

# LAKE CENTER CORRIDOR COMPLETE STREETS IMPROVEMENTS



2025 BUILD GRANT APPLICATION



# Table of Contents

## **1 Project Description**

- 1.1 Project Scope and Goals
- 1.2 Current Design Status
- 1.3 Transportation Challenges
- 1.4 Project History

## **2 Project Budget**

## **3 Merit Criteria**

- 3.1 Safety
- 3.2 Environmental Sustainability
- 3.3 Quality of Life
- 3.4 Improves Mobility and Community Connectivity
- 3.5 Economic Competitiveness and Opportunity
- 3.6 State of Good Repair
- 3.7 Partnership and Collaboration
- 3.8 Innovation

## **4 Project Readiness**

- 4.1 Project Schedule
- 4.2 Required Approvals
- 4.3 Assessment of Project Risks and Mitigation Strategies
- 4.4 Economic Analysis (Benefit-Cost Analysis)

# 1 Project Description

## Safety



**Construct a roundabout** at Osterhout Avenue to reduce crash rates and severity, **implement access management measures** to reduce the number of entry points on Portage Road, **replace traffic signals** at Zylman Avenue and Centre Avenue, **convert 4-lanes to 3-lanes** to reduce rearend crashes at Stanley Avenue, **relocate driveway to Lakeview Park** to align with Lakeview Drive for safer left-hand turns

## Environmental Sustainability



**Extend city's fiber network** to reduce congestion and vehicle emissions, **construct stormwater improvements** and **install pretreatment devices** prior to groundwater infiltration, **plant trees** to provide shade, **improve air quality and reduce heat island effect** by minimizing hard surfaces, **utilize LED lighting** in streetscape improvements

## Quality of Life



**Implement road rebalancing** to promote complete streets, traffic calming and active transportation, **promote public health** by encouraging greater physical activity in a safe environment, **improve the character of Lake Center Corridor** with landscaping and walkability improvements, **coordinate with Metro** to improve access for all users, **link residents** to nearby parks, schools and neighborhood amenities, **install mobility hubs** to improve accessibility and promote a connected community

## Mobility and Community Connectivity



**Install multi-use trail** to connect the heart of Lake Center Corridor and Lakeview Park with the city's extensive trail network, **complete Southwest Michigan Bikeway regional trail route**, **fill gaps in sidewalk network**, **improve mobility and crossing of Portage Road** with signalized pedestrian crossings, **promote multiple modes of transportation** to large economic employers directly north of Lake Center Corridor

## Economic Competitiveness and Opportunity



**Expand transportation options to provide greater access to jobs and affordable housing** by providing additional transportation options, **promote façade improvements program** with creation of Tax Increment Finance Authority, **implement zoning changes** to promote mixed land use, **revitalize Lake Center Corridor** to promote neighborhood activity and destination-driven trips, **extend utility access across Portage Road** to support development of vacant sites

## State of Good Repair



**Replace deteriorating culvert** under Portage Road to address vulnerabilities, **modernize core infrastructure assets** to meet the needs of all roadway users, **replace old water and sanitary mains** to improve reliability of infrastructure, **consolidate projects to minimize public inconvenience**, saving time and money during construction

## Partnership and Collaboration



**Promote public engagement** through Portage Road 360 initiative, **coordinate with public and private utilities** to replace old and deteriorating infrastructure, **improve system reliability** by undergrounding overhead power and cable lines, **extend multi-use trail to promote Safe Routes to School**, **develop attainable housing** adjacent to Portage Road

## Innovation



**Consolidate improvements into one project** for efficiency and minimal public inconvenience, **install Adaptive Signal Control Technology** to accommodate changing traffic patterns and ease traffic congestion, **install signalized pedestrian crossing** to sync with traffic signals on Portage Road, **replace Austin Lake Drain culvert** with innovative construction methods to minimize replacement timeline

## 1.1 Project Scope and Goals

The City of Portage Lake Center Corridor is located in Kalamazoo County, southwest Michigan, with the heart of the corridor spanning between West Lake and Austin Lake. This strategic location places the Lake Center Corridor just 3 miles from I-94, 4.5 miles from US Highway 131, and 2.5 miles from the Kalamazoo-Battle Creek International Airport. The project is located within the Kalamazoo, MI Urban Area.



The Lake Center Corridor extends approximately 2.5 miles along Portage Road from Osterhout Avenue to Centre Avenue. It serves as a vital thoroughfare, accommodating up to as many as 17,000 vehicles daily. Portage Road connects residents from the city and surrounding communities to key destinations, including employment, schools, churches, and local businesses. Major employers such as Pfizer, Stryker, and FedEx, are located less than 1.5 miles north of the proposed project area along Portage Road.

The stretch between Lakeview Drive and Centre Avenue is the primary business district of the area, while adjacent sections of the corridor are primarily residential neighborhoods. The northern segment is home to a low to moderate-income population, particularly between Ames Drive and Centre Avenue - one of the highest concentrations of low-income household with over 60% of the population falling below the poverty threshold as outlined in the city's [2021 – 2025 Consolidation Plan](#).

The City of Portage is requesting \$14.2 million in FY 2025 BUILD funds to leverage \$2.5 million in Surface Transportation Funds, \$481,269 in Carbon Reduction Funds and over \$4.3 million in local funds for 2.5 miles of *Complete Streets* improvements. The project's benefit cost analysis shows a ratio of 1.86, emphasizing the significance of enhancing multimodal and safety features in the Lake Center Corridor.

For decades, street design has prioritized vehicular traffic movement, neglecting the needs of vulnerable populations along the Lake Center Corridor. Adopting a *Complete Streets* approach aligned with the city's [2015 Complete Streets Policy](#) is key to revitalizing the area, fostering economic growth and creating a unified visual identity that reflects the Lake Center community's history. These improvements will transform the corridor into a safer, more walkable area that supports shopping, recreation, dining, and entertainment.

The improvements include road rebalancing, safer and more accessible sidewalks, a multi-use trail, connecting a gap in the [Southwest Michigan Bikeway](#) regional bike route, access management, and replacing aging infrastructure. Streetscape enhancements will feature gateway elements, consolidated driveways, trees, LED streetlights and wider sidewalks. Safety upgrades include a roundabout at Osterhout Avenue, and traffic signal updates at Zylman Avenue and Centre Avenue. A signalized pedestrian crossing, linked with the timing of the traffic signals on the corridor, will help pedestrians safely cross Portage Road near the Lakeview Park entrance in the heart of the Lake Center Corridor. A new traffic signal with pedestrian crossing improvements at Forest Drive will be constructed with local funds in 2025, in advance of the corridor improvements.

In response to the growing demand for attainable housing, Portage is developing 42 single-family homes on 14 acres of city-owned land on Portage Road between Stanley Avenue and Woodbine Avenue. With \$5 million in federal, state, and county funding secured for the \$13 million project, construction is scheduled to begin in the spring of 2025. The *Lake Center Corridor Complete Streets Improvements* will enhance safety and infrastructure to support a new residential development.

## 1.2 Current Design Status

Since 2013, the City of Portage has conducted extensive studies of the Lake Center Corridor, supported by numerous public engagement efforts. The Forest Drive traffic signal and site access designs are complete with construction slated for 2025 ahead of broader corridor improvements. In 2024, the city awarded a full design contract to Wightman for the entire corridor, completing a topographic survey and traffic impact study. Conceptual design, NEPA review, public engagement and utility coordination are ongoing with the first phase of design scheduled to be complete in the summer of 2025 for a 2026 construction start. The design of all phases is expected to be complete in 2026.

The city has acquired several parcels along Portage Road to support necessary improvements, such as the culvert replacement between West Lake and Austin Lake, and an attainable housing development. Easements already exist for most areas with sidewalks, and road rebalancing will create space for wider sidewalks, a multi-use trail, greenspace and placemaking opportunities.

## 1.3 Transportation Challenges

### **Unsafe Pedestrian Crossings and Inconsistent Sidewalks**

The five-lane, high-speed section of Portage Road in the heart of the Lake Center Corridor poses serious challenges for safe pedestrian crossings. While pedestrian islands were installed at Zylman Avenue and McClish Court in 2015, Zylman Avenue is too far away for most pedestrians, and Portage Road at McClish Court experiences frequent, fast-moving traffic. The pedestrian island at McClish Court, equipped with push-button flashers, has also been repeatedly struck by vehicles, making it uninviting for pedestrians. Planned road rebalancing and signalized pedestrian crossings will provide safer, protected crossings. Additionally, much of the corridor lacks sidewalk on the west side of Portage Road, and existing sidewalks are disconnected, often ending at driveways or parking lots. The project will ensure consistent, ADA accessible sidewalks throughout the corridor.

### **Traffic Speeds and Need for Traffic Calming**

The 2015 *Portage Road Traffic Study/Road Diet Feasibility Study* completed by CESO revealed that 85% of drivers travel 46 mph northbound and 49 mph southbound along Portage Road between Lakeview Drive and Forest Drive. As part of the Portage Road 360 survey, high traffic speeds, inconsistent infrastructure, and lack of sidewalks were frequently cited as barriers to walking and biking. High vehicle speeds emerged as a top concern during a recent open house attended by over 100 participants, with 27 mentions highlighting a strong demand for traffic calming measures.

### **Culvert Replacement Will Require Road Closure**

The deteriorating Austin Lake Drain culvert connecting West Lake and Austin Lake requires full replacement to ensure the long-term safety of Portage Road. A road closure and detour will be necessary during the replacement. Given the high daily traffic volume and limited alternative north-south routes, minimizing the closure period is critical. Innovative design solutions will be explored to reduce disruption during the project.



## 1.4 Project History

In 1999, the City of Portage assumed control of Portage Road within the city limits from Kalamazoo County. Before the transfer, the county widened and reconstructed the northern 1.5-miles of the Lake Center Corridor, adding sidewalks where possible. However, these sidewalks often end at driveways or parking lots, leaving gaps and positioning them uncomfortably close to the roadway. The southern section, an unimproved four-lane corridor, lacks a left-turn lane at Stanley Avenue, leading to frequent crashes. Overall, the corridor was designed solely for vehicle movement, offering little safety or accessibility for pedestrians and bicyclists. Many areas still lack sidewalks, and existing sidewalks fail to meet ADA guidelines at driveways.

To revitalize the Lake Center Corridor, the city is establishing a Corridor Improvement Authority to encourage economic growth. The area features many long-standing, locally owned businesses and Lakeview Park, a vital community anchor of the isthmus. The park is undergoing significant upgrades including a boardwalk along the water's edge, parking lot improvements and the addition of a bike rental station. These improvements align with Portage's commitment to creating accessible public spaces and making the city *A Natural Place to Move!*

Revitalizing the Lake Center Corridor requires transforming public right-of-way to prioritize people over vehicles, and improving safety, functionality, and character. Key developments since 2013 are summarized below.

|                  |      |  |
|------------------|------|--|
| PROGRESS TO DATE | 2013 | Lake Center Business Association Reestablished   |
|                  |      | Comprehensive Plan Including Lake Center District Subarea Plan                               |
|                  |      | Portage Road Traffic Study and Road Diet Feasibility Study                                   |
|                  |      | Lakeview Drive to Centre Avenue Reconstructed and 2 Pedestrian Islands Installed             |
|                  | 2017 | Complete Streets Policy Adopted by City Council  |
|                  |      | Trail Connection Between Austin Court and East Shore Drive Property Acquisition              |
|                  |      | Roundabout at Osterhout Avenue Property Acquisition - 10429 Portage Road                     |
|                  |      | South City Limits to Osterhout Avenue Reconstructed with Bike Lanes and Sidewalk             |
|                  |      | ROW Entrance Enhancements - Prosperity Avenue and Pleasant Avenue                            |
|                  |      | Road Rebalancing - Osterhout Avenue to Wetherbee Drive/Paved and Restriped to Add Bike Lanes |
|                  |      | Placemaking Opportunities Property Acquisition - 9125 Portage Road                           |
|                  |      | Emily Drive Lift Station Replacement and Site Improvements                                   |
|                  |      | Forest Drive Traffic Signal Feasibility Study  |
|                  |      | Realignment of Lakeview Drive Intersection Using Safety Funds Following Fatality             |
|                  | 2020 | Sidewalk Design from Ames Street to McClish Court on West Side of Portage Road               |
|                  |      | Sidewalk Easements Obtained for 2214 Ames Street, 9110 and 8944 Portage Road                 |
|                  |      | Southeast Corner of Zylman Avenue Property Acquisition - 8509 Portage Road                   |
|                  |      | Lake Center District Corridor and Placemaking Study Completed                                |
|                  |      | Attainable Housing Development Property Acquisition - 9617 Portage Road                      |
|                  |      | Culvert Replacement and Lakeview Park Improvements Property Acquisition - 9303 Portage Road  |
|                  |      | Future Placemaking and Green Space Along West Lake Property Acquisition - 9138 Portage Road  |
|                  |      | Attainable Housing Development Property Acquisition - 2010 Woodbine Avenue                   |
|                  | 2024 | Forest Drive New Traffic Signal Design and Site Improvements                                 |
|                  |      | Forest Drive Traffic Signal Mast Arms and Poles Contract Bid and Award                       |
|                  |      | Forest Drive Traffic Signal Property Acquisition - 8847 Portage Road                         |
|                  |      | Award Engineering and Public Outreach Contract for Lake Center Corridor Project              |
|                  |      | Adopt Zoning Amendments to Allow Mixed-Use in Lake Center District                           |

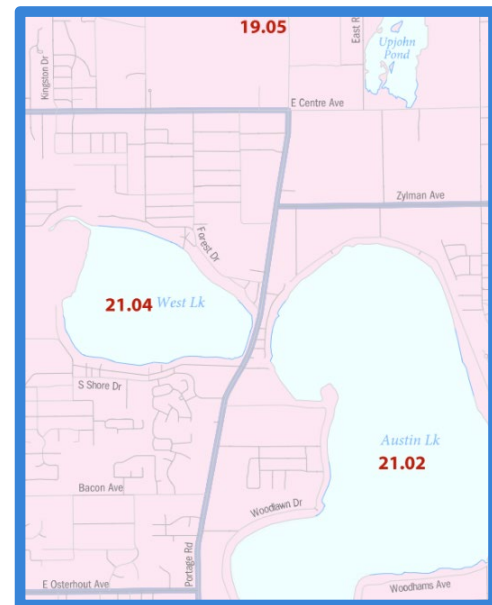
## 2 Project Budget

The City of Portage is requesting \$14.2 million (66% of \$21.5 million project cost) in FY 2025 BUILD funds to leverage \$2.5 million in Surface Transportation Funds, \$481,269 in Carbon Reduction Funds and over \$4.3 million in local funds to deliver 2.5 miles of *Complete Streets Improvements* along the Portage Road Lake Center Corridor. Portage Road from Zylman Avenue to Centre Avenue has been prioritized for funding in the Kalamazoo Area Transportation FY 2026-2029 Transportation Improvement Program for \$2,981,269 in funding for 2028. The city will appropriate more than 20% (\$4,318,731) of project funds locally to satisfy the statutory cost-sharing requirements of the federal funding programs. A letter from the City Manager demonstrating the city’s support and commitment to local funding is included in the application.

Over the last ten years, the city has invested more than \$7 million in planning and construction projects aimed at advancing the vision of the Lake Center Corridor. The city has more than \$2 million currently appropriated for corridor improvements along Portage Road which include design engineering and the Forest Drive traffic signal improvements, which are being funded locally outside of the project the city is seeking BUILD funding for. If BUILD funding is not awarded for the *Lake Center Corridor Complete Streets Improvements*, the city will need to allocate funds over the next 10-15 years to construct the needed improvements.

The project is at a 30% design development stage. A 10% contingency has been included in the project budget to cover unanticipated cost increases or unexpected field conditions. The estimate has been prepared with an appropriate level of detail and with engineering judgement, but also conservatively estimated to account for trends in local construction costs.

A breakdown of all funding sources is below.



Census Tract Map

| Funding Source               | Total Funding |
|------------------------------|---------------|
| RAISE Funds                  | \$14,200,000  |
| Surface Transportation Funds | \$2,500,000   |
| Carbon Reduction Funds       | \$481,269     |
| Non-Federal Costs            | \$4,318,731   |
| Total Project Cost           | \$21,500,000  |



The Lake Center Corridor Improvements Project encompasses various census tracts, categorized as follows:

| 2020 Census Tract  | Project Costs per Census Tract |
|--------------------|--------------------------------|
| 19.05              | \$2,550,000                    |
| 21.02              | \$8,200,000                    |
| 21.04              | \$10,750,000                   |
| Total Project Cost | \$21,500,000                   |

| Urban/Rural        | Project Costs |
|--------------------|---------------|
| Urban              | \$21,500,000  |
| Rural              | \$0           |
| Total Project Cost | \$21,500,000  |

### 3 Merit Criteria



#### 3.1 Safety

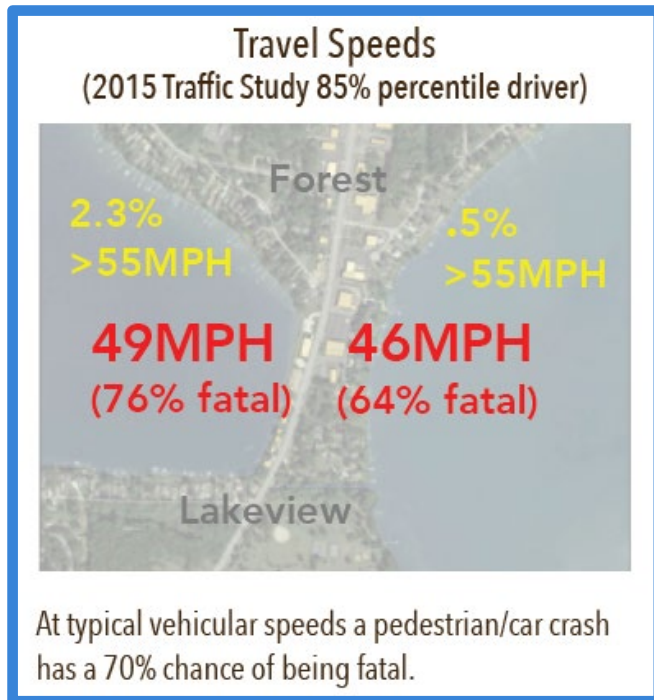
The Lake Center Corridor prioritizes safety for all users – pedestrians, cyclists, and drivers alike. While the posted speed limit on Portage Road is 45 mph, a 2020 pedestrian conditions analysis (as part of the [Lake Center District Corridor and Placemaking Study](#)) found that 70% of the corridor feels unsafe and unrewarding. Redesigning the roadway to balance the needs of all users will improve safety, encourage economic growth, and create a more vibrant, connected community.



McClish Court Pedestrian Island After Vehicle Accident

##### 3.1.1 Speed Reduction

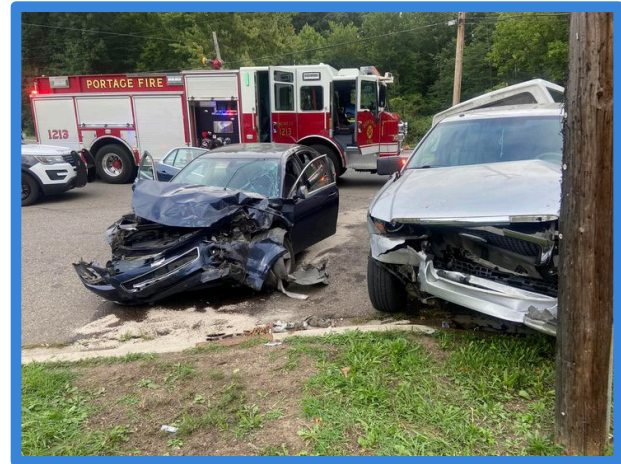
Portage Road between Osterhout Avenue and Centre Avenue spans 2.5 miles and has been primarily designed for vehicle movement. However, excessive speeds discourage walkability and create safety risks. The 2015 *Portage Road Traffic Study/Road Diet Feasibility Study* by CESO examined Portage Road between Lakeview Drive and Forest Drive and found that 85% of



drivers travel 46 mph northbound and 49 mph southbound. According to the [National Roadway Safety Strategy](#), traffic fatalities across the U.S. increased 11% from 2019 to 2020. Research shows at these speeds, the likelihood of a fatal pedestrian-vehicle crash can be as high as 70%. According to the *Highway Safety Manual*, a 1 mph speed reduction can decrease fatal crashes by 17%. Lowering speeds can literally save lives. All this highlights the ongoing risk of excessive speed and the need for roadway improvements to enhance safety for all users.

### 3.1.2 Roundabout

The 2014 *Portage-Osterhout Safety Project Report* identified the need for safety improvements at the Portage Road and Osterhout Avenue intersection, recommending either a traffic signal or a roundabout. Since then, traffic counts from 2018 and 2019 indicate increased traffic volumes, with left-turns from Osterhout Avenue to northbound Portage Road posing the greatest challenge due to limited gaps in traffic. Portage plans to install a roundabout, which will reduce speeds, improve traffic flow, and decrease crash frequency and severity. Preliminary designs have been completed, and the city secured the necessary property to the east, ensuring no additional right-of-way acquisition is needed for this project.



**2022 Osterhout Avenue Head-on Collision Accident**

### 3.1.3 Road Rebalancing

As part of the engineering design of the Lake Center Corridor, which began in 2024, Progressive Companies conducted a traffic impact study to assess three potential configurations for a 3-lane roadway within the project limits. The study aimed to evaluate the effects of each option on vehicle traffic flow and safety.

Using *Synchro*<sup>®</sup> traffic analysis software and methodologies outlined in the *Highway Capacity Manual*, the study analyzed the intersection Level of Service (LOS) for key intersections in the corridor, following MDOT requirements. LOS ratings measure traffic efficiency, with “D” being the minimum acceptable level for both signalized and unsignalized intersections in most areas. The analysis of morning and afternoon peak hours found that all intersections in the study area currently operate at a LOS “C” or better, indicating that Portage Road has excess capacity and is well-suited for road rebalancing.

Based on the study’s findings, the city has identified a 3-lane configuration as the preferred option for the corridor, from Osterhout Avenue to Centre Avenue. The plan includes:

- Bacon Avenue to Lakeview Drive: Conversion of four lanes to three lanes, introducing a dedicated left-turn lane to reduce rear-end crashes at Stanley Avenue.
- Lakeview Drive to Centre Avenue: Conversion from five lanes to three lanes.

Rebalancing Portage Road to three lanes will enhance safety, improve traffic flow, and make room for additional transportation options within the narrow public right-of-way between West Lake and Austin Lake. The project will incorporate wider sidewalks and a multi-use trail, promoting walkability and connectivity.

The table below compares the existing intersection conditions with projected conditions under the proposed 3-lane conversion:

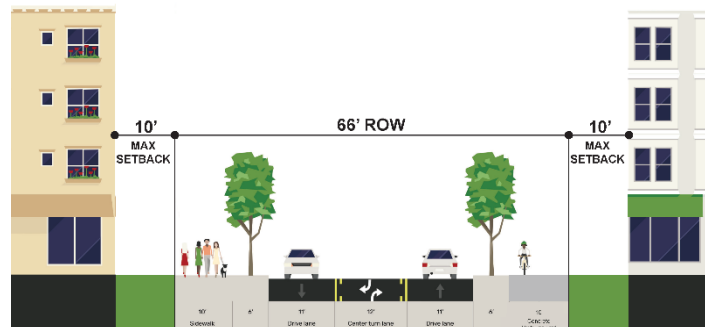
| INTERSECTION                  | EXISTING CONDITIONS |          |      |          | 3-LANE CONVERSION - BACON TO CENTRE |          |      |          |
|-------------------------------|---------------------|----------|------|----------|-------------------------------------|----------|------|----------|
|                               | A.M.                |          | P.M. |          | A.M.                                |          | P.M. |          |
|                               | LOS                 | DELAY(S) | LOS  | DELAY(S) | LOS                                 | DELAY(S) | LOS  | DELAY(S) |
| Portage Road/Centre Avenue    | C                   | 28.5     | C    | 32.8     | C                                   | 31.8     | D    | 40.4     |
| Portage Road/Zylman Avenue    | A                   | 7.9      | B    | 10.2     | B                                   | 12.7     | B    | 13.5     |
| Portage Road/Forest Drive     | B                   | 10.5     | B    | 14.2     | B                                   | 12.0     | C    | 19.9     |
| Portage Road/Lakeview Drive   | B                   | 13.6     | C    | 15.1     | C                                   | 17.3     | C    | 18.6     |
| Portage Road/Stanley Drive    | B                   | 13.5     | B    | 12.7     | C                                   | 17.6     | B    | 13.5     |
| Portage Road/Bacon Avenue     | C                   | 23.9     | C    | 26.1     | C                                   | 27.4     | C    | 28.1     |
| Portage Road/Osterhout Avenue | C                   | 15.7     | C    | 17.6     | C                                   | 16.0     | C    | 19.0     |

**2024 Existing Conditions and 3-Lane Conversion (Bacon Avenue to Centre Avenue) Level of Service and Delay Comparison**

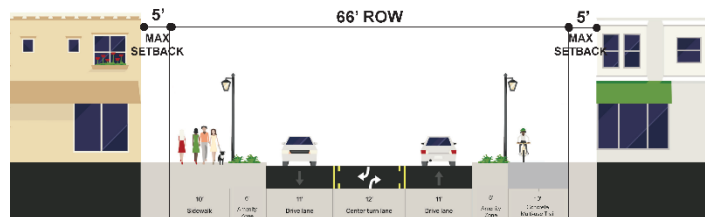
## Benefits of Road Rebalancing:

- Traffic calming for a safer, more predictable driving experience
- Better land use to support business and community growth
- Increased driver attentiveness through improved lane organization
- Enhanced mobility and access for all road users, including pedestrians and cyclists
- Improved livability by fostering
- a more vibrant, pedestrian-friendly corridor

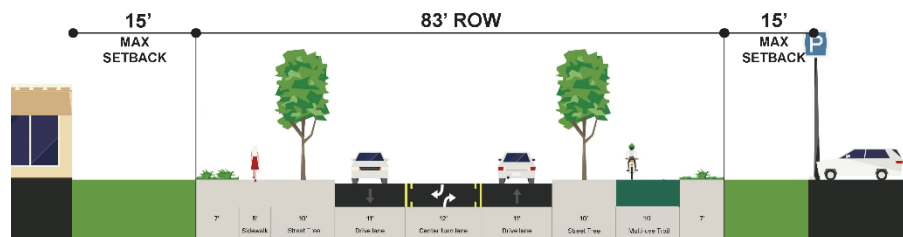
This transformation will help create a safer, more accessible, and community-oriented roadway for the Lake Center District. Typical cross sections of Portage Road are shown to illustrate road rebalancing in combination with recent zoning changes.



**Portage Road Typical Cross Section – Forest Avenue to Centre Avenue**



**Portage Road Typical Cross Section – Lakeview Drive to Forest Drive**



**Portage Road Typical Cross Section – Osterhout Avenue to Lakeview Drive**

### 3.1.4 Lakeview Park Driveway Realignment

In 2019, Lakeview Drive was realigned with Portage Road following a fatal crash. Before the realignment, the Lakeview Park driveway was aligned with Lakeview Drive. The current offset alignment creates a risk for head-on collisions when vehicles attempt to turn left onto Portage Road from both access points simultaneously. The Lakeview Park driveway will be relocated south to once again align with Lakeview Drive. This adjustment will provide safer and more efficient access to Portage Road.



## 3.1.5 Traffic Signal Warranted

A 2020 study by Abonmarche assessed traffic flow, operational efficiency, and safety impacts for both current and projected vehicle volumes along Portage Road. The study analyzed multiple scenarios to evaluate the proposed rebalancing of Portage Road from five lanes to three and recommended installing a traffic signal at the Forest Drive intersection. The signal will improve eastbound left-turn movements and reduce vehicle delays at Forest Drive.

To optimize traffic flow and provide better access for businesses on the east side of Portage Road, the city acquired property east of Forest Drive to accommodate a fourth leg for the new traffic signal. The design for the signal and necessary site improvements is complete.

As part of the phased improvements for the Lake Center Corridor, the Forest Drive traffic signal will be installed ahead of the full corridor road rebalancing. The mast arms and poles have been designed to function with the existing five-lane roadway, while also accommodating the future three-lane configuration. A contract for the signal infrastructure has been awarded and installation – funded locally – will be completed in 2025, prior to the broader Lake Center Corridor improvements.

By installing the signal in advance, the city ensures a smoother transition for future corridor changes while also enhancing traffic management during construction. While the traffic signal at Forest Drive is not part of the city’s BUILD grant application, it remains a critical component of the overall corridor improvements and has been designed to meet the long-term needs of Portage Road.

## 3.1.6 Culvert Replacement

The Austin Lake Drain culvert beneath Portage Road, located between West Lake and Austin Lake, was inspected in 2021 and found to be in poor condition. The 6-foot-wide steel beam superstructure showed significant deterioration, with eight out of the 33 beams either failing or exhibiting severe wear. Additionally, both upstream and downstream concrete spillways are deteriorating, with sediment erosion exposing underlying aggregates along the abutment walls. Corrosion is also present at the waterline and throughout the metal patching of the upper deck.



Portage Road Culvert Failed Beams

If the culvert were to fail completely, it would pose a major safety hazard for motorists and force the closure of one of the city’s key north-south routes for an extended period. Given the limited alternative routes, such a closure would result in substantial congestion and delays.

To prevent these disruptions, the culvert will be replaced with a structure of a similar size, ensuring compatibility with the existing stream width and site conditions. Additional details on the culvert replacement can be found in the State of Good Repair and Innovation Merit Criteria sections.



## **3.2 Environmental Sustainability**

### **3.2.1 Congestion Reduction**

Since 1984, the city has utilized fiber optic cable to enhance communication between traffic signals, optimizing signal coordination to minimize vehicle stops. This results in smoother traffic flow, shorter travel times, improved fuel efficiency and reduced air pollution. Additionally, better signal coordination decreases the likelihood of collisions, reduces frustration, and improves public transportation efficiency by limiting unnecessary stops.

Advanced communications and information technology play a crucial role in addressing congestion and preventing crashes. By reducing traffic delays, the city helps lower fuel consumption and greenhouse gas emissions, allowing vehicles to spend less time idling on the road. Fiber optic infrastructure is also environmentally friendly, requiring minimal energy, and generating little waste.

To further enhance traffic management, the city is extending its fiber network from Zylman Avenue to Bacon Avenue. This expansion will integrate the Forest Drive and Bacon Avenue signals into the system, improving the reliability of the city's traffic control center, and further reducing congestion.

### **3.2.2 Reduction in CO<sub>2</sub> Emissions**

According to the Federal Highway Administration [Road Diet Information Guide](#), “Road diets can reduce speed differential. The case study and simulation results of operational analyses from *Converting Four-Lane Undivided Roadways to a Three-Lane Cross Section – Factors to Consider* show that 85th percentile and average speed along conversions are likely to decrease by 3 to 5 mph.” Lower speeds lead to improved fuel efficiency and reduced vehicle emissions, contributing to cleaner air and a healthier environment.

### **3.2.3 Tree Plantings**

The Lake Center Corridor currently lacks green space and tree coverage within the public right-of-way. As a proud *Tree City USA* recipient for 32 consecutive years, Portage is committed to enhancing its urban canopy. A key objective of the *Lake Center Corridor Complete Streets Improvements* is to create a welcoming, multimodal environment for all transportation users. Planting trees within the public right-of-way will provide shade, improve air quality, and help mitigate the urban heat island effect, making the corridor more comfortable and sustainable for residents and visitors alike.

### **3.2.4 LED Street Lighting**

A well-designed roadway lighting system enhances visibility and contributes to a safer transportation network. According to the [FHWA Lighting Handbook](#), pedestrians are 3 to 6.8 times more vulnerable at night, with school-age children being particularly at risk. Many students walk or bike to and from Lake Center Elementary during twilight hours when visibility is poor, making adequate lighting a critical safety improvement. Currently, Portage Road lacks sufficient lighting throughout the corridor, underscoring the need for additional streetlights.



LED lights offer significant advantages over traditional streetlights, including greater energy efficiency, longer lifespan, and lower maintenance costs. Additionally, they reduce light pollution, making them a more environmentally friendly option. Implementing LED street lighting along the corridor will enhance security and create a safer, more inviting roadway for all users.

### **3.2.5 Storm Water Management**

A new piped stormwater system will be installed along the southernmost mile of the Lake Center Corridor to efficiently collect stormwater from the proposed curb-and-gutter roadway. Designed in accordance with the city's *Storm Water Criteria Manual* and best management practices, this system will pre-treat stormwater before directing it to a retention basin, ensuring proper infiltration into the groundwater. As part of the design process, the city will evaluate the existing stormwater infrastructure to identify opportunities for integrating green design elements. These improvements may enhance water quality, reduce localized flooding, and support sustainable stormwater management practices within the corridor.

## **3.3 Quality of Life**

### **3.3.1 Streetscape**

A *Complete Streets* approach shifts the focus from simply “moving cars quickly” to “providing safe mobility for all users.” Currently, Portage Road prioritizes vehicle movement over pedestrian and cyclist safety, with minimal landscaping or streetscape features to enhance the environment. The absence of these elements, combined with high traffic speeds, leaves pedestrians feeling exposed and unsafe. This lack of inviting and well-connected infrastructure diminishes both the sense of community and overall quality of life along the corridor.

Investing in streetscape improvements will not only enhance safety and accessibility but also encourage private investment and redevelopment of vacant and underutilized properties. As outlined in the *Safety Merit Criteria* section, upgraded street design and safety infrastructure will create a more welcoming and functional corridor. Additionally, new public green spaces and water access points along recently acquired waterfront property will offer opportunities for recreation, placemaking, and community programming. Modernized LED streetlights, as highlighted in the *Environmental Sustainability Merit Criteria* section, will further improve energy efficiency and create a safer, well-lit environment for pedestrians.

### **3.3.2 Walkable Community**

The existing public right-of-way along Portage Road provides limited space for sidewalks and other pedestrian-friendly infrastructure, making it difficult to achieve the city's vision for a truly walkable community. However, the proposed road rebalancing of Portage Road will allow for the strategic reallocation of space, enabling the construction of a multi-use trail from Osterhout Avenue to Centre Avenue on the east side of Portage Road. A continuous sidewalk on the west side will fill in gaps and existing sidewalk will be replaced with minimum five-foot width, in compliance with *Americans with Disabilities Act (ADA)* standards. North of Lakeview Drive, available right-of-way and easements will support sidewalk and greenspace enhancements to further improve walkability.

Currently, pedestrians are the most vulnerable travelers on Portage Road and their needs are fundamental: accessible destinations, comfortable and safe walking areas, easy crossings. However, the corridor's narrow right-of-way, excessive hard surfaces, and sprawled development have historically limited sidewalk constructions, leaving pedestrians with few safe options for travel.

Without adequate pedestrian and bike infrastructure, residents must rely on private vehicles – even for short trips. By reallocating road space to support walking and biking, the project will promote active lifestyles, improve overall quality of life, and encourage a shift away from car dependency for short-distance travel. Additionally, expanding sidewalks and adding a multi-use trail will help foster a stronger sense of community, enhance safety, reduce air pollution, and support local businesses by increasing foot traffic and accessibility.

### **3.3.3 Coordination with Metro and Mobility Hubs**

Metro, the regional bus transit system, serving the greater Kalamazoo area, including Portage, is expected to see increased demand along Portage Road with the development of affordable workforce housing. Recognizing the need for flexible transit solutions, Metro launched a micro-transit pilot program in 2024, offering on-demand ride-sharing services. This service has already city-wide, making it an ideal solution for areas like the Lake Center Corridor, where demand exists but does not yet justify a traditional fixed bus route.

To enhance connectivity and accessibility, four mobility hubs will be strategically placed along Portage Road at key locations:

- Near the proposed affordable workforce housing development
- Emily Drive
- Zylman Avenue
- Centre Avenue

These mobility hubs will be positioned adjacent to the planned multi-use trail, serving both transit riders and pedestrians. Each hub will feature shelter, seating, electronic/phone charging stations, and informational kiosks with maps highlighting the Lake Center Corridor amenities, transportation options. By integrating public transit, pedestrian infrastructure, and multi-modal connectivity, these hubs will improve accessibility, encourage transit use, and support a more walkable, connected community.

### **3.3.4 Zoning and Land Use**

Portage Road features a mix of residential and commercial developments characterized by suburban design, diverse zoning districts, buildings set back behind front parking lots, lacking a cohesive aesthetic. Recently, the City of Portage approved mixed-use zoning and land use updates for 172 parcels in the Lake Center Corridor. These changes aim to transform the area into a more traditional neighborhood corridor with wider sidewalks, buildings closer to the street, and parking lots relocated behind structures, fostering a more downtown village atmosphere. As part of the Lake Center District Commercial Corridor Rezoning initiative, the city partnered with McKenna to lead public outreach efforts. This included a stakeholder committee appointed by the Portage City Council and hosting three public open houses. The initiative began in 2023 and

culminated with the adoption of a new City Zoning Ordinance in 2024. Further details are available in the *Economic Competitiveness and Opportunity and Innovation Merit Criteria* sections.

### 3.3.5 Climate Resilience

Portage Road currently has overhead power lines and poles on both sides, occupying valuable space in the public right-of-way and posing a risk of outages during severe weather. This project aims to enhance energy resilience and quality of life by burying overhead utility lines crossing Portage Road and eliminating poles along the corridor. Utilizing an alternative primary power pole route will minimize overhead lines and poles. Reliable utilities are crucial for businesses, schools, medical facilities, and the community. Undergrounding these utilities safeguard against outages and improves reliability. To ensure coordination, regular quarterly meetings are being held with all utility companies located in the corridor to discuss utility relocations.



## 3.4 Mobility and Community Connectivity

The Lake Center Corridor currently lacks adequate infrastructure for safe pedestrian and bicycle access. Sidewalks are intermittent and often limited to one side of the road, frequently ending at driveways. In many areas, with constrained right-of-way, sidewalks are positioned dangerously close to the roadway, leaving minimal separation between pedestrians and vehicles traveling at speeds exceeding 45 mph.

### 3.4.1 Corridor Connectivity

To address connectivity issues, a 10-foot wide multi-use trail will be constructed along Portage Road from Osterhout Avenue through the heart of the Lake Center Corridor to Centre Avenue. The trail will provide a safe route to school, improved access to Lakeview Park, and seamless connectivity to existing city trails and local businesses. Additionally, the trail will bridge a crucial gap in the Southwest Michigan Bikeway regional route, linking the city's southerly limits and Osterhout Avenue to Forest Drive and Lovers Lane, which connect to bike routes in the City of Kalamazoo. [Portage Trail Map](#)

### 3.4.2 Safe and Accessible Transportation

Planned corridor upgrades include replacing sidewalks to meet a minimum of five feet and ensuring compliance with the *Americans with Disabilities Act (ADA)* standards. Sidewalks will also be added in areas where they are currently absent. A new traffic signal will be installed at Forest Drive, offering a protected crossing at the heart of the Lake Center Corridor. Furthermore, a pedestrian-activated signal near Lakeview Drive and Lakeview Park will enable safe crossings for residents accessing the park. These enhancements will improve mobility for pedestrians traveling to local small businesses, Lake Center Elementary School, Lakeview Park, and churches in the area. Additional information can be found in the *Safety Merit Criteria* section.



## 3.5 Economic Competitiveness and Opportunity

A *Complete Streets* approach is essential to revitalizing the Portage Road Lake Center Corridor, driving local economic growth and fostering a cohesive, attractive visual identity that honors the area's rich history. By expanding job opportunities, supporting entrepreneurs, incubating small

businesses, and positioning the Lake Center Corridor as a prime location for new enterprises, this project will stimulate economic activity. A safer, more inviting roadway will not only encourage business investment and expansion but also increase neighborhood engagement and destination-driven visits.

### **3.5.1 Promote Local Economic Development**

Recently, the City of Portage approved mixed-use zoning and land use updates for 172 parcels in the Lake Center Corridor. These changes aim to transform the area into a more traditional neighborhood corridor with wider sidewalks, buildings closer to the street, and parking lots relocated behind structures, fostering a more downtown village atmosphere. The impact of these zoning changes is already evident. CentrePort Commons has moved forward with plans for a four-story, mixed-use development at the corridor's northern gateway, featuring 106 residential apartments with associated retail and restaurant spaces. Inspired by the new vision and zoning framework, 468 Wine, has committed a \$1.5 million investment in a new facility along Portage Road, allowing them to expand operations, create new jobs, and contribute to the corridor's economic revitalization. Their project is expected to generate two full-time positions and 20 part-time roles. The investments, along with letters of support for the project, underscore the momentum behind the transformation of the Lake Center Corridor.

### **3.5.2 Opportunities for Employers**

Portage Road is a key corridor for major economic employers, such as Pfizer, Stryker, and FedEx, all located within 1.5 miles to the north of the Lake Center Corridor. Continuous multi-use trails along Portage Road provide direct access from these corporations to Centre Avenue, allowing employees to commute via multiple modes of transportation. As sustainability remains a priority for these corporations, as reflected in their corporate social responsibility policies (e.g., [Stryker 2022 Comprehensive Report](#)), enhanced infrastructure and transit options align with their goals. Additionally, the development of affordable housing within the Lake Center Corridor will help address workforce development by providing housing for employees at these major companies.

### **3.5.3 Corridor Improvement Authority**

To support ongoing economic growth, the city is forming a Corridor Improvement Authority to leverage the increased tax base generated by new developments. The Corridor Improvement Authority will help fund projects that enhance the corridor's appeal for residents and visitors, such as building façade and sign improvements, property acquisitions, public and private infrastructure improvements, and development of public spaces. In the fall of 2024, the city launched its façade grant program for the Lake Center Business District, providing financial incentives to local businesses for aesthetic and structural upgrades.

### **3.5.4 Increased Fire Protection**

Currently, all water mains and fire hydrants are located on the west side of Portage Road, while fire safety codes requires hydrants on both sides of major streets for new developments. To improve safety and prevent costly road closures during emergencies, the city must extend water mains and install hydrants on the east side. This infrastructure upgrade will enhance fire protection for east-side properties, increase the area's appeal for redevelopment, and reduce high

fire protection costs, which have historically deterred investment. Several prime properties have remained vacant for years due to the prohibitive costs of installing fire protection across Portage Road. Addressing this issue will remove barriers to redevelopment and encourage further economic growth.



### 3.6 State of Good Repair

#### 3.6.1 Culvert Replacement

The Austin Lake Drain culvert beneath Portage Road between West Lake and Austin Lake was inspected in 2021 and found to be in poor condition. The 6-foot-wide steel beam superstructure showed significant deterioration, with eight out of the 33 beams either failing or exhibiting severe wear. Additionally, both upstream and downstream concrete spillways are deteriorating, with sediment erosion exposing underlying aggregates along the abutment walls. Corrosion is also present at the waterline and throughout the metal patching of the upper deck.



Austin Lake Drain Culvert Deteriorated Spillways

A full replacement is necessary with a structure of similar size, ensuring compatibility with the existing stream width and site conditions. Design options will consider composite, low-carbon, and innovative materials to potentially reduce construction time. This replacement will extend the culvert's lifespan by 50+ years. The Kalamazoo County Drain Commissioner fully supports the project, stating:

*"This particular culvert is in poor condition, and I encourage its replacement. As Austin Lake and West Lake have established legal lake levels, it is important to my office that nearby infrastructure is improved and maintained in good condition. Moreover, I support the city's intent to replace the culvert in a manner to minimize disturbances to both lakes."*

#### 3.6.2 Traffic Signal Improvements

The traffic signals at Zylman Avenue and Centre Avenue, installed in 2000, are due for replacement. Upgrades will include new traffic signal mast arms and poles, a signal cabinet, countdown pedestrian signals with push buttons, pedestrian signal pedestals, signal backplates with retroreflective borders, and LED street name signs at each intersection. A Pan-Tilt-Zoom (PTZ) camera will be installed on Portage Road to monitor traffic flow and improve response time in the event of a crash. Real-time corridor visuals will enable more efficient traffic signal timing adjustments, helping to reduce congestion.



### 3.6.3 Sidewalk Improvements

The existing sidewalk throughout the corridor is deteriorated, does not meet Americans with Disabilities Act (ADA) guidelines at driveways, and lacks sufficient widths adjacent to Portage Road, creating unsafe conditions for pedestrians to walk through parking lots. Improvements will replace all 4-foot-wide sidewalks with a minimum width of five feet and ensure compliance with ADA guidelines, including proper slopes through driveways. Where sidewalks run adjacent to Portage Road, separation will be added where possible to enhance pedestrian safety.



Portage Road North of West Lake and Austin Lake

### 3.6.4 Access Management

The city's 2005 *Major Street System Traffic Analysis* conducted by Midwestern Consulting, LLC, established access management guidelines to prevent or alleviate traffic issues. Throughout the Lake Center Corridor, many businesses have interconnected parking lots and some properties feature pavement spanning their entire frontage due to narrow lot widths along Portage Road.



Portage Road North of Stanley Avenue

While some parcels have access agreements with adjacent property owners, changes have not been made to remove unnecessary driveways, contributing to traffic inefficiencies and vehicle conflict points. Planned improvements, including curb and gutter installation in uncurbed areas and new sidewalks, will create opportunities to consolidate driveways and enhance the corridor's character. Businesses with multiple driveways or access to multiple streets will be reviewed with modifications made as needed to improve traffic flow and safety.

### 3.6.5 Replacement of Deteriorating Utilities

The Lake Center Corridor contains a 10-inch sanitary force main sewer from 1975 and a 12-inch cast iron water main from 1967, both of which have ongoing maintenance issues and require replacement. Per city policy, cast iron water mains are replaced during major street reconstruction projects. To minimize disruptions to motorists, the replacements will be coordinated with the road reconstruction project. Combining these efforts will reduce the overall costs and streamline construction.





## 3.7 Partnership and Collaboration

### 3.7.1 Portage Road 360

As part of a broad public engagement and outreach campaign, the city has launched Portage Road 360 to promote the Lake Center Corridor and envision a transformation that considers all users and surrounding areas. To encourage participation, the city developed a Portage Road 360 logo and distributed coasters with a QR code linking to a community survey at various businesses and restaurants along Portage Road. Since its launch in early January 2025, the Portage Road 360 survey has received more than 350 responses and will remain open through February.

A key engagement effort took place at Twelve Baskets Food Pantry, located in the Lake Center Corridor. By meeting people in a familiar setting, the city fostered genuine conversations and gathered valuable input on the future of Portage Road. More than 50 community members completed survey, providing diverse perspectives on what is working, what isn't, and what they envision for the corridor. Survey results showed a strong desire for expanded transportation options with 30% wanting to walk more, 36% interested in biking and 33% open to using public transit if improvements were made. When asked about top priorities for Portage Road, community members emphasized the need for safer, more accessible streets with sidewalk improvements as the highest priority, followed by enhanced street lighting, additional crosswalk ramps, and more street trees to improve the corridor's appearance and atmosphere. By meeting residents where they are, the city ensures every voice is heard and valued in the planning process.



The first Portage Road 360 community engagement event was held on January 17, 2025 at Presidential Brewing Company, a popular restaurant located in the Lake Center Corridor. More than 100 attendees participated in the open house, sharing their thoughts, ideas, and concerns about the future of Portage Road. The event provided a valuable platform to listen, learn, and engage with the community. Insights gathered are being carefully analyzed and incorporated into the planning process to ensure community voices guide decision-making. Moving forward, the Portage Road 360 team will continue to engage with residents and stakeholders, providing updates and opportunities for further input to ensure the final design reflects the community's needs and aspirations.

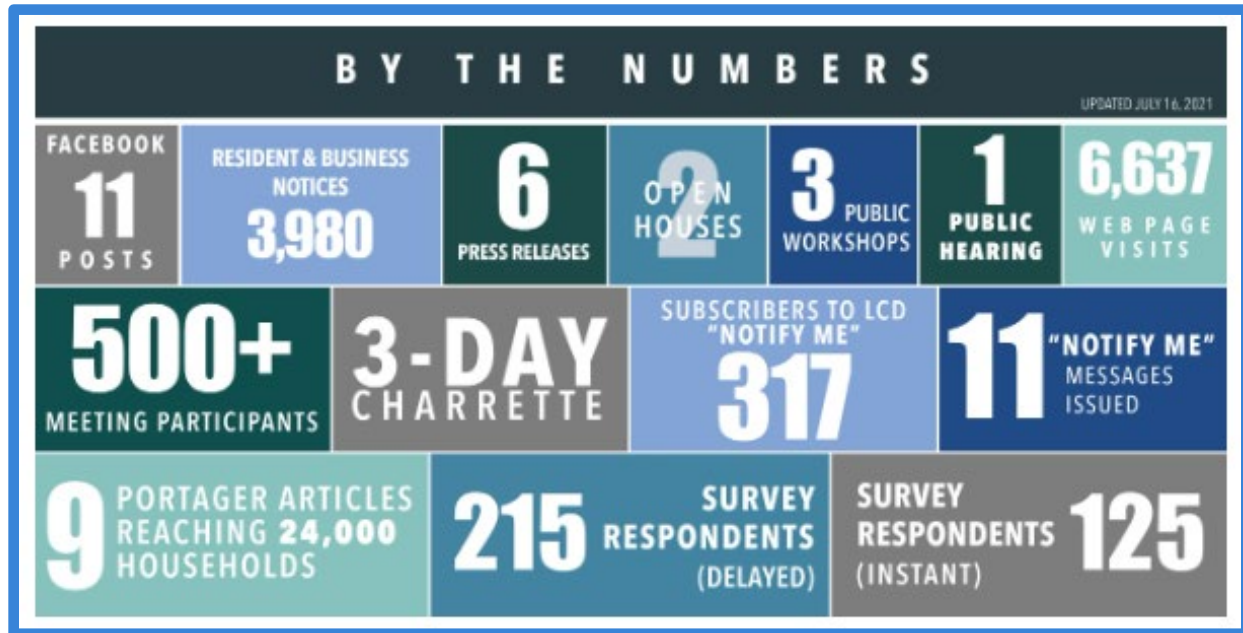
### 3.7.2 Zoning and Land Use Public Relations

The City of Portage recently approved mixed-use zoning and land use changes for 172 parcels abutting Portage Road in the Lake Center Corridor. These updates aim to create a traditional neighborhood corridor with wider sidewalks, buildings closer to the road, and parking lots behind buildings to foster a more downtown village atmosphere. As part of the Lake Center

District Commercial Corridor Rezoning efforts, the city partnered with McKenna to lead a public relations and outreach campaign. This effort included a stakeholder committee appointed by the Portage City Council and three public open houses to gather community input. The process began in 2023 and concluded with the adoption of a new City Zoning Ordinance in 2024.

### 3.7.3 Community Engagement

For over a decade, the City of Portage has actively sought public input on improvements to the Portage Road corridor. Following a corridor study in 2015, the city hosted an open house at Portage City Hall, where community members reviewed study findings, viewed potential layout schematics, and asked questions. Led by Farr Associates, the 2021 Lake Center District Corridor and Placemaking Study engaged a wide range of stakeholders. Formed as part of the study, the Lake Center District Steering Committee, comprised of area business owners, developers, and residents, met multiple times in to provide feedback and guide study proposals. Public engagement efforts, as summarized below, included multiple outreach activities, ensuring community voices helped shape the final recommendations.



2021 Lake Center District Corridor and Placemaking Study Outreach Efforts

### 3.7.4 Utility Coordination

The city is working closely with Consumers Energy to replace the aging, deteriorated gas mains in Portage Road from Lakeview Drive to Centre Avenue ahead of the Lake Center Corridor improvements, scheduled for completion in 2025. Additionally, the city met with Consumers Energy and other utility providers to explore undergrounding overhead utility crossings and removing poles that serve only one or two properties. While the city plans to underground utility work through its Capital Improvement Program, ongoing coordination is critical to ensure seamless integration with the Lake Center Corridor design and avoid construction delays.



## **3.8 Innovation**

### **3.8.1 Zoning Changes for the Needs of the Future Corridor**

Redesigning the public right-of-way on Portage Road alone will not fully realize the vision for the Lake Center Corridor – zoning updates are essential. Recognizing this, the City of Portage took the initiative to update its zoning ordinance to support a more cohesive, pedestrian-friendly corridor that fosters a stronger sense of place. Currently, Portage Road is a multi-lane, high traffic roadway with a mix of older and renovated single-family homes interspersed among commercial properties. Many non-conforming houses remain within commercially zoned areas, resulting in a fragmented land-use pattern that lacks a unified village-style design.

To address this, the city recently approved mixed-use zoning and land use changes affecting 172 parcels along Portage Road. The new zoning encourages wider sidewalks to improve walkability, buildings closer to the street to create a more inviting streetscape, and parking lots behind buildings to enhance the corridor’s aesthetic and pedestrian experience. Rather than modifying the corridor to fit with the existing land use, the city worked closely with the community to determine the desired land use for Portage Road. This collaborative approach ensures the corridor evolves into a vibrant, connected, and pedestrian-oriented neighborhood business district, linking residents to lakes, parks, schools, trails, and commercial hubs seamlessly and intentionally.

### **3.8.2 Project Delivery**

The *Lake Center Corridor Complete Streets Improvements* project consolidates all planned enhancements into a single, coordinated effort – maximizing efficiency and minimizing public inconvenience. If the city were to solely fund and implement these improvements, it would take more than a decade to complete all necessary improvements on Portage Road. Instead, by designing the entire corridor at once and incorporating all improvements into a single project, the city can:

- Significantly reduce costs through streamlined planning and construction.
- Minimize disruptions to property owners, businesses and motorists.
- Deliver community benefits much sooner, including increased property values, improved health from expanded active transportation options, and a more walkable, connected neighborhood.

This comprehensive approach ensures that the Lake Center Corridor transformation happens efficiently, effectively, and with lasting positive impact for the entire community.

### **3.8.3 Adaptive Signal Control Technology**

Modern transportation systems must address mobility, safety, and environmental challenges, which can lead to economic losses, increased accidents, and long-term environmental impacts in urban areas. Traditional signal systems rely on pre-programmed timing schedules that do not adjust in real time to changing traffic conditions. Adaptive Signal Control Technology (ASCT) offers a dynamic solution by continuously adjusting red, yellow, and green light timings to

accommodate fluctuating traffic patterns and reduce traffic congestion. The City of Portage plans to implement an adaptive traffic signal controller to optimize traffic in a connected vehicle environment. Recent advancements in communication technology allow vehicles to interact with roadway infrastructure, including traffic signals and other vehicles, known collectively as connected vehicle technology. This technology provides real-time data processing with minimal delays (low latency), high reliability and security in a mobile environment, and improved coordination of urban traffic systems. According to the [Federal Highway Administration](#), ASCT can improve travel time by more than 10% and reduce emissions of hydrocarbons and carbon monoxide by enhancing traffic efficiency. By integrating ASCT, Portage aims to create a smarter, safer, and more sustainable transportation network.

### 3.8.4 Pedestrian Hybrid Beacon



Pedestrian Hybrid Beacon Crossing

To enhance pedestrian safety and connectivity, the City of Portage proposes a mid-block pedestrian-actuated crossing on Portage Road between South Shore Drive and Emily Drive. This location was strategically selected to provide a safer and more convenient crossing for residents to nearby Lakeview Park and the neighborhoods south of West and Austin Lakes. and on the west side of Portage Road. This crossing will feature Portage's first Pedestrian Hybrid Beacon (PHB) traffic signal, a proven safety measure designed to improve pedestrian visibility and reduce vehicle-pedestrian conflicts.

The PHB will be integrated with the proposed traffic signals on Portage Road and connected to the city's fiber network extension to ensure seamless coordination with traffic flow. This approach minimizes disruption for motorists while significantly enhancing pedestrian accessibility and safety along the corridor.

### 3.8.5 Culvert Replacement

The Austin Lake Drain culvert beneath Portage Road between West Lake and Austin Lake was inspected in 2021 and found to be in poor condition, necessitating a full replacement. The new culvert will be designed to match the existing stream width and site conditions, ensuring proper drainage and environmental compatibility. During the design phase, various material options will be evaluated, including composite, low-carbon, and other innovative materials that could minimize disruptions. Given the location, full road closure and detour will be required during the replacement, making efficient project execution a top priority. As Portage Road is a major arterial street, its temporary closure will have a significant impact on traffic, reinforcing the need for a well-planned, timely replacement to restore normal traffic flow as quickly as possible.

## 4 Project Readiness

The city partnered with Wightman and Progressive Companies in 2024 to complete design engineering and initiate a public engagement initiative for the entire Lake Center Corridor. The initial focus has been on collecting all survey and utility data, completing a traffic impact study, public engagement and beginning NEPA environmental clearance requirements of the corridor. The schedule assumes the obligation of all FY 2025 BUILD funds fully by the end of the 2028 calendar year and anticipates the completion of all construction activities by the end of 2029, well in advance of the 2034 deadline to expend all funds outlined in the Notice of Funding Opportunity.

Construction is planned to be divided into four segments starting in 2026:

- 2026 – Bacon Avenue to Lakeview Drive
- 2027 – Lakeview Drive to Forest Drive
- 2028 – Forest Drive to Centre Avenue
- 2029 – Osterhout Avenue to Bacon Avenue

The risk associated with the *Lake Center Corridor Complete Streets Improvements* is low. The City of Portage Transportation & Utilities Department will be responsible for administering the grant and managing all design and construction activities. Portage has the resources needed to accomplish the project on time and within budget, including stable funding, experience administering federal funding, technical in-house staff, and community support.

### 4.1 Project Schedule

BUILD funding will be obligated in advance of the statutory deadline of 2029. Design engineering services are already underway and not a part of the funding request. This allows environmental reviews and preliminary design to be completed before a grant agreement is finalized (anticipated in fall of 2025). Design of the first phase is anticipated to be complete by summer 2025 with construction scheduled to begin in 2026. Final design of all subsequent phases will be completed in 2026 with final construction completion no later than 2029, and final closeout in 2030.

| Start Date | End Date | Milestone                         | 2024 |    |    |    | 2025 |    |    |    | 2026 |    |    |    | 2027 |    |    |    | 2028 |    |    |    | 2029 |    |    |    |
|------------|----------|-----------------------------------|------|----|----|----|------|----|----|----|------|----|----|----|------|----|----|----|------|----|----|----|------|----|----|----|
|            |          |                                   | Q1   | Q2 | Q3 | Q4 | Q1   | Q2 | Q3 | Q4 | Q1   | Q2 | Q3 | Q4 | Q1   | Q2 | Q3 | Q4 | Q1   | Q2 | Q3 | Q4 | Q1   | Q2 | Q3 | Q4 |
| 06/27/24   | 09/23/24 | City Awards Design Engineering    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |
| 10/01/24   | 12/15/24 | Topographic Survey of Corridor    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |
| 10/01/24   | 01/31/25 | Traffic Impact Study              |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |
| 10/01/24   | 02/28/25 | Planning/Conceptual Design        |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |
| 11/01/24   | 03/31/26 | Public Engagement and Outreach    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |
| 01/01/25   | 09/30/25 | Design Engineering                |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |
| 10/01/24   | 08/15/25 | ROW Acquisition                   |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |
| 10/01/24   | 12/31/25 | NEPA                              |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |
| 07/01/25   | 09/30/26 | Private Utility Relocation        |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |
| 04/15/26   | 11/15/26 | Construction - Bacon to Lakeview  |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |
| 04/15/27   | 11/15/27 | Construction - Lakeview to Forest |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |
| 04/15/28   | 11/15/28 | Construction - Forest to Centre   |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |
| 04/15/29   | 11/15/29 | Construction - Osterhout to Bacon |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |



## **4.2 Required Approvals**

### **4.2.1 National Environmental Policy Act (NEPA)**

The project will take place almost entirely within the public right-of-way and existing urbanized footprint, so no adverse impacts to the environment are expected; however, all NEPA requirements and documentation will be completed following 23 CFR Part 771, as amended to comply with 23 U.S.C. Section 128. The city understands NEPA reviews can take time and delay schedules, even in areas where minimal impacts are expected. To provide more time for these reviews, the city began NEPA clearance requirements for the entire corridor as part of early design engineering.

### **4.2.2 Permitting Requirements**

A water supply permit will be required through the Department of Environment, Great Lakes and Energy (EGLE) for water main extensions across Portage Road for increased fire protection and water main replacement between Ames Drive and McClish Court. A wastewater system permit will be required through EGLE for force main replacement from the Emily Drive lift station to McClish Court. Both EGLE permits will require standard reviews and there are no anticipated concerns with the proposed improvements that would cause delays. The culvert replacement will require a Joint Permit Application through EGLE for Part 31: Floodplain Regulatory Authority and Part 301: Inland Lakes and Streams. The proposed culvert will be the same width and size as the current culvert being replaced. There are no concerns with obtaining a permit; however, this permit application will be submitted with ample time for review and approval.

A National Pollutant Discharge Elimination System Notice of Coverage permit through EGLE will be required for impacting land over five acres, which is anticipated with the development of the multi-use trail, roundabout, and road improvements within the public right-of-way. Right-of-Way and Soil Erosion and Sedimentation Control permits will be issued directly through the City of Portage as the implementing agency.

### **4.2.3 Right-of-Way Acquisition**

A large component of this project is implementing complete streets and utilizing road rebalancing within the existing public right-of-way. Approximately 95% of the properties north of Lakeview Drive have existing easements already in place, providing additional room beyond the right-of-way as needed for corridor improvements. The city has acquired easements necessary for the project and anticipates having all right-of-way acquisitions complete by the summer of 2025, far in advance of bidding and obligating funds for construction. Although minimal right-of-way acquisition is anticipated as part of this BUILD project, the city is working on acquiring any remaining sidewalk easements north of Lakeview Drive for consistency in the final design and anticipates grading easements may be necessary for driveway replacements.

### **4.2.4 Planning Approvals**

Several phases of the Lake Center Corridor improvements are included in the local Kalamazoo Area Traffic Study 2050 Metropolitan Plan as standalone projects. In the recent call for projects for Transportation Improvements Funds, Portage Road from Zylman Avenue to Centre Avenue is scheduled to receive \$2,981,269 in federal funding for 2028, which includes \$2.5 million in Surface Transportation Funds and \$481,269 in Carbon Reduction Funds.



The city's Capital Improvement Program (CIP) includes the four phases of the Lake Center Corridor improvements. The project is supported by multiple city and regional master plans, including:

- [City of Portage CIP \(2024-2030\)](#)
- [Kalamazoo Area Transportation Study 2050 Metropolitan Transportation Plan](#)
- [City of Portage Comprehensive Plan](#)
- [Lake Center District Corridor and Placemaking Study](#)
- [Portage Forward Together 2045 Master Plan](#)
- [Portage Recreation and Open Space Plan](#)

#### **4.2.5 Public Engagement**

In 2021, the city completed the [Lake Center District Corridor and Placemaking Study](#) which evaluated Portage Road challenges and opportunities, while illustrating the trade-offs that occur in the public right-of-way as we consider the different users and uses of space. Various stakeholders were engaged to help shape the plan recommendations and multiple public engagement activities were undertaken during the study process.

In 2024, the city partnered with Wightman and Progressive Companies to begin a public engagement initiative “*Portage Road 360*” which will continue throughout project development and delivery, as the city is committed to implementing improvements that are responsive to the community's needs and input. The city has a [Lake Center District](#) webpage with progress updates and an option to sign up for notifications of city projects within the Lake Center District.



The Lake Center area has an active business community, lakefront amenities, and residents committed to this area. A steering committee of area business owners, developers, and residents will help guide the design process between community engagement opportunities of the Lake Center Corridor. These stakeholders are critical in helping support an active, vibrant area. Advancing the project will require coordination and collaboration with the community and businesses, and continued communication to ensure the vision of the Lake Center Corridor is shaped and implemented collaboratively.

### **4.3 Assessment of Project Risks and Mitigation Strategies**

The City of Portage understands all major capital projects include a level of risk. The city, on average, administers one federally funded project annually and understands the reporting requirements and financial responsibilities associated with federal funds. The city has upcoming federally funded projects annually from 2025 – 2029, ranging from \$3 million to \$7 million, having similar scope of work elements to the *Lake Center Corridor Complete Streets Improvements*. The city has identified the following project risks and mitigation strategies.

#### **4.3.1 Risk 1: Project Readiness**

The Lake Center Corridor Improvements Project is the culmination of various projects that would otherwise be completed over the next 10-15 years, depending on local and federal funding availability. By combining the various improvements into one large project, these improvements are completed more timely and efficiently, minimizing disruption to motorists and businesses. Due to the 2.5 miles of roadway that will be affected and various improvements along the corridor, the project will be constructed in four phases over four years of construction time, instead of being dragged out over a decade. The city recognized having one engineering consultant would provide the best continuity between phases for the entire corridor, whether constructed in four or ten years. If BUILD funding is not awarded in FY 2025, design will continue, construction may be delayed and either smaller phases would be implemented, or there will be gaps between each construction phase completed, until funding is available to complete the entire Lake Center Corridor. The necessary safety and mobility improvements would not be fully realized for several years and improvements will cost the city more money in the necessary overlap of various projects if they must be constructed as smaller standalone projects. This adds frustration to businesses and motorists if construction is continually ongoing in this corridor over the next 10-15 years. The nature of these local businesses will make it harder for these businesses to survive continuous construction over a longer period.

#### **4.3.2 Risk 2: Right-of-Way Acquisition**

The acquisition of right-of-way could potentially impact the project schedule for any project. The *Lake Center Corridor Complete Streets Improvements* project is designed to minimize right-of-way acquisition and is planned to be constructed almost entirely within the existing public right-of-way and existing easements. The project schedule is conservative and anticipates the project being fully obligated a year before the 2029 obligation deadline. Any additional right-of-way that is identified during design will be coordinated with affected property owners promptly and are not anticipated to cause issues with the project schedule. Right-of-way is planned to be completed in summer of 2025.

#### **4.3.3 Risk 3: Construction Impacts**

During construction, detours will impact access and travel time. Access to businesses will be temporarily impacted when installing sidewalk and driveway improvements. Pedestrian mobility during construction will be impacted by sidewalk closures, detours and the temporary unavailability of ADA-accessible facilities. Mitigation strategies include efficiently phasing each construction year to lessen direct impacts to each business with construction activities. Part of the Portage Road 360 campaign involves meeting with each business owner along the corridor to discuss the project and potential impacts to their business during construction. The feedback will help the project team minimize the inconvenience to the business community while key infrastructure improvements are completed.

Portage will provide communication to motorists regarding detours during construction and coordinating with businesses to minimize potential is key to the success of the project. The city will use social media and post updates on construction and schedule regularly, in addition to construction updates on the city's website. The city offers the ability to sign up for weekly updates on construction projects and choose the type of communication, whether it is an email, phone call, or text message.

#### 4.4 Economic Analysis (Benefit-Cost Analysis)

The benefit cost analysis was conducted using the U.S. Department of Transportation 2024 Benefit-Cost Analysis (BCA) Guidance for Discretionary Grant Programs document as a guide for preferred methods and monetized values. Construction of the Lake Center Corridor Improvements will generate benefits totaling \$57,334,884 in undiscounted 2023 dollars and \$34,930,362 using a 3.1 percent discount factor. Although, the city has locally incurred over \$2 million in local share costs for design engineering and the Forest Drive intersection improvements (scheduled for construction in 2025 ahead of corridor project), these are being completed outside of the corridor project and have not been included in the BCA.

The period of analysis corresponds to 25 years and includes 20 years of benefits starting in 2030. Total capital costs for the project are expected to be \$21.5 million in undiscounted 2023 dollars, or \$18,782,571 million using a 3.1 percent discount factor. The table below summarizes the benefit-cost ratio and net present worth based on benefits that can be monetized.

| Category                  | Value        |
|---------------------------|--------------|
| Total Discounted Benefits | \$34,930,362 |
| Total Discounted Costs    | \$18,782,571 |
| Net Present Value         | \$16,147,791 |
| Benefit Cost Ratio        | 1.86         |

When compared to discounted costs of \$18,782,571, this results in a Net Present Value of \$16,147,791 and a Benefit Cost Ratio (BCR) of 1.86. Because of the conservative nature of the benefits calculated in the analysis, it is anticipated that this ratio reflects the lower bounds of the achievable benefit-cost ration and monetization of additional benefits would result in improved outcomes over this baseline. It should be noted that there are several benefits that cannot be monetized and are not included in this benefit-cost analysis.