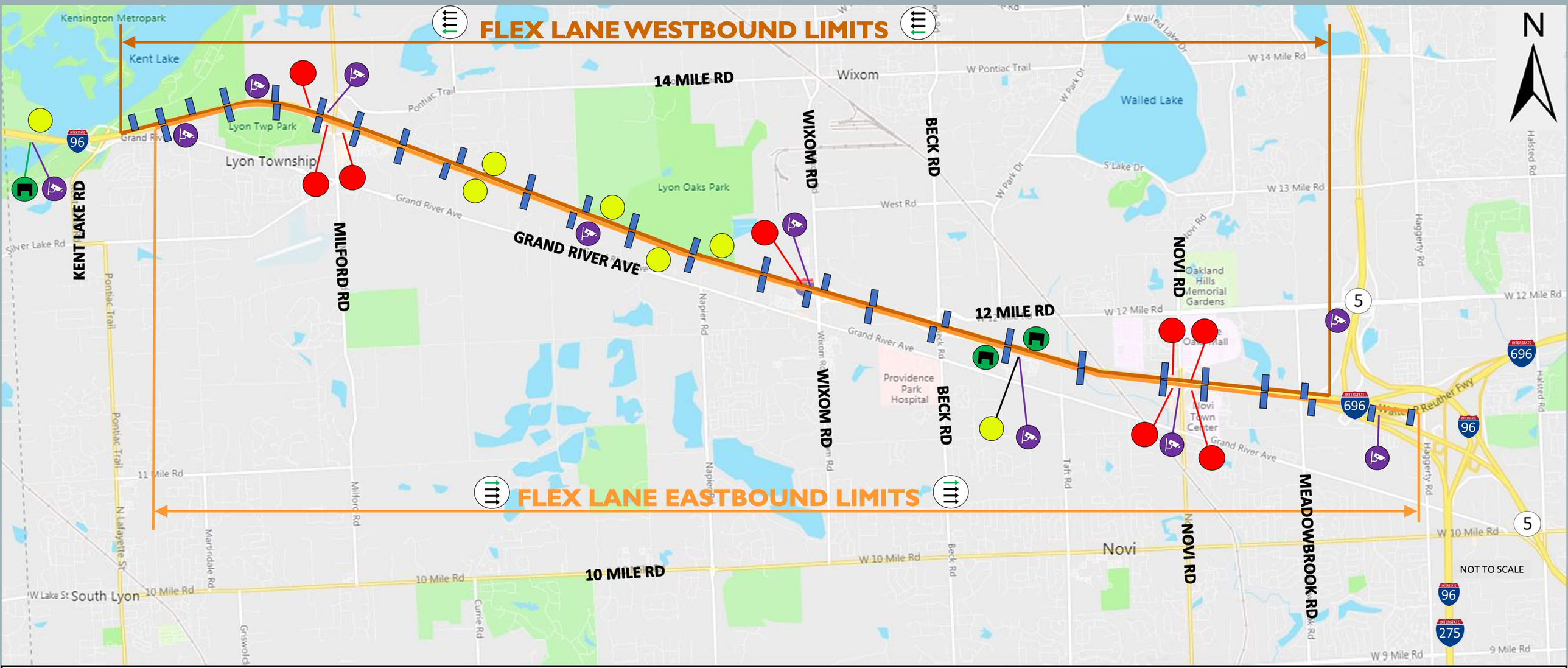
PROJECT SCHEMATIC

I-96 from Kent Lake Rd to I-696 / I-275 / M-5



Legend

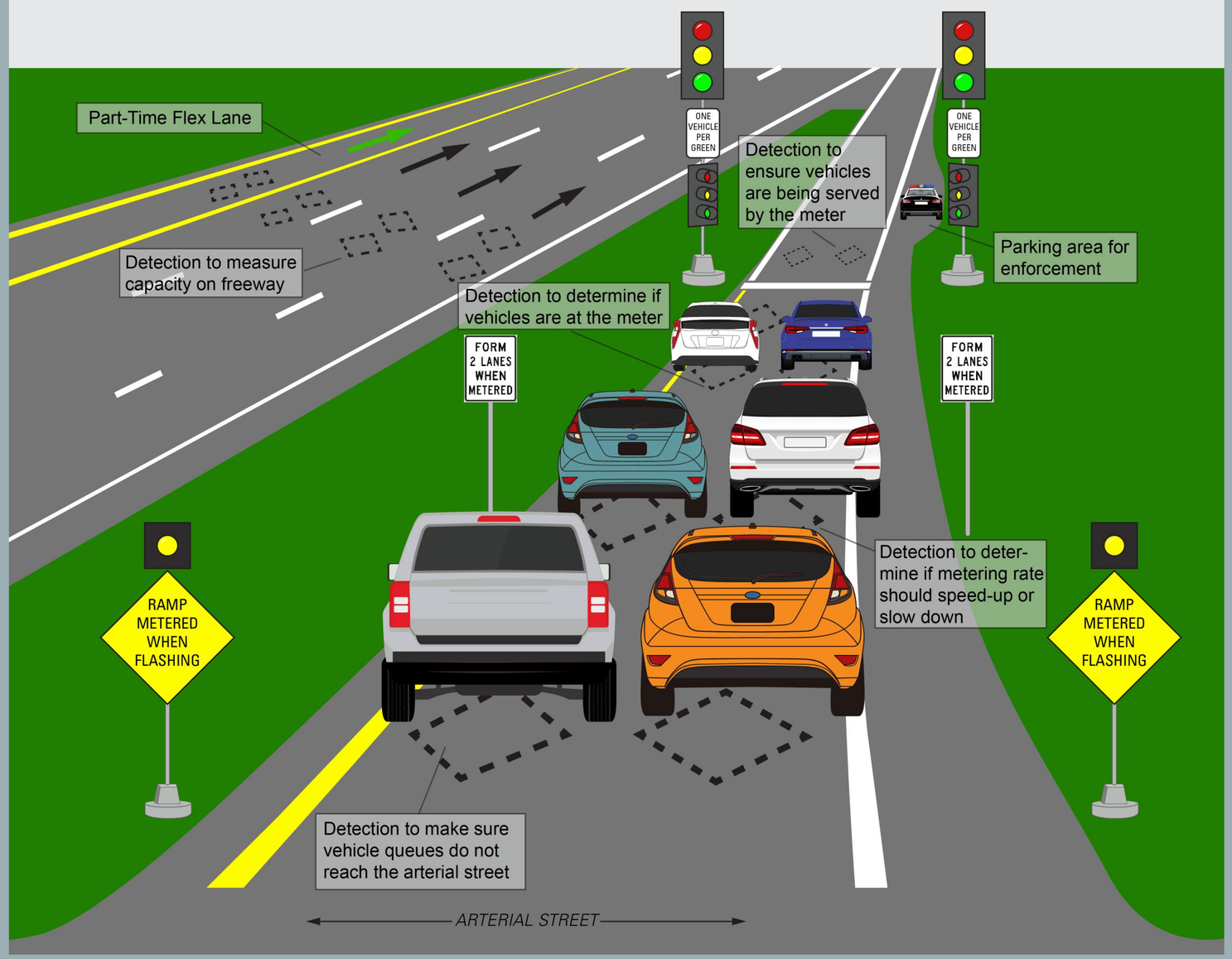
- Existing Full-Time Lanes
- Proposed Part-Time Flex Lane
- Existing Camera
- Existing Electronic Message Board
- Proposed Crash Investigation Site
- Proposed Ramp Meter
- Proposed Lane Control Signs with Camera and Detection

MDOT-I96FlexRoute@michigan.gov

RAMP METERING

FlexRoute
MICHIGAN DEPARTMENT OF TRANSPORTATION

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 of 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 signal is on.**
2. **Entering traffic forms two lanes, 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 signal to enter freeway.**

States using ramp metering...

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

Washington D.C. also uses ramp meters.

Expected benefits of flex lane & 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%

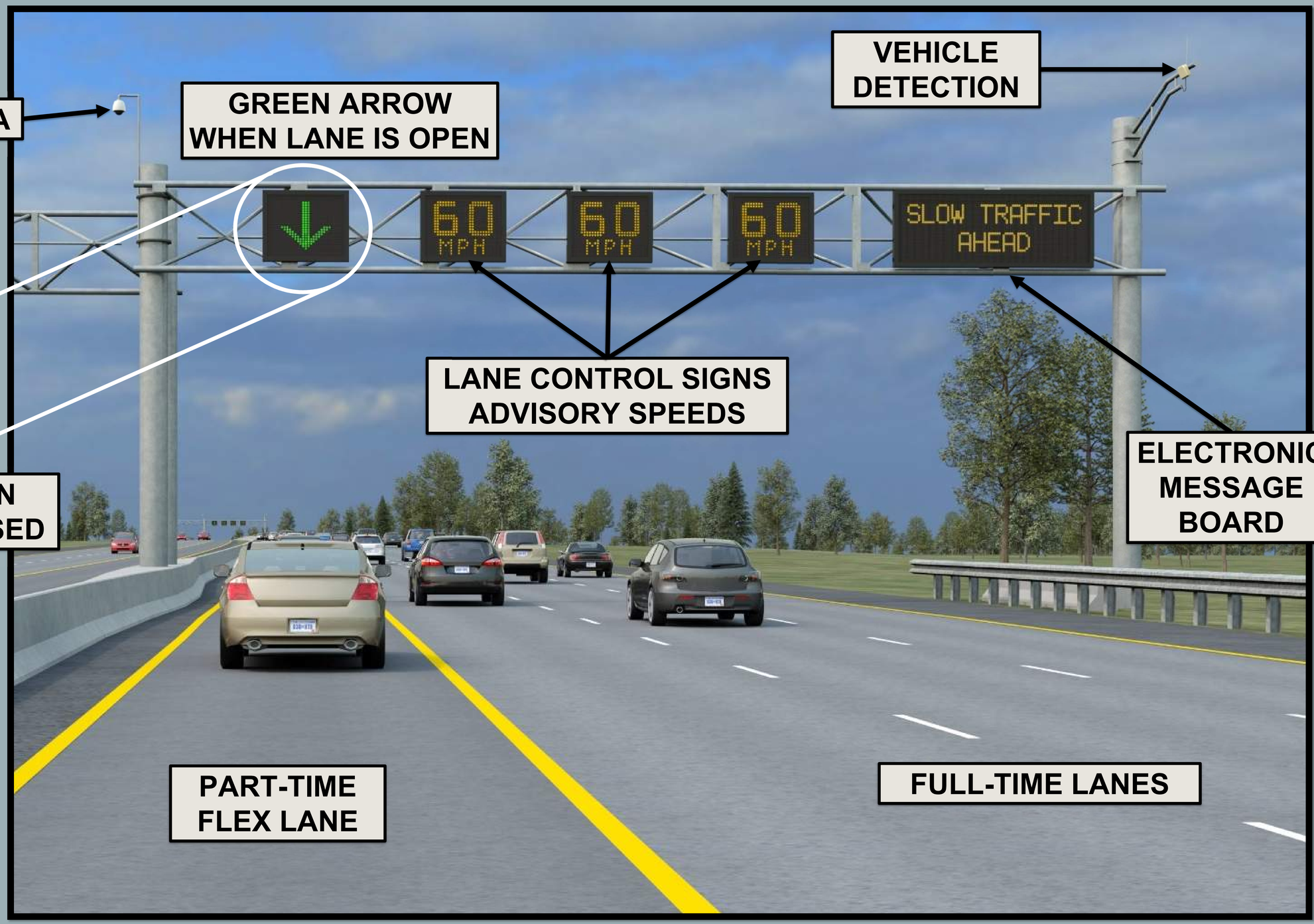
Use of Ramp Metering in Minnesota

MDOT-I96FlexRoute@michigan.gov

MDOT
Michigan Department of Transportation

FlexRoute
MICHIGAN DEPARTMENT OF TRANSPORTATION

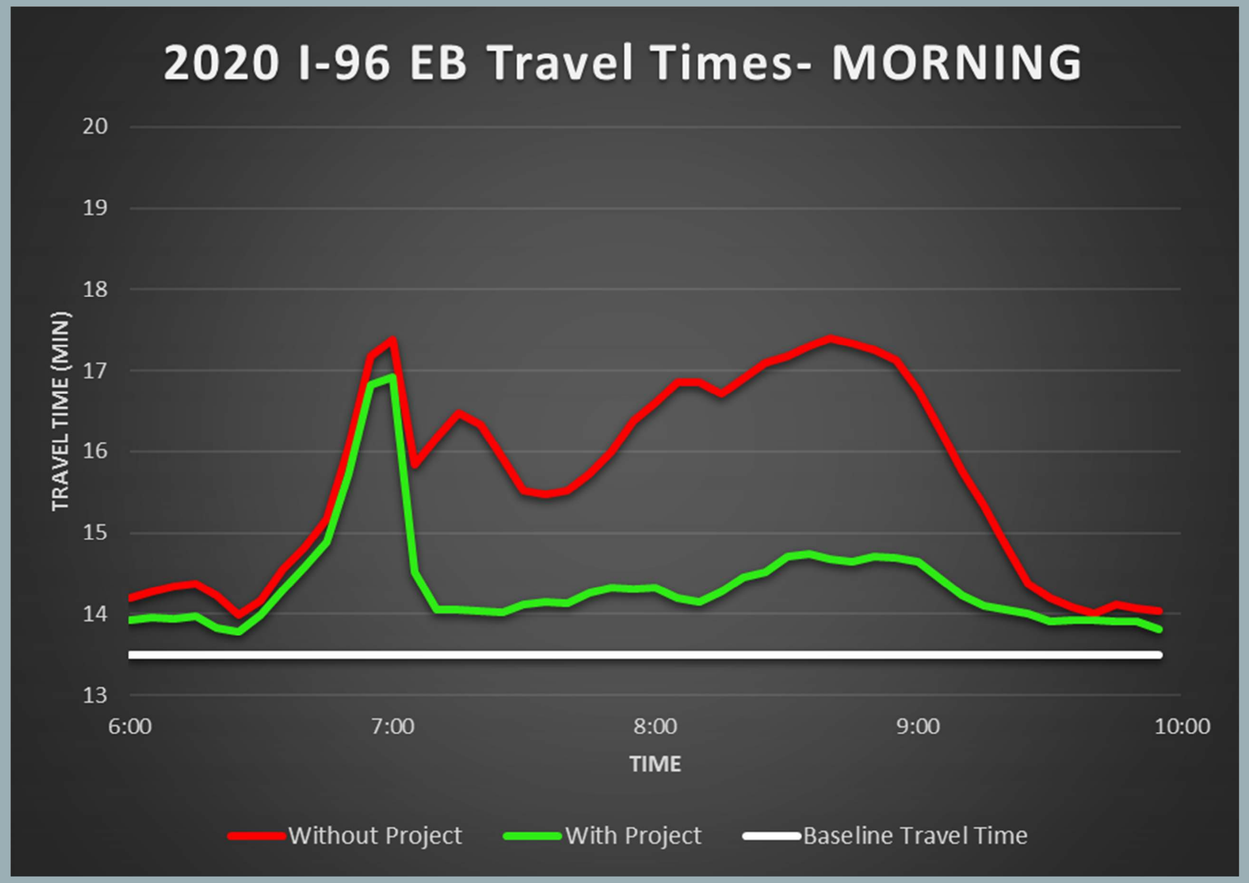
PROPOSED LAYOUT

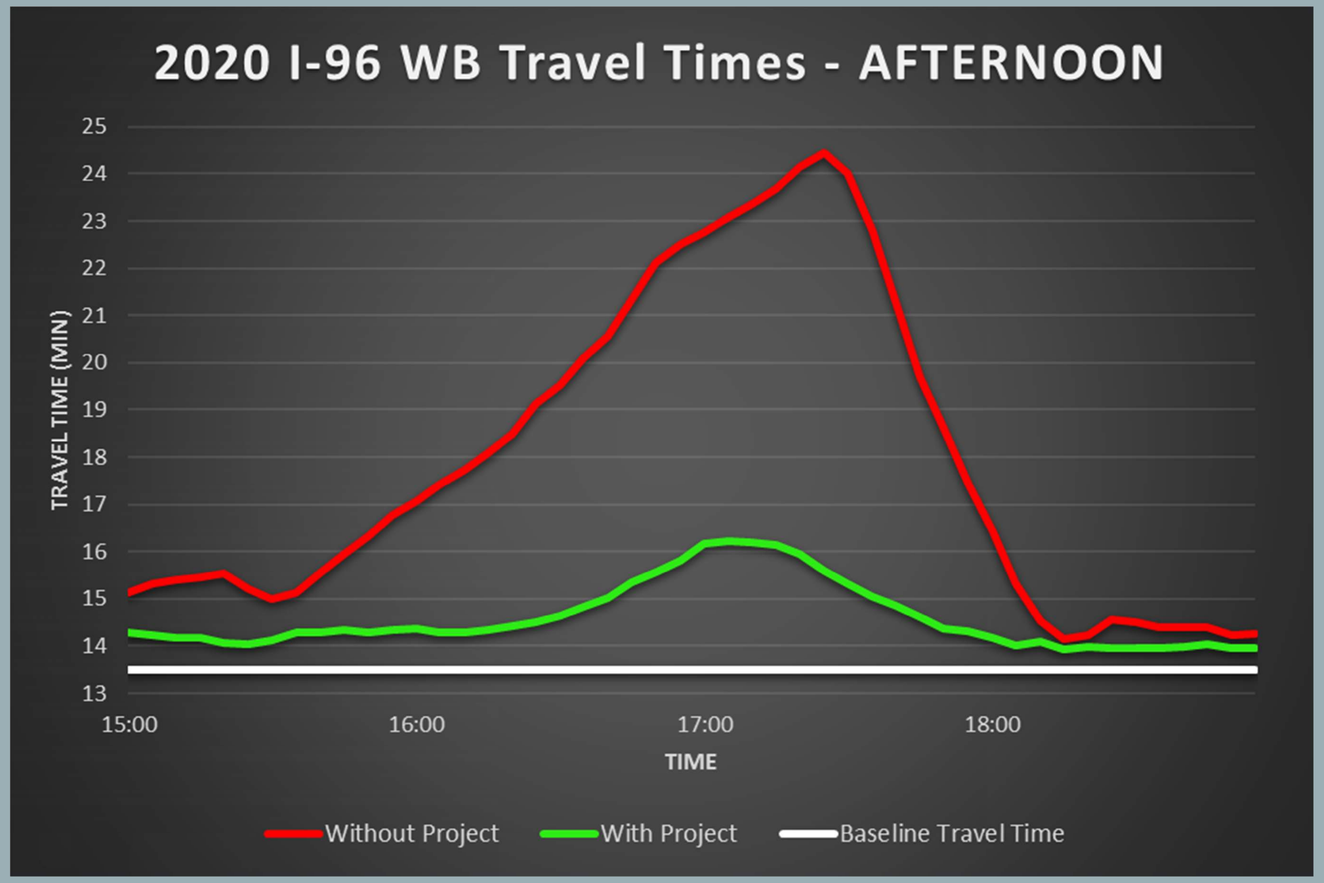


MDOT-I96FlexRoute@michigan.gov

MDOT
Michigan Department of Transportation

EXPECTED PROJECT BENEFITS





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

MDOT-I96FlexRoute@michigan.gov

FlexRoute
MICHIGAN DEPARTMENT OF TRANSPORTATION

PROJECT BACKGROUND & 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

MDOT-I96FlexRoute@michigan.gov

MDOT
Michigan Department of Transportation