

# PROJECT OUTCOME CRITERIA

MIDAMERICA CONNECTIVITY PROJECT:

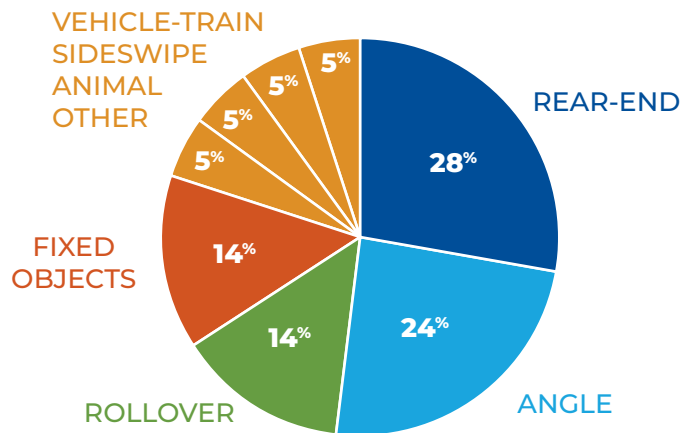
## CRITERION #1: SAFETY

The Project places a strong emphasis on safety improvements within MAIP and adjacent land area. Crash data was received from [ODOT Safety Division<sup>10</sup>](#). Between 2017 and 2021, there were 61 collisions in the Project area, averaging 13 collisions annually in Mayes County.

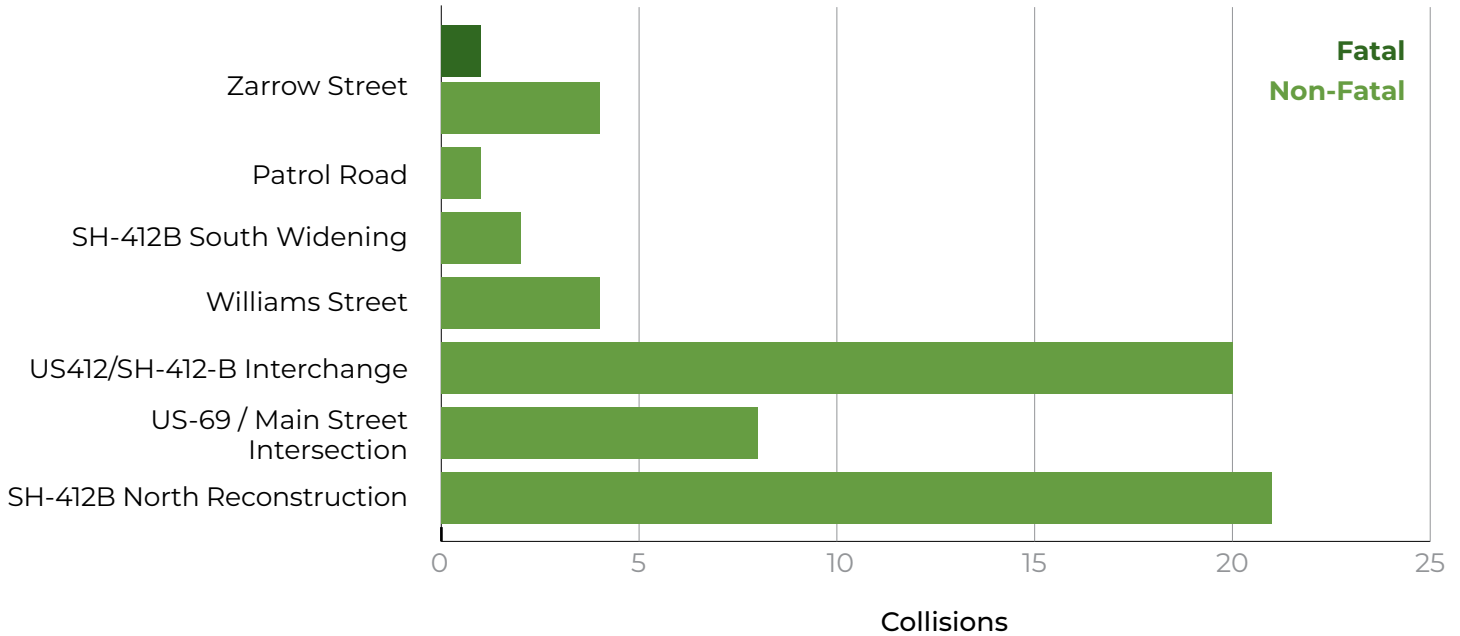
According to the pie chart, it is evident that the majority of reported collisions fall under two categories - angle collision at 28% and rear-end collisions at 24%. This data highlights the requirement to improve the existing conditions of the network to reduce the occurrences of these types of collisions. It is a matter of concern that these types of collisions are more common than others, and it is imperative to take appropriate measures to address this issue.

According to the data, the total tabular collisions

FIGURE 1: Distribution of Collision by Type



**FIGURE 2: Fatal vs. Non-Fatal Collision by Project Component**

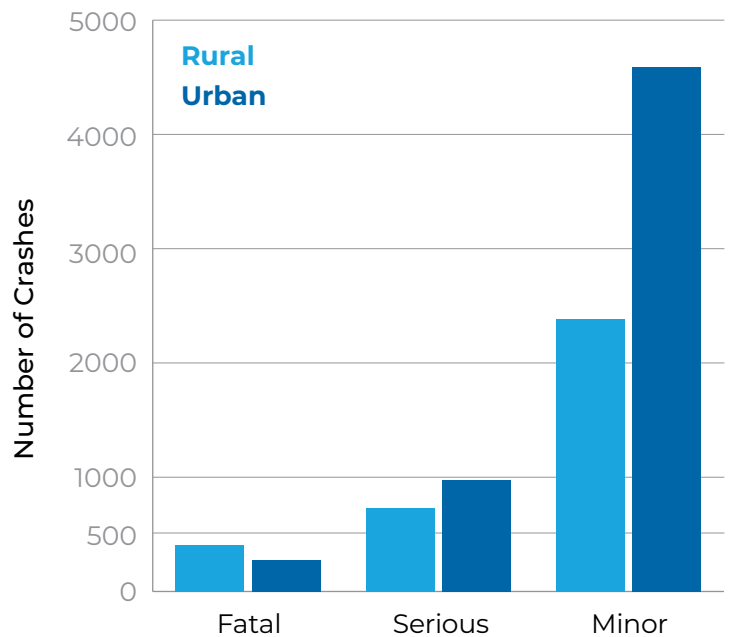


for each project component show that there was one fatal collision reported on Zarrow Street. The collision was reported as a rear-end type of collision. It is clear that improvements to Zarrow Street and all other project components will greatly enhance the safety of the area. Thus, helping mitigate safety concerns for fatal and non-fatal collisions.

The Project will create a safer roadway environment, generate economic benefits, and provide multimodal options in rural northeast Oklahoma. Safety improvements are necessary; statistics show 59% of fatal crashes occur on rural roadways, with only 34% of the population residing in rural areas, well above the national average for rural fatalities<sup>11</sup>. The chart provided on this page shows the breakdown of collision types for urban versus rural roadways in Oklahoma.

The safety of commuters and employees is of utmost importance for the Project and all project stakeholders. One primary objective is to alleviate congestion, a significant factor contributing to safety concerns. Studies show collision frequen-

**FIGURE 3: 2021 Crashes by injury Severity in Oklahoma**



cy on highways increases with congestion levels, especially during peak periods<sup>12</sup>. By improving the road network across the nine project components, the Project will mitigate congestion, thereby reducing collision risks within MAIP and the adjacent areas.

The Project includes wider lanes and shoulders on Patrol Road, Rocket Road, Zarrow Street and Williams Street, which will serve as refuge areas for motorists and result in a more forgiving roadside environment. This improvement is essential in maintaining traffic flow and decreasing the potential for collisions with stationary vehicles in travel lanes. Shoulders have been shown to reduce head-on collisions, sideswipe collisions, fixed object collisions, and pedestrian collisions<sup>13</sup>. By creating safer spaces for drivers, it will minimize accidents and enhance overall safety. Horizontal and vertical curves will be corrected where appropriate to meet modern design standards. Roadway surface conditions will be improved, which will reduce vehicle damage and erratic driving patterns.

The safety implications extend beyond the immediate boundaries of MAIP. The National Roadway Safety Strategy identified fatalities and fatal collisions occur disproportionately in rural areas, considering both population and vehicle travel<sup>14</sup>. The Project will alleviate potential safety risks on rural roads by optimizing capacity within the MAIP, reducing the need for freight traffic to use rural roads. This measure is expected to lower the number of large trucks on rural roads, resulting in an overall improvement in safety for the region.

For ODOT and MAIP, safety is a key priority. The Project reduces congestion and will enhance the transportation network's safety features. A goal of eliminating fatal and injury collisions is a cornerstone of the Project's vision, contributing



to a safer environment for all employees, residents, and visitors within the industrial park and surrounding communities.

#### *Cyclists.*

There are residents living along SH-412B and SH-69A who do not own a vehicle or have a driving license and bike this corridor daily in all weather conditions to reach places of employment or other essential services. Widening the shoulders, as appropriate, within the project limits, will make this corridor safer to these cyclists and will encourage more to bike the corridor, helping to address barriers to employment. Furthermore, the safety benefits resulting from this project will help protect recreational cycling.

## *Pedestrians.*

For an industrial park, the existing roadway network includes a relatively high volume of pedestrian trips currently. With additional large residential neighborhood developments under construction just north of SH-69A and just east of SH-412B, pedestrian and cyclist commuter trips to the large industrial park employment base within MAIP is anticipated to continue going forward. MAIP, Mayes County, and Pryor Creek are working toward a plan to include an interconnected trail network providing access to and across MAIP, and along segments of SH-69A, SH-412B, and Zarrow Street / Elliott Street.

Widened shoulders help these pedestrians feel safer and encourage them to walk more, supporting their physical and emotional health. Altogether, these safety benefits will protect and support the underserved communities living along the corridor, the tourists visiting the region, and the movement of freight along the corridor.

The Project takes a proactive approach to address safety concerns within MAIP. By mitigating congestion, providing wider shoulders, and optimizing capacity within the park, the Project will create a safer and more secure transportation environment for everyone utilizing the facilities. Emphasizing safety not only safeguards the well-being of all stakeholders but also enhances the park's reputation as a model of responsible and sustainable industrial development.

## **CRITERION #2: STATE OF GOOD REPAIR**

MAIP was established in the 1960s and many of the roadways in this Project were constructed as early as the 1940s. The 9,000-acre park was originally home to a munitions site during World War II until hostilities ended in 1945. The existing roadway infrastructure was built during that era to transport product in/out of the site. MAIP continues to maintain, preserve and expand that early roadway network.

From 2003 to 2021, MAIP has averaged nearly 50 acres of industrial park development per year. A large percentage of the developed area from 2003 to 2021 is associated with a single large commercial entity who currently owns 700 acres of additional land that is anticipated to be developed within the next five years – the area south of Williams St, east of the airport and west of Patrol Rd. Two additional large areas of land have development plans that are in the process of being negotiated with MAIP, totaling 1,250 acres between the two areas. The rate of development will increase well beyond the historic rates based as these large area development plans move forward.

The proposed roadway improvements for the Project include highways and local roads within the existing core infrastructure of the industrial park. The existing local roadway network relies heavily on narrow one or two-lane roads that





feed to the highways surrounding the park with little access to the property available for new development. The proposed roadways create primary corridors extending both north and south through the center of MAIP providing much needed relief to the outer existing road network. The Project, which includes multiple improved infrastructures segments within and surrounding the park, is vital to supporting the existing commerce and the continued future growth.

The existing highway network surrounding the park includes US-69 to the west, SH-69A to the north, SH-412B to the east and US-412 to the south. Primary access points to the industrial park from the north are located along US-69 at Main Street and Williams Street and along SH-69A at Zarrow Street. The primary access points from the south and east include the existing intersection of US-412 and SH-412B and along SH-412B to the north of which many of the businesses have direct access.

The highway within the industrial park (SH-412B), as well as the highways that border MAIP are currently classified in fair condition based upon the ODOT pavement international roughness index (IRI)<sup>15</sup>The primary improvements

along SH-412B include an interchange with US-412 and the replacement of the existing pavement designed to accommodate the current and future traffic loads. US-412 will soon be a designated interstate, therefore the need for an access controlled and grade separated interchange is vital to access to MidAmerica Industrial Park from the south. Without this interchange, access points to the park will be reduced and create a considerable time delay to and from the park, especially those travelling west to Tulsa, I-44, and I-35; and east to Bentonville, AR and I-49.

The roadway and safety of SH-412B will be improved by improved railroad crossings, pedestrian accommodations, improved shoulders and a new roundabout intersection with Patrol Road, the southern primary local road within the park. With the new interchange at US-412, SH-412B will soon become one of the most important access points to the park connecting to the Interstate system.

The local roads within the industrial park vary in type and condition, including paved and gravel roads needing repair. The primary improvements to the local roadway network within the park include the connection of several disjointed roadway segments.



The Williams Street segment will provide a new east-west corridor across the middle of the 9,000 acres that currently does not exist. Currently, the only way to travel east/west across the park is to take a series of roadway segments with multiple 90 degree turns. Williams Street improvements will provide a much-needed connection from US-69 to SH-412B with improved rail and drainage crossings, pedestrian access, and added access points to businesses in the center core of the park.



The improvements to Patrol Road will provide much-needed access from the middle of the park to the south and become the primary corridor on the south side of the park, tying into SH-412B. The route is currently a 2-lane gravel roadway and will be improved to add better drainage and railroad crossings along with added pedestrian access within the park.



The improvements to Zarrow Street will provide the added capacity and safety needed from SH-69A to Williams Street. The current roadway is a 2-lane road with minimal shoulder, with multiple businesses along the corridor. It is currently serving as one of the main access points into the park from the north. The improvements will improve safety by widening to 4 lanes to accommodate the considerable number of trucks utilizing this corridor and accessing businesses along the route.



ODOT currently maintains the existing highway network surrounding the industrial park. As part of the [8-Year Construction Workplan](#)<sup>4</sup> and [4-Year Asset Preservation Plan](#)<sup>5</sup>, ODOT has programmed approximately \$15,000,000 for improvements associated with this project for US-412, SH-412B and US-69 adjacent to the park. The 8-Year Construction Workplan and 4-Year Asset Preservation Plan are provided on the [project webpage](#)<sup>6</sup>. Additionally, ODOT has initiated the preliminary design of a new interchange at US-412 and SH-412B and has an initial programmed budget of \$30,000,000 set aside for this project.





MidAmerica Industrial Park currently maintains the local roadway network within the industrial park. The park has initiated design contracts for improvements to Patrol Road, Williams Street, and Zarrow Street in the amount of \$10M to improve the roadway network within the park. MAIP currently manages the local roadway network within the park with funds generated based upon the lease amount each business is required to pay. The improved network of roads planned with the Project will make more land available for lease to attract new commerce and economic growth. With those new leases, MAIP will increase the budgeted amounts in the Asset Management Plan dedicated for on-going maintenance of the roadways in this project.

The most significant benefit of the Project is providing the highway and local road network that will support the existing commerce and allow MAIP to continue to attract industry to improve the economy of the area. Also, travel time and vehicle operating cost savings from improved road conditions and routes will be a major benefit to network users.

### **MIDAMERICA FACT:**

*Located at the junction of US Highway 69 and US Highway 412, MidAmerica is near some of the nation's most highly-traveled thoroughfares.*

### **CRITERION #3: ECONOMIC IMPACTS, FREIGHT MOVEMENT, & JOB CREATION**

The Project directly impacts and supports northeast Oklahoma and the Mayes County regional economy, which has strong employment in various industries at the industrial park. As introduced under Criterion #2, the Park is currently progressing plans to move 1,950 acres of industrial development forward across three large area development plans within the park. Full buildout for these areas is anticipated within the next five years – by 2028. Economic activity will be supported in the following ways.

- Many existing MAIP tenants are in the [oil equipment and manufacturing industries, with large, heavy truck traffic](#). Freight mobility via rail and roadway are key elements attracting businesses to the park. Adding lanes, correcting verticals, and other improvements to the existing roadways allows for safer movement of these trucks. Additional lanes would allow for easier passing of the large trucks.
- MAIP recently completed an [Active Transportation Connectivity Master Plan<sup>16</sup>](#), which defined an extensive park-wide





bicycle and pedestrian network that provides safe, efficient, and enjoyable connections throughout the park and surrounding areas. The Plan includes connections to/from MAIP with a proposed trail network connecting Pryor Creek, MAIP, Choteau, and adjacent areas. This Project will include the construction of trails adjacent to the planned roadway improvements.

- MAIP businesses employ 4,500 employees and will continue to draw in large employers. The project would improve the roadway network for the 4,500 employees that currently work within the park. The park is center stage of the global economic marketplace and it is not finished. Having just missed out, but being in the final two, on a mega-site between the park and a location in Canada, they anticipate they will win a mega-site in a matter of time<sup>17</sup>.<sup>X</sup>.
- This Project improves critical connections in Mayes County among the surrounding communities and MAIP. The improvements will continue to draw new companies and new industries into the park. The new growth in the park will lead to significant job creation.

## **EMPLOYMENT OPPORTUNITY FACT:**

*Approximately 12.7% of workers are classified as underemployed and a high percentage of workers commute out of the county—many to Tulsa—but would prefer to work locally, providing another potential pool of skilled workers.*

MAIP has many unique strategies and partnerships that tie job creation, training, and retention of employees. Partners include on-site educational partners who provide relevant services and programs required by the companies at MAIP to meet their workforce needs. MAIP has a Career Center, which is a comprehensive one-stop-shop for career advisement<sup>18</sup>. In addition, the MAIP Center of Excellence is a consortium approach to workforce solutions that leverages the expertise of strategic partners to create a tailored approach to talent development. One example is Northeast Technical School who is the primary provider for applied technology education in northeast Oklahoma with five campuses and a Business and Industry Training Center located at MAIP.





## **CRITERION #4: CLIMATE CHANGE, RESILIENCY, AND THE ENVIRONMENT**

The Project will enhance resiliency of assets and incorporate lower-carbon project delivery approaches. The roadways proposed for improvements as part of this grant application at MAIP will reduce air pollution and greenhouse gas emissions from motor vehicles. The proposed improvements to the local roads include the addition of pedestrian facilities and access along each segment to provide users of the network with alternative means of access. Residential developments are being built along SH-412B north of SH-69A to serve the employees in the area. Additionally, MAIP has been working with other local agencies to accommodate the [Active Transportation Connectivity Master Plan<sup>16</sup>](#) and is currently the home of the Mayes County BMX track, which hosted the USA BMX Bounce Back National a few years ago<sup>19</sup>. The added pedestrian access including sidewalk and bike paths will be well received and will reduce vehicle emissions and improve air quality in the area.

The improved roadways and access points will increase the resiliency of the entire system. The existing local roadway network is disjointed and has limited access points to the larger highway system, causing delays due to access in and out of the park. Considering the growing nature of the industrial park, these numbers will only grow and worsen as new industrial sites are added to areas which do not have direct access to the highway system. The additional vehicles will increase ve-

hicle emissions and negatively impact air quality; however, the proposed improvements will provide better access and less delay within the park.

All roadways will be designed to reduce flooding and to ensure the roadway network remains open during significant rain events. All drainage structures will be designed to protect against scour and will include measures to protect stream banks against erosion. Structures will be designed to minimize fill out of stream channels and to allow restoration of natural flow patterns and provide environmental benefits to aquatic ecosystems. Approach roadways will include appropriate cross slopes and drainage ditches to convey runoff.

[ODOT Standards and Specifications<sup>20</sup>](#) will be utilized for all construction, which routinely uses warm mix asphalt instead of hot mix asphalt and is estimated to reduce between 25% and 50% of the emissions related to asphalt production.

Results from the BCA indicate that construction of the Project would result in reduced greenhouse gas emissions over the study period (2023 – 2048) within the project area due to the reduced VMT associated with construction with more direct routes. These include the following reductions over the study period for the partial build.

- 223 metric tons of Nitrous Oxides (NO<sub>x</sub>)
- 310,000 grams of Sulphur Oxides (SO<sub>x</sub>)
- 6,890,000 grams of Particulate Matter 2.5 (PM2.5)
- 1,542,995 metric tons of Carbon Dioxide (CO<sub>2</sub>)

For the ultimate build, reductions over the study period are shown below.

- 266 metric tons of Nitrous Oxides (NO<sub>x</sub>)
- 370,000 grams of Sulphur Oxides (SO<sub>x</sub>)
- 8,230,000 grams of Particulate Matter 2.5 (PM2.5)
- 1,861,763 metric tons of Carbon Dioxide (CO<sub>2</sub>)

Oklahoma is well-known for both frequent tornadoes and other severe weather occurs. It is anticipated climate change will increase these events in the future. Having redundant transportation options are of critical importance, as most climate models show increased incidence of severe weather in Oklahoma in the coming years.



## **CRITERION #5: EQUITY, MULTIMODAL OPTIONS, AND QUALITY OF LIFE**

### *MAIP Commitment to Equity*

The Project embodies MAIP’s rich history, economic significance, dedication to fostering inclusive growth, and commitment to equity. The Project includes diversification within multiple areas with increasing access for all residents and visitors. MAIP is a thriving regional economic powerhouse, and this Project is committed to advancement, social prosperity, and the collective well-being of all stakeholders involved.

MAIP is located in Mayes County and faces multiple socio-economic challenges in which the Project will assist in supporting equitable economic advancement and job creation.

Existing statistics for Mayes County include.

- Labor force participation rate of 57% for Mayes County is below both the state of Oklahoma and national rates of 60.8% and 63.1%, respectively<sup>21</sup>
- Mayes County median household (in 2021 dollars) is \$52,956 compared to \$56,956 across the state and \$69,021 nationally<sup>21</sup>.
- Mayes County poverty rate is 14.6%, which is higher than the national poverty rate of 11.6%<sup>21</sup>.

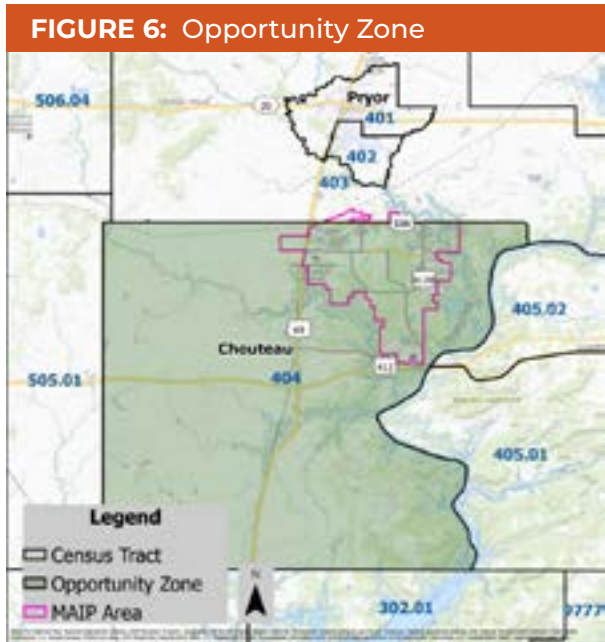
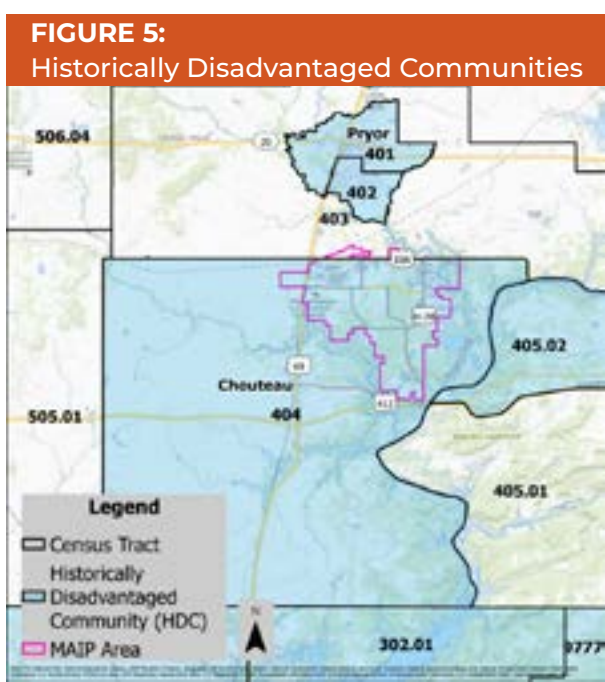
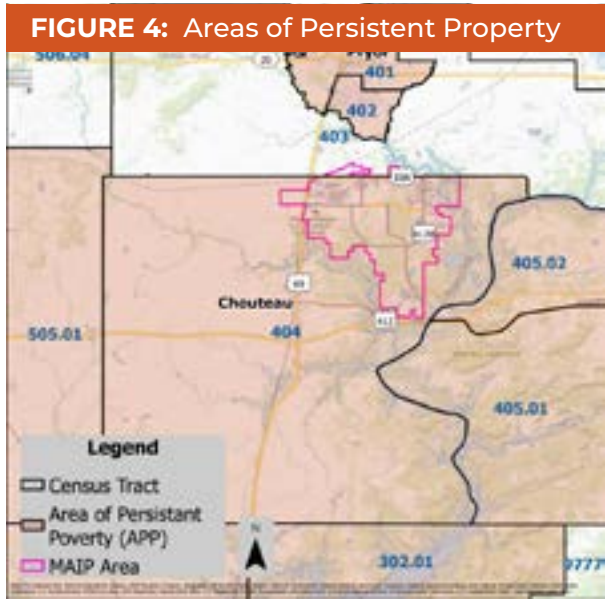
Consistent with the goal of the Biden Administration’s [Justice40 Initiative](#)<sup>22</sup>, investing in Mayes County supports environmental justice and benefits areas of persistent poverty and historically disadvantaged communities in Oklahoma.

Mayes County has 23% of total county residents identifying as American Indian and 10% of the total County residents have two or more races<sup>21</sup>. The Project area has one Census Tract with federally designated areas. Within Census Tract 404, where much of MAIP is located and shown in the pink boundary, is [designated Historically Disadvantaged Community \(HDC\)](#)<sup>23</sup> and an [Area of Persistent Poverty \(APP\)](#)<sup>24</sup>. Knowing these demographic factors give MAIP a stronger reason to emphasize and implement community-driven initiatives to promote inclusive growth.

The Project prioritizes equity and quality of life enhancements within the park and its surrounding areas. As MAIP continues to grow, job opportunities and quality of life for those in the area will increase. This project will have a direct effect on the park allowing for continued growth which in turn allows for continued opportunities in the area for everyone. The Pryor area, including MAIP, has continued to grow in population and added job opportunities. Five new residential subdivisions, a mixed-use development, and a recreational vehicle campground are in the planning stages. Current residential developments are under design with an estimated 2,096 new residential units expected to be developed within a 20-minute drive of MAIP in 2023, and an additional 11,000 residential units will be developed within a 45-minute drive. These developments will have diverse options for housing that will bring in a wide range of socioeconomic backgrounds.

The [MAIP Active Transportation Plan](#)<sup>16</sup> includes improvements for all residents, which provides an affordable and safe transportation option for residents who do not have access to or cannot afford reliable transportation and others who choose not to own fossil fuel-burning vehicles.

The proposed District trail links new mixed-use development and entertainment the airport and new residential subdivisions and into the City of Pryor<sup>25</sup>. The de-





velopments included in the Project will improve daily commutes and create livable communities. The socioeconomic challenges that Mayes County has faced will be directly impacted by the Project. Residents and employees can thrive and enjoy a higher quality of life with better, safer transportation options.

The Project includes multimodal improvements to walkability and accessibility for pedestrians, fostering thriving communities where individuals can work, live, and play in a healthy environment. By offering diverse transportation choices, whether with or without a car, the Project empowers individuals to move freely, encouraging an inclusive and vibrant atmosphere.

The proposed improvements to the local roads include the addition of pedestrian facilities and access along each segment to provide users of the network with alternative means of access. Residential developments are being built along SH-412B to serve the employees in the area.

The growth of the industrial park has been instrumental in developing an area adjacent to the park called The District<sup>25</sup>. The District includes retail, entertainment, commercial, and single and multi-family residential development. Access to/from MAIP to the District is along Zarrow Street with planned sidewalk and pedestrian access. According to The District, Phase II of The District's master plan commenced construction in 2022 for a multi-story living complex featuring 300 units with a park, pool, and fitness center amenities. Phase III is in progress with 111 rental homes, approximately 125 single-family lots, and 25 acres of interconnected parks and outdoor areas, linked by walkways and biking trails.

In alignment with its vision for equitable development, the Project contributes to improved access to essential services, emergency care, and urgent care. For instance, Access Medical Center within MAIP has an Urgent Care open to the general public seven days a week.



## CRITERION #6: INNOVATION AREAS: TECHNOLOGY, PROJECT DELIVERY, & FINANCING

MAIP has current active businesses in the park specially building and using advanced technologies. Working side-by-side with current data centers and electric vehicle manufacturers, MAIP will continue to coordinate, partner, and meet with local businesses to discuss innovative methods and designs for the local infrastructure. MAIP will incorporate the existing [Federal Highway Administration Proven Safety Countermeasures \(PSCi\)](#)<sup>26</sup> and strategies that are effective in reducing fatalities and serious injuries into the Project. Other innovative strategies to be implemented include:

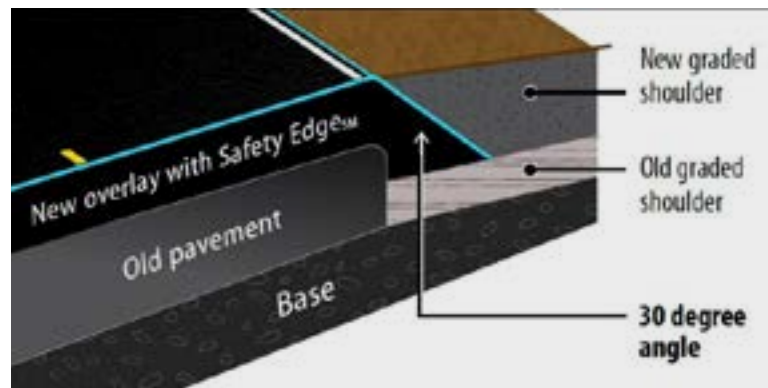
- Several countermeasures are included in the Project, including the use of Rectangular Rapid Flashing Beacons (RRFB) at a pedestrian crossing along SH-412B along a dedicated multiuse path along Patrol Road, Williams Street, and portions of SH-412B for pedestrian safety.
- Safety Edge technology will also be implemented along the projects. Based upon studies, Safety Edge technology results in an 11% reduction in fatal and injury collisions, a 21% reduction in run-off road collisions, and a 19% reduction in head-on collisions<sup>27</sup>. Safe-Edge Treatments for the widening of roadway will be implemented for the 412B segment improvement.
- The proposed roundabout at SH-412B, Patrol Road and Rocket Road is another countermeasure proposed by these projects. The roundabout will be used in-leu of a stop-controlled intersection. Roundabouts have been studied to show an 82% reduction in fatal and injury collisions, according to FHWA<sup>28</sup>.

RRFBs can increase motorist yielding rates up to

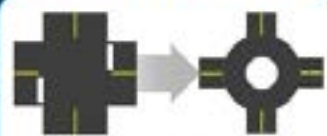
98%

RRFBs can reduce crashes for pedestrians up to

47%



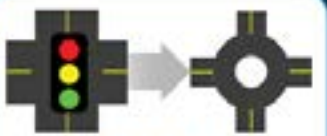
Two-Way Stop-Controlled Intersection to a Roundabout



82%

reduction in fatal and injury crashes.<sup>1</sup>

Signalized Intersection to a Roundabout



78%

reduction in fatal and injury crashes.<sup>1</sup>



- The proposed interchange at SH-412B and US-412 is another example of the innovative nature of these projects. The existing at-grade intersection will be replaced with direct connection ramps allowing a significant reduction in conflict points at this location. Considering the substantial number of commercial vehicles, trucks and employees traversing this intersection daily, the significant reduction in conflict points will enhance the safety of this project.
- Traffic signals are proposed at the intersections of Williams Street and US-69 and at Zarrow Street and SH-69A. These locations are considered major entry points into and out of the park. Current generation radar detection of vehicles will be utilized along with current pedestrian equipment at each of the locations.
- The proposed radar detection will include dynamic dilemma zone protection which utilizes dynamic speed and vehicle classification data to ensure adequate dilemma zone protection at both proposed traffic signals. This innovation should result in improvements both to safety and traffic operations.

### *Innovative Financing*

The partnership and commitment from ODOT and MAIP demonstrate the importance of the Project to northeast Oklahoma. ODOT and MAIP are prepared to make significant funding obligations and commitments to grow the regional economy and improve the safety of those utilizing each of the improved segments.

In addition, MAIP will continue to work with local MAIP businesses and look for opportunities for an innovative public/private partnership for future projects or specific technology within one of the project elements.

### *Innovative Project Delivery*

All segments of the Project are within MAIP or ODOT's existing right-of-way allowing for expedited timelines and project delivery. Without the need to acquire property, public and private utility owners can relocate the utilities prior to the project, which avoids delay and keeps the projects on schedule. Public and private utility owners can also consider the impacts of the Project and assist MAIP in providing the necessary utility infrastructure needed for the growing park. MAIP and ODOT are addressing delays to ensure the readiness of this project through the planning and design work currently underway.

The project includes the introduction of a new roundabout, an at-grade intersection conversion to a grade separated interchange and traffic signals to improve congestion management within the park. These improvements will allow the park to manage the commercial traffic within the park while continuing to grow by building a looped network of roadways within the park. The looped network will provide system reliability necessary for the industrial traffic at the park.

ODOT will work closely with potential bidders early and often to inform the design and enhance the procurement process. Ongoing supply and labor challenges are affecting the market and how contractors evaluate projects and risk. Continued and frequent communication is a goal for ODOT. In addition, ODOT and MAIP will continue conversations to explore Public-Private-Partnerships (P3s) for potential infrastructure improvements for the Project.