



**OKLAHOMA**  
Transportation



# MIDAMERICA **CONNECTIVITY PROJECT** *MPDG Program*

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## Criteria 1: Safety

### Reduce Fatalities or Serious Injuries

The Project places a strong emphasis on safety improvements within MAIP and adjacent land area. According to crash data was received from [ODOT Safety Division](#) between 2017 and 2021, there were 49 collisions in the Project area, averaging 10 collisions annually. Specifically, in 2021, 5% of crashes in the Project area were serious injury and fatalities. In that same year the statewide averages for serious injury and fatality crashes were 32%.

**Table 1: Crashes within Project Area**

Fatal	Injury	PDO	Total
1	26	22	49

Source: ODOT Crash Data 2012 – 2021, and 2023

The total collisions for each Project component show that there was one fatal collision reported on Zarrow Street. The collision was reported as a rear-end collision. The [MAIP Active Transportation Connectivity Master Plan](#) proposes “reconstructing the Zarrow Street intersection to align with S. Elliot Road” and to install a traffic signal to insure safe crossing for cyclists and pedestrians to Hwy 69A. These improvements will help mitigate safety concerns for fatal and non-fatal collisions.

[Federal Highway Administration](#) (FHWA) studies show collision frequency on highways increases with congestion levels, especially during peak periods. By improving the road network and roadway geometry across the seven project components, the Project will mitigate congestion, thereby reducing collision risks within MAIP and the adjacent areas.

**Figure 1.** Existing Patrol Road Conditions



Source: MAIP



The existing conditions of Patrol Road and Williams Street are shown in **Figures 1** and **2**, respectively, which highlight the dire need for improvements to upgrade the roadways to modern facilities. The Project includes the construction of wider lanes and shoulders on Patrol Road, Rocket Road, Zarrow Street and Williams Street, which will serve as refuge areas for motorists and any bicycle or pedestrian traffic. Additionally, the improvements are essential in maintaining traffic flow and decreasing the potential for collisions with stationary vehicles in

**Figure 2.** Existing Williams Road Conditions



Source: MAIP

travel lanes. Multiple Crash Modification Factors (CMF's) were used for specific safety mitigation measures per project component. For example, Zarrow Street improvements include widening from 2 lanes to 4 lanes. The CMF ID [#7570](#) was used to show that the 4-lane improvement will reduce crashes by 31%. According to [FHWA Safety Program](#), shoulders have been shown to reduce head-on collisions, sideswipe collisions, fixed object collisions, and pedestrian collisions. 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. object collisions, and pedestrian collisions. 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.

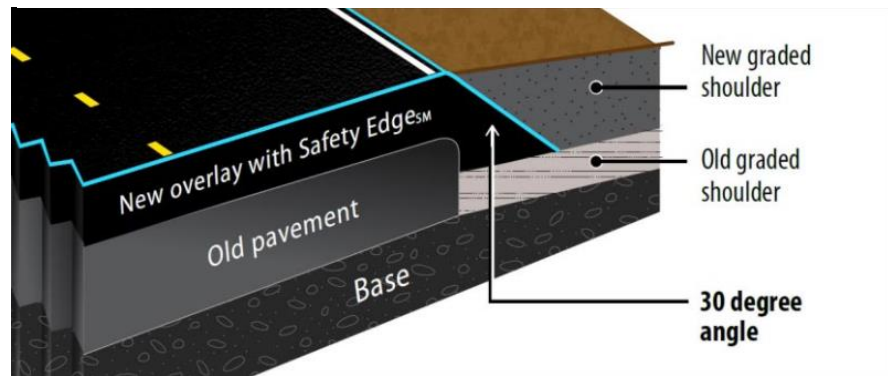
Traffic signals are proposed at the intersections of Williams Street and US-69 and at Zarrow Street and SH-69A. These locations are considered major entry points into and out of the park. Current generation radar detection of vehicles will be utilized along with current pedestrian equipment at each of 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 Project component should result in improvements both to [safety](#) and traffic operations.

[Safe Edge technology](#) will also be implemented. Based upon studies, Safe 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. Safe Edge Treatments for the widening of roadway will be implemented for the 412B segment improvement.

The roundabout at SH-412B, Patrol Road and Rocket Road is another countermeasure proposed by this Project. The roundabout will be used in-leu of stop-controlled intersections.

[Roundabouts](#) have been studied to show an 82% reduction in fatal and injury collisions, according to FHWA.

**Figure 3. Safe Edge Technology**



Source: FHWA

The proposed interchange at the 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 point 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.

### Protect Vulnerable or Non-Motorized Travelers from Safety Risks

Shown in the **Project Description** section, the Project is located within HDCs and APPs. 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. 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 and reduce overall congestion within the project area, resulting in an overall improvement in safety for the region.

MAIP recently completed an [Active Transportation Connectivity Master Plan](#), which defined an extensive park-wide bicycle and pedestrian network that provides safe, efficient, and enjoyable connections throughout the park and surrounding areas, as a means to protect non-motorized users from health and safety risks. 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. Several countermeasures included in the project is the integration of Rectangular Rapid Flashing Beacons (RRFB) at pedestrian crossings along SH-412B along a dedicated multiuse path along Patrol Road, Williams Street, and portions of SH-412B for pedestrian safety.

## Criteria 2: State of Good Repair

The Project will provide vital improvements to modernize existing core infrastructure and roadways throughout MAIP. These improvements will result in lower long-term maintenance costs and address current and projected vulnerabilities that if left unaddressed will threaten future transportation network efficiency, mobility of goods or people, or economic growth. ODOT and MAIP will work together to ensure the upkeep and maintenance of all Project components.

This project is centered on an intermodal freight facility, that operates as an inland port to improve reliability and efficiency in the movement of goods. The existing local roadway network relies heavily on narrow one- or two- lane roads that feed to the highways surrounding the park. The local roads within the industrial park vary in type and condition, including paved and gravel roads needing repair as shown in **Figures 4** and **5**. Throughout the park there are several disjointed roadway segments inhibiting the movement of people and goods throughout MAIP.

The primary improvements along SH-412B include the **new US-412/SH-412B**

**Interchange** which includes the replacement of the existing pavement designed to accommodate the current and future traffic loads. US-412 will soon be designated Interstate 42, 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, Arkansas, and I-49. The condition of the roadways and frequent heavy truck traffic necessitates better infrastructure upgrades to accommodate increase in oversize and overweight vehicles as MAIP continues to expand.

**Figure 4.** Existing Poor Conditions of Infrastructure along US-412



Source: MAIP

## Criteria 3: Economic Impacts, Freight Movement, and Job Creation

### Economic Impacts

The Project directly impacts and supports northeast Oklahoma and the Mayes County regional economy, which employs many people 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 near-term as it is anticipated by 2028. MAIP businesses employ 4,500 employees. The greater public and private investments in land-use productivity and equitable commercial development will improve access to new and existing jobs.

**Figure 5.** Disjointed Roadway Segment along Patrol Road



Source: MAIP

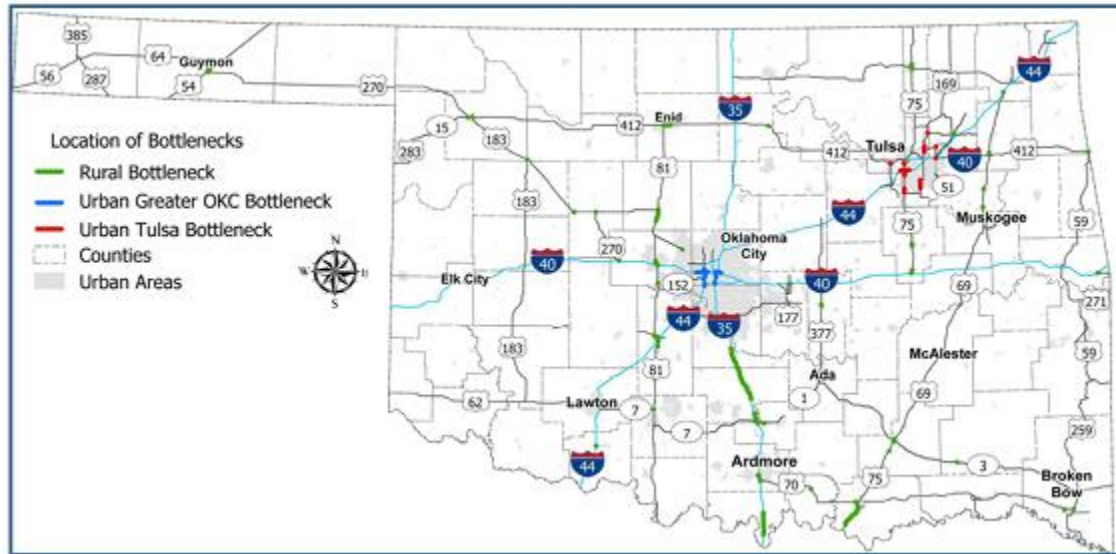
The Project directly improves multimodal transportation systems within MAIP and the region by providing critical roadway improvements necessary for increase freight movement. MAIP has an on-site airport with a 5,000-foot runway as well as railroad spurs throughout MAIP which connect to Union Pacific Railroad’s Smith Rail Yard located directly west of the park. Additionally, the [Port of Catoosa](#), a multimodal shipping complex, is located 30 miles from MAIP.

### Freight Movement

This Project will improve freight mobility, reliability, and efficiency by providing new, more efficient interchanges, critical road widenings, roundabouts and other roadway improvements. Additionally, this Project will improve freight reliability and efficiency by providing more lanes of traffic to support increased truck traffic which can reduce roadway congestion that provide supply chain improvements and reduces supply chain disruption.

MAIP’s primary entrance is located on US-69 and has been identified as Top five percent Rural Bottleneck Location in [ODOT’s Freight Transportation Plan \(pg. 5-5\)](#). Additionally, US-69 is a part of the National Highway Freight Network System, enhancing MAIP’s ability to provide efficient transportation and distribution of goods, contributing to local and national economic growth.

**Figure 6.** Bottleneck Locations in Oklahoma - Top 5 Percent



Source: ODOT

## Job Creation and Training Opportunities

MAIP has many unique strategies and partnerships that tie to job creation, training, and retention of employees. MAIP provides job training opportunities to better the lives of people who do not yet have training but want the opportunity to grow a career in a high paying industry. . As shown in **Figure 7**, MAIP has a [Career Center](#), which is a comprehensive resource for career advancement. The MAIP Center of Excellence leverages the expertise of strategic partners to create a tailored approach to workforce development.

In addition, the Great River Dam Authority Facility at MidAmerica Industrial Park will add approximately 1,500 new jobs to the area. This will necessitate the intersection of US-412B to be upgraded to an interchange to safely handle the increases in economic activity. The MidAmerica Industrial Park is also home to Google, who in [2007 announced \\$700 million in investments in the state](#), mainly at this facility. In May of 2022, Google announced an additional [\\$75 million investment](#) at MidAmerica Industrial Park. In March of 2022, Northern Data also announced a [\\$270 million investment](#) at the MidAmerica Industrial Park for a new data center that will employ at least 150 people. Canoo, [a leading high-tech advanced mobility company](#), has opened





their [second plant](#) in the state in MidAmerica Industrial Park. The plant is expected to employ at least 2,000 when fully operational.

**Figure 7.** MAIP Career Center



Source: MAIP

## Criteria 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 will reduce air pollution and greenhouse gas emissions (GHG) 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. By improving the overall pedestrian access and movement along US-412, the Project will reduce congestion and vehicle idling, which will reduce overall emissions in the area. Added pedestrian access including sidewalk and bike paths 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 vehicle emissions and negatively impact air quality; however, the proposed improvements will provide better access and less delay within the park. As shown in the BCA, the addition of vehicle trips due to economic growth and respective trip generation will increase the number of vehicle trips. This increases the potential of vehicle emissions, even though the project components will reduce overall travel time throughout the park.

All roadways will be designed to reduce flooding and to ensure the roadway network remains open during significant rain events. Although the majority of the project is outside of the 100 year floodplain, portions of the project segments fall into the floodplain. As such, it is important to implement roadway designs that reduce flooding to proactively prepare for another severe weather event, such as the May 20, 2019, flooding that occurred within this portion of the state.



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](#) 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.

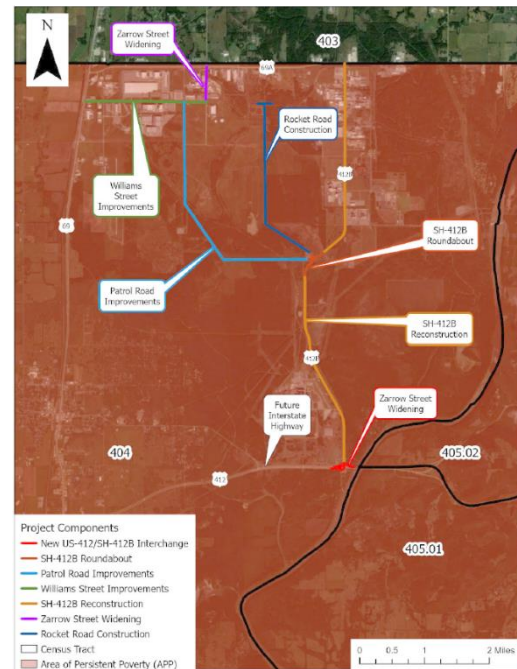
### Criteria 5: Equity, Multimodal Options, and Quality of Life

The Project is located in a Census boundary that is considered both a [Historically Disadvantaged Community \(HDC\)](#) and an [Area of Persistent Poverty \(APP\)](#). Mayes County poverty rate is 14.6%, which is higher than the national poverty rate of 11.6%. Mayes County also has 23% of [total county residents](#) identifying as American Indian and 10% of the total County residents have two or more races.

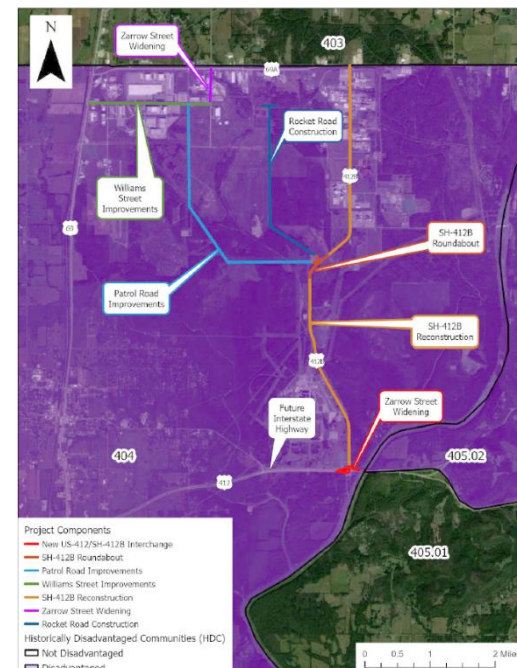
MAIP faces multiple socio-economic challenges in which the Project will assist in supporting equitable economic advancement and job creation. Most crashes involve passenger vehicles or semi-trucks in the Project area. Local people accessing employment in the area or using the corridors to perform their job are often the drivers, passengers, and pedestrians.

The Project prioritizes equity and quality of life enhancements within the park and its surrounding areas. The MAIP is heavily vested in a local community driven, [quality-of-life initiative](#). The MAIP stakeholders are committed to creating a community to attract more people for employment and incorporating the needs of the distinguished residents with new. As the 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 job growth due to more businesses

**Figure 8. Areas of Persistent Poverty**



**Figure 9. Historically Disadvantaged Communities**



relocating to take advantage of the new infrastructure and strategic location. MAIP has been working with other local agencies to accommodate the [Active Transportation Connectivity Master Plan](#) and is currently the home of the Mayes County BMX track, which hosted the [USA BMX Bounce Back National](#) a few years ago. The Pryor area, including MAIP, has continued to grow in population and added job opportunities. 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, and an additional 11,000 residential units will be developed with a 45-minute drive. These developments will have diverse options for housing that will bring in a wide range of socioeconomic backgrounds. To encourage a healthy environment that reduces resident’s interdependency on vehicles, multimodal infrastructure, such as bicycle and pedestrian pathways, will be built to withstand weather conditions and provide options for commute and leisure to places of development and other essential services.

The growth of the industrial park has been instrumental in developing an area adjacent to the park called [The District](#). 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

**Figure 10.** The District



*Source: MAIP*

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. The proposed [District](#) trail links new mixed-use development and entertainment to the airport and new residential subdivisions and into the City of Pryor. The development 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.

## Multimodal Options



The [MAIP Active Transportation Plan](#) 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. 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.

**Cyclists:** Widening the shoulders, as appropriate, within the project limits, will make this corridor safer to cyclists and will encourage more to bike the corridor, helping to address barriers to employment. As MidAmerica continues to grow, MAIP plans to build housing adjacent to The District; to date, one apartment complex has been developed. Furthermore, the safety benefits resulting from this project will help protect recreational cycling.

**Pedestrians:** For an industrial park, the existing roadway network currently experiences a relatively high volume of pedestrian trips. 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 to grow. 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, as well as proactively incorporate Universal Design that improves access for all people to the region.

In alignment with its vision for equitable development, the Project contributes to improved access to essential services, emergency care, and urgent care, which proactively creates new connections and opportunities to better the quality of life for underserved communities. For instance, Access Medical Center within MAIP has an Urgent Care open to the general public seven days a week.

## Criteria 6: Innovation

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 \(PSCi\)](#) and strategies that are effective in reducing fatalities and serious injuries into the Project. Through Innovative technology, project delivery, and financing this project intends to implement:

### Innovative Technology

As discussed in **Criteria 1: Safety**, the project intends to include the integration of Rectangular Rapid Flashing Beacons (RRFB) at pedestrian crossings 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 project segments, which have shown to reduce collisions. Safe Edge Treatments for the widening of roadway will be implemented for the 412B segment improvement.

As discussed in **Criteria 3: Economic Impact, Freight Movement, and Job Creation**, Canoo has announced a [Battery Module Manufacturing Facility](#) and its MegaMicro Factory at MAIP. The EV startup will build the [Lifestyle Delivery Vehicle](#) and [Lifestyle Vehicle](#) vans at the factory starting in the second half of 2023.

### 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.



## 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 2023, the Oklahoma State Legislature approved the single highest appropriation for rural areas in state history. The [Rural Economic Transportation Reliability and Optimization Fund \(RETRO\)](#) is a new funding source that allocates \$200 million for the construction, repair and maintenance of state highways in rural areas where robust economic development has or is occurring. For this project, RETRO has obligated \$8 million for the project, and if it overruns MAIP and ODOT have committed to completing the project.

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.

