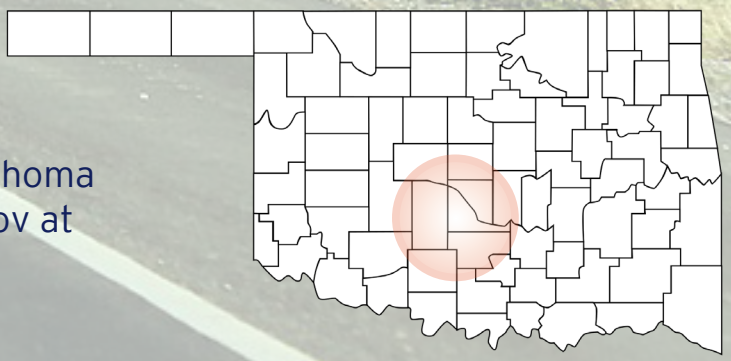
Grady County US-81 Realignment

INFRA Grant Application

Oklahoma Department of Transportation
March 2019
DUNS #: 8247000740000 | EIN #: 73-6017987



This application was submitted by the Oklahoma Department of Transportation to Grants.gov at http://www.grants.gov on March 1, 2019.

GRADY COUNTY US-81 REALIGNMENT	
Was an INFRA application for this project submitted previously?	Yes
If yes, what was the name of the project in the previous application?	US-81 Realignment
Previously Incurred Project Cost	$22,267,000
Future Eligible Project Cost	$254,980,000
Total Project Cost (This should be the sum of the previous two rows)	$277,247,000
INFRA Request	$123,188,000
Total Federal Funding (including INFRA)	$178,890,000
Are matching funds restricted to a specific project component? If so, which one?	OTA $ Yes US-81/I-44 Ramps
Is the project or a portion of the project currently located on National Highway Freight Network?	Pending
Is the project or a portion of the project located on the NHS?	Yes
• Does the project add capacity to the Interstate system?	No
• Is the project in a national scenic area?	No
Do the project components include a railway-highway grade crossing or grade separation project?	Yes
• If so, please include the grade crossing ID	595519H
Do the project components include an intermodal or freight rail project, or freight project within the boundaries of a public or private freight rail, water (including ports), or intermodal facility?	No
If answered yes to either of the two component questions above, how much of requested INFRA funds will be spent on each of these project components?	N/A
State(s) in which project is located	Oklahoma
Small or large project	Large
Urbanized Area in which project is located, if applicable	N/A
Population of Urbanized Area	N/A
Is the project currently programmed in the:	
• TIP	N/A
• STIP	Yes
• MPO Long Range Transportation Plan	N/A
• State Long Range Transportation Plan	Consistent
• State Freight Plan	Yes
If selected, would you be interested in participating in a new environmental review and permitting approach?	No

Table of Contents

All supplemental information for this application is provided on the ODOT US-81 INFRA Grant website, https://www.ok.gov/odot/Progress_and_Performance/Federal_Grant_Awards/INFRA_Grants/US_81_Realignment_HNTB.html. References within this application document are hyperlinked directly to the website, clicking on the highlighted reference will take readers directly to the site.

Project Summary

The Oklahoma Department of Transportation (ODOT) is seeking funding for a realignment of U.S. Highway 81 (US-81), a critical corridor to the state and local rural economy. By upgrading and realigning US-81 in Chickasha, Oklahoma to a four-lane divided, fully access controlled highway, transportation safety and freight flow along this National Highway System route will benefit from improved access and eliminated signal delays. Located immediately southwest of the Oklahoma City metropolitan area, the corridor is essential for the transportation of supplies, equipment, and products to support wind energy, oil and gas, military operations, and agricultural industries that sustain people and communities throughout the state and larger Midwest region. The US-81 corridor serves as a multi-national freight corridor linking Oklahoma to Canada, Mexico, and domestic markets.

Exhibit 1: Project Location Map

Upgrading and realigning US-81 in Chickasha, Oklahoma will *improve safety* and substantially *reduce travel times* in the corridor.

The project segment of US-81 follows a portion of the old Chisholm Trail, one of the nation's early freight transportation corridors. The realignment in Grady County will extend US-81 from the US-81 and State Highway 19 (SH-19) junction to the US-81 and U.S. Highway 62 (US-62) junction, realigning US-81 on the west side of the City of Chickasha. The four-lane existing route through downtown Chickasha includes more than a dozen signalized intersections and two 90-degree right-angle turns that are difficult for freight to maneuver. Current average speeds on this segment of US-81 through Chickasha are 30 mph, compared to the posted and average speeds of 70 mph north and south of Chickasha. This investment will transform this segment of the corridor into a seamless four-lane divided facility, matching the existing four-lane divided character of US-81 south of Chickasha.

ODOT has recognized the growing need to realign this segment of the corridor for decades and has invested in several efforts including traffic modeling, transportation planning, and a feasibility study which reaffirms the need to realign US-81. The 2007 US-81 Corridor Feasibility Study justified the need for a newly aligned route due to the difficulty in accommodating the increasing demand of trucks and other heavy vehicles.

The 2017 Access Justification Report (AJR) identified the US-81 Realignment as the preferred solution and provided justification for the new alignment and new interchange with the exiting US-81 route. The preferred alternative consists of an 8.5-mile alignment just west of Chickasha, Oklahoma. The new facility would provide access to adjacent rural and industrial corridors through four interchanges in addition to two new interchanges to connect the new corridor with existing facilities. In conjunction with the AJR, environmental clearance, and other planning efforts, an extensive public participation process was completed. The preferred alignment and associated interchange locations were selected with public and stakeholder input over the course of several public meetings. The goal in selecting the preferred alignment was to minimize social, environmental, and economic impacts while improving safety and traffic flow.

The complete 2017 AJR can be found in the **Reports and Technical Information** folder on the ODOT US-81 INFRA Grant website.

Project Description

This INFRA Grant application requests funding for realigning the section of US-81 that currently bisects Chickasha. The new corridor will have design speeds of 70 mph and provide full access control, with grade separated interchanges at intersecting corridors and rail crossings. The preliminary engineering for the project is complete and included in **Reports and Technical Information** folder on the ODOT US-81 INFRA Grant website.

Exhibit 2: US-81 Project at a Glance

Existing Route through Chickasha CBD	US-81 Realignment Project
7.6 Miles	8.5 Miles
4-Lane Undivided Facility (with Center Turn Lane)	Access Controlled 4-Lane Divided Facility
14 Signalized Intersections	6 Grade Separated Interchanges
2 90-DegreeTurns	2 Grade Separated Rail Crossings
30 mph Average	70 mph Average
14-Minute Average Travel Time	7.5-Minute Average Travel Time

The Grady County US-81 Realignment Project directly addresses all four identified INFRA Grant merit criteria. Below is an overview of the merit criteria, a more in-depth discussion of how this project meets all four Merit Criteria is found in the Merit Criteria Section starting on page ten.

Merit Criterion #1: Support for National or Regional Economic Vitality

The US-81 corridor is integral for connecting and linking freight movement throughout the country and internationally. US-81 is an important multi-national corridor linking several Midwest mega-regions to Canada and Mexico. The corridor intersects with I-44 in the project area, and I-40 further north in Oklahoma City, giving shippers international routes to seaport facilities, domestic markets, and customers around the world. This corridor is a lifeline for industries as well as companies operating super oversized loads, often restricted from operating on interstate highways, and use and rely on this route annually.

Merit Criterion #2: Leveraging Non-Federal Funding

The partnership and commitment from the Oklahoma Turnpike Authority (OTA) and ODOT demonstrate the importance of this project for Oklahoma. ODOT, in conjunction with OTA, is committing $98,357,000 in Non-Federal funding. $29,800,000 is committed by OTA and the remaining $68,557,000 is committed by ODOT. ODOT is requesting $123,188,000 from INFRA Grant funds; 44 percent of the total project cost.

Merit Criterion #3: Potential for Innovation

The US-81 Realignment offers potential innovation in several areas to better ensure that the project meets performance and accountability requirements. Focusing on better planning tools and processes that allow more accurate determinations of project requirements, materials, construction phasing and scheduling will allow for overall better grant funds management. To that end, the project will incorporate the use of: **Accelerated Bridge Construction,** particularly at the at-grade rail crossings, **offer incentives for early major milestone completions** and **innovative material QA/QC testing techniques**. Additionally, **Intelligent Transportation System (ITS)** improvements will be included to help manage safety and travel times. ODOT has also committed to implementing and maintaining applications to auto-capture and report safety related issues that could contribute to maintaining travel time along the corridor.

Merit Criterion #4: Performance and Accountability

The development of the US-81 Realignment Project is well advanced in all stages of work, with only minimal project risks identified and mitigation strategies have been put in place in preparation of construction beginning. ODOT will be held accountable to starting and finishing construction on time and within INFRA requirements. It is an ODOT priority to have this project shovel-ready in late 2020, well in advance of the statutory deadline (September 30, 2022 for FY 2019 funds). ODOT is committing to a travel time performance measure for operations of 35 percent, equating to a five-minute savings per trip. **ODOT is committed to transparency and quality performance in all projects and operations.**

Project Justification

Project planning and transportation modeling show that the existing US-81 infrastructure is inadequate for the high volumes of current and forecasted traffic.[1] Oklahoma ranks third nationally in wind energy production, fourth nationally in natural gas production, and fifth nationally in crude oil production. This project segment of the corridor handles a significant volume of oversized and overweight (OSOW) loads and superloads which supports the energy production occurring in the south-central region of the state.[2] The super oversized loads cause significant delays as they navigate the existing US-81 route through Chickasha, due to inadequate infrastructure able to handle large amounts of oversized vehicles. These loads cause traffic to be impacted in both directions and can create delays for up to 50 minutes at a time.

The recommended US-81 alignment provides trucks, OSOW freight, and passenger traffic a corridor that eliminates two 90-degree turns, improves mobility serving local businesses and downtown Chickasha, and eliminates an at-grade crossing at the Union Pacific Railroad line, which regularly delays traffic.

Super oversized load on US-81 at Choctaw Ave/US-62 in downtown Chickasha.

Project Benefits

The full project **Benefit Cost Analysis** narrative and spreadsheet model can be found in the **Reports and Technical Information** folder on the ODOT US-81 INFRA Grant website. Based on the project Benefit Cost Analysis, the US-81 Realignment project will result in substantial safety and travel improvements. The most significant enhancements are shown in Exhibit 3.

[1] Truck volumes reach as high as 25 percent on some sections of this corridor and the future "no-build" traffic modeling scenario forecasts total traffic volumes on the existing alignment to increase from 21,120 to 33,090 vehicles. The roadway capacity is inadequate for forecasted volumes and existing intersection geometry is inadequate for existing and future freight traffic.

[2] Over-sized and over-weight (OSOW) loads are trucks whose dimensions and/or weight limits exceed legal limits, and with some exceptions, cannot be split into multiple smaller loads. Superloads are vehicles 16 feet wide by 21 feet high and 18,000 pounds or more. Energy-related businesses in the area/region rely on this type of shipment (including wind energy components, drilling equipment, mining equipment, and agricultural equipment).

Exhibit 3: US-81 Project Benefits

General Project Benefits

- $200,459,640 in benefits when discounted at seven percent, with a benefit cost ratio of **1.01**
- Significantly reduced travel time through the corridor (14 minutes to 7.5 minutes)
- Expanded economic development opportunitites
- Reduced noise in downtown Chickasha

Safety Benefits

- Improved safety through the existing cooridor and reduced loss of life, injuries, and damages
- Avoided crashes totalling a benefit of $81.8M in savings when discounted

Faster Travel

- Improved travel times through the corridor for freight, commercial and residential users
- Significant volume of truck through traffic removed from downtown streets
- Faster emergency response times from reduced congestion and improved access

Funding Request

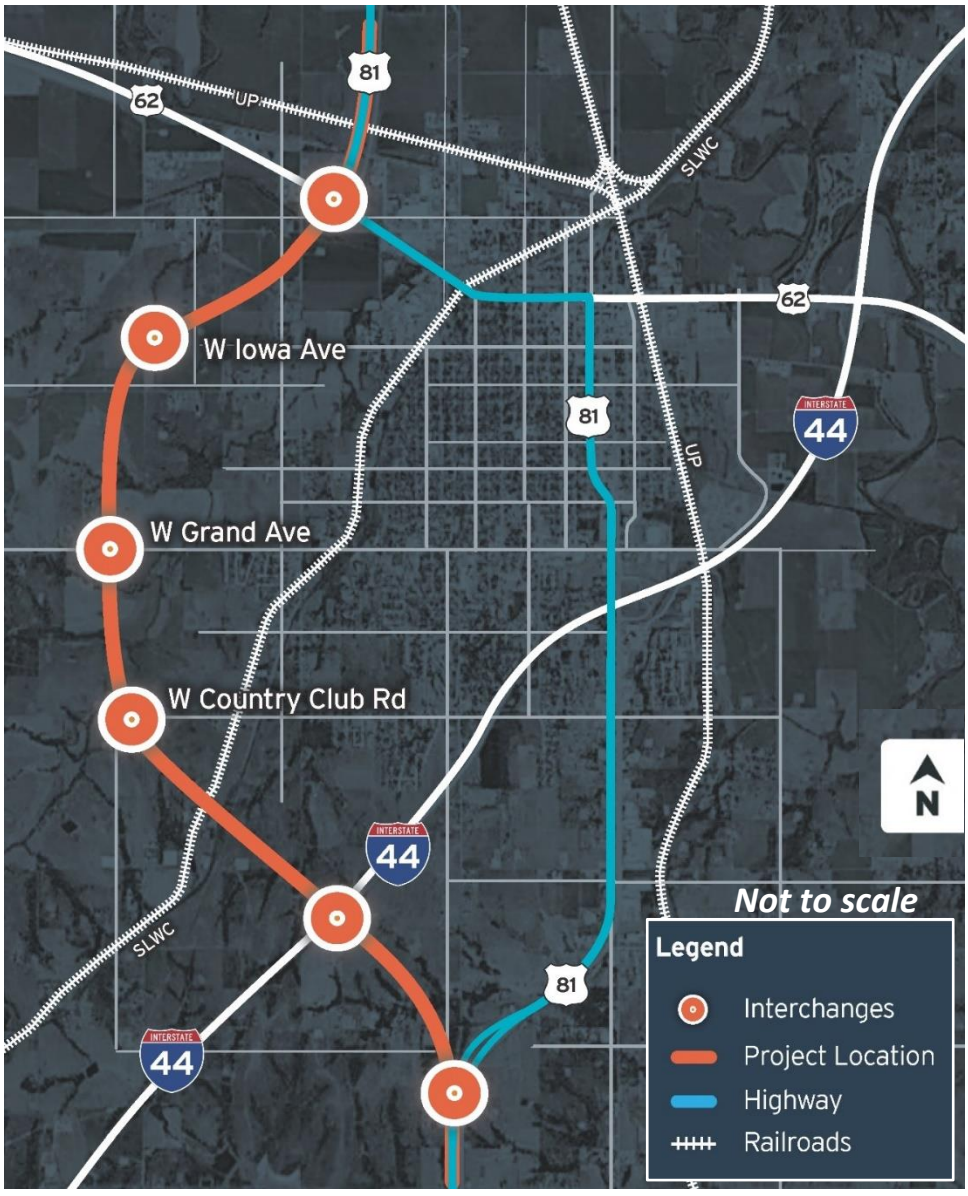
ODOT is requesting $123,188,000 in INFRA Grant funds; **44 percent of the total project cost.** ODOT and private partners have already invested $22,267,000 in previously incurred costs for preliminary project engineering, environmental studies, and relocation of the Oklahoma Turnpike Authority (OTA) toll booth at I-44, required to facilitate construction of this project. The OTA will contribute $29,800,000 which will be used for the construction of the access ramps at the new US-81 and I-44 turnpike interchange. This public/private partnership will maximize the dollars provided by OTA, which is not funded through any tax dollars. ODOT will contribute an additional $68,557,000 in Non-Federal Funds to the project. Funding sources are noted in detail in the **Grant Funds, Sources and Uses of all Project Funding** exhibit.

This project is a necessary enhancement to the existing transportation network and is currently included in ODOT's eight-year construction work plan. The project is slated to be let in FY 2021 and INFRA funds will allow the project to begin construction in 2020 and allow ODOT to complete construction by 2024. INFRA funds will ensure an expedited project construction and implementation schedule. **The US-81 Realignment Project is a top priority for ODOT as it will enhance the vitality of this region, ensure adequate access to nearby military facilities, and open further opportunities in this key energy and agriculture production corridor.**

Project Location

The project is located in a rural area south of Chickasha and begins where US-81 begins to curve east. The project then extends north approximately 8.5 miles about 1 mile north of the US-81/US-62 intersection. The northern limit is located at -97°57'53.4256" W, 35°03'36.7944" N and the southern limit is located at -97°57'09.0567" W, 34°58'44.5278' N. The existing and recommended project alignment is shown in Exhibit 4 and included in the **Maps and Graphics** folder on the ODOT US-81 INFRA Grant website.

Exhibit 4: Project Overview Map



Project Parties

ODOT is the project sponsor and is committed to improving conditions and safety on Oklahoma's transportation network. Several divisions within ODOT headquarters as well as Field Division 7 are responsible for coordinating the State's transportation planning efforts with project partners and municipalities.

OTA, a private partner, will provide $29.8 million in financial support for the project, which includes the specific infrastructure improvements at the I-44 interchange. The partnership between ODOT and OTA will maximize the benefits of ODOT and the United States Department of Transportation's (USDOT) dollars. ODOT and OTA have a history of successfully implementing several projects across the state and do not foresee any issues collaborating on this project.

ODOT works closely with many local municipalities, including the City of Chickasha. Once the new alignment of US-81 is fully constructed and open to traffic, the existing corridor through Chickasha will become part of the local road network with the maintenance and operation being transferred to Chickasha and Grady County.

Various entities in the region have shown their support for the project by providing letters of support. These partners include:

- OTA
- City of Chickasha
- Grady County
- Chickasha Economic Development Council
- University of Science and Arts
- Standley Systems
- Southwest Oklahoma Impact Coalition
- Chickasha First National Bank
- Southwest Oklahoma Regional Transportation Planning Organization

The OTA financial commitment and additional regional letters of support can be found in the **Letters of Support** folder on the ODOT US-81 INFRA Grant website.

Grant Funds, Sources and Uses of all Project Funding

Exhibit 5 includes the total project costs for the US-81 Realignment Project. Engineering costs include environmental clearance and design. General project contingency is based on ten-percent of total construction cost of the project. All obligated INFRA funding would be used for construction and construction contingency as shown in Exhibit 5. The exhibit provides a breakdown of sources and uses of funds for each project component. In total, ODOT requests $123,188,000 in INFRA funding; a total of 44 percent of project costs. In full, the project will include 35 percent non-federal funding and 65 percent federal funding.

Exhibit 5: Sources and Uses of Funds

	Engineering	Toll Structure	ROW & Utilities	Construction	Contingency	Total
Private Funds (OTA)						
Previously Incurred Cost		$17,000,000				$17,000,000
Future Cost				$12,800,000		$12,800,000
State Funds (ODOT)						
Previously Incurred Cost	$561,000					$561,000
Future Cost			$3,530,000	$57,435,000	$7,031,000	$67,996,000
Other Federal Funds						
Previously Incurred Cost	$4,706,000					$4,706,000
Future Cost			$14,250,000	$33,403,000	$3,343,000	$50,996,000
Grant Funds (INFRA)						
Previously Incurred Cost						$ -
Future Cost				$111,978,000	$11,210,000	$123,188,000

	Previously Incurred	Future Costs	Total	Percentage
Non-Federal Funds	$17,561,000	$80,796,000	$98,357,000	35.5%
Other Federal Funds	$4,706,000	$50,996,000	$55,702,000	20.1%
Grant Funds	$ -	$123,188,000	$123,188,000	44.4%
Total Project Costs	$22,267,000	$254,980,000	$277,247,000	100%

The OTA commitment of $29.8 million is included in the Non-Federal Future Eligible Costs for this project. A letter documenting this funding commitment is included in the **Letters of Support** folder on the ODOT US-81 INFRA Grant website. These funds are to be used for the construction of the ramps for the new interchange of the new US-81 alignment and I-44. ODOT will ensure any necessary documentation required by OTA regarding the construction, inspection, and completion of the ramps is provided to OTA. ODOT and OTA have partnered successfully on several highway and bridge projects in the past and their close coordination will continue on this project.

ODOT's **Certification Statement** regarding availability and commitment of funds is included in the **Certifications and Assurances** folder on the ODOT US-81 INFRA Grant website.

Merit Criteria

Criterion #1: Support for National or Regional Economic Vitality

US-81 is an important multi-national corridor linking the Texas Triangle, Central Plains, and Midwest mega-regions to the Canadian and Mexican border crossings. The corridor intersects with I-44 in the project area and I-40 further north in Oklahoma City, giving shippers international north-south and coast-to-coast east-west access to reach seaport facilities, domestic markets, and customers around the world. These connections are crucial to national and regional economic vitality. This project will improve travel time and reliability for regional and national businesses by reducing costs, improving time-to-market, and providing a safer network for all users.

The US-81 corridor is invaluable to major producers of wind energy, oil and gas, and large-scale agricultural production. The corridor currently provides significant contributions to the economic vitality of the region and the entire state, which would only be enhanced by providing the new alignment of the corridor. These industries are particularly important to this region as the oil and gas sector employs almost 20 percent of the state's workforce. [3] This corridor is a lifeline for these industries and an estimated 625 super oversized loads that use and rely on this route annually, which are often restricted from operating on interstate highways.[4]

Exhibit 6: Project Overview Map

[3] Steven C. Agee Economic Research and Policy Institute, Oklahoma City University Year
[4] Based on analysis from ODOT Division 7, City of Chickasha, and Chickasha Police Department Year

Benefit Cost Analysis

Following the USDOT's guidance for a Benefit-Cost Analysis (BCA), the US-81 Realignment Project generates a benefit-cost ratio (BCR) of 1.01. This ratio demonstrates that the generated monetized benefits exceed the project cost. The BCA quantifies several project costs and benefits as summarized in this section. An **Executive Summary Table** of the BCA, the full BCA narrative and spreadsheet model, and the **BCA Executive Summary** can be found in the **Reports and Technical Information** folder on the ODOT US-81 INFRA Grant website.

The BCA developed for this INFRA Grant application was evaluated in terms of the following characteristics:

- **Costs** – pre-construction, construction, and annual maintenance costs
- **Economic competitiveness** – time savings and vehicle operating cost savings
- **Safety** – avoided crashes, injuries, property damage, and fatalities
- **Quality of life improvements**

The table and information below present the results of the BCA, expressed in terms of net present value (NPV) and BCR, using a discount rate of 7 percent.

Exhibit 7: BCA Summary

Project	US-81 Realignment Project
Total Capital Costs (2017 Dollars)	$277,247,000
Total Project Costs (7% Discounted) (2017 Dollars)	$200,459,640
Total Net Benefit (7% Discounted) (2017 Dollars)	$203,211,104
Benefit Cost Ratio (7% Discounted)	**1.01**

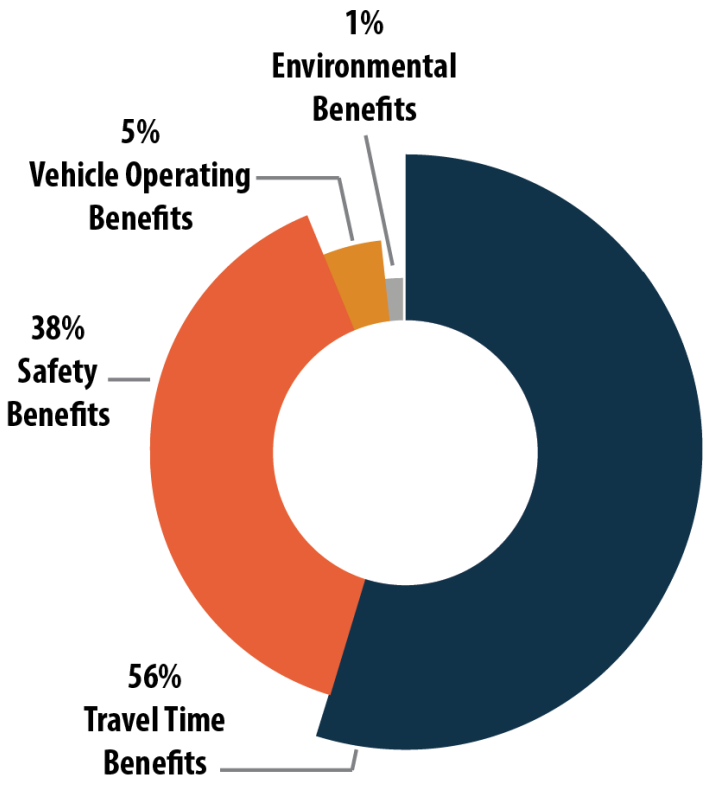
US-81 Realignment Project Costs

- **Total Project Capital Cost: $277,247,000 (2017$)**
  Total project cost includes engineering, right-of-way (ROW), utilities, construction and contingency categories. The project has previously incurred $17,561,000 in eligible project costs.
- **Operations and Maintenance Costs: $35,290,710**
  Constructing a new facility will require on-going operations and maintenance costs to ensure a state of good repair on the new US-81 alignment. Over the course of the project life-cycle (30 years), the project will incur $35,290,710 in maintenance.

US-81 Realignment Project Benefits

- **Total Project Benefits: $203,211,104**
  When discounted at seven percent, the US-81 Realignment Project will provide $203,211,104 in total project benefits discounted at seven percent. Travel time savings produces the largest quantifiable benefit of the US-81 Realignment Project.
- **Economic Competitiveness Benefits: $123,855,846**
  Travel time reductions will result in a benefit of $114,231,298 (discounted at seven percent). The US-81 Realignment Project will also produce vehicle operating cost savings that total $9,624,547 in benefits (discounted at seven percent).
- **Safety Benefits: $76,591,766**
  Cost of crashes, fatalities, and injuries avoided with project benefits totaling $81,899,333 (discounted at seven percent).
- **Environmental Benefits: $2,773,493**
  The project will result in environmental and air quality benefits from reduced pollutants, totaling $2,773,493 (discounted at seven percent).
- **Quality of Life Improvements**
  In addition to the project benefits quantified in the BCA, the US-81 Realignment Project also provides several qualitative benefits. As noted, the project will improve travel time through the US-81 corridor and improve access for local residents. The project will result in significant time savings through the corridor for residents by removing superloads routed through downtown Chickasha. Finally, the area and region will benefit greatly from expanded economic development opportunities provided by the realignment and new interchanges.

Exhibit 8: Summary of Project Benefits



Criterion #2: Leveraging of Federal Funding

Maximizing Non-Federal Funds

ODOT, in conjunction with OTA, is committing $98,357,000 in Non-Federal funding to this project as well as $55,702,000 in ODOT federal formula funds. **ODOT is requesting $123,188,000 in INFRA Grant funds, 44 percent of the total project cost.** The significant leverage contribution from the State of Oklahoma shows the importance of this project, both to the region and to the state. Oklahoma is primarily a rural state with many financial demands, which are particularly acute after the recent downturn in the oil and gas industry. However, because of the importance of this project to the regional and state economy, freight movements, and the safety of those driving this highway, ODOT is prepared to make this significant funding obligation and investment in the corridor.

The OTA receives no tax money to operate its turnpikes. As such, the investment by OTA will not include any taxpayer dollars. In 1992, legislation made available additional motor fuel excise taxes, if necessary, for payment of OTA debt service requirements on OTA's bonds. Since that legislation was enacted in July 1992, OTA has received and immediately remised 100 percent of those funds to ODOT.[5] [6]

OTA is a primary project partner with a $29.8M commitment to the US-81 Realignment

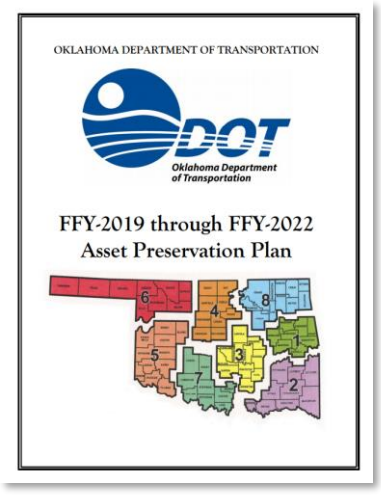
OTA's contribution allows ODOT to reach a total of $98.4M in non-federal funding (56%).

OKLAHOMA TURNPIKE AUTHORITY

US-81 is a high transportation priority. ODOT and OTA are willing to invest in the US-81 Realignment Project absent of local municipal or county funding. Chickasha and Grady County are small rural communities with limited financial resources and do not have the funds necessary to contribute to the project.

Addressing Life Cycle Costs

ODOT maintains a detailed Asset Preservation Plan for existing infrastructure and future transportation improvements within each county. These plans begin with ODOT's Field Division Engineer building on a condition assessment of the highway network based upon their knowledge of the transportation needs and priorities in each division.



ODOT's pavement maintenance schedule for existing US-81 includes pavement preservation projects every seven years and rehabilitation/reconstruction project once between 2017 and 2055 on the existing US-81 corridor. The estimated maintenance costs on this corridor, including annual general maintenance, would be $49 million through 2055.

[5] See OTA website: https://www.pikepass.com/pdf/OTA%20Adopted%20Budget%202019.pdf page 20.
[6] http://www.oscn.net/applications/oscn/DeliverDocument.asp?CiteID=89525

ODOT will maintain the existing corridor through Chickasha until the realignment project is completed. At that time, the existing segment of the corridor will be decommissioned and transferred to Chickasha and Grady County through a formal highway removal process.

The new corridor alignment will be maintained in accordance with ODOT's maintenance schedule outlined previously. ODOT has estimated the maintenance and operating costs for the realigned corridor using recent maintenance and operating cost analysis of other similar new corridors. Based on ODOT's regular pavement maintenance, rehabilitation/reconstruction projects, and annual general maintenance, the estimated maintenance cost for the new alignment will be $35 million through 2055, equating to a decrease in $14 million in maintenance costs.

Efforts to Secure Private Funding

ODOT has evaluated options for raising private funds for any portion of this project and plans to continue to identify and pursue potential options. Due to the rural nature of this area, value capture strategies that might generate funds typically in urban project locations are not an option.

Criterion #3: Potential for Innovation

The US-81 Realignment Project includes several innovative components and techniques to improve performance and implementation including ITS components and dynamic messaging signs to help manage traffic with travel time information and statewide alerts by implementing and maintaining applications to auto-capture and report safety. Portable dynamic messaging will be used during construction to alert drivers of potential delays. The **US-81 Realignment Project will employ additional innovative strategies to improve project delivery**. Strategies employed will include:

- **Accelerated Bridge Construction (ABC)** – ODOT will encourage the use of ABC techniques, particularly at the rail crossings and US-81 North- and South- most interchanges on the realignment. ABC is a paradigm shift in the project planning and procurement approach to minimize mobility impacts which commonly occur due to on-site construction activities. ODOT will encourage ABC innovative planning, design, materials, and construction methods to improve site constructability, project delivery timeline, and work-zone safety. ODOT also anticipates reduced traffic impacts, on-site construction time and weather-related time delays due to ABC. On-site construction time and mobility impact time (period that traffic flow is reduced due to on-site construction activities) are two performance measures that can be used to gauge the effectiveness of ABC.

- **Incentives and Disincentives** – ODOT will offer incentives for early completion of each major project milestone and implement disincentives for project delay. This will further ensure that the US-81 Realignment Project is implemented on-time and within INFRA schedule requirements. In addition to schedule incentives, ODOT will also offer a cost incentive for enhanced pavement smoothness as a measure of quality construction.

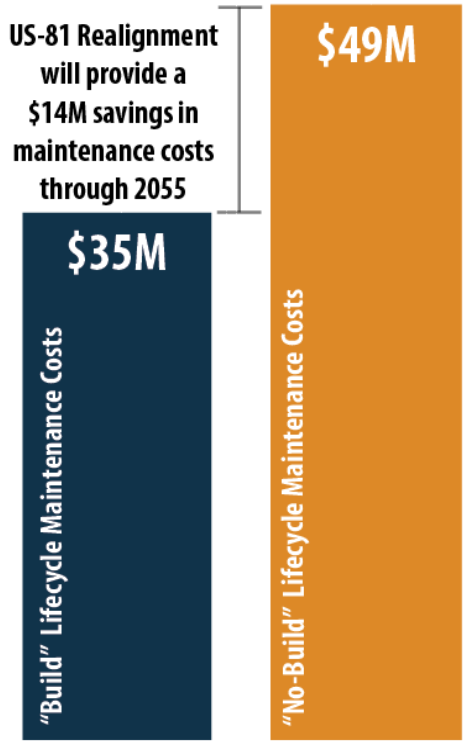
- **Innovative QC/QA Testing Techniques** – ODOT will use innovative techniques such as use of concrete maturity meters and soil settlement plates to help expedite the construction process.

Criterion #4: Performance and Accountability

With additional funding from the INFRA grant to leverage state and private investment, ODOT anticipates ROW acquisition and utility relocation will be complete by the end of 2019 with final design anticipated to be complete in 2020. It is an ODOT priority to have this project shovel-ready in late 2020, in advance of the statutory deadline (September 30, 2022 for FY 2019 funds). ODOT will ensure that any unexpected delays will not put the funds at risk of expiring before they are obligated.

Project Lifecycle Costs

ODOT has assessed the project's lifecycle costs, estimated at $35 million through 2055. ODOT and its partners anticipate being able to fully address the lifecycle costs of the realignment project. Additionally, municipal partners are aware of the lifecycle costs on the existing alignment and Chickasha and Grady County are accounting for the maintenance costs in future planning. Street maintenance in the City of Chickasha and Grady County is funded through the general fund.



The US-81 Realignment Project is included in ODOT's Eight Year Construction Work Plan (2019 – 2026). Included in the plan are strategies to ensure success in implementation including detailed schedules, key project components, and detailed budgets which allow ODOT to closely monitor projects. Following construction of the project, the new alignment of US-81 will be included in ODOT's Transportation Asset Management (TAM) system. ODOT's TAM system is built on quality information inputs and disciplined analysis which establishes a basis for optimizing expenditures to sustain and improve ODOT's transportation system in an efficient manner.

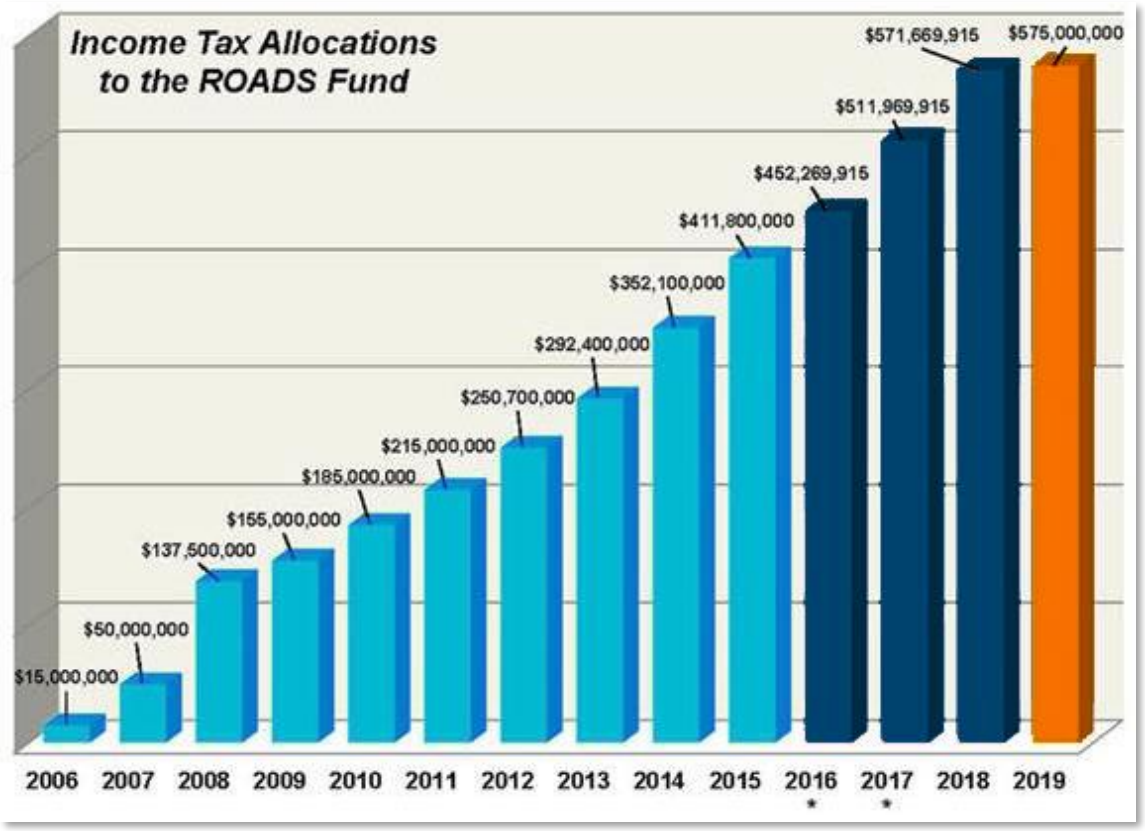
ODOT is funded by both state and federal dollars. In 2005, House Bill 1078 passed creating the Rebuilding Oklahoma Access and Driver Safety (ROADS) fund that permanently dedicated state income tax dollars to help supplement the minimal state dollars invested over the previous decades. Oklahoma, like many states, faced budget shortfalls from 2010-2017, resulting in nearly $800 million in cumulative budget cuts to the transportation system during that period. The Oklahoma Legislature has recognized that cutting transportation funding was not an option and implemented the following countermeasures to partially offset this temporary budget impact:

- In 2016, ODOT was authorized to sell $200 million in bonds to partially offset the budget shortfalls that impacted the transportation budget that year.

- In 2018, for the first time in over 30 years, state lawmakers united to pass a required super-majority (75 percent house and senate) tax increase to boost state revenue that included state motor fuel tax (3 cents on diesel and 6 cents on gasoline). While this revenue was not additive to the ROADS fund allocation, this transportation industry generated revenue was committed 100 percent to ODOT to help ensure that future budget shortfalls would not impact ODOT funding as occurred in 2016 and 2017.

Oklahoma increased dedicated transportation funding by $163 million in annual state commitment from 2015 to 2018, representing a 40 percent increase to the state's ROADS fund. However, as illustrated in Figure 9, the commitment since 2006 has built a new annual state commitment of $575 million in transportation funding. That represents an estimated $3.6 billion in non-federal revenue commitment during this period.

Exhibit 9: ODOT Tax Allocations



Accountability Measures

The project partners are focused on accountability in project delivery and performance, and ODOT is committed to transparency and quality performance in all projects and operations.

If ODOT is awarded INFRA Grant funding, in order to ensure the project achieves the optimal public benefits and meets or exceeds project schedule and performance accountability measures, ODOT will provide schedule incentives for early completion and monitor quality throughout construction. One additional measure that will be used to ensure quality construction is a measure of pavement smoothness. ODOT will offer an incentive for enhanced pavement smoothness.

Schedule

To ensure that the US-81 Realignment Project meets project milestones for obligation of funds and project completion, ODOT will structure the project contract to **encourage the use of Accelerated Bridge Construction (ABC) techniques** (particularly at the US-81 South and North interchanges and at rail crossings). ODOT will also employ **incentives for early completion** of each major milestone and **disincentives for delay**. ODOT also plans to employ **innovative material QC/QA testing techniques** such as use of concrete maturity meters and soil settlement plates to help expedite the construction process.

Further, ODOT will organize a **US-81 Project Performance Team** comprised of the persons from the design firm, the field division, and local city/county officials who will attend project status meetings and be able to provide the construction team with accelerated answers to the contractor's requests for information. Prior to award of the construction contract, ODOT will organize a **dispute resolution team** which will provide accelerated resolution to disputes based on a project specific dispute resolution matrix.

Performance

The US-81 Realignment Project will produce several quantifiable benefits including substantial travel time savings through the corridor. A third-party consultant analysis showed that the travel time through the corridor is 14 minutes in existing conditions. This travel time was developed based on field inventory and validated by typical travel times via Google. This travel time is a conservative estimate and does not include further potential delays at the rail crossing or from superloads on the corridor. Project design and analysis shows that the US-81 Realignment Project may reduce travel times in the corridor by as much as 46 percent. **ODOT is comfortable committing to a project performance measure of a travel time savings of 35 percent, equating to a five-minute savings per trip**. ODOT will measure this savings six months after opening to the public, in July 2025 (still within the statutory federal deadline of September 30, 2025 for all funds to be expended).

ODOT commits to a 35% reduction in travel times (equating to 5-minute savings per trip)

Project Readiness

ODOT and project partners have already made significant investments to position the project to proceed as quickly as possible once funding is available. The project's **Environmental Assessment** has been prepared and submitted; and a **Finding of No Significant Impact (FONSI)** has been issued. ODOT has completed preliminary engineering plans and OTA has relocated a toll booth structure on I-44 in 2017 in preparation for project construction. Engineering plans (65% drawings) and the project's FONSI are included in the Reports and Technical Information folder on the ODOT US-81 INFRA Grant website.

Technical Feasibility

ODOT has extensive experience designing and constructing projects similar in complexity and scale to the one proposed in this application. The technical feasibility of this project is evidenced by the conceptual preliminary design plans that were 65 percent complete as of October 10, 2017. The preliminary plans are being designed in accordance with FHWA and AASHTO standards. The cost estimates for this project were developed based on estimated quantities and similar projects constructed in the State of Oklahoma. The construction schedule (CPM) and preliminary project plans can be found in the Reports and Technical Information folder on the ODOT US-81 INFRA Grant website.

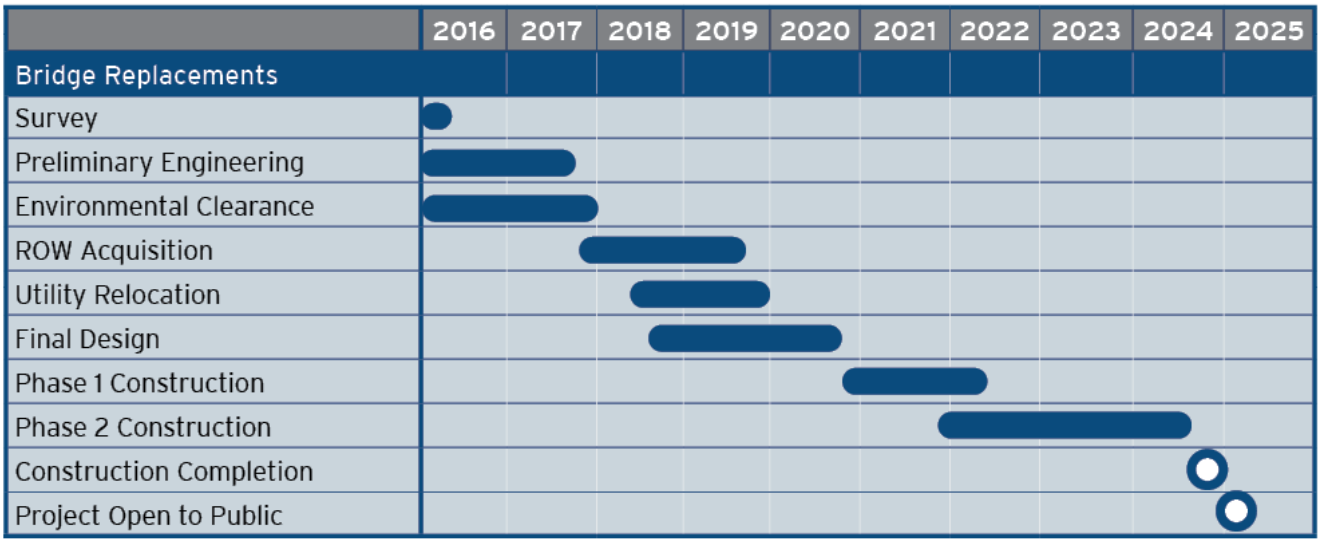
Project Schedule

A detailed project schedule that includes all major project milestones has been prepared anticipating INFRA Grant funding. The project schedule shown on the following page and can also be found in the Application folder on the ODOT US-81 INFRA Grant website. A summary of the schedule includes:

- State and local planning approvals:
  - The project is consistent with the 2015-2040 Oklahoma Long Range Transportation Plan (LRTP).
  - The State Transportation Improvement Program is a financially constrained document and will be amended as the project progresses.
  - With an accepted INFRA award, ODOT will expedite the project as funding is made available.
- The project is included in the current Oklahoma Freight Transportation Plan (2019 – 2026).
- Environmental study, NEPA documentation, and other environmental reviews and approvals are complete with an Environmental Assessment signed on February 3, 2017. ODOT coordinated with the Federal Aviation Administration (FAA) and the U.S. Army Corps of Engineers on permitting issues and the project received all environmental clearances in early 2018.
- Project design was 70 percent complete as of February 2019, with final design to be completed by March 2020.
- Right-of-way acquisition began at the end 2017 and will be completed in mid-2019.
- Utility relocation began in 2018 and will be completed by the end of September 2019.
- Procurement and obligations of INFRA funds will be completed by September 30, 2022.
- Construction completion by the end of 2024.

The project schedule that follows will obligate INFRA Grant funds by December 2019 in advance of the statutory deadline. Construction on the project will begin in 2020 and will be completed by the end of 2024 in advance of INFRA requirements. All right-of-way acquisition will be completed in accordance with 49 CFR part 24 and other applicable federal regulations and will be concluded by August 2019.

Project Schedule and Milestones



Required Approvals

The Environmental Assessment, early coordination with other state and local plans, and commitments to amend the necessary planning documents to advance the realignment project if INFRA funds are awarded puts this project ahead of schedule to meet the INFRA Grant award obligation dates.

Environmental Permits and Reviews

ODOT reasonably expects all environmental approvals and permits necessary for the project to proceed on the timeline specified in the project schedule. The schedule will meet the statutory obligation deadline, including satisfaction of all Federal, state and local requirements. **The US-81 Realignment Project's Environmental Assessment (EA) and Finding of No Significant Impact (FONSI) was signed February 3, 2017.**

Reviews, Approvals and Permits by Other Agencies

The Environmental Assessment identifies coordination with Federal Aviation Administration (FAA) may be required via FAA Form 7460-1 prior to construction. The Chickasha Municipal Airport is roughly two miles north of the planned realignment. The proposed construction activities will be evaluated regarding the linear extent and volume of potential disturbance to any jurisdictional waters and wetlands to comply with the appropriate Clean Water Act Section 404 permit application made when design plans are finalized.

USDOT Modal Administration Discussions

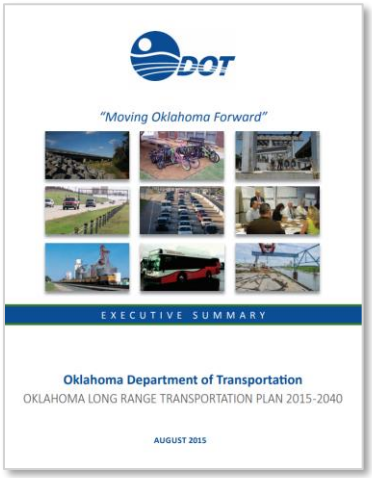
FHWA was involved with the development of the US-81 Realignment Environmental Assessment and the document was approved by FHWA signature on February 3, 2017.

Public Engagement

During the development of the Environmental Assessment, ODOT and their team held three separate public meetings to obtain input and feedback regarding the realignment. Each public participation event was well publicized and included a meeting with stakeholders representing local residents, businesses, and public organizations, followed by a meeting with the general public.

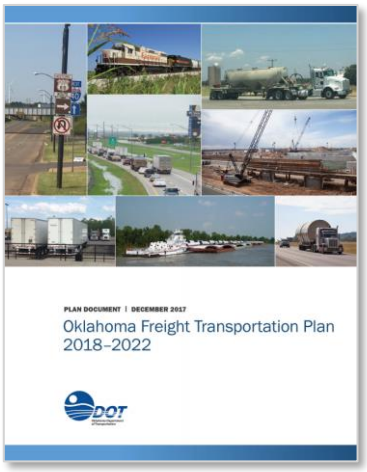
Chapter 5 of the **Environmental Assessment** describes the details of the public engagement process and comments can be found in the **Reports and Technical** Information folder on the ODOT US-81 INFRA Grant website. ODOT will continue to meet with regional partners and stakeholders throughout the design and construction process for this project. In addition, ODOT will establish a project advisory committee and coordinate with emergency services, public works staff, and area businesses, as well as Chambers of Commerce to allow businesses and residents to stay informed about project progress.

State and Local Approvals



The 2015 – 2040 Oklahoma Long Range Transportation Plan, adopted in August 2015 is a policy document. The project to construct the US-81 realignment to a full access-controlled facility addresses two policies in the LRTP:

- Highway Bridge Policy #3 – Reduce fatalities and serious injuries on Oklahoma highways through appropriate engineering solutions, and
- Highway Bridge Policy #5 – Provide for a safe, efficient and effective National Highway System to improve commercial motor vehicle mobility and connectivity.



ODOT has met with the City of Chickasha and Grady County and the project is supported by these entities and is consistent with local plans and economic development efforts. Based on National Performance Management Research Data Set (NPMRDS), the Oklahoma Freight Transportation Plan: 2018 - 2022 identified US-81 through Chickasha as a top 5 percent freight bottleneck in Oklahoma.

Operational analysis of the proposed realignment shows collisions can be reduced and safety increased through implementation of this project. The project will allow for improved through freight and passenger vehicle traffic, and at the same time enhance the community environment and provide safe and reliable travel options for local residents and businesses.

Federal Transportation Requirements

Currently the right-of-way acquisition and utility projects are in the Statewide Transportation Improvement Program (STIP). ODOT commits to amend the STIP and any other applicable local planning documents in the event the US-81 Realignment Project is awarded INFRA funding.

Assessment of Project Risks

ODOT staff has discussed the project concept with the Oklahoma Division of FHWA and project communication and coordination will continue. To date, no risks have been identified by FHWA staff. ODOT staff have carefully assessed the potential project risks and mitigation strategies. Risks considered are as follows:

- **Inability to secure ROW section(s).** This might include residential relocation or commercial impacts, etc. However, given the location of the necessary ROW acquisition, ODOT does not anticipate such conflicts. All right-of-way will be acquired in accordance with 49 CFR part 24, 23 CFR part 710 and other applicable legal requirements. To mitigate this, ODOT will begin communication with property owners early in the process. Also, ODOT will provide opportunities to meet and discuss concerns and questions with affected property owners and officials familiar with the local area and the project.
- **Inability to obtain permitting approval.** This project requires FAA approval and USACE permitting to begin construction. ODOT does not anticipate either of these approvals will have issues or delays. Mitigation would include early and clear communications with FAA and USACE.
- **Weather related construction delays are possible and difficult to mitigate.** Mitigation would include detailed project scheduling and clear communications and documentation regarding rain days, careful management of project schedule, and early and frequent communication with project contractors before schedule becomes an issue.

Large Project Requirements

Based on the future eligible project costs of $254,980,000 (total project capital costs remaining), the US-81 Realignment Project exceeds the minimum total project cost categories for the State of Oklahoma and therefore meets the large project size requirement.

REQUIREMENT	REFERENCE
Does the project generate national or regional economic, mobility, safety benefits?	Yes see Pages 1 – 6 and 10 – 12
Is the project cost effective?	Yes see Pages 6 and 11 – 12
Does the project contribute to one or more of the Goals listed under 23 USC 150? *(safety infrastructure condition, congestion reduction, system reliability, freight movement and economic vitality, environmental sustainability, reduced project delivery delays)*	Yes see Pages 4 – 5 and 11 – 12
Is the project based on the results of preliminary engineering?	Yes PE is 65% complete *(plans are on website)*
With respect to non-federal financial commitments, does the project have one or more stable and dependable funding or financing sources to construct, maintain, and operate the project?	Yes see Pages 12 – 13
Are contingency amounts available to cover unanticipated cost increases?	Yes see Page 9
Is it possible that the project cannot be easily and efficiently completed without other federal funding or financial assistance available to the project?	Yes See Page 12
Is the project reasonably expected to begin construction not later than 18 months after the date of the obligation of funds for the project?	Yes see Pages 15 – 18