



US-23 Flex Route Extension Operational and Environmental Study

Livingston County Brown Bag Lunch

March 11, 2021

Agenda

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2. US-23 Flex Route Phase I
3. Study Overview
4. Preferred Alternative:
 - a. I-96/US-23 Interchange Area
 - b. Bridge Work
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7. Questions?
8. Contact Us



FlexRoute23

Rebuilding MI Corridors

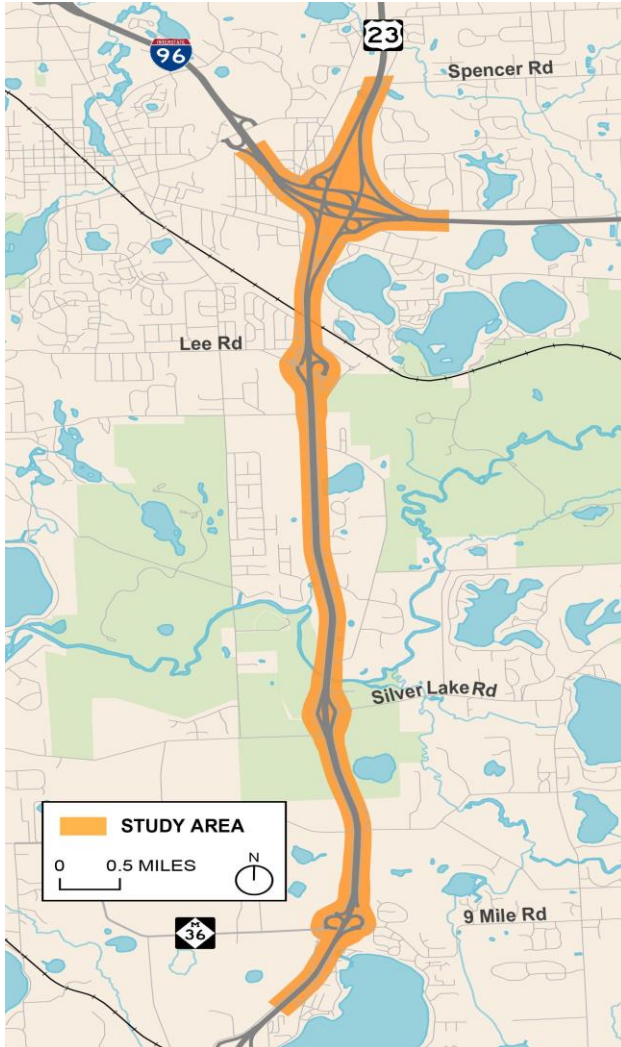
US-23 Flex Route is a Rebuilding MI Corridor



- Rebuilding MI Corridors are part of the Rebuilding MI bond program focused on state highways and bridges that are critical to our economy and carry the most traffic.
- Rebuilding MI Corridors will be designed and constructed as a single project.
- MDOT will environmentally review these corridors as single projects to identify any potential cumulative impacts.

For more information, visit www.Michigan.gov/MDOT5YearPlan or contact MDOT Public Involvement Officer Monsma Monica at MonsmaM@Michigan.gov.

Introduction



US-23 Flex Route

- Phase 1
 - M-14 to south of M-36 (9 Mile Road)
 - Opened to Traffic in 2018
- Phase 2
 - M-36 to I-96/US-23 interchange
 - Rebuilding Michigan Bond Program
- Operational and Environmental Study
 - Traffic and operational analysis
 - Road and bridge scoping
 - Environmental surveys
 - NEPA documentation

US-23 Flex Route Phase I

- Overall Improvement in Travel Time and Reliability
 - Travel Time
 - Planning Time
 - Speed
 - Crashes
- SB saw the greatest improvement
- NB will benefit from the extension to I-96
- MSU Study
 - Performance
 - Safety Impacts



Study Overview

Purpose of the study is to focus on:

- Traffic Safety
- Operational Needs
- Directional Weekday (Monday – Friday) Peak Period Congestion
- Infrastructure Condition

Goal is to: Develop Safe, Efficient, Sustainable Transportation

Improvements to assure that the corridor will meet current and future highway operations using state-of-the-art traffic control measures along with improved infrastructure.

Study Overview

Need is to focus on:

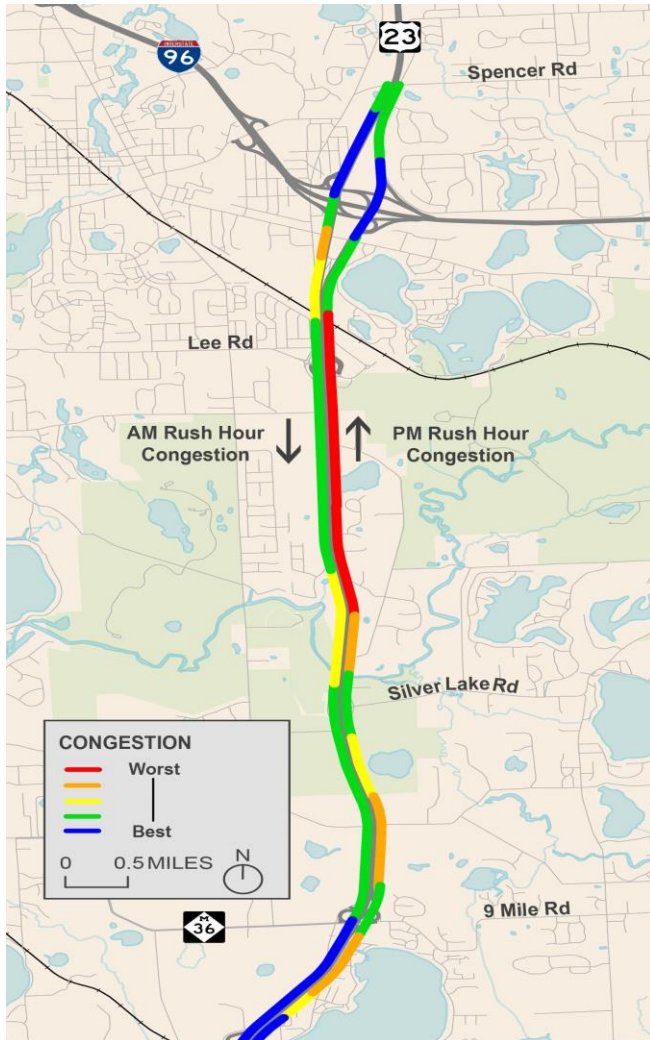
- Economic feasibility regarding restricted funding;
- Pavement condition;
- Directional weekday (Monday – Friday) peak period congestion;
- On-ramps that are short to adequately accelerate and merge into traffic;
- Traffic operations at M-36, Silver Lake and I-96 interchanges;
- High crash segments throughout the corridor;
- Incident management areas to safely clear and investigate accidents; and
- Road and bridge maintenance.

Study Overview

The Study includes:

- Road and bridge scoping to extend the US-23 Flex Route to I-96;
- Recommended alternatives at the M-36 and Silver Lake Road interchanges;
- Environmental Analysis that identifies potential environmental impact locations; and,
- NEPA documentation

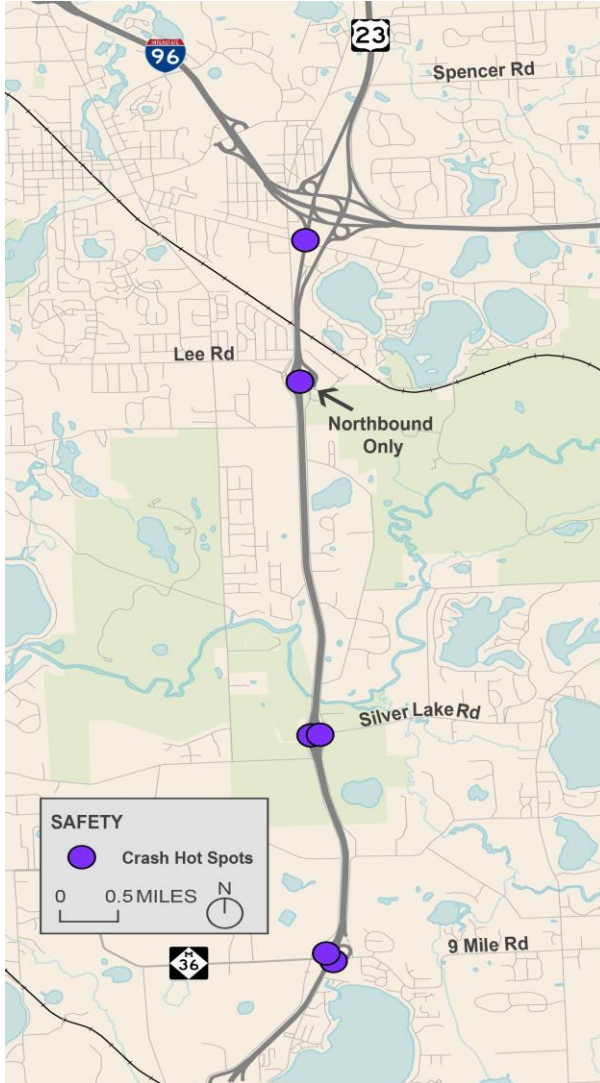
Existing and Future Traffic Conditions



Congestion (2020) –

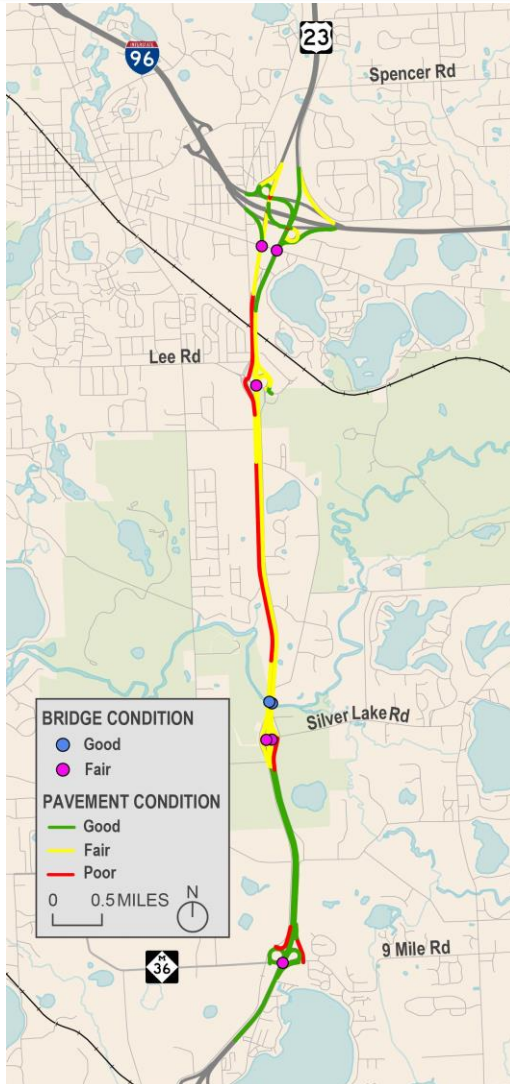
- AM – Southbound US-23 near the eastbound I-96 on-ramp as well as the Silver Lake Road interchange.
- PM – Northbound where the flex lane currently ends north of 8 Mile Road, as well as near Lee Road and the I-96 ramps.

Existing Safety Conditions



- Analyzed crashes from 2015 - 2019
- Highest percentage of crashes near the interchange areas
- 99 crashes per year in southbound direction
- 228 crashes per year in northbound direction
- High number of rear-end crashes due to rush hour congestion
- Short acceleration and deceleration lanes

Existing Road and Bridge Conditions



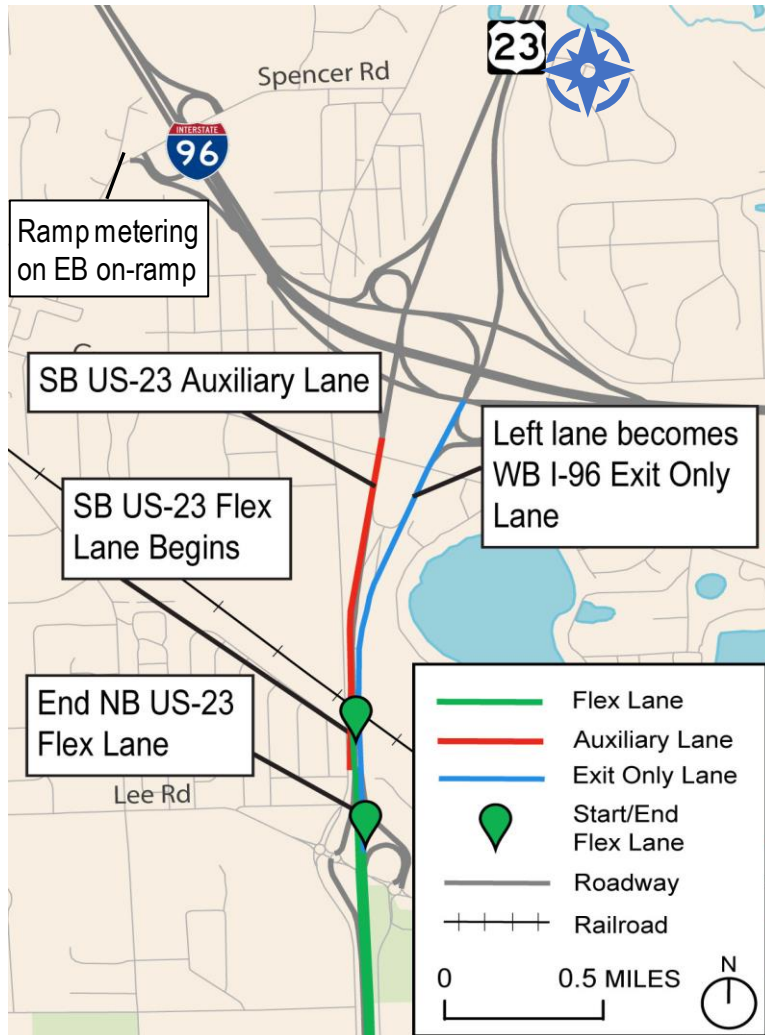
- Acceleration and deceleration lanes are short
- Shoulders are narrow
- Pavement condition is fair to poor (north of Silver Lake Road)
- Bridges are in fair condition
 - Study will document fix type

Flex Route Extension

Extend the existing US-23 Flex Route from south of M-36 (9 Mile Road) to the I-96/US-23 interchange and improve the interchanges at M-36 and Silver Lake Road

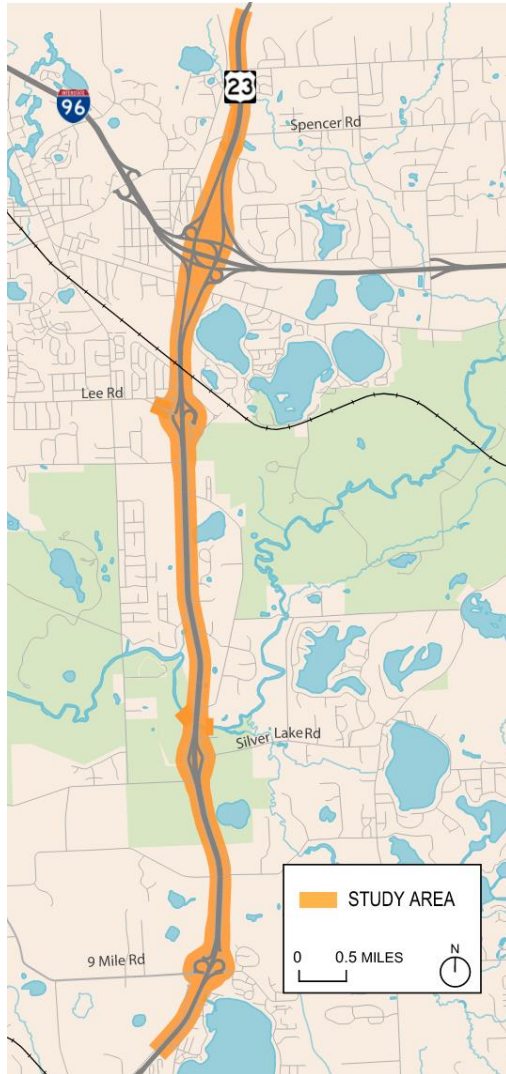


Preferred Alternative (I-96/US-23 Interchange Area)



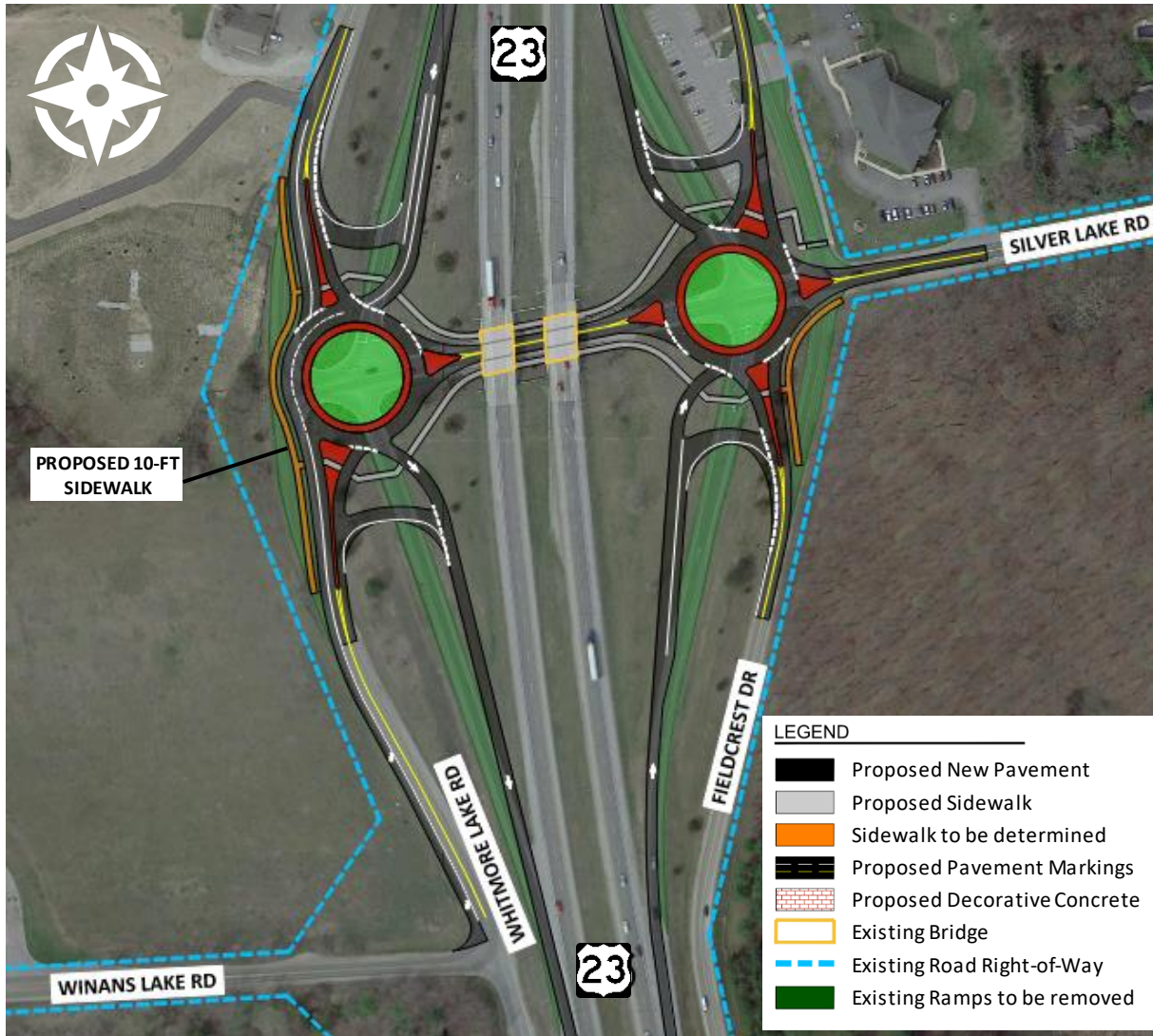
- NB Flex Lane will end between the Lee Road off- and on-ramps
 - Flex Lane will transition into an exit-only lane to westbound I-96
- SB Flex Lane will start between Lee Road off-ramp and CSX railroad bridge
 - An auxiliary lane will be added along SB US-23 between the EB I-96 on-ramp and Lee Road off-ramp
- Add ramp metering to EB Spencer Road on-ramp

Preferred Alternative (*Bridge Work*)



- The two Grand River Avenue bridges over US-23 will have maintenance work
- The railroad bridge over US-23 will not be replaced
- The Lee Road bridge will have maintenance work
- The two bridges over the Huron River will be modified due to median widening

Preferred Alternative (*Silver Lake Road Interchange*)

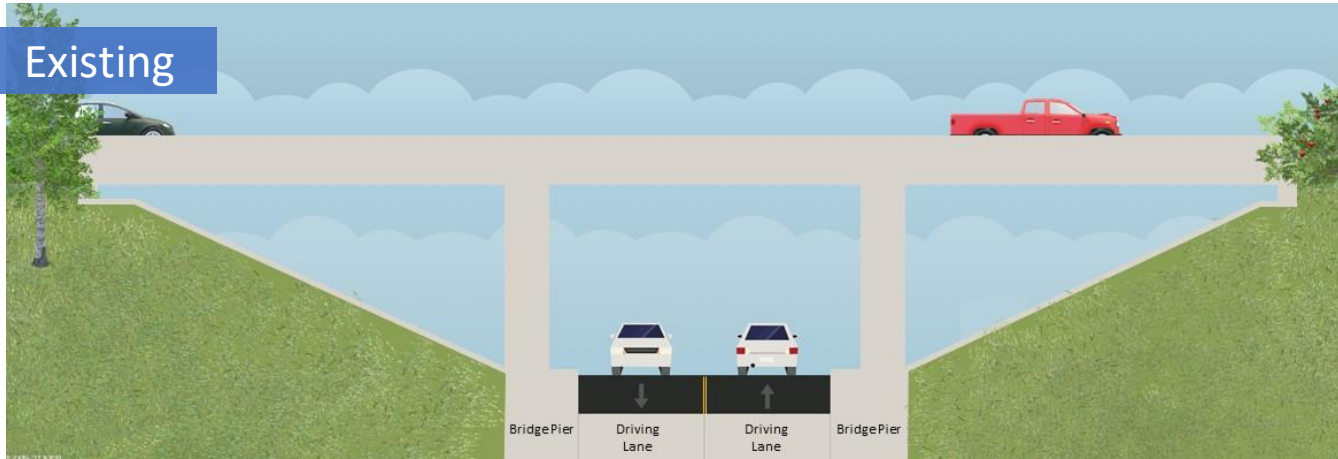


Silver Lake Road

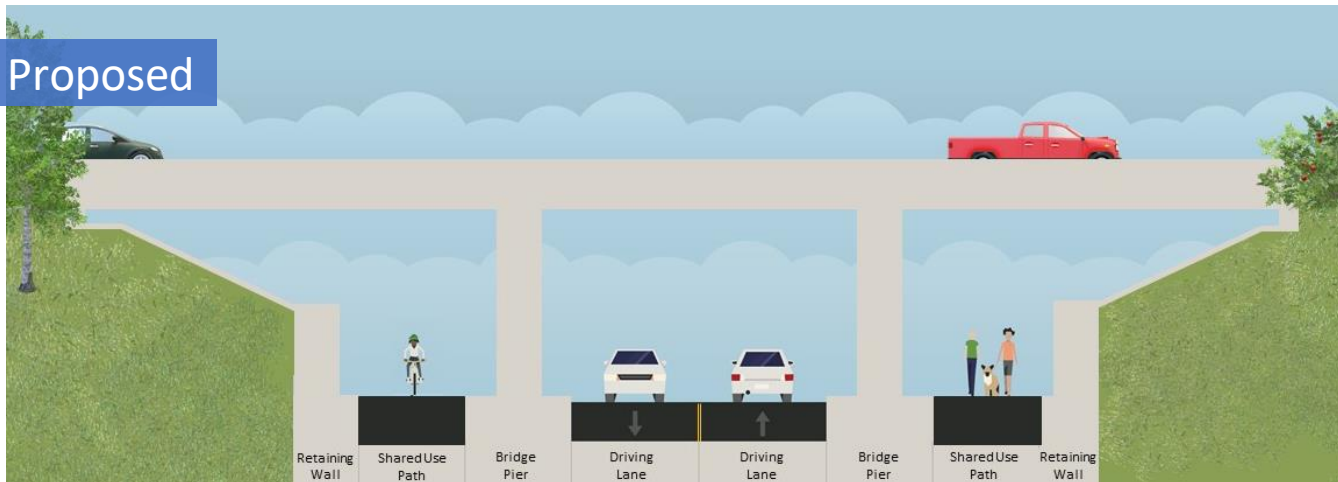
- **Existing:** Tight diamond configuration with closely spaced intersections at Whitmore Lake Road and Fieldcrest Road
- **Proposed:** Two options – SPUI or roundabouts
- **Preferred:** Roundabouts at each ramp terminal that include Whitmore Lake Road and Fieldcrest Road

Preferred Alternative (*Sliver Lake Road Non-motorized*)

Existing

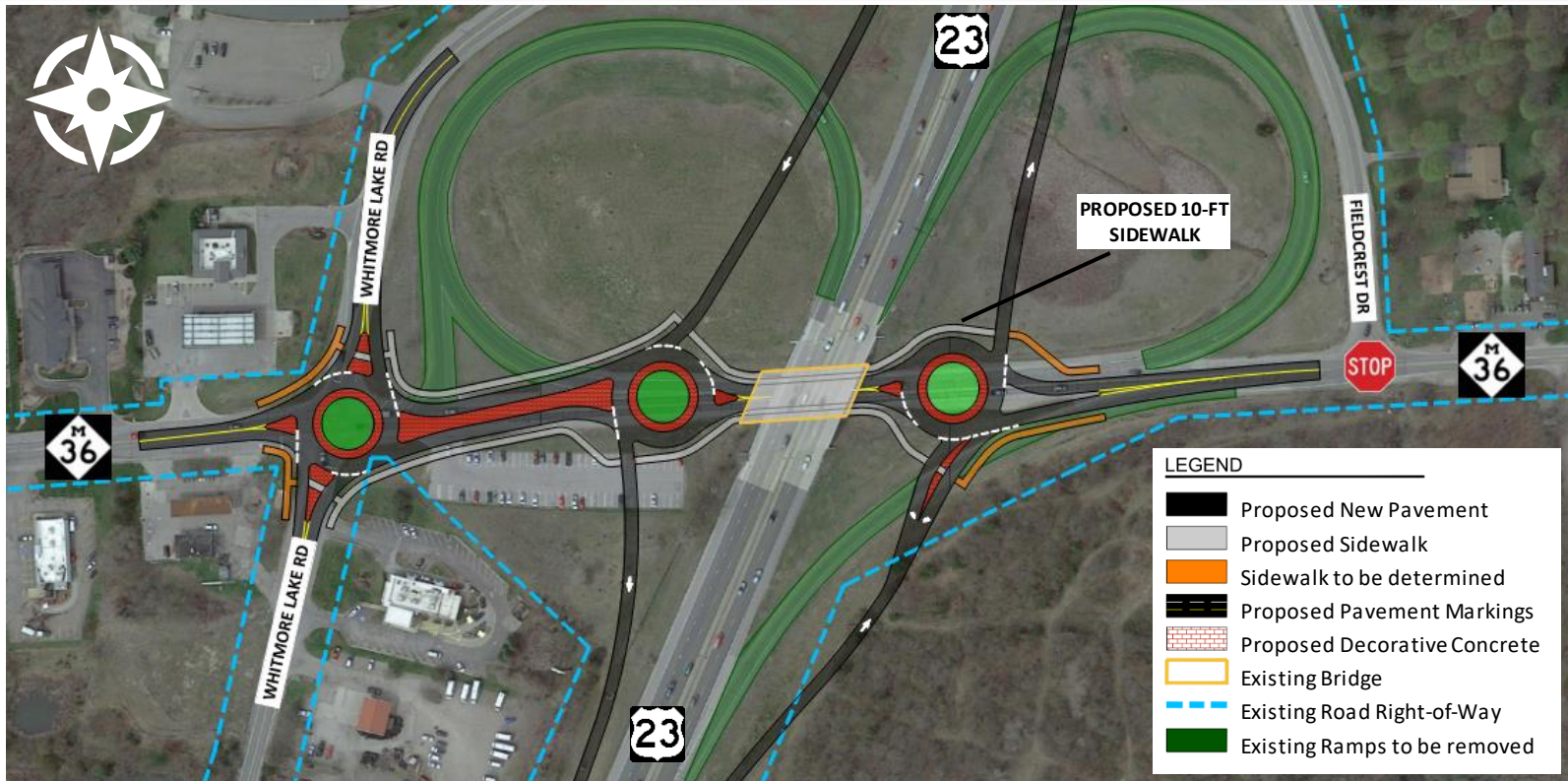


Proposed



- Current slope walls extend to bridge piers.
- A 10-foot shared-use path will be constructed on both sides of Silver Lake Road and through the roundabouts.
- Slope walls will be modified to add the path

Preferred Alternative (M-36 Interchange)

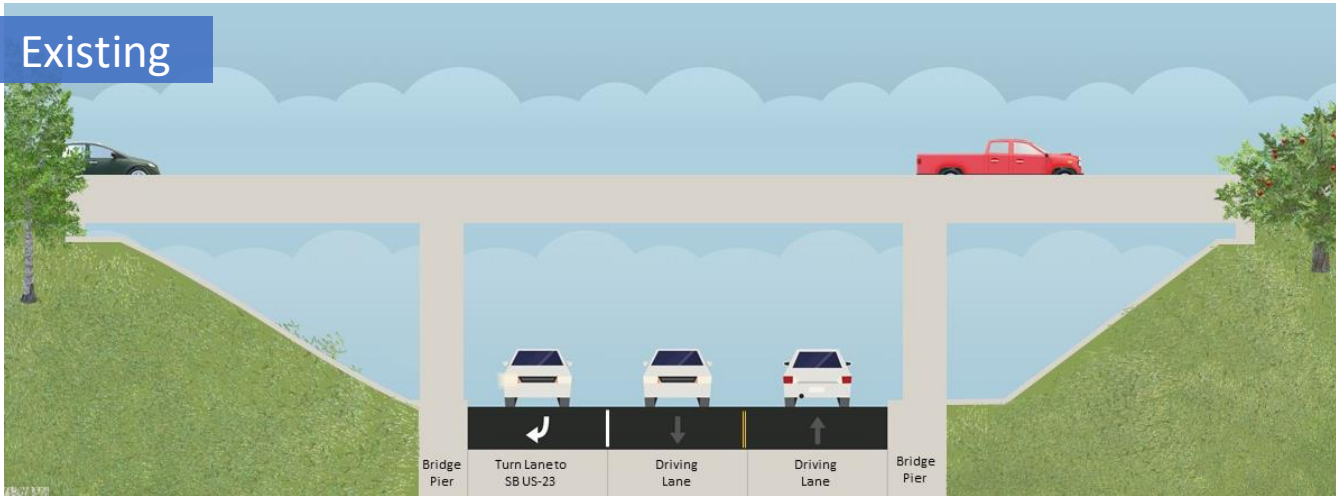


M-36 (9 Mile Road):

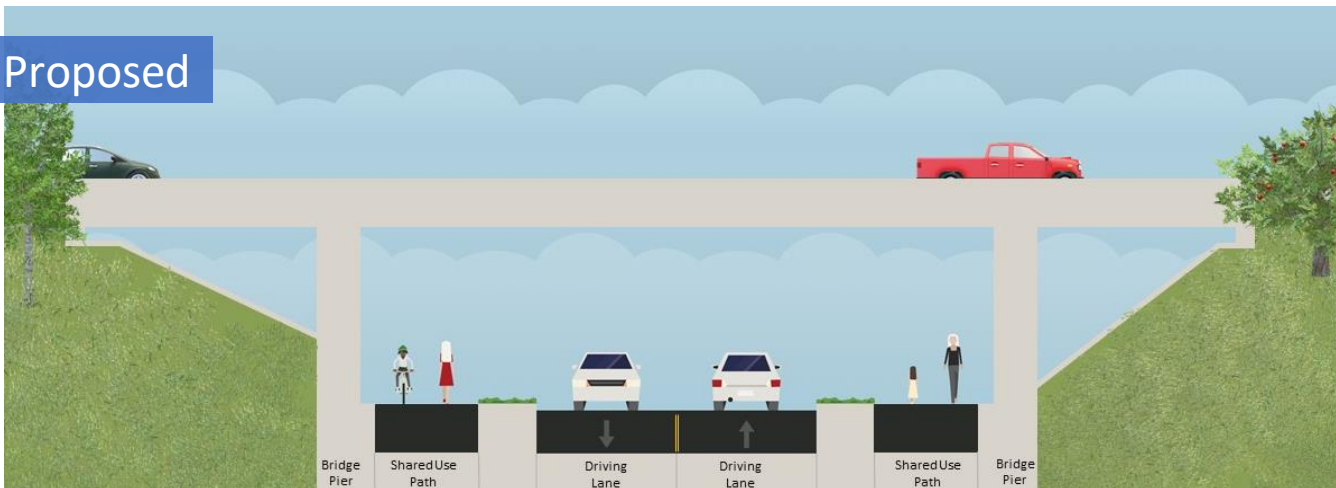
- Existing: Partial cloverleaf configuration with loops and directional ramps
- Preferred: Series of three roundabouts

Preferred Alternative (M-36 Non-motorized)

Existing



Proposed

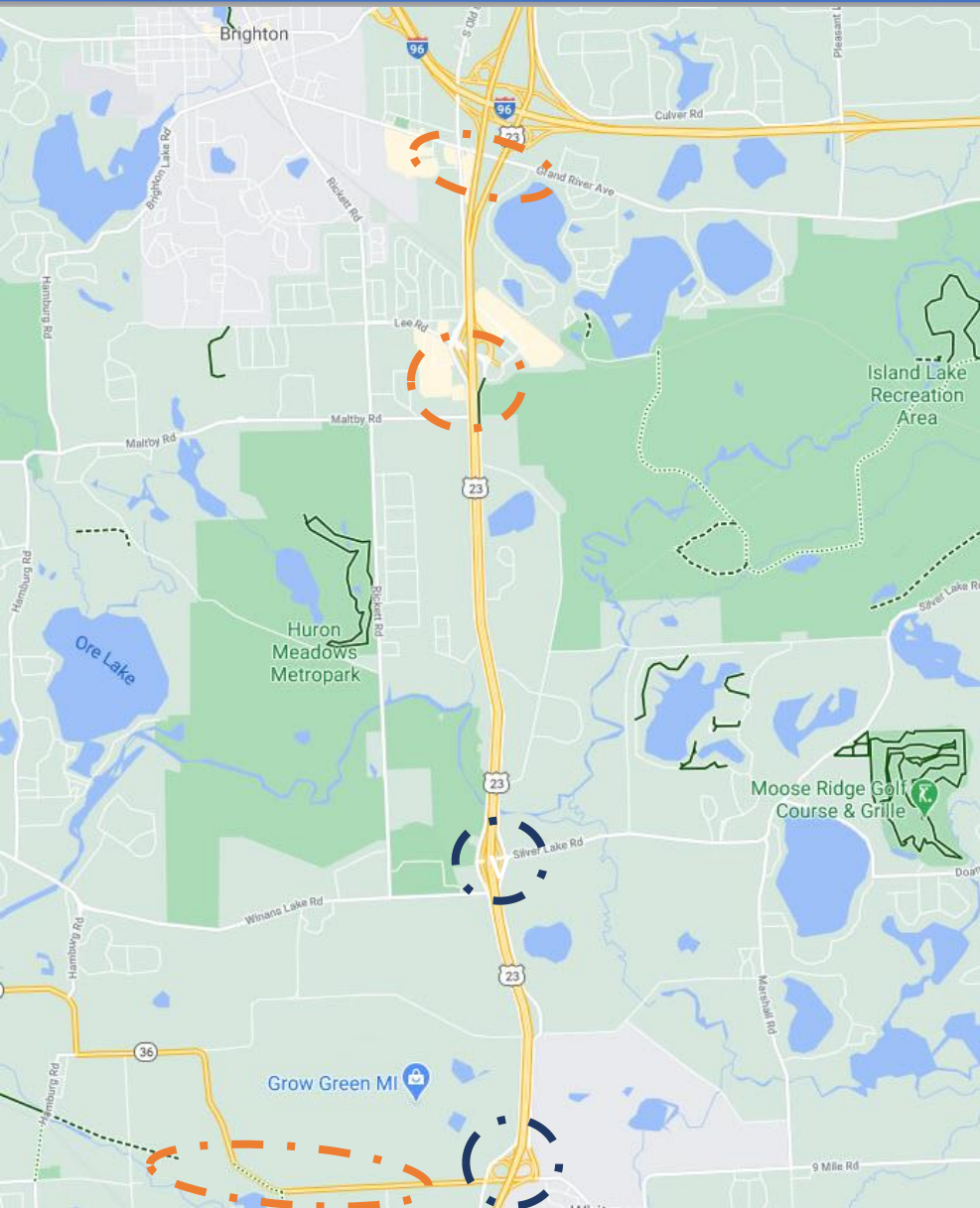


- Bridge will be reconstructed to allow a 10-foot shared-use path on both sides of M-36 (9 Mile Road) and through the roundabouts.

Preliminary Environmental Findings

- Threatened and Endangered Species
 - Survey identified federally protected Snuffbox Mussels in the Huron River
 - MDOT is coordinating with the US Fish and Wildlife Service
- Wetlands and Watershed Areas
 - MDOT will mitigate to address possible impacts
- Right-of-Way
 - Minimal Effect
- Noise
 - The draft noise analysis is complete

Regional Non-Motorized Connections

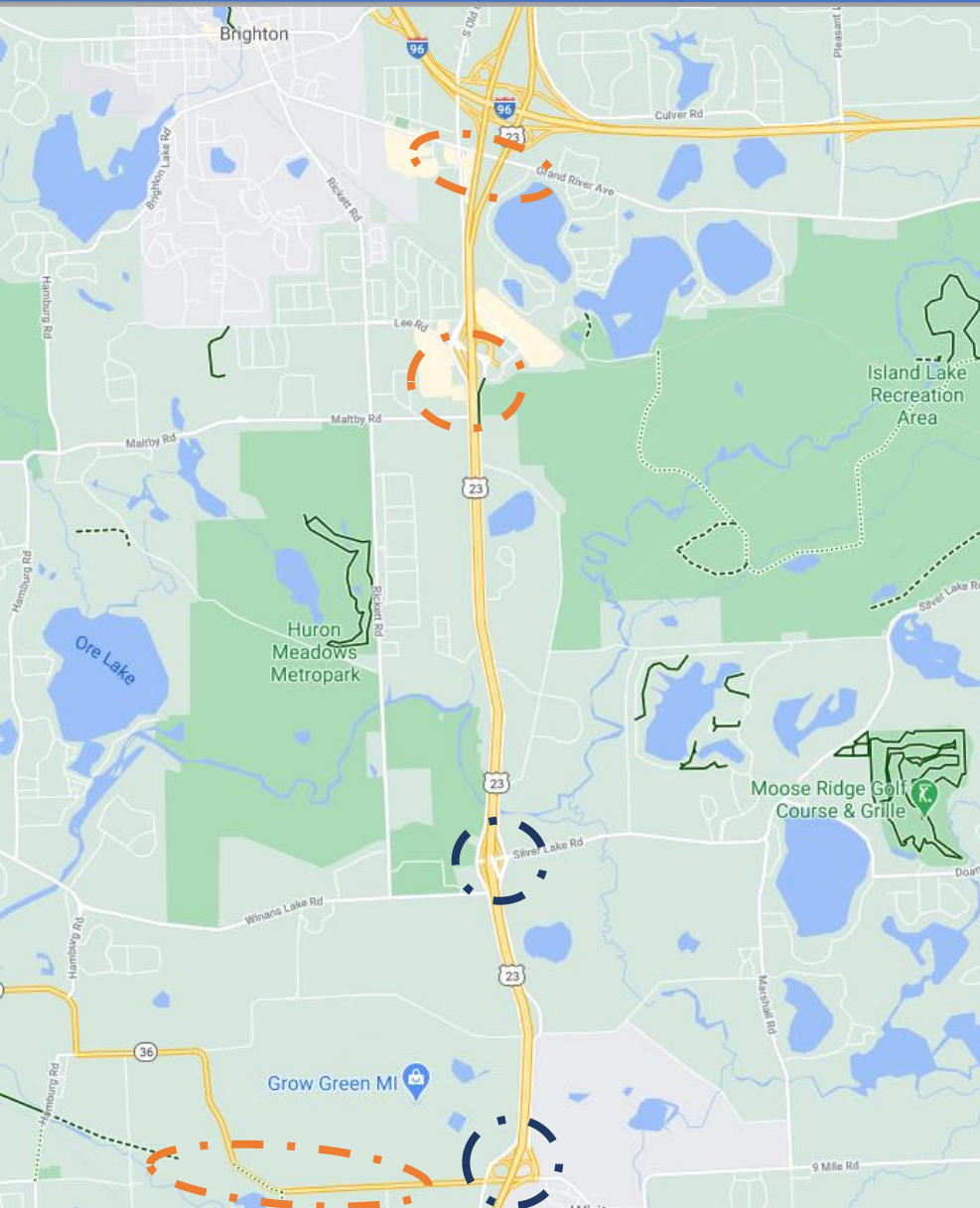


- SEMCOG and MDOT hosted a large stakeholder meeting on January 14th, where larger connectivity needs, and opportunities were discussed.

Discussed:

- Possible connections between Island Lake and Huron Meadows
- Connections into the Lakelands Trail system
- Flex Route impacted interchanges
- Grand River Ave and various local road network connections

Regional Non-Motorized Connections



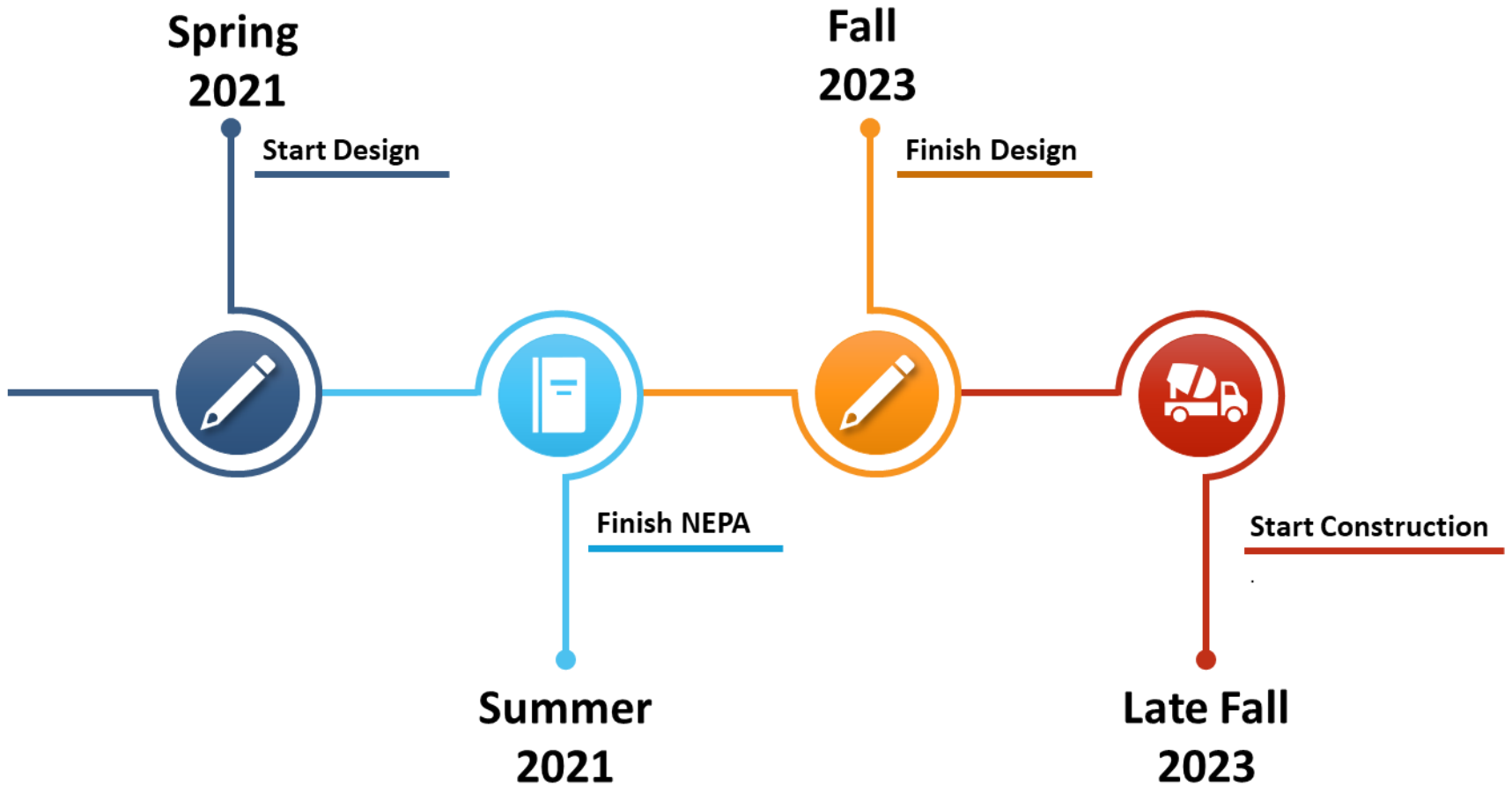
What Next:

- Discussions to continue with local agencies and stakeholders

Takeaways:

- Important to have local unified direction and plan that MDOT is aware of and can work to incorporate to any new projects
- MDOT works as a partner for regional trails

Project Timeline



Questions?




FlexRoute23

Contact Us



Kari Martin, Project Manager

martink5@michigan.gov

Mike Davis, University Region Planner

davism45@michigan.gov