and five years later was named the District's Maintenance Engineer where he has overseen maintenance for one of ODOT's most populous, diverse and challenging Districts. In this role, Trapper created transportation solutions for state owned roads and highways located in tribal reservations, USDOT designated HDC communities, and areas of persistent poverty.

**Jared Schwennesen, P.E.**, is the Multimodal Division Manager for the Oklahoma Department of Transportation. In 2009, Schwennesen began his tenure with ODOT as an Engineer in Training. Since then, he has held roles in the Bridge Division, Traffic Division, Maintenance in ITS and Fiber Optics, and Environmental Programs Division. His most recent position was serving as the assistant to the Director of Capital Programs. In 2007, Schwennesen earned his Bachelor of Science in Civil Engineering from the University of Oklahoma. In 2008, He went on to earn his Master of Science in Civil Engineering from OU and joined ODOT soon after. Additionally, he gained his professional engineering license in 2012. Having worked as a manager and designer in

a diverse group of ODOT divisions, Schwennesen leads the Multimodal Division as it seeks to improve Oklahoma's passenger and freight rail systems.

The proposed project aligns with both ODOT's 2023-2030 Freight Transportation Plan[21] and 2020-2045 Long Range Transportation Plan[22] safety goals. Both plans include the improvement of safety and efficiency of freight movement and its interaction with other vehicles and to ensure the ability of urban and rural highways to safely accommodate growth in freight traffic. In addition, ODOT's Highway-Rail Grade Crossing State Action Plan's goal is to, "Achieve a significant reduction in traffic fatalities and serious injuries at all public highway-rail grade crossings in Oklahoma."[23] Data sets that are evaluated in the Oklahoma Highway-Rail Grade Crossing State Action Plan include traffic volumes, number of trains per day, number of tracks, maximum railroad timetable speed, and roadway geometry. Rural Crossings, in particular, have been identified as one of the key areas of need.

The Project provides opportunities for the evaluation of innovative technologies, innovative design, and construction techniques, or construction materials that reduce greenhouse gas emissions.

The Project will not use financial support from BNSF for Track 1; however, once planning is complete, ODOT will work with BNSF to determine the best approach and begin to discuss potential private investment for Track 3, final design and construction.

In Track 1, the Project will look at the feasibility of improving the mobility of multiple modes of transportation, including users of nonvehicular modes and public transportation. Cimarron Transit is a rural transit provider for Creek County. When a train is blocking basin road, their dispatchers are burdened with adjusting schedules and managing unexpected delays, and their operations are significantly disrupted. In addition, they have drivers that live north of Basin Rd., and sometimes they can't get to work to operate the transit vehicles. A separated-grade crossing would improve the mobility of Cimarron Transit's riders, the majority of whom are elderly and disabled. ODOT will evaluate the feasibility of including a sidewalk for pedestrians and people with disabilities during the preliminary engineering process.

## Project Benefits

The project will consider alternatives for a grade separated crossing on a rail line owned by BNSF on Basin Rd. in the Town of Mannford, Creek County, OK. Basin Rd. is a two-lane rural major collector and is the only way in and out of a peninsula, surrounded by water with the Cimarron River on the west and Keystone Lake on the east. Residents and visitors to the lake have been stuck in their cars for over 45 minutes due to a train stopped on the side track **(Figure 6)** that blocks the road. If there is a medical emergency or the peninsula needs to be evacuated due to natural disasters, residents have no reliable evacuation route. This poses a huge safety risk for those stuck

[21] 2023-2030 ODOT Freight Transportation Plan
[22] 2020-2045 Long Range Transportation Plan
[23] Oklahoma Highway-Rail Grade Crossing State Action Plan, ODOT, January 2022, p. 1

*Figure 6 Side Track and BNSF Main Line, Mannford,*

on the north side of the crossing when it is blocked. The Project will address these issues by planning for a grade separated crossing that would eliminate train-induced delays and the potential for vehicle/train collisions.

The final product of the Track 1 Project is to complete preliminary engineering for a grade separated crossing to replace the existing at-grade crossing.

Having a grade separated crossing will improve the mobility of both people and goods efficiently from the peninsula to the Town of Mannford where destinations and essentials for everyday life are located such as the post office, schools, and grocery store. In addition, access to SH-51 will become more reliable, allowing people to get to work on time and arrive at their medical appointments. The closest major hospitals and the majority of jobs are located in Tulsa, approximately 25 miles to the east on SH-51. It is also common for school buses to be stuck by the train **(see Figure 3)**, causing children to be late for school. Traffic modeling using Synchro shows that vehicles, including freight also back up when the crossing is blocked. According to Synchro traffic modeling, the daily cumulative hourly delay for all vehicles at all train events each day is 256 hours. This assumes 15 trains/day (per BNSF) with a train blocking the tracks for 20 minutes (average time a train blocks the track), and a 27-minute queueing event to allow time for cars to dissipate. Cimarron Transit, the rural transit provider, "has experienced delays at the crossing on Basin Rd. due to trains blocking the only crossing…that affects not only residents on the north side but also our passengers and drivers in the surrounding areas. Drivers living on the north side are unable to reach their vehicles to start their shifts on time. This delay cascades throughout the entire day, causing further disruptions…" (S. Jewel, personal communication, September 11, 2024).

A benefit of a grade separated crossing is reduced motorized vehicle idling, which in turn, reduces greenhouse gas emissions and ground-level ozone. According to Synchro Traffic modeling software, traffic congestion caused by the blocking of the railroad crossing causes yearly emissions of 367 pounds of hydrocarbons (HC), 8,313 pounds of carbon monoxide emissions (CO), and 681 pounds of nitrogen oxides ($NO_2$) to be released into the atmosphere. These gases not only decrease air quality and contribute to the formation of ground-level ozone and smog but are also related to negative health impacts like asthma and other respiratory diseases.[24]

Ambulances have been stuck on the north side of Basin Rd., unable to transport people to a hospital for emergency medical treatment due to the train. Tragically, one family's experience of their loved

[24] Note: This assumes a 27-minute event that begins with a 20-minute train blocking the crossing. This allows time for the queue to dissipate. 27 minutes is the average time for the Basin Rd. crossing to be blocked.

one being stuck in an ambulance behind a train after having cardiac arrest cost him his life.[25] Recently, one woman was stuck on Basin Rd. for 45 minutes while in labor.[26] Per the Oklahoma Freight Transportation Plan, "Class I railroads are running longer trains, both for unit trains and merchandise freight." As previously stated it isn't always possible for BNSF to position the longer trains and prevent them from blocking Basin Rd. while they are waiting on the siding track. As trains get longer, delay times will become more frequent and increase, thus increasing the probability of emergency services being stuck on Basin Rd. and unable to get people the immediate medical attention they need. The ultimate goal of this Project is to implement a grade separated crossing. This will allow ambulances and others to more quickly reach a hospital.

In addition, natural disasters nationwide are more common. According to EPA's report *What Climate Change Means for Oklahoma*, droughts and floods may become more severe. When a flood event occurs, much of the peninsula is in a flood zone, and residents will need a reliable evacuation route. When a train is across the BNSF rail line, everyone is stuck on the peninsula, and even emergency services are not able to access half of Mannford nor a section of Pawnee County.


*Figure 7 Mannford is a destination for recreational visitors*

The Town of Mannford is bisected by the BNSF railroad and SH-51, there is a north and a south side of Mannford. Basin Rd. runs the length of the north side, which is a peninsula, and it is the only road in and the only road out. There is a traffic light at the intersection of SH-51 and Basin Rd., but just north of the intersection, there is the BNSF railroad at-grade crossing that is often blocked due to the side track that is at the same intersection. Essential amenities for daily life are on the south side of the railroad track such as the Mannford School District, the post office, grocery store, and access to SH-51 that connects the Town of Mannford to the Tulsa metropolitan area **(Map 3)**. A blocked railroad crossing severely delays residents north of the railroad crossing from reaching these destinations. Mannford's Chamber of Commerce hosts many community events and programming with the aim of engaging local businesses and community members. Many events revolve around Lake Keystone like the Lake Life Festival that includes a bass fishing tournament and a kid's fishing derby. The location of the lake events is on the north side of the at-grade crossing, and when a train blocks it for 45 minutes, the goal of creating an engaged community decreases because half of Mannford cannot get to the event.

[25] *Tulsa's News on 6.* Mannford Residents Frustrated by Ongoing Train Delays
[26] *2 News Oklahoma.* You're just at their mercy: Mannford train delays drivers


*Map 3 Essential Destinations south of the BNSF rail line*

When the only road off the peninsula is blocked by a train, residents of the Town of Mannford have lost wages because they arrived late for work.[27] The crossing isn't blocked just for a couple of minutes, it is common that it is blocked for close to 45 minutes. Also, a driver for Cimarron Transit, a rural transit provider, lives north of the crossing, and he is often late to work to pick up passengers, which means the driver drops passengers off late at essential destinations (S. Jewel, personal communication, September 11, 2024). As of today, there is no detour and people are forced to lose wages caused by stopped trains on the tracks. If a grade separated crossing were constructed, traffic would be able to cross the tracks with no delay.

The blocked crossing also causes delay to vehicles and freight on SH-51. Using the AADT volume of 4,600 vpd on Basin Rd., traffic modeling using Synchro shows typical weekday traffic volumes during AM and PM periods on Basin Road between SH-51 and the BNSF rail line backing up ½ mile and onto SH-51 with just a 20-minute delay. This increases to a mile when a train is stopped for 40 minutes and cause delays on SH-51 east and west bound because of the queuing and the fact that there is a stop light at this intersection. Vehicles stopped in the turn lanes on SH-51 means there is only one lane of thru traffic that can move in either direction.

The Project will comply with all ODOT policies and procedures related to equal opportunity employment. ODOT participates in a state comprehensive plan to promote equal opportunity, including removing barriers to hire and preventing harassment on work sites. ODOT requires contractors to comply with the Equal Employment Opportunity (EEO) Program requirements and create an inclusive environment. To further the initiative of inclusion and equity, ODOT set a 2023-2025 Triennial DBE goal of 16% and efforts to promote the program resulted in the FFY 2023

[27] *Tulsa's News on 6.* Mannford Residents Frustrated by Ongoing Train Delays

goal attainment of 17.33%. These efforts increased total dollars to DBEs almost 40% from 2022 to 2023, going above and beyond the federal requirement. Oklahoma's project-level goal setting is data-driven, utilizing current DBE certification information and historical DBE pay item performance to identify the project goal achievement possibility.

ODOT completes contractor compliance reviews on all projects to monitor the utilization of minorities and women on ODOT projects. Because this project will be using state funds, ODOT will let the project. Contractors must practice affirmative action in recruiting and hiring. Contractors must determine the availability of minority and women within their recruitment area to determine the degree to which action must be taken to seek minority and female recruits. Each contractor must appoint a responsible company official to serve as their EEO officer. Additionally, contractors must develop and post complaint procedures and promptly investigate all alleged complaints of discrimination within a reasonable timeframe.

## Key Administration Priorities

### Safety

Like the Federal Railroad Administration, enhancing safety for all forms of transportation is ODOT's primary objective. The proposed project aligns with both ODOT's 2023-2030 Freight Transportation Plan[28] and 2020-2045 Long Range Transportation Plan[29] safety goals. Both plans include the improvement of safety and efficiency of freight movement and its interaction with other vehicles and to ensure the ability of urban and rural highways to safely accommodate growth in freight traffic. These goals also fall under the National Freight goals listed under IIJA,[30] to improve safety, security, efficiency, and resilience in both the urban and rural environments. In addition, ODOT's Highway-Rail Grade Crossing State Action Plan's goal is to, "Achieve a significant reduction in traffic fatalities and serious injuries at all public highway-rail grade crossings in Oklahoma."[31] Data sets that are evaluated include AADT, number of trains per day, number of tracks, maximum railroad timetable speed, and roadway geometry. Rural Crossings in particular, have been identified as one of the key areas of need.

ODOT invests state funds into rail investment programs that increase safety at rail crossings and align with the goals of the above-mentioned plans. They include the Grade Crossing Safety Program that assists railroads with signal maintenance costs, Primary Highway-Railroad Grade Crossing Surface Repair Program to assist with surface improvements at highway-rail crossings on the primary road system, and the Highway-Railroad Grade Crossing Surface Repair Program to assist cities, counties, and railroads with surface improvements at highway-rail crossings. Both the plans and these programs shows the seriousness ODOT takes the safety or railroads and railroad crossings.

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[28] 2023-2030 ODOT Freight Transportation Plan
[29] 2020-2045 Long Range Transportation Plan
[30] https://www.fhwa.dot.gov/bipartisan-infrastructure-law/nhfp.cfm. p. 4-23
[31] Oklahoma Highway-Rail Grade Crossing State Action Plan, ODOT, January 2022, p. 1

FRA's Accident/Incident Report shows the last crash at the Basin Rd. crossing was in 1997 and involved two passengers in a vehicle. Fortunately, no one was injured.[32] This does not mean that the crossing does not pose serious safety concerns in the future. **Table 6** shows there has been a decreasing trend in total rail incidents in the State of Oklahoma from 2011 – 2020. This is due to the efforts the state has taken to focus on railroad crossing safety. The Project proposed in this application is being proactive by studying alternatives to close an at-grade crossing before human behavior, an area included under USDOT's safety policies, at Basin Rd. leads to death or injury. According to the Oklahoma Freight Transportation Plan, "Class I railroads are running longer trains, both for unit trains and merchandise freight." As previously stated it isn't always possible for BNSF to position the longer trains to not block Basin Rd. while they are waiting on the siding track. As delays for vehicles on Basin Rd. become longer, the greater the chance of a person experiencing an emergency, or out of frustration, believing they can "beat the train" will increase.

According to Synchro traffic modeling, the daily cumulative hourly delay for all vehicles at all train events each day is 256 hours. This assumes 15 trains/day (per BNSF) with a train blocking the tracks for 20 minutes (average time a train blocks the track), and a 27-minute queueing event to allow time for cars to dissipate. Anecdotal evidence from recent news reports shows the growing frustration by Mannford residence. A grade separated crossing would prevent human behavior from attempts to beat the train or other such dangerous actions.

## Climate Change and Sustainability

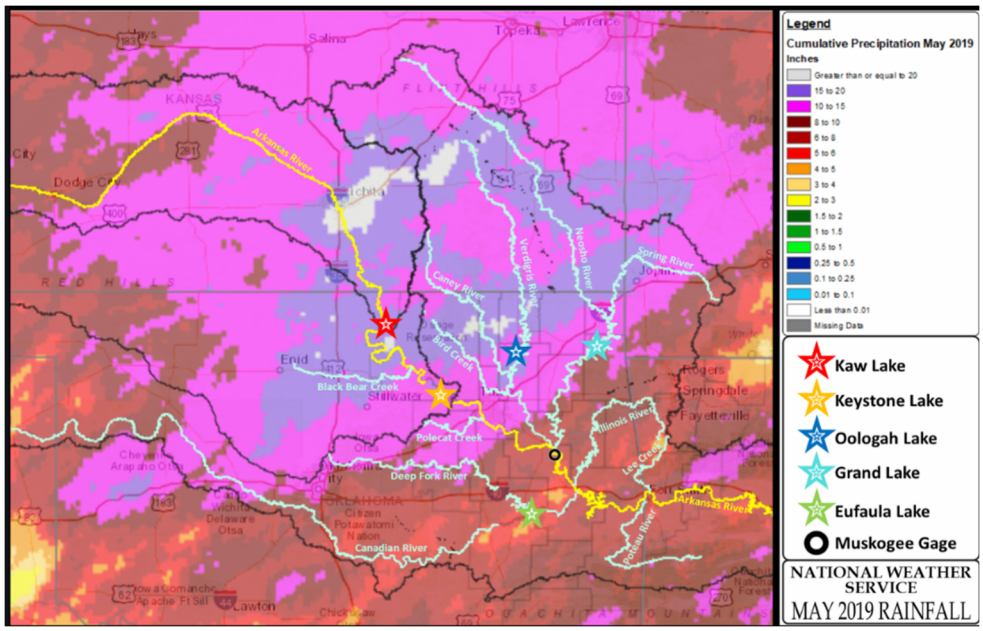
According to Synchro Traffic modeling software, traffic congestion caused by the blocking of the railroad crossing causes yearly emissions of 367 pounds of hydrocarbons (HC), 8,313 pounds of carbon monoxide emissions (CO), and 681 pounds of nitrogen oxides ($NO_2$) to be released into the atmosphere. These gases not only decrease air quality and contribute to the formation of ground-level ozone and smog but are also related to negative health impacts like asthma and other respiratory diseases.[33]

Resiliency planning when natural disasters occur on the peninsula and Lake Keystone is on the minds of ODOT and the Town of Mannford when identifying the Project. From May 7 – 8, 2019, a large thunderstorm moved across Kansas and Oklahoma, dumping between 2" – 8" across the upper Arkansas River basin. Most of the water flowed downstream to the Keystone reservoir. Heavy rains continued throughout May, totaling 10" – 20" in northern Oklahoma **(Map 4)** and southern Kansas, and on May 16th, the Keystone Dam was releasing ~100,000 cubic feet per second (cfs), which is more than an Olympic sized pool every second.[34] During the 2019 flood event, Acey Hatten, a property owner on Lake Keystone, upstream of the dam, saw his property

[32] fragis.fra.dot.gov/GISFRASafety/

[33] Note: This assumes a 27-minute event that begins with a 20-minute train blocking the crossing. This allows time for the queue to dissipate. 27 minutes is the average time for the Basin Rd. crossing to be blocked.

[34] https://storymaps.arcgis.com/stories/89670972e3544316aff03dd954940e20




*Map 4 National Weather Service, May 2019 Rainfall*

*Figure 8, 2019 Flood, Acey Hatten's property*

flooded, but thankfully, the water levels did not reach his house. The 2019 flood was not the first Mr. Hatten had seen his property flooded **(Figure 8)**.[35]

The probability of 100-year flood events is increasing. In October 1986, there was a record release of 300,000 cfs from Keystone Dam. According to EPA's report *What Climate Change Means for Oklahoma*, droughts and floods may become more severe. When a flood event occurs, much of the peninsula is in a flood zone, and residents will need a reliable evacuation route. USACE is currently conducting a Keystone Dam Safety Modification Study to determine potential risks associated with embankment overtopping or failure of the stilling basin during extreme flood events. The safety of life and risk management of upstream pool elevations, where the Town of Mannford is located, are being considered.[36]

In addition to flooding events, wildfires also pose a risk to the residents of Mannford. In August of 2012, evacuation orders by the Oklahoma Department of Emergency Management were issued because of wind gusts that could result in erratic fire behavior.[37] Natural events cannot be predicted, and it is critical reliable evacuation routes exist for residents and visitors to the lake.

[35] Hatten, Acey. (2024, March 14). Army Corps of Engineers looks to renovate Keystone Dam. *2 News Oklahoma*. https://www.kjrh.com/news/local-news/army-corps-of-engineers-looks-to-renovate-keystone-dam
[36] https://www.swt.usace.army.mil/Portals/41/Keystone%20DSMS_Meeting%20Posters_13MAR2024cm.pdf
[37] https://www.publicradiotulsa.org/local-regional/2012-08-04/evacuations-ordered-in-mannford-ahead-of-wildfire

This RCE Project is the first step towards a resilient grade separated solution for the safety of those on the peninsula and to decrease emissions from motorized vehicles.

## Equity and Justice 40

Railroad crossing 673651V, in Census Tract 40037020706 is identified as a Historically Disadvantaged Community and rural as well as Census Tract 40117957200 in Pawnee County that is included in the northern half of the peninsula. The Town of Mannford, when adjusting for low income, is above the nationwide 50th percentile at 62nd percentile of adjusted low income for all Census Tracts in the nation, per the Climate and Economic Justice Screening Tool (CEJST). In addition, both Census Tracts are above the 90th percentile for expected population loss resulting from natural hazards each year, and Census Tract 40037020706 is above the 90th percentile for projected risk to properties from wildfires.[38] As previously explained, there is no way off the peninsula other than Basin Rd., and if a train has stopped across the tracks, people cannot evacuate. Creek County overall is ranked at 77th percentile as experiencing transportation insecurity as defined by USDOT's Equitable Transportation Community Explorer (ETC), meaning residents, "are unable to get to where they need to get to meet the needs of their daily life regularly, reliably, and safely."[39] In the part of Pawnee County on the peninsula, transportation insecurity is higher at 85%. All residents of both Census Tracts living north of the at-grade crossing on Basin Rd. do not have a regular, reliable, nor safe transportation route to leave the peninsula.

According to the Justice40 Rail Explorer, the PM 2.5 (fine-particle air pollution) level at crossing 673651V is 9.81m this is above the EPA standards that were published in February 2024 of 9.0 micrograms per cubic meter to align with the latest scientific research.[40] Combustion and soot pollution is linked to serious illnesses as well as heart attacks. When motorized vehicles are idling for up to 45 minutes waiting for the train to clear the tracks, not only are they breathing in emissions from vehicles, but sitting there breathing in additional Particle Matters 2.5 from the train engines.

In addition, it is a common occurrence for residents to be late to work and children being late to school because the at-grade crossing is blocked. The week of September 2, 2024, Danita Estez was stopped by the train, twice for over 45 minutes that caused her to be late to her job and cost her $100 of income each time[41]. Losing income that families rely upon for basic needs is an economic hardship. In addition, children have been late to school when school buses are delayed by the train. **(See Figure 3.)** Kelly Spradlin, superintendent for Mannford Public Schools, states the school system operates five bus routes that utilize Basin Rd. Each bus transports approximately 50 students to school. (K. Spradlin, letter of support, 9/17/2024) Research shows attendance is an important factor in student achievement, and missing any school can lead to lower achievement in reading, math, and general knowledge.[42]

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[38] Explore the map - Climate & Economic Justice Screening Tool (geoplatform.gov)
[39] Transportation Insecurity | US Department of Transportation
[40] National Ambient Air Quality Standards (NAAQS) for PM | US EPA
[41] *Tulsa's News on 6*. Mannford Residents Frustrated by Ongoing Train Delays
[42] https://nces.ed.gov/pubs2009/attendancedata/chapter1a.asp#:~:text=A%20recent%20study%20looking%20at,3

Rural residents of the Town of Mannford and unincorporated Creek and Pawnee Counties will directly benefit from the Project. A grade separated crossing will alleviate the risk of climate and disaster risk because it will provide a reliable evacuation route. In addition, it will help with shift workers and service industry personnel who lose income when the train causes them to be late to work.

### Workforce Development, Job Quality, and Wealth Creation

The Project will comply with all ODOT policies and procedures related to equal opportunity employment. ODOT participates in a state comprehensive plan to promote equal opportunity, including removing barriers to hire and preventing harassment on work sites. ODOT requires contractors to comply with the Equal Employment Opportunity (EEO) Program requirements and create an inclusive environment. To further the initiative of inclusion and equity, ODOT set a 2023-2025 Triennial DBE goal of 16% and efforts to promote the program resulted in the FFY 2023 goal attainment of 17.33%. These efforts increased total dollars to DBEs almost 40% from 2022 to 2023, going above and beyond the federal requirement. Oklahoma's project-level goal setting is data-driven, utilizing current DBE certification information and historical DBE pay item performance to identify the project goal achievement possibility.

ODOT completes contractor compliance reviews on all projects to monitor the utilization of minorities and women on ODOT projects. Because this project will be using state funds, ODOT will let the project. Contractors must practice affirmative action in recruiting and hiring. Contractors must determine the availability of minority and women within their recruitment area to determine the degree to which action must be taken to seek minority and female recruits. Each contractor must appoint a responsible company official to serve as their EEO officer. Additionally, contractors must develop and post complaint procedures and promptly investigate all alleged complaints of discrimination within a reasonable timeframe.

## XII. Project Implementation and Management

ODOT will implement and manage the Project. Ten percent of the Project budget is for grant management. This includes project contracting, contract oversight, change-order management, risk management, and conformance with Federal requirements for progress reporting. DOT has a history of successfully completing projects using federal funds, and specifically FRA funds. Examples include the Kiamichi Tri-State Rail Project. This project replaces approximately 23 miles of rail and 15 turnouts, reinforces 31 bridges, resurfaces 17 curves, restores 13 miles of track, and upgrades nearly three dozen road crossings across four subdivisions and the SH-37 BNSF Grade Separation and Multimodal Improvements: Moore, Oklahoma grant to facilitate grade separation. These projects were funded using both federal and state funds. ODOT follows the State of Oklahoma Competitive Bidding Act of 1974. This act refers to the regulations governing the procurement process for public contracts. ODOT oversees the construction of all projects built with state funds and ensures these projects meet applicable state and federal requirements. For these two FRA grants and other USDOT grants, ODOT has submitted all quarterly progress and financial reports in a timely manner. In addition, ODOT has a history of submitting final reports

on or before the end of the period of performance. Under 2 CFR 200.206(b), ODOT is not a high-risk factor for managing federal funds.

Key Personnel who will effectively lead the Project to completion are Trapper Parks, PE and Jared Schwensen, PE of ODOT.

**Trapper Parks, PE** is the District 8 Engineer for the Oklahoma Department of Transportation (ODOT). He earned his bachelor's degree in civil engineering from Oklahoma State University in 2006 and was licensed as a Professional Engineer in 2010. As District Engineer, Mr. Parks manages transportation planning and operations in Craig, Creek, Delaware, Mayes, Nowata, Osage, Ottawa, Pawnee, Rogers, Tulsa, and Washington Counties in northeastern Oklahoma, including the Tulsa metro area. He began his career with ODOT in 2004 as a co-op student on the OSU Design Squad, hiring on full time in 2006 after graduation. In 2007 Trapper joined the Roadway Design Division and by 2010 had progressed into the position of Project Engineer. In 2011 Trapper made his way into the field as an Area Maintenance Engineer for District 8, and five years later was named the District's Maintenance Engineer where he has overseen maintenance for one of ODOT's most populous, diverse and challenging Districts. In this role, Trapper created transportation solutions for state owned roads and highways located in tribal reservations, USDOT designated HDC communities, and areas of persistent poverty.

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It is understood that an agreement required under 49 USC 22905(c)(1) is mandatory to proceed with future Lifecycle Stages under the RCE program. BNSF and ODOT have cooperatively worked on RFA projects together, and ODOT does not foresee any delays in obtaining the required agreement with future Tracks. The outcome of Track 1 will determine which grade separated option ODOT will move forward with to apply for Track 2. Track 2 is when discussions and specific details of construction, maintenance, and operations will be developed more fully.

The Project will comply with all ODOT policies and procedures related to equal opportunity employment. ODOT participates in a state comprehensive plan to promote equal opportunity, including removing barriers to hire and preventing harassment on work sites. ODOT requires contractors to comply with the Equal Employment Opportunity (EEO) Program requirements and create an inclusive environment. To further the initiative of inclusion and equity, ODOT set a 2023-2025 Triennial DBE goal of 16% and efforts to promote the program resulted in the FFY 2023 goal attainment of 17.33%. These efforts increased total dollars to DBEs almost 40% from

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