Rebuilding MI Corridors

I-96 Flex Route Project
I-275/I-696/M-5 Interchange to Kent Lake Road

MDOT Job Number 124103

FlexRoute

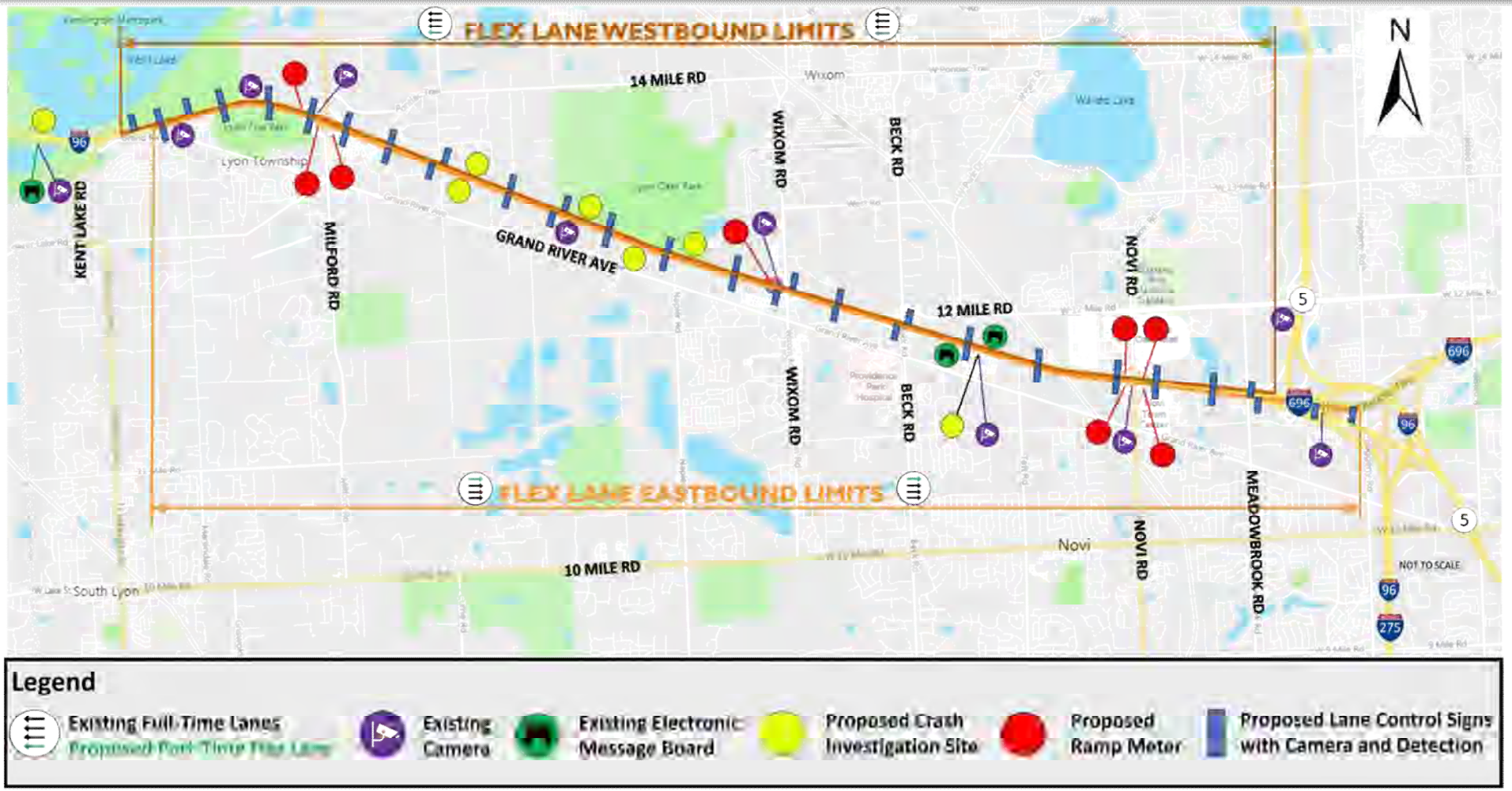
Rebuilding MI Corridors

I-96 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, please visit www.Michigan.gov/MDOT5YearPlan or contact MDOT Public Involvement Officer Monsma Monica at MonsmaM@Michigan.gov.

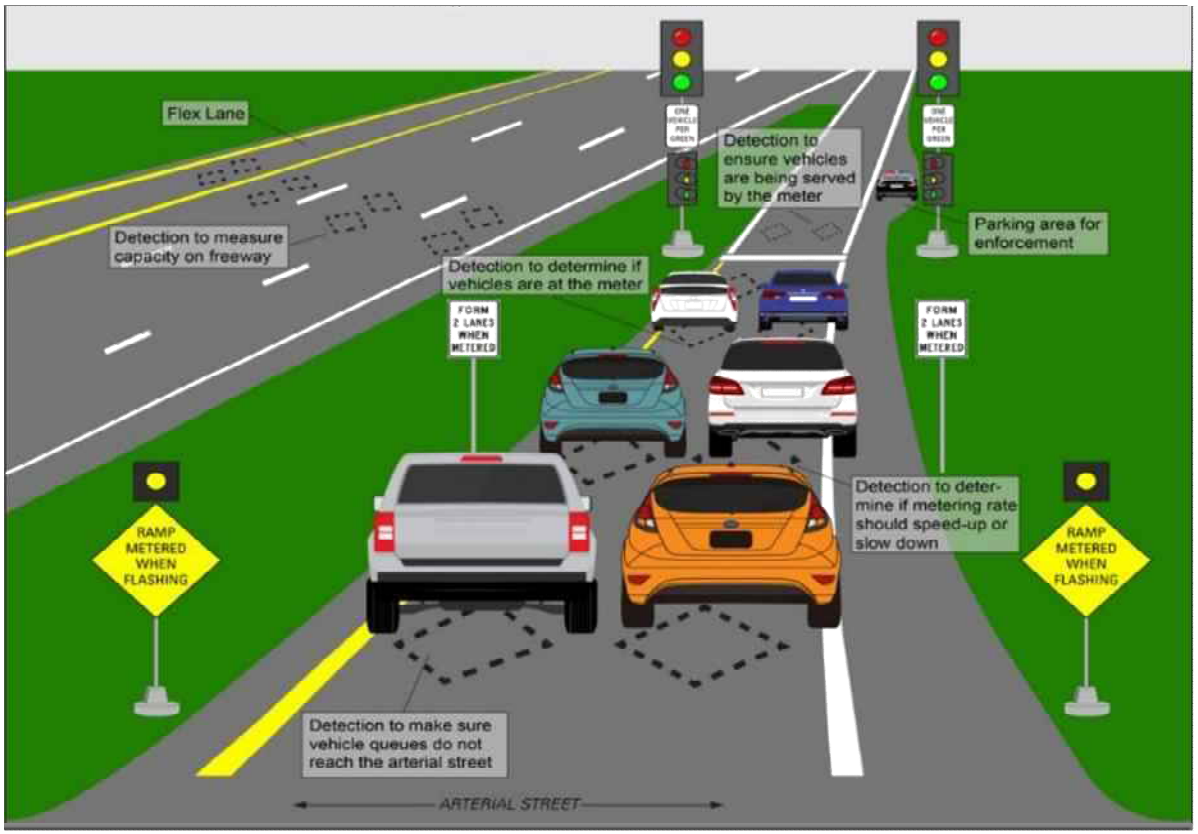
Proposed Project Schematic



I-96 From Kent Lake Road to I-696/I-275/M-5

Proposed Ramp Metering

What will ramp metering look like?



Ramp meter locations...

1. Milford Road on ramps
2. Westbound Wixom Road on ramp
3. Novi Road on ramps

Ramp metering uses traffic signals on ramps to smooth the flow traffic onto the freeway to:

- Reduce congestion by managing the number of entering vehicles.
- Break up platoons that form on the ramp and have difficulty entering the freeway.

How it works:

1. "Ramp Metered When Flashing" signs alert motorists that the signal is on.
2. Enter traffic forms two lanes and is prepared to stop at signal.
3. On **red** signal, traffic stops at white stop bar as it would for any other traffic signal.
4. Alternating **green** signals allow the next motorist closest to the signal to enter freeway.

States using ramp metering:

Arizona	Kansas	Oregon
California	Minnesota	Pennsylvania
Colorado	Missouri	Texas
Florida	Nevada	Utah
Georgia	New York	Washington
Illinois	Ohio	Wisconsin

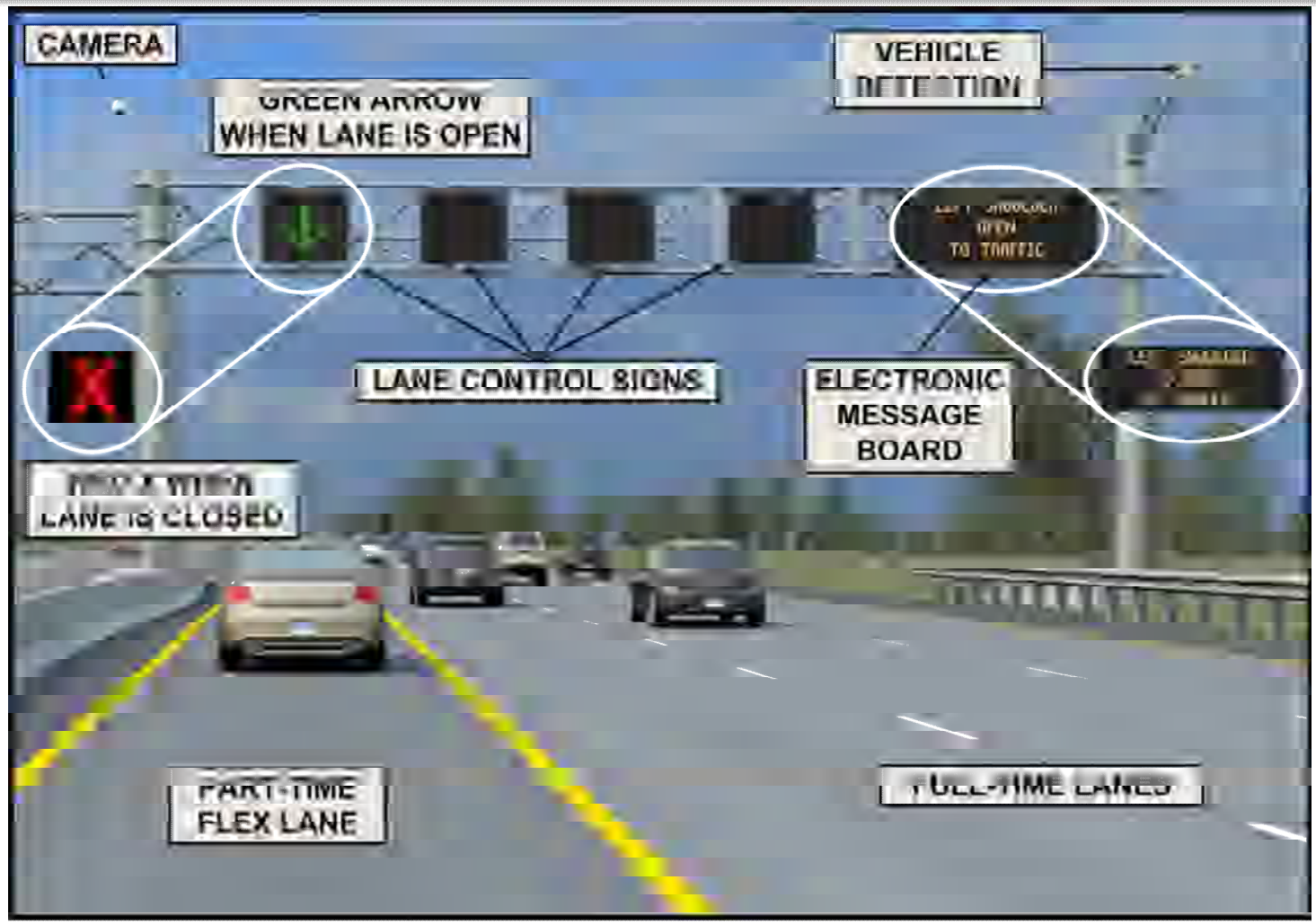
Washington D.C. also uses ramp meters

Expected benefits of flex lane and ramp metering:

1. Improved Safety
   - Reduced rear-end crashes
   - Reduced merge crashes
2. Improved Travel Time Reliability
   - Improved travel time consistency
     - Eastbound morning up to 65%
     - Westbound afternoon up to 75%
   - Reduced peak period duration
     - Eastbound morning up to 80%
     - Westbound afternoon up to 67%

Use of Ramp Metering in Minnesota

Proposed Gantry Layout 1

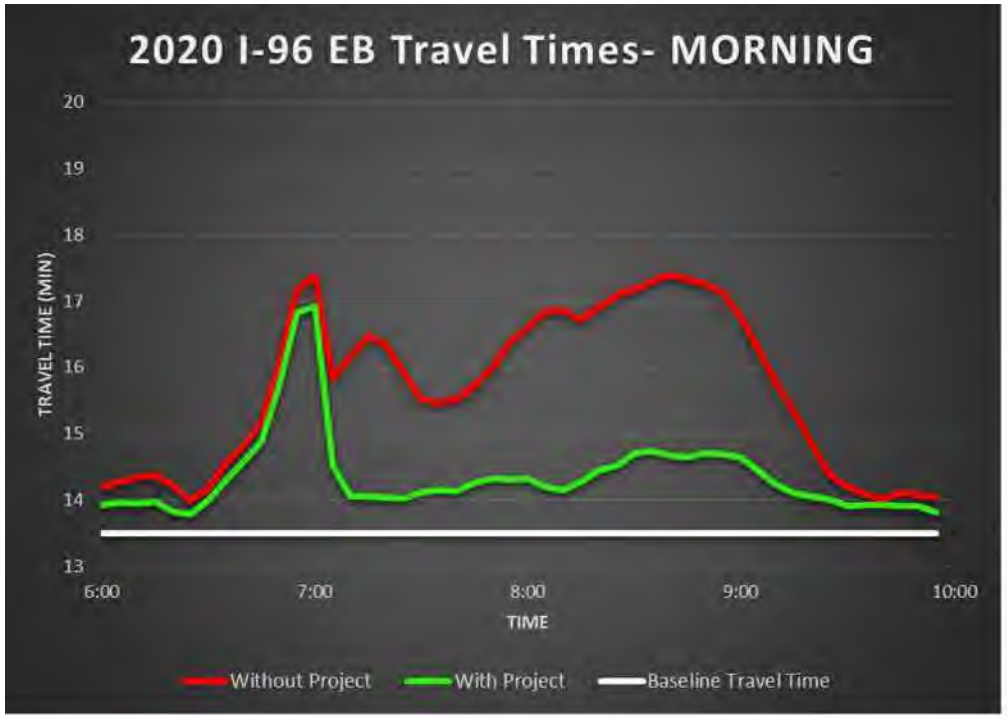


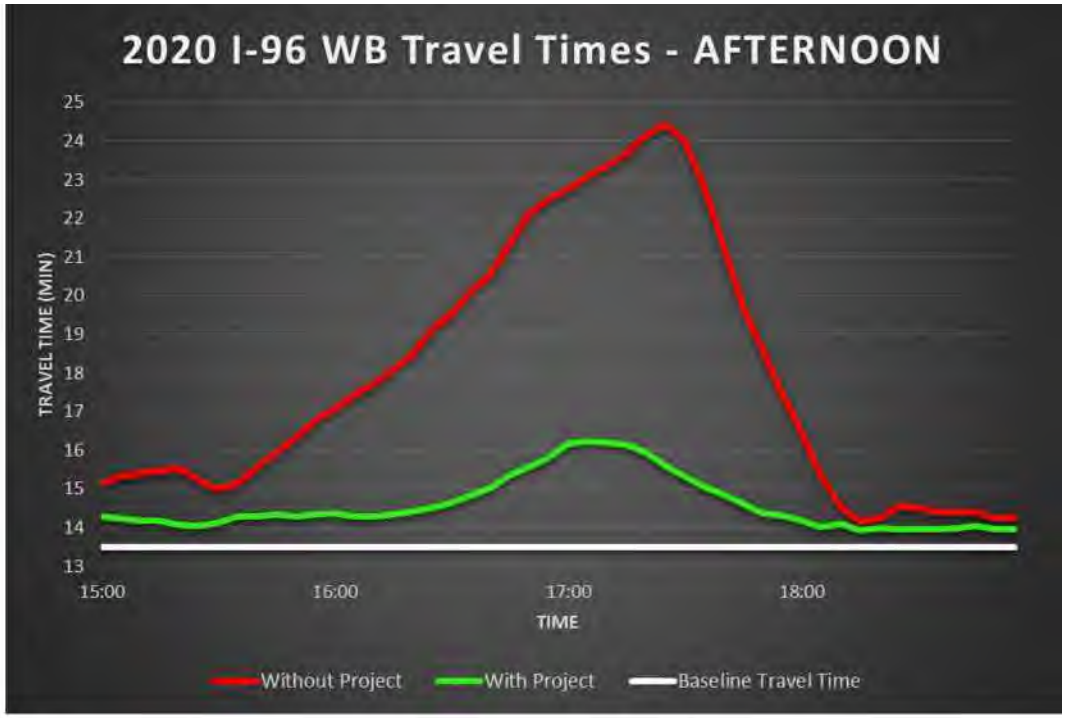
Flex Lane OPEN or CLOSED

Proposed Gantry Layout 2

Flex Lane OPEN with ADVISORY SPEED

Expected Project Benefits





- Reduced travel times
- Reduced stop-and-go
- Notification of slow downs ahead
- Improved travel time reliability

Project Background and Need

- 12 miles from Kent Lake Road to I-275/I-696/M-5
- Main corridor between Lansing and Detroit
- 163,000 vehicles per day
- Recurring directional congestion
  - Eastbound in the morning
  - Westbound in the afternoon
- Limited alternate routes
- Excessive travel times
- Inconsistent travel time reliability
- Frequent crashes
- Available existing wide median shoulders

Environmental Impacts

Analysis will review impacts to:

- Natural Environment
  - Air
  - Wetlands
  - Water Quality
  - Flora/Fauna
- Community Impacts
  - Public Engagement
  - Noise
  - Indirect/Cumulative
  - Public Parks
  - Detours
  - Hospital Access
  - Mall Access
  - Special Event Access

Proposed Project Work

Installation of an Active Traffic Management System (Flex Lane) from Kent Lake Road to I-275/I-696/M-5 interchange, including:

- ITS equipment to allow part-time peak-period median shoulder use, provide traffic warnings and advisory speeds and assist in incident management
- Ramp metering at 8 entrance ramps to help reduce congestion and improve travel time reliability and safety by breaking up entering traffic platoons
- 7 crash investigation sites along the outside shoulder to assist in clearing incidents

Proposed Project Work (Continued)

- Full reconstruction of all lanes and shoulders of I-96 from Kent Lake Road to approximately 1800’ east of Haggerty in the I-275/I-696/M-5 interchange
- Reconstruction of the ramps at the Milford Road and Novi Road interchanges
- Pavement patching of the ramps at Wixom Road and Beck Road interchanges
- Rehabilitation of the Beck Road Park & Ride lot
- Rehabilitation of 11 bridges and culvert work

Next Steps

Construction

- Begin in the Fall of 2021/Spring of 2022
- Complete in 2024

Construction Impacts

- Lane closures entire duration of project
- Ramp closures during some construction stages